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**AN INVESTIGATION OF THE RELATIONSHIP
BETWEEN PRODUCT HAPTIC ACCESSIBILITY AND
CONSUMER RESPONSE: A BRAND PERSPECTIVE**

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ABSTRACT

Consumers generally like touching products before buying and prior research indicates that touching influences the purchase decision-making process (e.g. McCabe & Nowlis, 2003; Peck & Childers, 2003a; Peck & Johnson, 2011; Peck & Shu, 2009; Webb & Peck, 2015). For example, touching products has a positive effect on consumer attitudes, intentions and behaviours and these effects seem to vary by product category, situational context and need for touch. Touch research however has principally received scant attention and is one of the most under researched senses in behavioural research (Spence & Gallace, 2011).

Consumers consider both product and brand name when making purchase decisions (Raju, 1977) yet despite continuous calls from researchers for the investigation of effects of brand on product touch, research in this area has not been forthcoming. This might in part be due to limited theory and conceptualizations in the emergent area of product touch therefore resulting in a lower level of understanding regarding how it and brand name could interact.

Responding to these calls for research (Grohmann et al., 2007; Jansson-Boyd, 2011; Peck & Childers, 2003a; Peck, 2010), this research project aims at developing a richer understanding of the influence of product touch by examining the moderating effects of brand familiarity and brand status, on the relationship between product touch and product evaluation, purchase intentions, confidence in judgement and willingness to pay. Essentially, the research extends brand familiarity, brand status, product knowledge and contagion theory literature to the emerging field of sensory marketing, specifically related to product touch.

Adopting an experimental factorial between subjects design, findings from two experiments make five key contributions to knowledge: 1) This research project advances knowledge by conceptualizing previously unexplored relationships between three key areas of literature, namely product touch, brand familiarity and brand status (luxury brands). Conceptual advances are critical to the vitality of the marketing discipline (MacInnis, 2011). 2) It takes an innovative view to extending sensory marketing literature on product touch by examining boundary conditions for touch effects beyond just product categorization (brand familiarity, brand status). 3) Adds to the brand familiarity literature by providing empirical support for a negative brand familiarity effect. 4) It extends the concept of need for touch to brand literature, identifying contexts in which it effects still apply (brand familiarity) and where it surprisingly does not (brand status). 5) In extending contagion theory to brand literature, it is one of the first studies to show a brand contagion effect and furthermore, demonstrate its activation through product touch. Practical implications, limitations and recommendations for future research are discussed in detail in Chapter 7.

Keywords: Touch, Need for Touch, Haptics, Sensory Marketing, Brand familiarity, Information processing, Brand status, Luxury Brands

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CHAPTER 1: Introduction

1.1 INTRODUCTION

Chapter 1 begins with an overview of the extant academic literature and practice of sensory marketing, in addition to product touch research and practice. The chapter then presents the identified research gaps, research objectives and questions, research significance and contributions, the method and analyses used and the ethics adhered to. Lastly, the structure of the thesis is provided together with a brief summary of each chapter.

1.2 SENSORY MARKETING

Fifteen years ago the average London commuter was reportedly exposed to over 100 advertisements within the span of a single 45 minute commute (which highlighted over 80 different products), but with only half of these making any impact upon them (Gibson, 2005). In a recent study by the Chartered Institute of Marketing, 52% of social media users reported that bombardment with too much brand content would negatively impact their brand trust and generally alienate them from the brand (EMarketer, 2016). With UK advertising spend surpassing £20 billion and reaching a five year high in 2016 (IAB¹, 2016) competition for consumer attention is set to become more robust. As such, retailers are constantly on the hunt for the ‘spark’ that will give them a competitive edge over their rivals. Choice is not solely made on the premise of the ‘product’ at hand but by a wide array of additional factors such as social, personal, environmental and, indeed, cultural factors. In seeking to reach and ‘touch’ consumers in a deeper and more emotional way, non-verbal prompts are taking an increasingly noticeable role in international brand strategy (Grimes & Doole, 1998). More recently, practitioners believe that multisensory marketing enhances the formation of richer memories and emotional connections between consumers and brands which encourages

¹ Internet Advertising Bureau UK

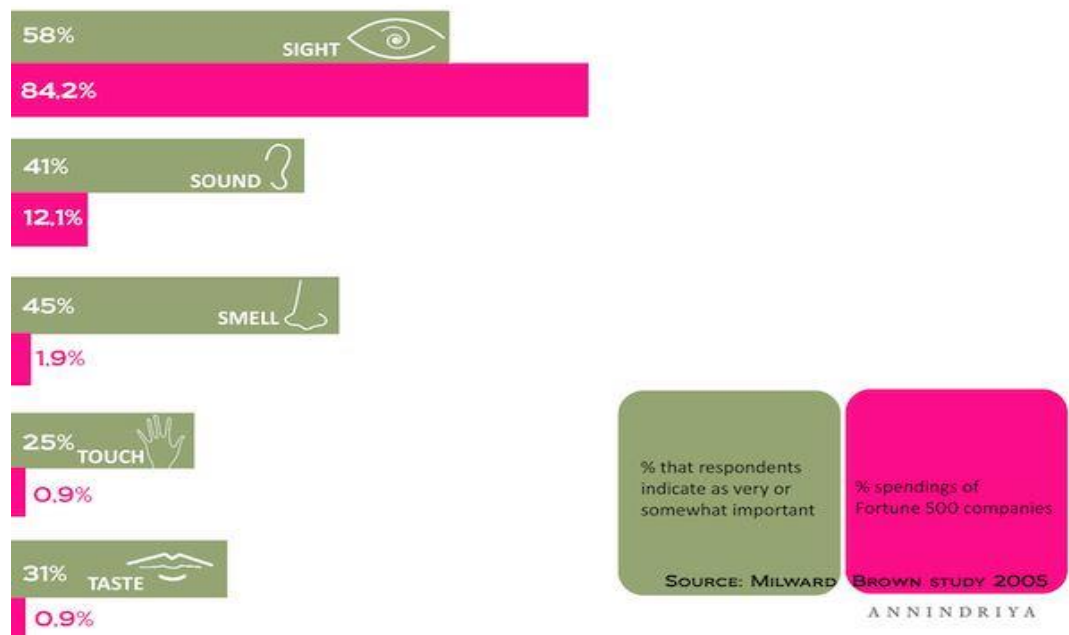
sales and loyalty (Scent Marketing Institute, 2013). Indeed, using three-dimensional marketing can increase a brand's value by \$100 million (Cooper, 2013) and getting the balance right between cue selection and context is the key to its success. It is the congruence between these cues and products (or services) that affects the processing and memory of events with lack of congruity negatively affecting the information encoding and retrieval process, leading to lower recall (Hanna & Wozniak, 2001).

The emergent field of sensory marketing, defined as '*marketing that engages the consumers' senses and affects their perception, judgment and behaviour*' (Krishna, 2012; p. 333) recognizes that consumer decision-making and behaviour are consciously and subliminally influenced through sensory input from all five senses (sight, sound, smell, touch, taste). Knowledge and understanding of these subconscious triggers thus equips practitioners with the tools to influence consumer product perception (e.g., regarding sophistication or quality) (Krishna, 2012) as sensory marketing focusses more on individuals than the masses or the segment (Hulten, Broweus, & Dijk, 2009).

An extensive 18 month, 13 country research study carried out in 2005 by a leading brand expert and neuro-marketing consultant (Lindström, 2010) and the market research agency Millward Brown, highlighting a disparity between the average advertising and promotional spend (in terms of sense-related spend) by top Fortune 500 companies and what consumers reported as being important to them, is indicative of a greater effort needed in bridging the gap between consumer wants and marketers' delivery of goods and services via different senses. The findings of their study showed disproportionally allocated advertising budgets among the five senses such as an overspend of budgets on sight/visual forms of advertising (84.2%), despite only 56% of consumers reporting the importance they felt it played (see Figure 1 below). A similar

pattern is seen in consumer behaviour research, where researchers have predominantly focused on the visual appeal of products, brands and packaging (Hulten et al., 2009).

Figure 1. Consumer Sense Importance versus Average Advertising and Promotional Spend



1.2.1 Sensory marketing research

Thus far, sensory marketing research has yielded interesting insight into the effect of the senses on consumer behaviour. For example, colour influences many decisions including what to buy, what to wear, how to decorate your house (Schloss, Strauss, & Palmer, 2013) and even how we behave (Bellizzi & Hite, 1992; Bellizzi, Crowley, & Hasty, 1983). Music influences consumer mood (Bruner, 1990) therefore affecting how consumers respond to products (Gorn, 1982; MacInnis & Park, 1991) as well as the amount of time spent browsing and shopping in-store (Milliman, 1982). Research on sound reveals that music in advertisements impacts advert persuasion by influencing the mood (Bruner, 1990; Tesoriero & Rickard, 2012) of those watching or listening to it (Park & Young, 1986) and pleasant music playing in a store makes customers feel

that they have spent less time in the store than they actually have (Yalch & Spangenberg, 1990). Furthermore, slower music tends to slow one's shopping pace therefore leading to increased purchases (Milliman, 1982).

Smell is also an extremely powerful sense as it is processed in the limbic system of the brain, the same part that is responsible for emotional processes and memory, thus enabling smell to have the most accurate and strongest level of recall (Scent Marketing Institute, 2013). Smell and its effect on consumer behaviour has been examined in a variety of contexts (Chebat & Michon, 2003; Dijksterhuis, Smith, van Baaren, & Wigboldus, 2005; Gueguen & Petr, 2006; Spangenberg, Grohmann, & Sprott, 2005; Ward, Davies, & Kooijman, 2003). Scent affects premium product and brand purchases (Madzharov, Block, & Morrin, 2015), product assessment (Bone & Jantrania, 1992), leads to increased spending in a casino (Hirsch, 1995), increased time and money spent in-store and product selection (Mitchell, Kahn, & Knasko, 1995), store perception and purchase intentions (Spangenberg, Crowley, & Henderson, 1996). From a practitioner perspective, scent marketing has been applied in toy stores (Hamleys London), candy stores (M&M), airlines (Stefan Florida waters scent in Singapore airlines), casinos (The Bellagio), hotels (white tea scent in Westin Hotels) and even in technology stores (honey dew melon scent at Samsung). Hamleys toy store in London used the scent of pina colada over the summer to encourage parents to remain in-store longer, while at the M&M store, chocolate scent was pumped around the store to make it smell like the chocolatey products sold (The Marketer, 2011). Scent marketing efforts do translate into increased sales with Dunkin Donuts in South Korea, for example, reporting a 29% sales increase during the period an atomizer was used to release the aroma of coffee whenever the company's jingle was played on buses (Sundar & Noseworthy, 2016b).

Research on taste is far less extensive and has revolved around the influence of in-store product sampling on consumer choice (Nowlis & Shiv, 2005) and cross-modal research on how touch (e.g., the firmness of a cup) influences taste perceptions (e.g., the taste of the contents in that cup) (Krishna & Morrin, 2008). As Krishna (2012) notes, ‘...*there is indeed tremendous need for research within the domain of Sensory Marketing*’ (p. 347). Accordingly, ‘*Attention to how to reach consumers through the five senses has consequently been growing exponentially in the corporate world as well as in academia*’ (Krishna, Cian, & Sokolova, 2016; p. 142).

One seemingly under-researched area that is garnering increased attention in the research literature is related to the sense of touch (Krishna, 2012; Peck & Childers, 2005). Touch by virtue of its nature is difficult to artificially emulate in a virtual environment (Maheshwari & Saraf, 2008) and can only really be effectively experienced first-hand, therefore perhaps making research in the area more challenging to conduct. Nevertheless, interest in research on product touch effects on consumer perception and behaviour has been growing (Atakan, Bagozzi, & Yoon, 2014; Brasel & Gips, 2014; Citrin, Stem, Spangenberg, & Clark, 2003; Grohmann, Spangenberg, & Sprott, 2007; McCabe & Nowlis, 2003; Norton, Mochon, & Ariely, 2012; Peck & Childers, 2008; Peck & Childers, 2003b; Peck & Johnson, 2011; Peck & Shu, 2009; Webb & Peck, 2015). A brief background of product touch practice and research is presented next, which thereafter leads to a detailed discussion of the problem statement and research gaps identified from this.

1.3 BACKGROUND

1.3.1 Product touch practice

“In 2003, the Illinois State Attorney General’s office issued a

warning for holiday shoppers to be cautious of retailers who encourage them to hold objects and imagine the objects as their own when shopping.”

(Peck & Shu, 2009; p. 434)

Seeing, smelling, hearing and touching products informs consumption decisions, implying that multisensory feedback forms the foundation for human cognition (Neisser, 1976). But, as previously highlighted, vision has governed consumption related practice and inquiry in consumer behaviour irrespective of the fact that sensory information is gathered by other modalities from the environment as well (Krishna, 2012). This has resulted in oversaturation and bombardment of consumers with visual forms of marketing communications.

Brick and mortar stores provide an experiential environment facilitating touch, trial, instantaneous satisfaction or pleasure and social interaction (Underhill, 1999) often leading to impulse purchases (e.g., Peck & Childers, 2006). Statements such as that of financial expert Kim Griggs, below (Griffiths, 2014), give an indication of just how influential touch is on consumer behaviour. She proposes adopting a ‘one finger rule’ during shopping trips, stating that:

“You can touch anything you want, but only with one finger as it satisfies the desire to touch without implying ownership, which makes shoppers less likely to blow their budget and overspend.”

Forbes Magazine reports that Apple stores purposely tilt netbook display screens at a certain angle that forces consumers to adjust them to their preferred angle (Gallo, 2012) therefore subconsciously triggering touch. Evidently, Apple stores are all about

interaction, from their characteristic uncluttered shop floor design to their high speed, free, wireless internet on offer, all of which are '*designed to generate an ownership experience from the moment a customer walks through the door, which is considered more important than a sale*' (Gallo, 2012). In addition, when ASDA supermarkets removed the wrapping of various toilet paper brands in-store, allowing customers to feel the product, they witnessed increased sales of their own brand toilet paper (Ellison & White, 2000).

More recently, the use of touch has extended to the cinema with Europe's first 4D cinema opened in Milton Keynes (UK) where movie goers are rocked in their seats, sprayed with gusts of air, water, bubbles, rain and even scents to simulate movie scenes (James, 2015). This is all aimed at creating a more integrated, immersive and entertaining cinematic experience that goes beyond seeing and hearing the movie, to smelling and physically feeling the movie. Coca-Cola uses touch in a very innovative way to encourage customer interaction with the brand and, in the process, elicit happiness through their use of Coke-for-hugs machines across different countries (Kosner, 2012). Consumers simply have to hug the machine tight and a free Coke is dispensed. According to Leonardo O'Grady, a Coca-Cola director who is part of this campaign, the message is simple, '*Happiness is contagious. The Coca-Cola Hug Machine is a simple idea to spread some happiness. Our strategy is to deliver doses of happiness in an unexpected, innovative way to engage not only the people present, but the audience at large*' (Kosner, 2012). Overall, the aforementioned companies have found creative ways of enhancing consumer brand experiences using senses, including touch, which serve as ways to enhance their brand image.

In summary, it is evident touch is being used in novel ways across various contexts, going a long way to not only enhance consumer experiences but influence their behaviour. In addition, with the promise that multisensory marketing experiences hold (e.g., such as with the 4D cinema), it is imperative to further understand how touch affects consumer behaviour in order to effectively combine it with other senses for improved impact.

1.3.2 Product touch and consumer behaviour

Although scant in nature, research on the effects of touch on consumer behaviour has revealed some useful insights. For example, touching products influences consumer shopping channel choice (Citrin et al., 2003) such that consumers prefer to shop for certain products (e.g., clothing) in a context where they can physically engage with them/touch them than an online experience where touch is not possible. This preference is predominantly the case for certain product categories such as clothing (sweaters) that possess material properties of texture (McCabe & Nowlis, 2003), consequently, affecting purchase intentions and product evaluations (Grohmann et al., 2007). Material properties include the tactile input of texture, firmness, temperature and weight (Klatzky & Lederman, 1992; Lederman & Klatzky, 1987, 1993).

Touch further increases purchase likelihood (McCabe & Nowlis, 2003), impulse purchase behaviour (Peck & Childers, 2006), message persuasion (Peck & Wiggins, 2006), confidence in judgments (Peck & Childers, 2003b), perceived ownership (Peck & Shu, 2009) and consumer valuation of products (Peck & Shu, 2009). Krishna & Morrin (2008) found that cup firmness altered taste perceptions of the water it was carrying, such that water in firmer (versus softer plastic) cups was perceived as more tasty. Additionally, retailers often employ tactics such as strategically placing products

at arm's length allowing for easier access, especially at checkout lines, as they know consumers tend to buy what they pick up (Underhill, 1999). Marketers constantly strive to get their products into consumers' hands because when consumers touch products, they have greater value for them (Peck & Shu, 2009).

Individuals however differ in their need/preference for touching products (Peck & Childers, 2003b). The Need for Touch (NFT) is the “*preference for extraction and utilization of information obtained through the haptic system*” (Peck & Childers, 2003b; p. 431) and it moderates the relationship between direct touching and consumer confidence in product judgments (Peck & Childers, 2003a; 2003b). Those with a higher NFT experience less confidence when they cannot directly touch a product while on the contrary those with low NFT confidence levels are unaffected when they cannot touch but get to see the product instead (Peck, 2010).

The aforementioned findings are all beneficial outcomes for practitioners and, given that they can control or influence how and what consumers touch, these past studies confirm the noteworthy role of touch in consumer decision-making, perception and product purchase. However, there is a general consensus among researchers that one specific facet of product touch has not and needs to be examined. Grohmann et al. (2007) contend that there remains a need to know how additional cues (such as brand name) moderate previously established touch effects. Peck & Childers (2003b) further speculate that brand name could signal both high and low need for touch consumers to forgo product touch during evaluation. These speculations could arise from the recognition that a consumer is seldom faced with a product purchase situation where brand name is unavailable (Raju, 1977). The majority of products today are indeed branded and consumers tend to equate and relate the importance of a brand to that of

the product itself (Kotler, Armstrong, Harris, & Piercy, 2013). In some cases, the value added by a particular brand supersedes the importance attached to the product attributes (e.g., texture, size, weight).

To date, despite the aforementioned and other propositions from scholars (Jansson-Boyd, 2011; Peck, 2010), brand, although considered as a significant influencer of consumer decision-making, has not been empirically examined in the context of touch (direct experience with a product). Clearly, *‘there are still a lot of gaps to fill in as far as research is concerned, in order to have a clearer picture of the role of touch’* (Jansson-Boyd, 2011; p. 541). Consequently, the research gaps identified across touch and brand literature is elaborated upon next.

1.4 IDENTIFIED RESEARCH GAPS

1.4.1 Touch literature

The role of touch in consumer behaviour is more important than the present state of the art in consumer research would seem to indicate. Hornik (1992) acknowledges the scarcity of knowledge on the role of touch in consumer decision making and the need for a deeper understanding of touch and associated behaviour is necessary (Hultén, 2011).

Research gap 1: Sensory marketing informs that product intrinsic indicators (physical product differences) relating to smell, taste, touch and sound are touted as being potentially more significant in influencing consumers than extrinsic cues such as price or brand in perceived quality perception (Krishna, 2012). For example, the inability to touch a product has a greater negative influence on purchase intentions and attitudes than the inability to see a product (Balaji, Raghavan, & Jha, 2011). However, the bulk

of current touch research in marketing has focused on product qualities, despite the realization that globalization and mass production has resulted in a multitude of product and brand offerings for consumers to choose from. Despite researchers acknowledging that brand could influence previously reported consumer responses to product touch (Grohmann et al., 2007; Jansson-Boyd & Marlow, 2011; Peck & Childers, 2003a, 2003b) research examining this has not been forthcoming. In order to process information constantly bombarding individuals on a daily basis, individuals must discerningly process and filter what is deemed as relevant or irrelevant at the time by taking ‘*cognitive shortcuts*’ (Shugan, 1980) and often, this discernment is based on a brand’s familiarity or in some cases the luxury status of a brand. Overall, although we know that touch influences consumer decision making and evaluations, there is yet a need to know how additional cues such as brand name moderate this effect (Grohmann et al. 2007).

Therefore:

‘.....research is needed to establish how the sense of touch influences the evaluation of product categories, more so those belonging to different brands within those categories.’

(Jansson-Boyd, 2011; p. 265)

1.4.2 Brand literature

1.4.2.1 Brand familiarity

Research gap 2: Brand familiarity is one of the most researched brand aspects and has long been acknowledged for its effect on information processing and consequently consumer perception, judgments and behaviour (Baker, Hutchinson, Moore, & Nedungadi, 1986; Biswas, 1992; Campbell & Keller, 2003; Ha & Perks, 2005; Hoyer

& Brown, 1990; Kent & Allen, 1994; Laroche, Kim, & Zhou, 1996; Machleit, Allen, Madden, & Machleit, 1993; Park & Lessig, 1981; Park & Stoel, 2005; Raju, 1977; Sundaram & Webster, 1999). Brand familiarity is also shown to increase purchase intentions (Arora & Stoner, 1996) and even the performance of brands on the stock market (Lane & Jacobson, 1995). In their investigation of the effect of touching packaged FMCGs (fast moving consumer goods) on product evaluation, Marlow & Jansson-Boyd (2011) noted that their models accounted for less than 40% of the variance found in their results and future accounting for familiarity could improve this. This research project therefore proposes that consumer response to product touch (or lack thereof) could differ (is moderated) by brand familiarity. The rationale for this line of thinking is derived from prior literature that has shown brand familiarity's ability to moderate various aspects such as advertising recall and effectiveness (Campbell & Keller, 2003; Kent & Allen, 1994; Machleit et al., 1993) through familiar brands being more noticeable and hence, recalled more easily and preferred more than unfamiliar brands (Alba & Hutchinson, 1987; Chattopadhyay, 1998; Dahlen, 2001; Dahlén & Lange, 2004; Rindfleisch & Inman, 1998).

1.4.2.2 Luxury brands

Research Gap 3: The research on luxury brands is limited to a large extent by a focus on definitions and conceptualizations of luxury brands and, as Patrick & Hagtvædt (2014) stress, there is need for research regarding the evaluation of luxury brands and processing of luxury brand information. Furthermore, few studies explore consumer experiences in the context of luxury brands (e.g., Atwal & Williams, 2009; Berthon, Pierre, Pitt, & Parent, 2009; Tynan, McKechnie, & Chhuon, 2009). Furthermore, despite the common consumer preference for purchasing luxury branded products in a

physical versus online store, with research² by Google US revealing that 69% of luxury consumers prefer to shop in-store to experience the product visually and/or through touch (Shea, 2013), theoretically driven academic research on the relationship between such brands and product touch has not been carried out. It is therefore unknown what role brand plays in the relationship between tactile input and product evaluations (Marlow & Jansson-Boyd, 2011; Grohmann, Spangenberg, & Sprott, 2007). Accordingly, examining how luxury brand information is processed in a context with variable touch accessibility would prove informative in advancing knowledge in both streams of literature.

1.5 RESEARCH OBJECTIVES AND QUESTIONS

1.5.1 Research objectives

With sensory marketing being a relatively emerging area, there are several avenues that additional research related to product touch could take. Brand names influence both consumer decision-making and purchase behaviour (Erdem & Swait, 1998; Keller, 2003) as consumers often use brand as a signal to deduce product quality when previous product experience is lacking or when unable to thoroughly assess products (Png & Reitman, 1995; Ubilava, Foster, Lusk, & Nilsson, 2011). Of the various brand aspects that could have been examined in this research project, brand familiarity was chosen due to its extensively documented influence on the consumer decision-making process (e.g., Kent & Allen, 1994; Laroche, Kim, & Zhou, 1996; Machleit, Allen, Madden, & Machleit, 1993; Park & Lessig, 1981; Park & Stoel, 2005; Raju, 1977; Sundaram & Webster, 1999). As purchase situations or decisions involve brand and

² The “How Affluent Shoppers Buy Luxury Goods: A Global View” report conducted interviews with individuals between the ages of 25-65 who were in the top 5-8 percent of affluent households in nine countries and had made at least two luxury purchases in the past two years. Both ethnographic and online interviews were conducted. The interviews were conducted on the phone and online January-April 2013.

product considerations (through physical interaction/contact with the product) the interactive role of product touch and brand familiarity is beneficial to examine.

Additionally, how luxury brand evaluation and luxury brand information processing occurs is yet to be fully understood (Patrick & Hagtvedt, 2014) therefore brand status was selected for this research project as it is believed touch will aid in shedding light on the aforementioned process. This research attempts to address the aforementioned gaps (section 1.4) and calls for research from both touch and brand researchers, by examining the moderating effect of brand on product touch effects, specifically from a brand familiarity and brand status (luxury and non-luxury brand status) perspective. Identifying moderation (boundary conditions) of an effect as well as factors that impact effect size are important scientific objectives (Hayes, 2013).

The underlying mechanism informing the brand moderation effects is also investigated from both affective (emotional) and cognitive (rational) information processing perspectives. Affect and cognition are controlled by separate and moderately independent systems which both constitute independent sources of effects in information processing (Zajonc, 1980). Therefore this study examines if the product-brand interaction effect is driven by an emotional response (evoked feeling) to product touch or a rational response (evoked thinking). Psychological ownership and affective reaction are known mediators of product touch and willingness to pay (Peck & Shu, 2009), but it is unknown if these would explain how brand familiarity and brand status moderate product touch.

Four dependent variables were selected for examination: product evaluation, purchase intention, confidence in judgment and willingness to pay. Every retailer is concerned

about how consumers evaluate their product offerings and the factors that influence these product evaluations. Purchase intentions denote ‘what we think we will buy’ (Blackwell, Miniard, & Engel, 2001, p. 283) and are important due to their wider implications on an individual’s actions (Ajzen & Driver, 1992; Chandon, Morwitz, & Reinartz, 2005; Schlosser, White, & Lloyd, 2006). For example, purchase intentions are key to predicting future sales and discerning how retailer decisions and strategies will affect consumers’ purchase behaviour (Morwitz, 2014). Consumer confidence in decision-making has been shown to be a determinant of purchase intentions (Bennett & Harrell, 1975; Howard & Sheth, 1969) and is thus important to understand. The last dependent variable examined in this research project is willingness to pay, which provides an indication of the value individuals attach to products or services (the maximum price a buyer is willing to pay), and has implications on how retailers consequently price their products. Understanding why and how this willingness to pay varies can also equip retailers/marketers with knowledge on the qualities consumers are willing to pay more for/value more.

This research project utilizes schema and contagion theories to argue that touch effects may have some boundary conditions, specifically, when the product under examination comes from familiar, unfamiliar, luxury and non-luxury brands.

1.5.2 Research questions

Corresponding to the aforementioned research objectives, the following research questions are posed:

1. What effect does product touch have on consumer response (product evaluation, purchase intention, confidence in judgment and willingness to pay) (RQ1a)?
2. Does the aforementioned effect differ by NFT (RQ1b)?

3. Are familiar brands viewed more positively (RQ2a)?
4. Does brand familiarity then moderate product touch effects on consumer response (RQ2b)?
5. How does this moderation effect differ by individual NFT (RQ2c)?
6. Is the effect of product touch on consumer response to unfamiliar branded products mediated by psychological ownership (RQ3a)?
7. Is the effect of product touch on consumer response to unfamiliar branded products mediated by affective reaction (RQ3b)?
8. Does product touch have an effect on consumer response to luxury branded products (RQ4a)?
9. How does the effect of touch (for luxury branded products) differ by individual NFT (RQ4b)?
10. Does brand status moderate product touch effects (RQ4c)?
11. Does this brand status moderation differ by NFT (RQ4d)?
12. Is the effect of touch on consumer response to luxury branded products mediated by psychological ownership (RQ4e)?
13. Is the effect of touch on consumer response to luxury branded products mediated by affective reaction (RQ4f)?

1.6 RESEARCH SIGNIFICANCE AND CONTRIBUTIONS

Early language discipline recognized the significance of touch through its metaphorical reference in language expressions such as ‘a touchy story’, ‘a heavy heart’ or ‘a rough exterior’ language discourse for example (Montagu, 1986). Recent adoption of this tactile language in branding (e.g., the iPod *Touch*) and marketing (e.g., Trident *Soft* chewing gum) indicates an increasing awareness of touch’s potential in the marketing domain (Spence & Gallace, 2011). In striving to outdo competition, the success of a

brand will be hinged on its ability to deliver emotions to connect with consumers in an affective way (Sundar & Noseworthy, 2016a) and non-verbal cues (e.g., touch) provide a means to achieve this emotional connection (Grimes & Doole, 1998). Application of touch-related sensory marketing by large multinational brands such as Coca Cola (hug machines) and iMax (immersive cinematic experiences) are examples of the growing recognition of touch's influence. Emerging research suggests *'We're about to enter an era in which many more consumer product companies will take advantage of sense-based marketing'* (Harvard Business Review, 2015).

As mentioned earlier, in this day and age it is highly likely that every single product we come across is branded and so to some extent brands guide our purchase choices and decisions. In the 1970s the average shopper spent under half an hour on a typical shopping trip to the supermarket within which they would have selected approximately 14 items from a range of 6,300 on display (Sacharow, 1970). Two decades later this range of items increased to 17,000-20,000 items despite shopping duration remaining the same (Robinson, 1998). In 2017, one would imagine this number to be significantly higher. Brand names and touching behaviour are thus an integral part of the consumer shopping experience and examining their dual impact on consumer response is critical in designing shopping experiences that will have the greatest positive impact on the bottom line: increased sales and customer loyalty.

In spite of additional calls for research and evidence of touch's increasing use by renowned brands (Apple, Coca Cola), the impact of product touch and brand on consumers has not been extensively explored in the literature. This makes my research project all the more significant as it aims to build upon existing touch literature by incorporating a manipulation of brand (moderation of brand). Moderation occurs when

a relationship holds for some but not other categories of a sample (Bryman & Cramer, 1999) and its examination enables research to steer clear of conjecturing that a set of findings applies to a sample as a whole, when it actually only truly applies to a section of that sample (Baron & Kenny, 1986; Bryman & Cramer, 1999). The research results provide a number of theoretical contributions to knowledge and practical implications.

1.6.1 Theoretical contributions

‘Conceptual advances are critical to the vitality of the marketing discipline’
(MacInnis, 2011; p. 136).

A review article in the Journal of Marketing notes that empirical and methodological advances have overtaken conceptual advances in the marketing field (MacInnis, 2011). This is despite recognition of, and subsequently calls for, conceptual research (MacInnis, 2011). Consequently, research making conceptual advances is valued for its contribution to new ideas through examining previously unexplored areas and my research therefore makes a novice contribution to knowledge by conceptualizing previously unexplored relationships between product touch and brand familiarity, and product touch and brand status. Contributions are made to the aforementioned streams of literature, as well as literature on luxury brands, sensory marketing, product knowledge and contagion theory in the following ways:

- 1. Contribution to brand familiarity literature** - Extensive research has demonstrated the influence of brand familiarity on how consumers process information and consequently behave (e.g., Baker, Hutchinson, Moore, & Nedungadi, 1986; Biswas, 1992; Campbell & Keller, 2003; Ha & Perks, 2005; Hoyer & Brown, 1990; Kent & Allen, 1994; Laroche, Kim, & Zhou, 1996;

Machleit, Allen, Madden, & Machleit, 1993; Park & Lessig, 1981; Park & Stoel, 2005; Raju, 1977; Sundaram & Webster, 1999). Enriching this literature, this research project contributes by being one of the few presenting findings implying that there may be instances where the familiarity of a brand may not work in its favour, contrary to the majority of existing literature that shows its influence to be positive. Furthermore, it extends brand familiarity literature to product touch literature and finds that it has no significant moderation effect.

2. **Contribution to luxury brand literature** - My research advances brand luxury literature by extending the concept of luxury brand status to the area of sensory marketing and provides evidence of its influence on product touch effects. By doing so, advances understanding of luxury brand evaluation and information processing, both of which areas where additional research and comprehension is required (Patrick & Hagtvedt, 2014).
3. **Contribution to sensory marketing literature** – With existing literature primarily focussing on product touch direct effects and categorization of these effects by product (e.g., McCabe & Nowlis, 2003; Peck & Childers, 2006; Grohmann et al., 2007; Peck & Wiggins, 2006; Peck & Childers, 2003b; Peck & Shu, 2009; Peck & Shu, 2009; Krishna & Morrin, 2008), my research takes an innovative view by defining boundary conditions (brand familiarity and brand status) for touch's effect beyond simply product categorization. It extends the current and notably under-researched area of product touch (Krishna, 2012; Peck & Childers, 2005) and answers several calls for research to investigate the interaction of touch and brand name (Grohmann et al., 2007; Jansson-Boyd, 2011; Peck & Childers, 2003a; Peck, 2010). As such it is one of the first studies to demonstrate touch's effects from a

brand perspective. Additionally, the application and effects of need for touch is still in its infancy (Nuszbaum, Voss, Klauer, & Betsch, 2010; Vieira, 2012). Accordingly, this research project makes novel contributions to existing NFT literature by identifying brand related contexts in which its effects still apply (brand familiarity) and where surprisingly they do not (brand status).

4. **Contribution to product knowledge literature** - This research project answers McCabe & Nowlis' (2003) proposition that higher (as opposed to lower) product knowledge could reduce the likelihood that touch was influential in decision making. It is one of the first studies to examine the well-established concept of product knowledge in the emerging field of sensory marketing by showing that it does not (where non-luxury brands are concerned). Interestingly however, the research provides marginal support for its interactive effect with touch and brand familiarity on willingness to pay.
5. **Contagion theory literature** – According to Rozin & Nemeroff (1990) contagion theory states that when an individual or object (i.e. the source) directly or indirectly comes into contact with another person or object (i.e. the target), properties from the source are believed to be transferred to the target. Contagion theory in touch literature has been examined from the perspectives of products ‘contaminating’ other products (Morales & Fitzsimons, 2007), consumers negatively contaminating products (Argo et al. 2006) and consumers positively contaminating products (Argo, Dahl, & Morales, 2008). It has been suggested that certain brand types may evoke positive feelings or associations that could then drive positive contagion effects (Argo et al., 2008). As such, this research project contributes to knowledge by extending the theory of contagion to the concept of luxury brands, which to my

knowledge has not been examined until now, and finds marginal support for a brand contagion effect where a luxury branded product is concerned. A further contribution made is that, in the context of luxury brands, this brand contagion effect is activated through product touch.

All the aforementioned contributions therefore add to knowledge in the following streams of literature; sensory marketing (specifically product touch), brand literature (brand familiarity and luxury brand literature), product knowledge and contagion theory. Given the scant research in sensory marketing especially where product touch is concerned, the experiments explored territory that was previously unexplored and it is my belief that the findings have moved one step further on the journey to better understand this emergent area by providing comprehensive conceptualization, methodology and results that future researchers can build upon.

1.6.2 Practical implications

The results of this research provide managerial implications for marketers and retailers in terms of marketing strategies at different levels of the product life cycle (where familiarity differs), brand extension strategies (where familiarity and brand status may differ) and, most crucially, design of in-store layout and product displays (based upon insights from how consumers choose to interact with/touch products from specific types of brands). Consumers are exposed to extrinsic cues (e.g., brand names) during the pre-purchase stage and examining these in addition to touch effects provides a more realistic depiction of an actual purchase situation. By understanding the relationships between product touch, brand familiarity and brand status, marketers can better recognize how to manipulate or arrange retail environments to achieve desired

outcomes. Managerially, this research project provides marketing and retailing managers with insight into the following:

- Touch is not found to play a critical role in influencing consumer response to products from unfamiliar non-luxury brands, therefore retailers from such brands can afford to have online store presence without negatively impacting their brand, and perhaps focus on other factors such as price discounts to drive sales. However, findings also show that when consumers possess relatively low product knowledge of the products on offer, touch then has a significant positive influence on their willingness to pay for them. In such cases therefore, it could be beneficial for retailers from unfamiliar brands with less known products to avail their products to consumers in a physical setting. This physical setting may not necessarily have to be a permanent store, but could instead initially adopt the more economical marketing strategy of setting up a ‘pop up’ store. Pop up stores are temporary retail structures that utilize physical retail space to sell products, communicate brand values and create an immersive shopping experience for customers (Shopify, 2017). With the pop-up industry valued at \$50 billion in 2016³ (Milnes, 2017), pop up stores appear to be an attractive opportunity. Alternatively, retailers may consider providing detailed information about their products advertisements for example, in order to negate the negative effects of not being able to touch such products.
- Physical stores are the most critical points of contact with luxury consumers who are heavily influenced by what they see and experience in-store (Remy, Catena, & Durand-Servoingt, 2015). The findings reinforce this and may help explain why consumers prefer to go in-store to buy a luxury branded product compared to purchasing online. Luxury retailers tend to control customer contact with products in a store to preserve the integrity of the products and perhaps uphold an image or

³ According to PopUp Republic (PUR), the leading end-to-end service provider for the pop-up industry.

sense of exclusivity. Although this rationale seems reasonable, this research proposes that it may be more beneficial for a luxury brand to allow consumers to touch their products instore as this may increase their product evaluations. Furthermore, purchase intentions may increase as a result of this touching. Overall, consumer product touch seems advantageous to luxury brand retailers.

- As my research project finds, touching can improve consumer evaluations of luxury branded products therefore reaffirming the need for luxury brand retailers to adopt and further develop an experience based marketing strategy, as a way to drive more luxury consumer traffic to their stores.

1.7 METHOD AND ANALYSIS

Manipulation of product touch and brand variables required stringent control measures to counter any external variables that could have affected or explained observed effects, separate from effects generated from this manipulation. The research method employed in this thesis was experiments, which enabled manipulation of touch (the independent variable) to form comparable groups (a control group-no touch and an experimental group-touch), brand familiarity (familiar, unfamiliar) and brand status (luxury, non-luxury). This also followed the precedent of previous research on the study of touch in the marketing literature (Argo, Dahl, & Morales, 2006, 2008; Grohmann, Spangenberg, & Sprott, 2007; Klatzky & Peck, 2012; Peck, Barger, & Webb, 2013; Peck & Shu, 2009).

To test the conceptual framework, two studies were designed, the main purpose of Study 1 being to examine brand familiarity moderation and, in Study 2, touch effects on luxury branded products (see Section 1.5.2 for the detailed research questions). Furthermore, additional analyses were carried out to empirically test for a brand status

moderation effect. To increase the likelihood that as many nuisance variables⁴, participant-related variables and environmental (experimental environment) variables were controlled for in the experimental procedure, two methods were used: control by design; and control by randomization (Keppel & Wickens, 2004). Measurement reliability was confirmed using Cronbach's Alpha and the hypotheses were tested using a series of ANCOVA's with SPSS 21 software.

1.8 RESEARCH ETHICS

The research involved human subjects therefore ethical approval was sought and granted from the Kent Business School Ethics Approval Board (see Appendix 2). Additionally, verbal and written instructions were given to all participants, emphasizing what was expected of them in the experiments, and an informed consent form presented for their signature prior to commencement of each experiment (see Appendix 8).

1.9 THESIS STRUCTURE

This thesis is comprised of seven chapters; a summary of each is provided below.

Chapter 1 – Introduction

Chapter 1 begins with an overview of the extant academic literature and practice of sensory marketing, in addition to product touch research and practice. The chapter then presents the identified research gaps, research objectives and questions, research significance and contributions, the method and analyses used and the ethics adhered to. Lastly, the structure of the thesis is provided together with a brief summary of each chapter.

⁴ 'Factors that may influence the value of the dependent variable other than the treatment of interest' (Keppel and Wickens, 2004, p. 6).

Chapter 2 – Literature Review

Chapter 2 presents a comprehensive review of the key literature in the areas of touch, brand familiarity and brand status for the purpose of highlighting the current gaps in the literature and therefore present the justification for this research project.

Chapter 3 – Conceptualization: The effect of touch on consumer response and the moderating effects of NFT, brand familiarity and brand status

Chapter 3 provides the theoretical and conceptual rationale used to answer the research questions presented in Section 1.5.2. Specifically, it presents the research questions, theoretical background of the proposed conceptual framework, description of model constructs and proposed relationships (between the constructs) in the model. The proposed conceptual framework captures the key independent variable of touch and dependent variables (product evaluation, purchase intention, confidence in judgment and willingness to pay) in addition to the moderating variables of need for touch, brand familiarity and brand status. Lastly, the underlying mechanism between the independent and dependent variables which are psychological ownership (cognition) and affective reaction (affect) are discussed.

Chapter 4 – Research Methodology

Chapter 4 reports the set of procedures followed and method employed to examine the proposed relationships. A detailed discussion of the research approach, sampling method, participant assignment, questionnaire design, reliability of measures, validity of measures and research design, measures, stimuli/product selection, brand selection, pilot study, main study design, manipulations, additional analysis and ethics adhered to during the research.

Chapter 5 – Study 1 (Effect of touch, NFT Moderation, Brand Familiarity Moderation and Psychological Ownership Mediation) Data Preparation, Analysis and Results

Chapter 5 begins with a discussion of the data preparation process, followed a description of respondents by demographic profile, the scale reliability test results, data analysis and empirical results and concludes with a summary of the Chapter. Study 1 sought to answer research questions 1 to 7. To achieve this, analyses were run to examine the effect of touch on consumer response (H1a), the moderating effect of need for touch (H1b), the direct effect of brand familiarity on consumers' response (H2a), the moderating effect of brand familiarity (H2b) and how brand familiarity moderation differed by need for touch (H2c). Furthermore, the results of supplementary analyses carried out by the researcher which examined the relationship between touch, brand familiarity and product knowledge is presented. Based on results of H2b, it was not necessary to conduct the mediation analyses (psychological ownership (H3a) and affective reaction (H3b)). Rationale for this decision is presented in section 5.5.6 and thereafter a summary of the chapter is provided.

Chapter 6 – Study 2 (Brand Status) Data Preparation and Analysis

Study 2 was designed to address research questions 8 to 13. It did this by replicating Study 1 and examining touch effects on the same relationships (consumer response variables) within the context of a familiar luxury brand (Chanel). Building upon the significant and insignificant findings of Study 1, Study 2 examines touch effects for a different brand category; *a luxury brand* and primarily examines the influence of touch on consumer response to luxury branded products (H4a), how this differs by need for touch (H4b), if brand status moderates the effect of touch (H4c), if touch, brand status and NFT interact to influence consumer response (H4d) and what underlying

mechanism could explain touch effects for luxury brands (psychological ownership (H4e) or affective reaction (H4f).

Chapter 7 – Discussion and Contribution, Conclusion, Limitation and Directions for Future Research

Chapter 7 discusses the research findings and concludes the thesis by presenting a brief recap of the overarching purpose of this research project, an overview of the proposed research hypotheses, followed by a discussion of the results. Results from both Study 1 and 2 presented some expected and unexpected results and a detailed discussion of the findings and speculations surrounding this is then provided. Additionally, this chapter highlights the key theoretical contributions of this research, consequent practical implications, the limitations of the research and the recommendations for future research. The chapter then ends with a conclusion and chapter summary.

1.10 CHAPTER SUMMARY

The overarching message conveyed in Chapter 1 is that there is still much to be done in the emergent field of sensory marketing. This research project endeavours to contribute to this field through the sense of touch (specifically product touch); examining not only its immediate effects on consumers but its interaction with relatively better established brand concepts. Chapter 1 further served to provide the context, rationale and overall structure guiding the presentation of information and discussion of this project henceforth. A detailed review of touch, brand familiarity and brand status literature is now discussed in Chapter 2.

CHAPTER 2: Literature Review

2.1 INTRODUCTION

Chapter 2 presents a comprehensive review of the key literature in the areas of touch, brand familiarity and brand status for the purpose of highlighting the current gaps in the literature and therefore present the justification for this research project.

2.2 TOUCH LITERATURE

2.2.1 The Sense of Touch

The sole reliance on vision can often lead to misperceptions of space, volume, direction and even distance (Krishna, 2012). On the contrary, touch's ability to help minimize these misperceptions has led scientists to refer to it as the '*reality sense*' (Heller & Clark, 2008). Indeed the great philosopher Aristotle apparently believed touch to be a mediator of how all the senses are perceived (Siegel, 1970).

2.2.2 Definition and significance of touch

Touch is the first sense to develop in infants and therefore from an early age informs how we make sense of the world (Atkinson & Braddick, 1982; Miodownik, 2005). Stevens & Green (1996, p. 1) define touch as the '*sensations aroused through the stimulation of receptors in the skin*', which implies that touch can be experienced through all parts of the body. Marketing research on touch however has been predominantly based on touch via the hands, also known as the *haptic system*. The *haptic system* specifically refers to the discrete system involved in the seeking and extraction of information by the hands (Gibson, 1962) and when this system is activated through touch via hands, it encodes material properties of objects related to texture, hardness, temperature and weight (Klatzky, Lederman, & Matula, 1993; Lederman & Klatzky, 1987).

So proficient is this haptic system that the hands have been referred to as an individual's 'outer brain' and the 'intelligent hand' (Lederman & Klatzky, 1987). Some argue it could be the most significant sense for providing a framework for future comprehension (Ackerman et al., 2010) as hands are incessantly used to obtain information regarding our surroundings from birth (Piaget, 1952). This is because such initial sensorimotor occurrences shape a support structure for the development of conceptual knowledge which can then be drawn upon at a later stage (Mandler, 1992). This knowledge then subconsciously impacts judgment and behaviour later in life (Huang et al., 2014; Williams, Huang, & Bargh, 2009). For example, touching at an early age equips a child with knowledge and skills that they draw upon in the course of their lives, such as identifying things through their sense of touch (e.g., sand) or knowing what not to touch (e.g., hot surfaces or fire).

2.2.3 Operationalization of Touch

The literature reveals that touch has been described and measured in diverse ways and, hence, operationalized differently. These can be classified into: haptic feedback in relation to products' attributes (weight, texture, firmness, weight); and/or a direct act of touching (having the opportunity to touch a product or item). For example, Peck & Wiggins (2006) refer to touch as texture valence, where haptic feedback is favourable (soft) or unfavourable (rough). Several product attributes can be studied at once such as in Langner, Fischer, & Brune's (2013) study which looked at weight and texture. Their study examined how haptic sensations from the texture and weight of a print advertisement's paper altered product judgments of an advertised running shoe. Touch can also be examined from an opportunity to touch perspective. Hornik & Ellis (1988) examine how touching or not touching customers on the arm during a mall intercept affected their compliance to participate in an interview. A similar approach to touch

was used for studies in a bookstore (Hornik, 1991, 1992) and restaurant setting (Crusco & Wetzel, 1984; Hornik, 1992) where interpersonal touch effect was the main research focus. From a consumer to product perspective, a number of researchers have taken this direct physical product contact angle in their research. For example, although not measuring this in a physical experiment, McCabe & Nowlis (2003) assess consumer perceptions of products they would or would not need to touch during product evaluation when making purchase decisions. Their intention in effect was measuring how the opportunity to touch products affected shopping channel choice (online versus actual store). Grohmann, Spangenberg, & Sprott (2007) use the term tactile input (where this tactile input was diagnostic of product quality) and operationalize it as either being able to touch or not touch a product. Haptic stimuli cues are diagnostic when they provide impartial information directly relevant to product judgment while cues that are not tangibly pertinent to judgment or do not provide attribute information about a product are non-diagnostic (Jin & Phua, 2015).

Similarly, Peck & Childers (2003b) consider touch as direct product experience when classifying individuals with a high or low need for touch. Peck & Shu (2009) use both opportunity to touch and touch based on texture in their study. Their core focus however was in the manipulation of the opportunity to touch, essentially touch or no touch. However, when products were physically present, they considered a no touch condition as a participant touching the packaging within which the item (a metal slinky) was placed. However, research shows that tactile feedback from packaging has an effect on consumers, for example, Keif, Twomey, & Stoneman (2015) determine that consumers prefer textured packaging (soft touch and high rise designs) over no tactile coated packaging and are even willing to pay more for the product in the soft touch tactile packaging. Clearly packaging can play as much of a significant role in

consumer response as touching the actual product does. For this reason, in addition to actual products being used in the no touch condition of this study, no packaging was used. Instead, physical contact with the product was instructionally restricted. The differing perspectives of touch examination in prior literature affirm the need to define what perspective is under examination as well as how it is operationalized. As such, in this research project touch is examined from an opportunity (or lack thereof) to touch a product as opposed to operationalizing and measuring the touch manipulation based on product weight or temperature for example.

2.2.4 Touch and consumer behaviour

It is evident that touch studies in consumer behaviour literature fall into one of two categories: passive touch and active touch. According to Gibson (1962), passive touch happens to the perceiver (being touched) while active touch is initiated by the perceiver (touching something/someone). Effectively, in passive touch the '*impression on the skin is brought about by some outside agency*' while in active touch by 'the perceiver himself' (Gibson, 1962, p. 477). Although the passive touch concept initially introduced the area of touch to marketing literature led by the work of Hornik (1992) on interpersonal touch (person to person), active touch (e.g., product touch) has and is dominating research in this field. How each type of touch is measured varies as the concepts of interpersonal and product touch are theoretically distinct (Webb & Peck, 2015). It is therefore important to specify that the type of touch examined in this study pertains to active touch via the haptic system (hands). Both passive and active touch is elaborated upon further below.

2.2.4.1 Passive touch in a retail environment

Consumer behaviour studies have examined passive touch from the perspective of interpersonal touch. Interpersonal touch has the capacity to induce positive reactions such as sampling a product in-store or purchasing a new product (Hornik, 1992), higher restaurant tipping (Crusco & Wetzel, 1984; Stephen & Zweigenhaft, 1986), new product purchasing (Hornik, 1992), taking part in a mall-intercept interview (Hornik & Ellis, 1988) and a salesperson's touch increases trust thus increasing product evaluations and purchase intention (Orth, Bouzdine-Chameeva, & Brand, 2013). Customers have been observed to significantly tip more when the waitress serving them touches their shoulder or hand, an effect that Crusco & Wetzel (1984) term the '*Midas Touch*.' Moreover, a field experiment by Hornik (1991) revealed that shoppers lightly touched on the upper arm as they entered a bookstore spent longer browsing in-store, bought more and had a greater general evaluation of the store. These studies suggest that interpersonal touch is indeed a powerful tool in significantly affecting consumer perception and behaviour as, when touched, positive feelings towards the toucher were formed (Fisher, Rytting, & Heslin, 1976; Patterson, Powell, & Lenihan, 1986), leading to an increase in closeness felt towards the other person (Anisfeld, Casper, Nozyce, & Cunningham, 1990).

Webb & Peck (2015) recognize that the bulk of empirical research on interpersonal touch in marketing focusses on the manipulation of receiving touch (from either a salesperson or another customer), but initiated interpersonal touch (active touch) receives less attention. Therefore, despite reported positive effects on compliance with various requests (section 2.2.4), Webb & Peck (2015) clarify that the valence (positive or negative) of this interpersonal touch effect is dependent on an individual's level of comfort with interpersonal touch (CIT). The researchers developed a CIT scale as a

means to assess this. The CIT scale is defined as the ‘*degree to which an individual is comfortable with intentional interpersonal touch from or to another person*’ (Webb & Peck, 2015, p. 60). The scale acknowledges that two levels of interpersonal touch exist, the comfort with the act of touching someone else and the act of being touched by someone else. An individual’s CIT therefore has the potential to affect their enjoyment and shopping behaviour. For example, those less comfortable with initiating and being touched are less likely to enjoy services that involve a lot of touching such as getting a haircut or a massage. Furthermore Webb & Peck (2015) establish that those comfortable with interpersonal touch have a higher likelihood of enjoying salesperson attention and a lower likelihood of avoiding crowded environments. It also appeared that women overall seem to be more comfortable with initiating touch than men.

2.2.4.2 Active touch in a retail environment

Existing touch research within the domain of marketing literature has provided vast insight into the influence of product touch on evaluation (Krishna & Morrin, 2008; Peck, Barger, & Webb, 2013; Peck & Childers, 2003a; Peck & Shu, 2009; Peck & Wiggins, 2006), willingness to pay (Peck & Shu, 2009), impulse purchasing (Peck & Childers, 2006) and confidence in judgment (Peck & Childers, 2003b). Furthermore, consumer evaluations can differ dependent on who (e.g., an attractive person or celebrity) or what (e.g., another product) has come into contact with the product before they do (Argo et al., 2006, 2008; Morales & Fitzsimons, 2007).

To highlight the intricacies of the touch concept, it is pertinent to discuss the different types of active product touch consumers engage in and what factors are found to influence its effects.

2.2.4.2.1 Classification of active touch

Consumers may wish to engage in product touch for *instrumental* or *hedonic* purposes (Peck, 2010). Instrumental touch is goal oriented and encompasses touch to purchase, touch to acquire non-haptic information (e.g., gauging the ripeness of a fruit by picking it up to smell it) and touch to obtain haptic information (e.g., picking up a laptop to gauge its weight hence portability) (Peck, 2010). Hedonic touch is merely touch for the sake of touching aimed at attaining a pleasant sensory experience and fun (Peck, 2010; Peck & Childers, 2003b). Hedonic touch stems from the need to seek fun, enjoyment and sensory arousal which is an emotive reaction derived from haptic feedback (unpleasant/pleasant) while instrumental touch on the other hand is motivated by a practical or functional necessity to comprehend product characteristics (e.g., weight, quality) in order to make an informed decision. The effect of this active touch is however dependent upon certain factors related to the individual, situation (context) and product (Peck, 2010) which are discussed in detail below.

2.2.5 Influential factors of touch effects

The three factors (individual, situation and product related) can work individually or in unison to influence judgment and behaviour, and the desire to understand how they interact is driving research in the area of product touch.

2.2.5.1 Individual factors

To date, two measures exist for segmenting individuals based on their necessity to touch: the need for tactile input and the need for touch.

2.2.5.1.1 Need for tactile input

Citrin, Stem, Spangenberg, & Clark (2003) found that the need for tactile input (NTI), defined as '*the desire or need for tactile input to make brand or product evaluations*' (p. 918), influenced shopping channel choice for certain individuals. They developed a six-item scale which was empirically tested on 272 undergraduate students, revealing that consumers with a high NTI prefer not to make online purchases for products high in tactility attributes (e.g., texture); and as such, individual NTI affects shopping channel choice (online vs in-store). Notably, the scale questions only captured instrumental touch motivations (e.g., I feel it necessary to touch a product in order to evaluate its physical characteristics) and none which was autotelic (e.g., touching for fun). Consequently a scale encompassing both instrumental (NTI) and autotelic dimensions of touch was later developed by Peck & Childers (2003b), labelled as the need for touch.

2.2.5.1.2 Need for touch

The need for touch is the '*preference for extraction and utilization of information obtained through the haptic system*' (Peck & Childers, 2003b, p. 431). Drawing on the rationale of Holbrook & Hirschman's (1982) classification of shoppers as either problem solvers or consumers seeking fun, and McClelland, Koestner, & Weinberger's (1989) dual motivation model stipulating that human motivation is either implicit or self-attributed, Peck & Childers (2003b) conceptualized NFT into two dimensions: *instrumental* and *autotelic*. Instrumental NFT is directed by an outcome goal of pre-purchase touch in relation to the product (e.g., assessing its quality) and/or the consumer (e.g., comfort with one's decisions). As such, focus is primarily on the haptic properties of a product that will aid in arriving at a decision, such as picking up an Apple MacBook laptop and gauging its portability as a result of assessing its weight.

Instrumental NFT is consistent with the consumer as a problem solver (Holbrook & Hirschman, 1982) motivated by explicit goals (self-attributed motivation) (McClelland et al., 1989).

Conversely, autotelic NFT relates to touch for the sake of touching. Fun, enjoyment and affect are derived from the sensory experience of touch with no specific goal in mind (Peck & Wiggins, 2006). Autotelic need for touch (touching for the sake of touching) is in effect associated with hedonic satisfaction which is a known motivator of most impulse purchasing behaviour (Ramanathan & Menon, 2002).

Overall, a high need for touch implies a preference for the haptic examination of products, either to make a decision or for fun. Those with a higher need for touch (greater motivation to examine a product's haptic properties) possess a higher accessibility to haptic information stored in memory than those low in need for touch (Peck & Childers, 2003b), when assessing products high in haptic attributes (e.g., texture of a piece of fabric, weight of a tennis racket). Prior research shows that this accessibility increases the chance that the information will be used in judgment formation (Lingle & Ostrom, 1979). NFT also moderates the effect of touch on product evaluations (Grohmann et al., 2007) and confidence in judgment such that individuals with a high need for touch are more confident in their judgment when they can touch products with high salient haptic attributes (e.g., a sweater) (Peck & Childers, 2003b). On the contrary given that those with a low need for touch are not as motivated to touch, they are less affected when they cannot touch a similar type of product are instead rely more on non-haptic cues. Interestingly, where touch provides non-haptic information about a product (e.g., holding a flimsy versus firm cup of water) those with a low need for touch (i.e., lower need for autotelic touch) are more likely to base their

product evaluation and willingness to pay on the actual product (water in the cup) while high NFT individuals are shown to be influenced by the firmness/flimsiness of the cup in their evaluations (Krishna & Morrin, 2008). Jin & Phua (2015) find that a computer user's autotelic need for touch influences their brand trust, brand excitement and brand placement awareness in haptic game advertisements. Comparing the two scales, the NTI does have a high convergence validity with the instrumental dimension of the NFT scale (Peck & Childers, 2003b) but, as previously mentioned, differs from the NFT scale due to its lack of the autotelic dimension.

Researchers have used the NFT scale in one of two ways. First, NFT can be used by taking a median split of the measure and classifying NFT as either high or low NFT. Second, NFT can be examined by looking at instrumental touch alone (use 6 items from the scale), autotelic touch alone (6 items), and examining results from an autotelic or instrumental dimension. In Chapter 2, instrumental and autotelic touch dimensions are discussed only to provide a comprehensive view of the history and components of the NFT scale. In my research however, the need for touch focus is on low versus high need for touch and how this high versus low affinity to touch products during evaluation influences touch effects for branded products. By doing so, results derived are comparable to aforementioned prior touch research that has taken the same approach.

2.2.5.2 Situational factors

Some retailers are prone to putting up 'do not touch' signs in stores. Varying situations hinder consumer ability to touch such as display cases (Peck & Childers, 2003a, 2003b), signage (Peck & Childers, 2006; Ramanathan & Menon, 2002) and webpages (Brasel & Gips, 2014; Grohmann et al., 2007). Although this is predominantly aimed at

maintaining the integrity of the products sold, research shows that not touching can actually hinder sales. In effect, the situational context essentially ‘primes’ the consumer’s response. Priming is the implicit memory effect in which exposure to one stimulus impacts a response to another stimulus (Meyer & Schvaneveldt, 1971) which then affects the decision-making process (Jacoby, 1983).

In their study, Peck & Childers (2006) effectively ‘primed’ shoppers using a ‘touch me’ sign encouraging consumers to ‘feel the freshness’ or by simply not placing any signage above a fruit product display. Shoppers were observed as they purchased nectarines and peaches, and those that purchased either one were stopped and asked to fill out a survey capturing their impulse purchase levels. Contact details were captured and a follow-up survey mailed to the same shoppers where demographic, autotelic need for touch, buying impulsiveness trait and normative evaluation of impulse purchase of the nectarines or peaches information was captured. The results revealed that the presence of the point of purchase sign encouraging touch (‘feel the freshness’) increased actual impulse purchase behaviour and thus highlighted the significance that environmental salience of touch has on influencing touch behaviour hence sales. Similar results were reported by Ramanathan & Menon (2002) where point of purchase signage increased impulse purchasing of displayed products for both impulsive and non-impulsive shoppers. These studies provide insight that ‘touch priming’ consumers in general can lead to greater unplanned purchases, not only for consumers with differing degrees of need to touch but differing degrees of impulsive buying traits, as what consumers report (‘I am not an impulsive shopper’) and what they do (engaging in actual impulsive behaviour) differs. Additionally, literature informs that providing or not providing accessibility to products during the pre-purchase stage has implications on the choices consumers make (McCabe & Nowlis, 2003), shopping channel

preferences (Citrin et al., 2003), product evaluations (Grohmann et al., 2007; Jansson-Boyd, 2011), impulse purchase behavior (Peck & Childers, 2006), willingness to pay (Peck & Shu, 2009) and feelings of product ownership (Brasel & Gips, 2014; Peck & Shu, 2009).

Along with individual and situational factors, product related factors have differing influences on touch's influence. Consumers prefer to buy products that vary in material properties (e.g., such as textiles and clothing) in person, compared to products such as books (McCabe & Nowlis, 2003). The key aspect to remember is that when the quality assessment and judgment of an item is based on its haptic features (texture, weight, temperature and firmness/softness), such as a jacket, for example (its texture can indicate quality), consumers feel more confident in making purchase decisions when they have the chance to haptically engage with the item first. Despite the current pattern of e-commerce⁵, given the choice, consumers prefer not to shop online for product categories where quality evaluation is discerned best via touch such as clothing (Citrin et al., 2003).

2.2.5.3 Product factors

Product tactile perception has been the predominant focus in prior academic literature. Tactile perception is defined as the '*extraction of material properties from stimuli, such as texture, that are distinct from geometrical properties, such as shape, that usually requires a more active interaction with the objects*' (Klatzky et al., 1993; Lederman & Klatzky, 2009). This implies that consumers prefer to evaluate material products haptically while vision may suffice for evaluating products with geometric properties. Material object properties are related to weight, temperature, firmness and texture

⁵ Online retail sales in Europe have increased by 18.4% from £132.05 billion in 2014 to £156.67 in 2015 (CRR, 2015)

while geometric object properties are related to size and shape (Klatzky et al., 1993). Vision is shown to be commensurate for evaluating products with geometric properties such as video cassettes (McCabe & Nowlis, 2003) or packaged fast moving consumer goods (FMCGs) such as cookie and soap boxes (Jansson-boyd & Marlow, 2011).

Conversely, evaluation of products that vary along the four material properties (texture, weight, firmness, temperature) warrants more touch behaviour investigation (Grohmann et al., 2007; Jansson-Boyd, 2011; Jansson-boyd & Marlow, 2011; McCabe & Nowlis, 2003). The opportunity to touch products increases consumer confidence in their evaluation decisions while not allowing product touch increases frustration, especially for those consumers that have a high need for touch (Peck & Childers, 2003b). We know that pleasant haptic sensations are preferred over unpleasant ones and the brain reacts differently to positive and negative haptic stimulation. Its orbitofrontal cortex section responds specifically to pleasant touch such as the feel of velvet on one's skin (Francis et al., 1999), having a greater positive effect on affect (emotion) and the monetary value that individuals attach to a product (Peck and Shu, 2009).

In Grohmann et al.'s (2007) study, participants evaluated one of three products (a headband, fleece and ball point pen) under one of three conditions (touch, no touch, product present online, product picture only). Overall, higher product evaluations emerged for products that were physically present as opposed to remotely (virtually) present. Additionally, haptically examining a high touch diagnostic product such as a pillowcase (where texture is a key quality cue) allowed higher NFT individuals to discern its product quality therefore increasing their evaluation of it. This effect occurred as a result of their higher confidence in purchase decisions which acted as a

confirmatory mechanism affirming that a correct evaluation was made (Grohmann et al., 2007; Peck & Childers, 2003a). This behaviour is seen in everyday life, we pick up a piece of jewellery to assess its weight and feel and rub a towel in-store to assess its texture despite product information having been provided (on a website, in a brochure, a catalogue or on the product display in-store).

Grohmann et al.'s (2007) study provides the first empirical support that touch is only significant for those with a high NFT when they evaluate a high (versus low) quality product, as it allows them to '*better discriminate high quality levels, resulting in more favourable evaluations*' (p. 243). Conversely the effect of touch is indifferent for low quality products at both levels of NFT (high and low). Unable to establish an affective underlying mechanism (pleasure or arousal) to explain their findings, the researchers proposed that an information processing mechanism may provide the answer. Collectively, McCabe & Nowlis (2003) and Grohmann et al. (2007) highlight the significance of product touch for products providing haptic diagnostic information (material properties). For fast moving consumer goods with geometric properties (shapes) such as boxes, visual information suffices (Marlow & Jansson-Boyd, 2011). Alternatively for some, visual inspection acts as a precursor to touch. Surface properties (texture) more so than object shape are powerful generators of motivation to touch, specifically encouraging the exploratory action of stroking (Klatzky & Peck, 2012).

The *visual preview model* suggests that when looking at an item provides some indicative information regarding its haptically obtainable properties deemed satisfactory enough to arrive at a decision, the item will not be touched (Klatzky et al., 1993). As such, exploration via touch is prompted when current visual information as

well as that retrieved from memory regarding an object is inadequate at that present time (Klatzky et al., 1993). A TV remote control, for example, possesses haptically related features best explored via touch (e.g., its weight, comfort and fit to one's hand and ease of pushing buttons) thus visual preview would spur instrumental touch to determine its quality and fit for the individual choosing to purchase it.

The majority of the products we buy come in packaging and haptic differences in product packaging affect perceptions of the product itself. Keif et al. (2015) report that when fictional cosmetic packages with various coating effects (no effect, soft touch and high rise) were shown to participants, preference for cosmetic packaging with soft touch coating and high rise coating, over the packaging with no coating was shown. Specifically, willingness to pay a premium for the cosmetics in soft touch packaging was reported. These findings are similar to Klatzky & Peck (2012) who found that products (in their particular study, perfume bottles that were presented pictorially) with smooth textured surfaces (as opposed to rough or bumpy ones) are perceived as more expensive. Smooth pleasant surfaces have an overall positive influence on people. For example, touching a pleasantly textured surface (e.g., a smooth leaf) on a donation appeal card (where touch was incongruent to the functionality of the card itself) increases the message persuasiveness of a communication appeal therefore making respondents want to donate more (Peck & Wiggins, 2006).

The visual aspects of a product drawing consumers to want to touch it were unknown until recently when the concept of '*touch-ability*', referring to the affinity of the visual preview of an object to invite touch for hedonic purposes (Klatzky & Peck, 2012) was introduced. Touchability, attractiveness and perceived price vary with object shape and texture; specifically, smooth (glass-like) versus coarse (concrete-like) textures are more

appealing to touch, and glass objects with simple and smooth textures appear more expensive and attractive. Additionally, simpler textures and shapes induce the inclination to 'grasp' objects while more complex shapes and textures induce a 'stroking' action.

Tactile signals can subconsciously impact judgments of abstract objects or people not related to the tactile experience itself (Meyers-Levy, Zhu, & Jiang, 2010; Williams & Bargh, 2008; Zwebner, Lee, & Goldenberg, 2014). Beyond product perceptions, recent research reveals that surface haptic sensations subconsciously influence how individuals perceive others. In Williams & Bargh's (2008) experiment, participants who signed up for a study were met one at a time by an experimenter at the building foyer. In the elevator on the way to the study room the participant was asked to hold the experimenter's cup of coffee while he attended to another matter (in all instances the coffee was either hot or cold). Once in the study room participants were asked to gauge the personality of a given individual and, surprisingly, those who had held the hot cup gauged the person as being more caring and generous (warmer) and they themselves (the participants) were more likely to buy a gift for someone else as opposed to themselves (the warmth made them feel more generous). In Meyers-Levy et al.'s (2010) study, the bodily sensations (comfort vs. discomfort) elicited from tactile input (soft carpeted flooring vs. hard tile flooring) affected how consumers felt about the product they viewed, which was moderated by the distance of the product from the consumer. When distant from the product, visual inspection was impaired and mental representations formed were poor, thus facilitating their current bodily state or feeling to shape their product assessments which were favourable when experiencing comfort (soft floor) and unfavourable when experiencing discomfort (hard floor).

In both aforementioned studies the warmth from the cup and the firmness of the floor transferred to product and individual perceptions through the process of *embodied cognition*. Embodied cognition theory posits that cognition is grounded in bodily states (Barsalou, 2008; Glenberg, 1997; Malter, 1996). The study of sensory-related processes in embodied cognition has only recently begun to garner interest as highlighted in a recent special issue in the Journal of Consumer Psychology (Krishna & Schwarz, 2014). In regard to temperature, when exposed to ambient warm temperatures, consumers have a higher valuation of products (termed as the ‘*temperature premium effect*’) and perceive themselves as being physically closer to products (Zwebner et al., 2014). Ambient temperatures also positively influence conformity in judgment and decision-making (Huang et al., 2014).

2.2.6 Touch and the other senses (cross modal research)

The nature of the surface of a product affects perception in the other senses. Drinking water from a firm cup is perceived as tasting better than from a flimsy cup (Krishna & Morrin, 2008) and crisps in packaging that is difficult to open are believed to taste better (McDaniel & Baker, 1977). Spence & Gallace (2011) propose that this type of multimodal interaction where touch feedback is transferred to product perceptions is as a result of ‘*affective ventriloquism*.’ Affective ventriloquism suggests that ‘*hedonic attributes of a product perceived via one modality (e.g. touch) can “pull” (or bias) a person’s estimates of the quality and pleasantness of the product derived from other sensory modalities into alignment, and by so doing, modulate a person’s overall (multisensory) product experience*’ (Spence & Gallace, 2011, p. 267).

Haptic exposure also aids in visual recognition of a brand name. Streicher & Estes (2015) found that the effects of haptic priming to a particular brand facilitated

perceptual identification of the brand when visual stimulation was absent. Under the pretence of a judgment task, participants were blindfolded and asked to grasp Coca-Cola or Red Bull cans differing slightly in weight, after which the phrase 'Red Bull' was gradually presented on a computer screen and participants asked to identify the phrase as fast as possible. An alternative group that had not haptically examined the objects were exposed to the same computer display phrase and asked to identify the brand. Results revealed that those haptically primed identified 'Red Bull' significantly faster than those that were not. The majority of prior research indicates the positive effects of touch; however, under certain circumstances it can have negative effects. This is discussed next.

2.2.7 Negative effects of touch

Touch negatively influences consumer perception, judgment and behaviour through the processes of consumer contamination and product contagion. The law of contagion states that a source (object/individual) can influence a recipient (another object/individual) by touching it directly or indirectly (Rozin, Millman, & Nemeroff, 1986; Rozin & Nemeroff, 1990, 2002). When examined in a retail setting Argo et al. (2006) demonstrate this contagion effect through what they term as the process of 'consumer contamination.' When consumers receive contamination signs that there has been contact with a product from a source (e.g., time since contact and the number of contact persons), product evaluation, purchase likelihood and their willingness to pay for it declines. In these instances, disgust drove this negative effect.

Morales & Fitzsimons (2007) also identify disgust as the underlying mechanism driving consumer response to two products touching each other, through the process of 'product contagion.' When a disgusting product touches or comes into close contact

with the product of interest to the consumer, be it in a grocery cart or a shelf, it ‘transfers’ its unpleasantness, leading to a lower evaluation of that product. For example, if butter is placed next to healthy rice cakes, the latter is perceived as more fattening and less desirable (Morales & Fitzsimons, 2007). In summary, contagion theory within touch literature has focussed on person-to-product contagion and product-to-product contagion. It may not always be possible to touch products and in such instances other factors could be employed to compensate for it.

2.2.8 Identified compensatory factors for lack of product touch

Inability to touch adversely affects confidence in judgment, increases frustration, willingness to pay and product evaluations; all of which are crucial success factors for product sales (e.g., McCabe & Nowlis, 2003; Peck & Childers, 2006; Grohmann et al., 2007; Peck & Shu, 2009). Some research (Pincus & Waters, 1975; Sprott & Shimp, 2004; Wheatley, Chiu, & Goldman, 1981) lends support to the greater significance of intrinsic versus extrinsic product cues in product evaluation, when these intrinsic properties are diagnostic in nature. Intrinsic cues are features that are part of a physical product that cannot be altered without also altering the physical product itself, while extrinsic cues although related to a product are not physically part of it (Olson, 1977). Pincus & Waters (1975) found that a low priced pen was viewed as being higher in quality when unpackaged, allowing for its intrinsic cues to be accessible, than when it was presented in packaged form. On a similar note, Szybillo & Jacoby (1974) found that material differences in ladies’ nylon hosiery samples had a greater effect on quality ratings than did store image or price information. Sensory marketing suggests that product intrinsic indicators (physical product differences) relating to smell, taste, touch and sound are touted as being more significant than extrinsic cues such as price or brand name in perceived quality perception (Krishna, 2012).

Given that consumers vary in their level of need for touch (Peck & Childers, 2003b), researchers have additionally identified factors that may alleviate the negative effects of not touching, primarily for individuals with a high need for touch. Peck (2010) initially proposed (but did not empirically test) that written descriptions, pictorials, return policies and brand names could act as compensatory factors, therefore, decreasing the need for additional information retrieval via touch. Indeed, the results of McCabe & Nowlis's (2003) study found that the preference for touching products varying in material properties (e.g., texture) is lessened when written descriptions are provided. But, as Peck & Childers (2003a) reveal, this is only true when these descriptions provide information that is instrumental (e.g., weight) rather than hedonic in nature (e.g., softness of a sweater). Although researchers acknowledge that purchase intentions and attitudes are more negatively influenced by the inability to touch than the inability to see a product (Balaji et al., 2011), price promotions are shown to compensate for a lack of touch for high NFT individuals (resulting in greater purchase intentions and confidence in judgment) (Yazdanparast & Spears, 2013). As such, high NFT individuals are more likely to purchase online when price promotions are running (Yazdanparast & Spears, 2013).

2.2.9 Touch literature research gap

The field of sensory marketing is broad, with an unlimited number of sensory combinations that could be examined. However, the scope of this research project was limited to the sense of touch. To date, research has provided valuable insights regarding product attributes emboldening touch (Grohmann, Spangenberg, & Sprott, 2007; McCabe & Nowlis, 2003), individual variances in the need for touch (Citrin et al., 2003; Peck & Childers, 2003a, 2003b), situational motivators of touch (Peck & Childers, 2008; Peck & Shu, 2009; Peck & Wiggins, 2006) and the effects of

interpersonal touch (Crusco & Wetzel, 1984; Erceau & Guéguen, 2007; Hertenstein, Keltner, App, Bulleit, & Jaskolka, 2006; Hornik, 1992; Webb & Peck, 2015). But, it is also noted that the bulk of current touch research in marketing is primarily focused on product aspects, despite awareness that consumers are also faced with extrinsic cues when making purchase decisions. From a practical perspective, consumers are exposed to extrinsic cues during the pre-purchase stage and examining these in addition to touch effects should provide a more realistic depiction of an actual purchase situation.

Researchers (e.g., Grohmann et al., 2007) acknowledge that although we know that touch influences consumer decision-making and evaluations, there remains a need to understand how additional cues such as brand moderate this effect. Likewise, Peck & Childers (2003b) propose brand may signal both high and low need for touch consumers to forgo product touch during evaluation. Touch is identified as a key tool for the evaluation of various types of goods (Grohmann et al., 2007; Schifferstein, 2006), however, consumers are scarcely faced by purchase situations where brand names are absent (Raju, 1977). These brands often provide cues for product perception and ultimately purchase decisions (e.g., Richardson et al., 1994; Teas & Agarwal, 2000). To date, notwithstanding these and other propositions from scholars (Peck & Childers, 2003b; Peck, 2010), and the fact that brand is a significant influencer of consumer decision-making, brand has not been empirically examined in the context of touch (direct experience with a product). The research project aims to fill this gap and advance current knowledge by incorporating the concepts of brand familiarity and brand status in the examination of product touch effects on consumer behaviour (a detailed discussion is provided in section 2.3 below).

2.3 BRAND LITERATURE

As noted above, touch literature to date is limited by its predominant focus on product related attributes. Brand name is an innate product characteristic and is considered a significant factor influencing consumer perceptions, which is often a prime cue in making purchase decisions (Low & Fullerton, 1994). Indeed, there are many brand related variables that could have been included in the conceptual framework of this research project, but brand familiarity and brand status were selected for moderation of touch effects.

The reason for brand familiarity selection is that it is one of the most highly researched brand related variables in marketing literature, due to its ability to influence advertising recall and effectiveness (Campbell & Keller, 2003; Kent & Allen, 1994; Machleit et al., 1993), information search (Biswas, 1992), product choice (Raju, 1977), advertising message processing (Kent & Allen, 1994) and brand choice (Hoyer & Brown, 1990). Indeed, one of the most common scenarios that a consumer is faced with irrespective of product category is whether a brand they encounter is familiar or unfamiliar. With higher brand familiarity, brand related experiences and knowledge of that brand are generated (Alba & Hutchinson, 1987) which accelerates decision-making for the most part in favor of the familiar (versus unfamiliar) brand. Given the varied consumer responses based on brand familiarity it is possible to surmise that brand familiarity would play a critical role in influencing how consumers' process and respond to product touch.

Another classification or category that brands fall into is luxury or non-luxury. Consumers often use brand names as extrinsic cues to infer or uphold quality perceptions (Richardson et al., 1994), such as with brands like Gucci and Armani for

example that are resonant with perceptions of exclusivity, superior quality and higher sometimes exorbitant pricing. The reason for brand status (luxury versus non-luxury brands) selection is that there is need for research regarding the evaluation of luxury brands and processing of luxury brand information (Patrick & Hagtvedt, 2014) and few studies explore consumer experiences in the context of luxury brands (e.g., Atwal & Williams, 2009; Berthon, Pierre, Pitt, & Parent, 2009; Tynan, McKechnie, & Chhuon, 2009). Furthermore, research on luxury brands is limited to a large extent by a focus on definitions and conceptualizations of luxury brands and stress, and theoretically driven academic research on the relationship between such brands and product touch has not been carried out. Overall, it is therefore unknown what role brand plays in the relationship between tactile input and product evaluations (Marlow & Jansson-Boyd, 2011; Grohmann, Spangenberg, & Sprott, 2007) and exploration of this effect from an academic perspective will prove useful to advancing luxury branding literature. A detailed discussion of brand familiarity and brand status is presented next.

2.3.1 Brand familiarity

Practitioners and scholars have long acknowledged the significance of familiarity in consumer information processing and decision-making (Johnson & Russo, 1984; Park & Lessig, 1981; Rao & Monroe, 1988) both from a product and brand-based view. There is extensive empirical research on product familiarity with the general consensus held that as product familiarity increases so does consumer expertise in executing product related tasks (Alba & Hutchinson, 1987; Fiske & Taylor, 1991; Park & Lessig, 1981; Raju, 1977; Rao & Monroe, 1988; Sujan, 1985).

Baker, Hutchinson, Moore, & Nedungadi (1986, p. 637) define brand familiarity as a *‘unidimensional construct directly related to the amount of time that has been spent*

processing information about the brand, regardless of the type or content of the processing that was involved.' Baker et al. (1986) view brand familiarity as the most basic form of consumer knowledge, consistent with Johnson & Russo's (1984) and Alba & Hutchinson's (1987) view that familiarity is a facet of consumer knowledge. Baker et al. (1986), however, acknowledge that their uni-dimensional definition was very basic and context-independent and made under the assumption that brand familiarity has the same effect on purchase behaviour, advertising exposure and product usage.

Alba & Hutchinson (1987) instead propose a multidimensional view of consumer knowledge that distinguishes two categories: *familiarity* and *expertise*. Expertise is the '*ability to perform product related tasks successfully*' while familiarity refers to '*the number of product related experiences that have been accumulated by the consumer*' (Alba & Hutchinson, 1987, p. 411). As the focus of this research project is based on brand and not product related tasks, the category of interest is familiarity (of a brand) and therefore expertise will not be discussed further.

Brand familiarity represents a consumer's degree of direct and indirect experiences with a brand (Alba & Hutchinson, 1987; Kent & Allen, 1994). These experiences may arise from past decision-making, salesperson interaction, advertising exposure, information search or word of mouth (e.g., hearing a friend talking about a brand they use). The totality of experience contributes to building a high degree of brand knowledge (Campbell & Keller, 2003) which is stored in the memory as a schema. A schema is a unit of knowledge in the memory that additionally contains information regarding how this knowledge is to be used (Bartlett, 1932) that is, in turn, activated through cues such as words, symbols or images for example (Warlaumont, 1997) that

appear to match the schema. Schemas can also be considered as the group of associations or associative networks linked to an object or person (Hoyer, MacInnis, & Pieters, 2012) and can exist for anything from people (e.g., celebrities' association with style), companies (e.g., Apple's association with innovation) to places (e.g., Disneyland's association with wholesome family entertainment) (Hoyer & MacInnis, 2008). Thus, encompassing these experiences the working definition of brand familiarity adopted in this study is derived from Alba & Hutchinson (1987) as adapted by Tam (2008; p. 4) where it is defined as the '*accrued related experiences that customers have had with a brand.*'

Brand knowledge structures (or brand schema) for familiar brands tend to be stronger and more easily available while more restricted and weaker for unfamiliar brands (Campbell & Keller, 2003). The existence of a well-developed brand schema for familiar brands and the subsequent ease of storage and accessibility means that consumers require less effort in processing information concerning familiar brands and research shows that familiar brands tend to be liked or preferred more than unfamiliar brands (Alba & Hutchinson, 1987; Dahlén & Lange, 2004; Kent & Allen, 1994). In effect, familiarity expedites the acquisition of new and use of existing information (Park & Lessig, 1981). Fundamentally, brand familiarity reflects brand knowledge stored in a consumer's memory and variations in the level of this knowledge is what distinguishes familiar from unfamiliar brands, that then directly affects consumer information processing and general attitudes towards brands. The importance of building brand familiarity (through creating awareness, for example) to establish a brand within a consumers' mind-set is therefore greatly beneficial to practitioners.

2.3.1.1 Brand familiarity and brand awareness

Although brand familiarity has been defined, some researchers recognize that it is sometimes used interchangeably with the concept of brand awareness. The similarity between brand awareness and familiarity is evident in how brand awareness was operationalized in Hoyer & Brown's (1990) study. They used two conditions, awareness and no awareness. Participants were presented with three brands of peanut butter, one well-known and two unknown brands, with the condition for inclusion in the awareness group being that they had to be aware of the brand through advertising (indirect experience) but not have purchased it (direct experience). The opposite was true for the no awareness condition where Hoyer & Brown (1990; p. 143) state, *'To be included in the no-awareness condition subjects have to be totally unfamiliar with all three brands in the set.'* According to Aaker (1996, p.10) brand awareness is *'the strength of a brand's presence in the consumer's mind'* which is measured through brand recall and brand recognition. Brand recall reflects the ability to retrieve the brand from memory when its product class is talked about, while brand recognition reflects the ability of consumers to confirm prior exposure to the brand (Aaker, 1996). Brand familiarity on the other hand is a way in which brand recognition is measured; it is therefore a reflection of brand recognition (Aaker, 1996). It can be concluded that despite their seemingly interchangeable use, brand familiarity and brand awareness are indeed related yet conceptually distinct terms.

2.3.1.2 Brand familiarity direct and moderation effects on consumer perception, judgment and behaviour

Consumers today are faced with a plethora of products and brands to choose from and therefore must actively discern what they deem relevant by employing information processing *'cognitive shortcuts'* (Shugan, 1980) to make a decision. These cognitive

shortcuts (brand knowledge schema) then account for how consumers choose between alternative brands. Hoyer & Brown (1990) note that when presented with a given brand choice set (different branded peanut butter), individuals familiar with a brand in that set tended to select it despite its lower rating in quality (taste) in comparison to the unfamiliar brand. Conversely, those unfamiliar with any brand in the choice set tended to sample more brands and made their selection based on higher product quality. This implies that brand unfamiliarity forces consumers to engage in more intense information gathering before arriving at a decision, while familiarity with a brand requires less engagement. Furthermore, brand familiarity increases purchase intentions (Arora & Stoner, 1996) and even the performance of brands on the stock market (Lane & Jacobson, 1995).

Further research demonstrates that the level of consumer satisfaction is influenced by brand knowledge structures. Typically, consumer brand choices are based on their expectations of or from that brand. Consumers with low familiarity have no existing brand schema to base expectations on and their evaluation is derived from their actual experience. When expectations are met or exceeded, consumers are satisfied. In a study on restaurant satisfaction Tam (2008) shows that for familiar brands, service expectations positively influenced post dining re-patronage intentions despite actual service experience. Even when satisfaction was lower, intentions to re-patronize the familiar brand restaurant remained higher than that of the unfamiliar brand. Tam (2008) suggests a reason for this could be that the experience encountered in the familiar brand restaurant was not actively processed thus minor deviation from congruity with prior expectations went unnoticed (Oliver, 1980). Confidence in evaluations increases with familiarity (Laroche et al., 1996). Shopping online presents a variety of risks related to security (safety of payment information shared) and products (receiving a damaged

product, different product from that advertised or not receiving a product at all). Brand familiarity aids in alleviating this risk (Park & Lessig, 1981; Park & Stoel, 2005). When faced with multiple brands, consumers are more likely to purchase familiar brands (Park & Stoel, 2005) because they have greater confidence in them (Laroche et al., 1996), implying that perceived risk is negatively correlated to brand familiarity. Furthermore, a less extensive (or none at all) information search process is involved with familiar brands (Howard & Sheth, 1969).

In addition, advertising literature informs that brand familiarity moderates the degree of advertising recall and effectiveness (Campbell & Keller, 2003; Kent & Allen, 1994; Machleit et al., 1993). Within advertising clutter, familiar brands are more noticeable in advertisements and are recalled with greater ease and are generally liked more than unfamiliar brands (Alba & Hutchinson, 1987; Chattopadhyay, 1998; Dahlen, 2001; Dahlén & Lange, 2004; Rindfleisch & Inman, 1998). This is because less effort is required in processing information about familiar brands as it is more readily retrieved and stored. Kent & Allen (1994) show that exposure to competitive advertising had little effect on advertising information recall for well-known brands, which notably was greater than that of unfamiliar brands. This is because the presence of existing brand schema facilitates the reception of additional information received. In instances when a familiar brand's advertisement information differs from the brand image schema, a familiar brand will remain more memorable and be viewed more favourably than an unfamiliar brand (Dahlén, Lange, Sjödin, & Törn, 2005; Lange & Dahlen, 2003; Törn & Dahlén, 2007). In effect brand familiarity improves consumers' cognitive structures, task performance, capacity to analyse and to expound on known information and recall brand information (Alba & Hutchinson, 1987).

Brand familiarity also moderates the extent to which new negative brand information affects judgment (Dawar & Lei, 2009; Sundaram & Webster, 1999). Dawar & Lei (2009) found that when consumers were exposed to newspaper articles depicting brands undesirably, unfamiliar consumers reported negative brand evaluations irrespective of the relevance of the claim to the brand. Conversely, familiar customers only lowered brand evaluations when the said claim was relevant to the brand. Consistent with *information integration theory* which suggests that attitudes, evaluations and judgments form as a result of the integration of new (external) information with existing information (Anderson, 1965, 1981), consumers familiar with the brands integrated external information (negative claims) with internal information (existing brand schemas) to discern the significance of the claim (Dawar & Lei, 2009). Those unfamiliar had no basis of comparison and relied solely on incoming information. According to Pham & Muthukrishnan's (2002) *search and alignment model*, when new information that contests previously existing attitudes is received, individuals initially attempt to uphold these attitudes by seeking pro-attitudinal information in memory. Sundaram & Webster (1999) show that despite negative word of mouth leading to a decrease in brand evaluations for both familiar and unfamiliar brands, it was greater for unfamiliar brands. The competitive advantage of familiar brands therefore acts as a shield in the face of negativity (Sundaram & Webster, 1999).

From the aforementioned research, it is evident that brand familiarity influences consumer information processing and judgment. The discussion on brand now shifts to brand status.

2.3.2 Brand status

To reiterate, in this research project the term brand status is used conceptually to refer to whether a brand is luxury or non-luxury. Luxury brands tend to be evaluated using different criteria compared to non-luxury brands, more so stemming from the emotional and hedonic benefits they are able to deliver to the consumer (Patrick & Hagtvedt, 2014). Recent research by McKinsey and Company reports that a physical store is the most critical touch point for luxury consumers as they are heavily influenced by what they see and experience in-store, so much so that it is considered the most important point of contact with luxury customers (Remy et al., 2015). An investigation of the relationship between brand status and product touch is thus insightful in understanding this. The discussion of brand status first begins with defining the concept of luxury.

2.3.2.1 Luxury concept

The Merriam-Webster Dictionary defines luxury as ‘*a condition of abundance or great ease and comfort*’ or ‘*something adding to pleasure or comfort but not absolutely necessary.*’ This definition suggests a link between luxury and Holbrook & Hirschman's (1982) notion of hedonic consumption. The history of luxury consumption dates back several thousand years to as early as Ancient Egypt, seen in the trade of precious metals, jewellery, and finely painted pottery (Berry, 1994). Researchers have examined luxury in the contexts of consumer attitudes towards luxury (Dubois, Czellar, & Laurent, 2005), values associated with luxury (Sukhdial, Chakraborty, & Steger, 1995), purchase motives (Kapferer, 1998; Tsai, 2005), consumer perception of brand luxury (Vigneron & Johnson, 2004), culture and socio-demographics (Dubois & Duquesne, 1993), consumption context (publicly versus privately consumed) (Bearden & Etzel, 1982) and other contexts (Laurent & Dubois, 1996).

Although the concept of luxury has gained academic and managerial relevance, there is no consensus on the definition of luxury, evident in the varying ways scholars have attempted to define it (Christodoulides, Michaelidou, & Li, 2009; De Barnier, Rodina, & Valette-florence, 2006; Kapferer, 1998; Nueno & Quelch, 1998; Vigneron & Johnson, 2004; Weijters, Cabooter, & Schillewaert, 2010). A review of luxury literature (Heine, 2011) reveals that the disparity in the comprehension of the luxury concept and, consequently, luxury brands, is driven primarily by the different perspectives or lenses from which it has been examined or approached, these being *economic*, *psychological (social and behavioural)* and *marketing* perspectives (De Barnier & Valette-florence, 2013). Although the perspectives are distinct from one another, some aspects of luxury seem to overlap or feed into each other.

Marketing scholars define the term ‘luxury’ in different ways. For example, Dubois & Czellar (2002) approach luxury from an individual (consumer) based understanding (e.g., ‘luxury for me is having more leisure time in the day’) while Vigneron & Johnson (1999) from a product-based (marketing) perspective by asking questions such as ‘What differentiates a luxury product from a non-luxury product from a high quality product?’ To fully grasp the complexity of this luxury concept, it is pertinent to understand the various perspectives from which it has been approached.

2.3.2.2 Perspectives of Luxury

2.3.2.2.1 Economic perspective

‘In order to gain and to hold the esteem of men it is not sufficient merely to possess wealth or power. The wealth or power must be put in evidence, for esteem is awarded only on evidence.’

(Veblen, 1934, p. 36)

The traditional view of luxury from the early 1900s was grounded in Veblen's (1899) seminal work, which viewed luxury as a way for the wealthy among society to express their superiority over the less wealthy through the purchase and 'showing off' of goods. Veblen (1899) recognized the prevalence of a need for status and coined the term '*conspicuous consumption*' where possessions serve as signifiers of an individual's social status and ranking. Similarly, Kapferer & Bastien (2009, p. 314) view the heart of luxury as lying in the '*symbolic desire to belong to a superior class*' chosen in accordance with one's dreams, and that '*anything that can be a social signifier can become a luxury.*' Luxury goods in general are perceived as higher in quality and cost more than necessities. Therefore, the crux of the economic view is the relationship between price and luxury demand (Kemp, 1998).

Economists view a necessity as a product whose purchase does not increase with increased income while a luxury is a product whose demand increases with increased income. A very basic example is an income increase may not lead to increase in purchasing of water, which is viewed as a necessity, but may lead to an increase in the purchase of a luxury item such as Dom Perignon Champagne. The economic perspective of luxury holds that conspicuous consumption behaviour patterns on a consumer level can be viewed in terms of '*conformism*' and '*snobbism*' (Corneo & Jeanne, 1997; Leibenstein, 1950). Conformism (or bandwagon effect), occurs when consumer product demand increases as a result of the product's purchase by others while with snobbism consumer product demand and purchase decreases as a result of others' purchase of the product (Corneo & Jeanne, 1997; Leibenstein, 1950). Conformist and snobbish behaviours correspond to the *desire to not be identified with the poor* but the *desire to be identified with the rich* accordingly (Corneo & Jeanne, 1997). These consumption patterns are motivated by *perceived social value*

(conformism) and *perceived uniqueness value* (snobbism) (Vigneron & Johnson, 1999). Both motivations can lead to an increase in the demand for goods as a result of their increase in price, which is known as the Veblen effect (Bagwell & Bernheim, 1996). This implies that from an economic perspective, price is an indicator of luxury.

Veblen's view is evidenced in the way some researchers have opted to measure luxury in past academic literature. For example, Bearden & Etzel (1982) determine the luxuriousness of a product category by rating it on a scale of 'a necessity for everyone' to 'a luxury for everyone.' However, the complexity and subjectivity of the concept of luxury arises from the fact that what one considers luxury or necessity may not be that for another. Therefore, although significant, luxury consumption motivation cannot solely be attributed to status achievement nor can its definition solely be derived from price or accessibility.

2.3.2.2.2 Psychological (social and behavioural) perspective

Luxury from an economic perspective is centred on demand and pricing. The psychological perspective (social and behavioural) views luxury and its consumption motivation according to *interpersonal* (extrinsic) factors like esteem, attitudes and reference group relations (Bearden & Etzel, 1982) and *personal* (intrinsic) factors like emotions and consumption motivations (Vigneron & Johnson, 2004). Luxury is used as a way to construct individual identity (Hemetsberger, Von Wallpach, & Bauer, 2012) and influences how others construct our identities as a result. For example, in a recent study Lee, Ko, & Megehee (2015) tested different settings where individuals either wore a luxury branded product with a visible logo, non-luxury branded product with a visible logo and a product with no logo on it. In their series of experiments, a woman wearing the luxury brand logo received considerably higher status and wealth rating

and was viewed as more suitable for a job position and deserving of greater compensation, than the one wearing a non-luxury brand logo or no logo at all. External motivations are driven by attaining societal acceptance (through social status and recognition in addition to forming good impressions of oneself) therefore luxury consumption is directed towards others rather than oneself. Conversely, intrinsic motivators, driven by the enjoyable experience or fun, are more geared towards self enhancement irrespective of others' perceptions. A summary of exemplar articles documenting extrinsic and intrinsic motivations for luxury consumption is provided in Table 1 below.

Table 1 Psychological motivation for luxury consumption

FACTORS	MOTIVATION	STUDIES
EXTRINSIC	Status, social recognition, constructive impression management	(Brinberg & Plimpton, 1986; Mason, 1992; Novak & MacEvoy, 1990; Vickers & Renand, 2003; Vigneron & Johnson, 1999)
INTRINSIC	Hedonic or pleasure-seeking	(Fenigstein, Scheier, & Buss, 1975; Vickers & Renand, 2003)

Adapted from De Barnier & Valette-florence (2013)

Kemp (1998, p. 599) compared the necessity-luxury view of luxury, finding that *'similar items are more likely to be perceived as a luxury if they (produce) a positive effect for the recipient than if they (relieve) a state of discomfort (...so that luxuries are) positive instead of negative reinforcements.'* Research demonstrates that luxury brands possess hedonic and symbolic qualities that provide intangible benefits to individuals (Vigneron & Johnson, 1999). As such in addition to Veblen's status-driven view of luxury consumption, luxury can be consumed to satisfy one's hedonic needs and desires and are, therefore, primarily driven by emotions. Of the resultant diverse frameworks and taxonomies discerning luxury from non-luxury in marketing discourse,

Vickers & Renand (2003) and Dubois et al. (2001) are the most renowned with the former taking a socio-psychological approach, and the latter a more product related view (product related view is discussed in detail in Section 2.3.2.2.3 below).

Vickers & Renand's (2003) approach bases the understanding of luxury goods on the concept of luxury products as symbols of personal and social identity. That is, their main value is psychological and their consumption is dependent upon personal, social and individual cues. Vickers & Renand (2003) state that luxury products can be distinguished from non-luxury products based on their capacity to meet consumer needs along three instrumental dimensions of performance: *functionalism*, *experientialism* and *symbolic interactionism*.

Functionalism relates to product features that can solve or prevent a particular need or problem (e.g., high quality, sturdiness). Experientialism relates to a product's ability to provide hedonic satisfaction through sensory pleasure, assortment or cognitive stimulation (e.g., pleasant texture and delightful designs, unique style, fun to experience). While symbolic interactionism relates to the product's ability to meet the needs of self enhancement, ego, group affiliation, roles status and self-image (e.g., group affiliation to the 'hip' or 'urban' crowd). Despite the fact that Vickers & Renand's (2003) consequence-based approach corresponds to marketing practice knowledge of products being a bundle of benefits (Kotler et al., 2013), the three dimensions are not exclusive to luxury products and are not solely sufficient to define luxury products. For example, Heine & Phan (2011) argue that some non-luxury products such as self-made T-shirts can still satisfy consumer needs for prestige without being higher in price. Consequently a characteristic based approach to defining

luxury products such as Dubois et al.'s (2001) as discussed next, is more broadly accepted in the literature (Kisabaka, 2001).

2.3.2.2.3 Product view (marketing perspective)

There is a lack of contention regarding the demarcation of parameters that define a luxury product/good in the marketing literature (Hennigs et al., 2015; Vickers & Renand, 2003). Grossman and Shapiro (1988, p. 82) define luxury goods as '*goods for which the mere use or display of a particular branded product confers prestige on their owners, apart from any utility deriving from their function.*' As stated previously Dubois et al.'s (2001) product-based view of defining luxury is one of the most renowned approaches. Dubois et al.'s (2001) 20-country study (spanning three continents: Western Europe, USA and Asia Pacific) employed both quantitative and qualitative methods to derive consumer based definitions of luxury. They subsequently define a luxury brand or product based on the characteristics of the product itself and developed a generic definition of luxury as an amalgamation of six dimensions: Quality, Price, Uniqueness, Aesthetics, Personal History and Superfluousness (see Table 2 below). Consistent with this characteristics approach, Keller (2009) believes that luxury is acquired or attained from the product.

Table 2 Dubois's characteristics of luxury

CHARACTERISTIC	DESCRIPTION
<i>Excellent quality</i>	The mental association between luxury and quality is so strong that for some respondents, the two words are almost synonymous.
<i>Very high price</i>	Such a perception is established either on the basis of the absolute value of the price or, more frequently, by comparison with non-luxury alternatives.
<i>Scarcity and uniqueness</i>	Scarcity is closely associated with perceived excellent quality and high prices associated with luxury goods.
<i>Aesthetics and polysensuality</i>	Luxury involves a strong aesthetic appeal that many consumers believe should always be the case. At the

CHARACTERISTIC	DESCRIPTION
	extreme luxury products become pieces of art which have to be recognized as such.
<i>Ancestral heritage and personal history</i>	Anchoring in the past. The consumer believes that to be luxurious, products and services must have a long history and their elaboration process as well as consumption should respect tradition.
<i>Superfluosness or usefulness</i>	Luxury products are not felt to be necessary for survival. It is in this sense that consumers as well as researchers oppose luxuries and necessities.

(Dubois et al., 2001, p. 8)

The Vickers & Renand (2003) and Dubois et al. (2001) views on luxury demonstrate that how a luxury product is defined stems from both what is derived from the consumer/individual (e.g., social or emotional benefits) and the characteristics of the product itself (e.g., quality, aesthetics, high price), both of which are valid. As such, a dictionary-based definition of luxury as *something that is expensive and not necessary* appears too simplistic (Merriam-Webster, 2016). It therefore seems that the most representative and appropriate overall definition of a luxury product would be one that integrates both Vickers & Renand (2003) and Dubois et al.'s (2001) views. A review of the literature revealed that Heine & Phan's (2011) definition of a luxury product appears to sufficiently capture this and was thus adopted in this research project. Heine & Phan (2011) define a luxury product as one that is '*more than necessary and ordinary characteristics compared to other products of their category, which include their relatively high level of price, quality, aesthetics, rarity, extraordinariness, and symbolic meaning*' (p. 112). Based on the marketing perspective of luxury, luxury brands are now defined.

2.3.2.3 Brands and luxury brands

'Products are created in the factory, but brands are created in the mind.'

A brand is a '*name, term, sign, design, symbol or a combination of these, that identifies the maker or seller of a product or service*' (Kotler, Armstrong, Harris, & Piercy, 2013, p. 245). Brands convey meaning beyond the physical properties of a product due to the relationships or associations consumers form with them, or reputation the brand has, thus they have an influential role in decision-making. Just as with the concept of luxury and luxury products, confusion reigns in defining a luxury brand mainly due to the difficulty of clearly identifying what constitutes a luxury good (Sung, Choi, Ahn, & Song, 2015). Furthermore, the experiential nature of luxury consumption is subjective given that it is largely influenced by a consumer's social and cultural environment (Vigneron & Johnson, 2004).

Literature often interchangeably uses the terms luxury and prestige (Bagwell & Bernheim, 1996; O'Cass & Frost, 2002) despite differing conceptualizations of each from the consumers' perspective in how consumers perceive each. Dubois & Czellar (2002) for example demonstrate that the terms prestige and luxury as applied to brands differ as prestige is attainable independent of luxury and, more importantly, consumers view the two differently. Specifically, perceptions of prestige are derive from '*a unique accomplishment inherent to the brand*' (p. 4) while luxury perceptions stem from '*subjective perceptions of comfort, beauty and lavish lifestyle, be it for private or public self-indulgence*' (p. 5) (Dubois & Czellar, 2002). For example, mass produced prestige brands such as Adidas or Apple which situate themselves between luxury and non-luxury brands (Kapferer & Bastien, 2009) can still add to consumer prestige.

⁶ (Kotler et al., 2013)

Hulu is an American online company and ad-supported streaming service that offers a selection of TV shows, clips, movies, and more on the free Hulu.com service and Hulu subscription service.

Owning an Apple iPhone vis-à-vis a Nokia can signal prestige. Luxury brand practitioners themselves have added to the growing confusion through practices such as collaborations with non-luxury brands as seen with designers Stella McCartney and Karl Lagerfeld's collaboration with the brand H&M, for example (Kapferer, 2015).

Generally, it is felt that luxury brands are associated with the characteristics of their core products (Kapferer, 2008, p. 193) of higher quality, price, aesthetics, extraordinariness, rarity and a high degree of symbolic meaning, thus the facets of luxury products fundamentally correspond with those of luxury brands (see Table 3). In addition to product characteristics, luxury brands are characterized by three worlds of consumer experience: *functional*, *experiential* and *symbolic* (Berthon et al., 2009). These dimensions are essentially similar to Vickers & Renand's (2003) three dimensional model for classifying luxury products, but defined differently in the context of luxury brands. The functional dimension represents the physical manifestation of the luxury brand. To consumers in this dimension, quality is important as it represents what the object does. For example, the Louis Vuitton brand is known to make bags of exceptional quality. The experiential dimension is subject to individual interpretation or tastes and their thoughts and feelings towards the luxury brand. Whereas the symbolic world pertains to what the luxury brand signals to others as well as the individual themselves, such as higher status. Owning a Rolex watch can symbolize sophistication and class to others.

From the aforementioned description integrating prior research examining luxury brands from quality, conspicuous consumption and hedonic perspectives, a luxury brand is considered as a '*differentiated offering that delivers high levels of symbolic, experiential and functional value at the extreme luxury end of the utility luxury continuum*' (Berthon et al., 2009, p. 49). This definition however does not reflect the

luxury brand characteristics of price, quality, aesthetics, rarity and extraordinariness. Therefore the more concise definition by Heine (2011, p. 32) that defines a luxury brand as *‘images in the minds of consumers that comprise associations about a high level of price, quality, aesthetics, rarity, extraordinariness and a high degree of non-functional associations’* is the definition used in this research project.

Table 3. Luxury brand characteristics

CHARACTERISTIC	DESCRIPTION
Price	The brand offers products which belong to the most expensive products of their category.
Quality	The brand aims to create everlasting top-of-the-line products, which will not be disposed of even after long utilization or defect, but rather repaired and which often even gain in value over time so that consumers can even hand them on to their grandchildren.
Aesthetics	The brand behaves like a chic and vain dandy, who would never leave the house in less than perfect style. Whenever and wherever the brand is seen, it embodies a world of beauty and elegance.
Rarity	In contrast to mass-market brands, the brand needs to limit its production and tries not to disclose its (high) sales numbers. The brand plays hard to get and is not available at all times or places.
Extraordinariness	The brand has a mind and style of its own and its products offer an extra kick and surprise with the “expected unexpected”.
Symbolism	The brand stands for “the best from the best for the best”; its charisma fills the room, and regardless of whether it is of a conspicuous or understated nature, deep inside, it is swollen with pride.

Adopted from (Heine, 2011, p. 62)

2.3.2.4 Where luxury brand consumers shop

Far from the product-based view of luxury (Dubois et al., 2001; Keller, 2009), a more abstract view of luxury has emerged that focusses on the consumer and experience with luxury (Hemetsberger et al., 2012). The pre-purchase stage of luxury brand acquisition is as important as the post-ownership phase and some researchers acknowledge the

importance of the luxury experience over actual luxury possession (Tynan et al., 2009). Even though they do not buy, consumers crave the experience of luxury.

The internet plays a significant role in the information search process when making luxury purchase decisions. Despite this, such consumers prefer to physically purchase their items in an in-store instead of an online setting where touch is unavailable. According to recent research by Google, 69% of luxury consumers prefer to shop in-store to experience the product visually and or tactically (Shea, 2013). This preference was found to overshadow concerns of buying counterfeits (28%), lack of customer experience in an online environment (19%), luxury items being too costly to buy online (15%), lack of salesperson contact (15%), lack of trust with online payment systems (8%) and lack of experience with online shopping (5%). This demonstrates that luxury brands possess unique features that draw consumers to want to be near them. Perhaps the reason for this is what Patrick & Hagtvedt (2014) suggest, that luxury consumers are more likely to judge luxury brands by their ability to satisfy their affective or emotional expectations rather than their functional needs. As such, value their experience in the store prior to purchase just as much as they do the product itself.

2.3.3 Brand literature research gaps

To date despite calls for research on a brand's influence on product touch effects (e.g., Peck, 2010; Marlow & Jansson-Boyd, 2011; Grohmann, Spangenberg, & Sprott, 2007), and brands' recognized influence on consumer decision-making (as discussed in this chapter), research in the area is lacking. Collectively, it is evident as research shows that both brand and product touch are an integral part of the decision-making process and examining their dual impact on consumer response presents both crucial theoretical and practical implications.

2.3.3.1 Brand familiarity gap

Viewed collectively, familiarity research highlights that familiar brands and products are viewed more favourably than unfamiliar ones. It is evident that brand familiarity is a key moderating variable affecting the consumer decision-making, judgment and evaluation process. Only one study, that of Jha & Balaji (2015) has attempted to examine the moderating effect of brand familiarity on the relationship between touch and purchase intention. Jha and Balaji (2015) examined the effect of brand familiarity on product evaluation in a touch and no touch environment, finding that differences in need for tactile input influence purchase decisions dependent on the touch environment. Specifically, high NTI individuals had higher purchase intentions for an unfamiliar branded mobile phone, compared to those with a low NTI. The researchers also found that purchase intentions for a less familiar brand product were greater instore (touch environment) for high NTI, and that for high NTI individuals, the negative effects associated with a no touch environment were overcome if the products on offer/presented came from familiar branded products.

In summary, a brand familiarity moderation effect was found such that in the touch environment high NTI individuals had higher purchase intentions for an unfamiliar branded mobile phone, compared to those with a low *NTI*. *Their* study however presents a number of flaws concerning methodological choices, which brings their findings into question. First, they opted not to use actual products and there is no evidence that participants actually touched products before expressing their purchase intentions. Second, it can be argued that the written and visual descriptions provided for their product of choice (a mobile phone) provided satisfactory information needed to make a decision, therefore discounting the significance of touch.

In this research project, the emphasis is specifically on products where touch is primarily used to discern quality via texture, that is, touch provides diagnostic feedback. Furthermore, in addition to purchase intention this study enriches the touch and familiarity literature by examining additional important dependent measures: willingness to pay, product evaluation and confidence in judgment. Also, the failure of Jha & Balaji (2015) to find a difference in purchase intentions for high and low need for touch individuals may be attributed to the choice of scale used: the need for tactile input (NTI). The NTI only captures individuals on one dimension of touch, that is, touch with a salient purchase goal in mind (instrumental need of touch), who tend to not be as affected by not touching compared to those with a high autotelic need for touch (Peck & Childers, 2003b). Overall, the aforementioned flaws imply that brand familiarity's role in the context of product touch is yet to be fully understood thus warranting further investigation that will ultimately add to the richness of the touch and brand familiarity research.

2.3.3.2 Brand status gap

The literature demonstrates a general consensus that luxury brands have greater appeal and are viewed favourably by consumers. With demonstrated preference for luxury brand purchasing in-store (Shea, 2013) a review of the literature reveals that academic research has not provided empirical evidence regarding the effect of touching luxury brand products on consumer response. Moreover, the underlying mechanism driving this effect is unknown. In general, luxury branding research is limited to a large extent by a focus on definitions and conceptualizations of luxury brands, with research on luxury brand evaluation and information processing required (Patrick & Hagtvedt, 2014). The store atmosphere can influence customer experience and overall consumer perception and judgment (Baker, Parasuraman, Grewal, & Voss, 2002) and even

though touch behaviour is considered to play a role in the creation of this store atmosphere, researchers are yet to empirically examine its effect for luxury branded products.

2.4 CHAPTER SUMMARY

Chapter 2 presented an up-to-date review of the key literature in the domain of touch and identified the key research gaps that exist. The literature review then proceeded to highlight literature from both brand familiarity and brand status (luxury brand) domains, also highlighting the research gaps that exist and how this research aimed to fill these research gaps by integrating product touch and brand literature streams and examining what moderating role brand familiarity and brand status have on the effect of product touch on consumer product evaluation, purchase intention, confidence in judgment and willingness to pay. Chapter 3 presents an integrated conceptual framework which brings together the three different streams of literature and provides a description of the constructs in the model as well as a series of hypotheses for testing all of which are geared towards answering the research questions set out in section 1.5.2.

CHAPTER 3: Conceptualization: The effect of touch on consumer response and the moderating effects of NFT, brand familiarity and brand status

3.1 INTRODUCTION

Chapter 3 provides the theoretical and conceptual rationale used to answer the research questions presented in Section 1.5.2. Specifically, it presents the research questions, theoretical background of the proposed conceptual framework, description of model constructs and proposed relationships (between the constructs) in the model. The proposed conceptual framework captures the key independent variable of touch and dependent variables (product evaluation, purchase intention, confidence in judgment and willingness to pay) in addition to the moderating variables of need for touch, brand familiarity and brand status. Lastly, the underlying mechanism between the independent and dependent variables which are psychological ownership (cognition) and affective reaction (affect) are discussed.

3.2 Conceptual framework

As mentioned in Chapter 2, product touch research is an emerging field thus little knowledge on theories and concepts useful in explicating relationships is known. However, literature from the Stimulus Organism Response (SOR) Model of psychology concerning human behaviour provides insight that is relevant in predicting relationships in the proposed conceptual framework.

3.2.1 Stimulus Organism Response (SOR) Model

The SOR Model posits that based on particular environmental stimuli (S), an organism (O) perceives and reacts (R) to its environment (Mehrabian & Russell, 1974). The organisms' (O) responses consist of perceptual, physiological, feeling and thinking activities (Bagozzi, 1986) that correspond to pleasure/displeasure (P), arousal/non-arousal (A) and/or dominance/submissiveness that (D) in turn act as mediators to behavioural responses (approach or avoidance). In a retail environment,

approach/avoidance behaviour is reflected by store patronage intentions, exploration inside a store, desire to communicate with others, satisfaction and performance, including time and money spent (Mehrabian & Russell 1974).

In this research, touch acts as a stimulus to which participants react, that may lead to differing responses. In answering the key research questions of determining direct (touch), moderating (with the moderators brand familiarity, brand status, and need for touch) and mediating effects (with the mediators psychological ownership and affective reaction), the SOR model is therefore adopted for this research.

3.2.2 Development of SOR Model in marketing literature

Originally pioneered in environmental psychology, existing research demonstrated support for the SOR model's usefulness in enhancing understanding of consumer behaviour (e.g., Donovan & Rossiter, 1982; Bitner, 1992; Donovan, Rossiter, Marcolyn, & Nesdale, 1994; Baker, Grewal, & Parasuraman, 1994). Donovan & Rossiter (1982) introduced the concept of environmental psychology to marketing research, finding that consumer behavioural intentions in a retail environment (e.g., monetary amount and time spent in-store) could be predicted by one's reported emotional state (a more positive state having a more positive effect).

The SOR model was further conceptualized in the context of the service industry by Bitner (1992) who presents a model focussing on the effect of atmospheric qualities of service organizations ('*servicescapes*') not only on consumers but employees. Bitner (1992) refers to servicescapes as the manmade physical environment consisting of ambient cues (those influencing the five senses consciously or subconsciously), dimension of layout and functionality (organization of store machinery, equipment and

furniture), and signage, symbols, and artefacts; all of which trigger/activate internal reactions from consumers that influence their approach or avoidance behaviour. Bitner's (1992) version of the SOR model introduced the additional factor of *perception* (specifically perceived servicescape) that was directly influenced by the environmental cues (S) that affected internal responses (O) of both consumers and employees. She also proposed that individual (e.g., gender) or personality traits and situational factors (e.g., current mood) could act as moderators to this effect.

Donovan, Rossiter, Marcoolyn, & Nesdale (1994) studied actual behaviour and emotions during the shopping experience in two discount department stores. Study respondents were approached at random and reported the time and money they estimated would be spent in-store prior to and after entering and exiting the store. The results showed the effect of emotional states (pleasure and arousal) was independent of cognitive factors, with pleasure having a positive effect on both time spent and unplanned spending. They further concluded based on the findings and comparison to their previous study (Donovan & Rossiter, 1982), that arousal effects were context specific (e.g., fear and excitement are negative and positive emotions caused by arousal).

3.2.3 Use of the SOR in sensory marketing literature

The SOR model has been used in various studies examining the effect of environmental/ ambient cues on emotion, cognition, intention and behaviour. Ambient cues encompass visual and non-visual background conditions in a retail store environment (Baker, Grewal, & Parasuraman, 1994). For example, when compared to a simulated orange mall background, a blue background leads to increased simulated purchases, higher tendency to browse and less purchase deferrals. Blue is effectively

seen as calming and relaxing and red is perceived as increasing physical arousal and excitement (Bellizzi & Hite, 1992). Given that colours with longer wavelengths such as orange possess arousal qualities, the results indicated that emotional perception of colour as opposed to the arousal characteristic could explicate the outcome. It has also been shown that brighter lighting in-store (versus soft lighting) positively influences product examination and handling (Areni & Kim, 1994).

Gulas & Bloch (1995) extended the SOR model and developed a model specifically highlighting the impact of ambient scent as an environmental cue on emotions and shopping behaviour. This model extension, although not empirically tested, proposed the inclusion of individual characteristics (e.g., age) and moderator variables (e.g., scent congruity) in the SOR model. Doucé, Poels, Janssens, & De Backer (2013) took into account the moderating effect of motivation and scent congruity proposed by Gulas & Bloch (1995), finding that the scent of the pleasant smell of chocolate positively influenced sales of thematically congruent books in the bookstore.

Further studies have shown that music volume and tempo can affect consumer emotions and consequently the pace at which they do their shopping, amount spent and duration of stay (Milliman, 1982; Milliman, 1986; Turley & Milliman, 2000). Based on the SOR model Eroglu, Machleit, & Davis (2001) propose that website layout (colours, graphics and design) can provide information about the retailer as well as influence consumers' emotional and behavioural reactions. Indeed, the SOR model is useful in understanding consumer emotional and purchase behaviour response to online retail websites (Mummalaneni, 2005).

3.3 The proposed conceptual framework

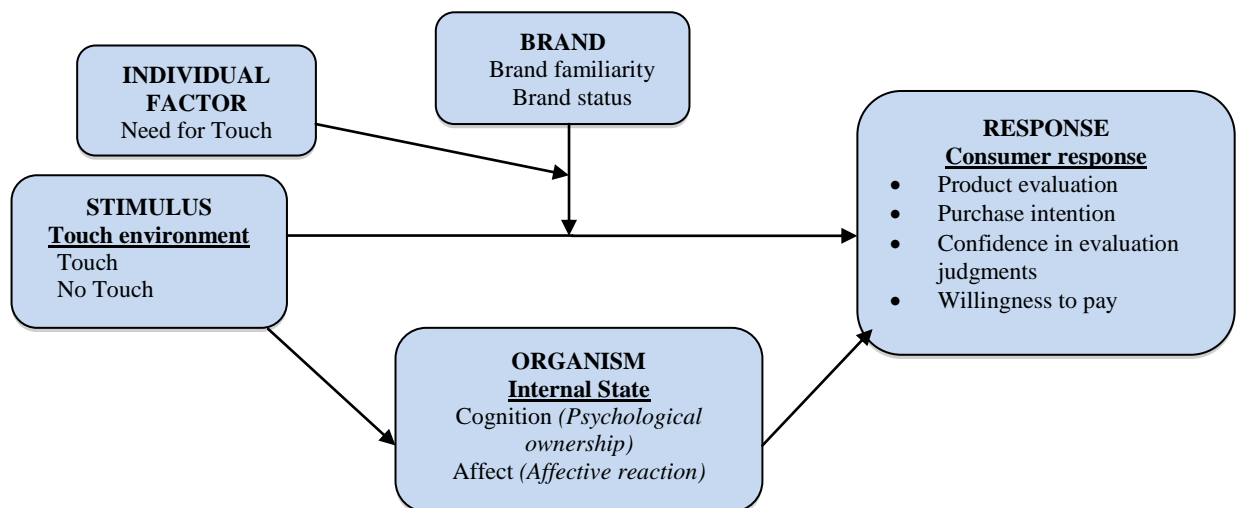
An environment in which touch is and is not available may thus act as a stimulus evoking differing responses from consumers. As reported earlier, touch has a significant effect on how consumers evaluate products and that this effect is greater for products where tactile examination provides an indication of the quality (or functionality) of the product (Grohmann et al., 2007; Jansson-Boyd & Marlow, 2007; McCabe & Nowlis, 2003). In line with Bitner's (1992) proposition of acknowledging the effects of individual factors in response to stimuli, research also informs that an individual's need for touch moderates touch effects (Peck & Childers, 2003b). Additionally, merely touching a product elicits feelings of psychological ownership (a feeling that something belongs to you, without legal ownership) and positive feelings towards the product (affective reaction) which then determine one's willingness to pay for it (Peck & Shu, 2009).

What is not known is if touch effects, in addition to being product- and individual-specific, are also brand-specific and, if so, what underlying mechanism explains this. Therefore, building on recent advancements in sensory marketing, this research further develops the SOR model by introducing two new moderating factors to the model: brand familiarity and brand status (see Figure 2). Need for touch is also captured and as informed by prior research (Peck & Shu, 2009), the underlying mechanism informing the brand familiarity moderation is examined from both a cognitive (psychological ownership) and affective (affective reaction) perspective.

Consumer behaviour studies adopting an experimental approach (as with this research project) can never fully capture and incorporate numerous constructs at one given time, and the stringent nature of experiments calls for examination of only those deemed

most relevant (Peterson, Albaum, & Beltramini, 1985). Thus the constructs in the conceptual framework capture factors derived from an extensive review of touch, brand, and psychology literature. Four dependent variables were examined: product evaluation, purchase intention, confidence in judgment, and willingness to pay which are henceforth collectively referred to as consumer response. From a theoretical and academic perspective, none has been examined in relation to touch from a brand familiarity and brand status perspective therefore the findings contribute to a greater understanding of consumer behaviour both in touch and brand literature. The detailed conceptual framework of this study is presented next, with the independent variable of touch, moderators of brand familiarity, brand status and need for touch, and the dependent variables of product evaluation, purchase intention, confidence in judgment and willingness to pay.

Figure 2. Proposed conceptual framework



The moderators (brand familiarity, brand status and need for touch) have been discussed in detail in Chapter 2; thus they are only discussed in the hypothesis section (section 3.3.2). A description of the mediators (psychological ownership and affective reaction) is also discussed in the hypothesis section (section 3.3.2.5.8). The purpose of

the forthcoming section is to thus present a discussion of the dependent variables and rationale for their inclusion in the above framework.

3.3.1 Dependent variables

Four dependent variables were examined in this research project: product evaluation, purchase intention, confidence in judgment and willingness to pay. These variables were chosen for use in this research project due to their ability to predict consumer behaviour, as explained in the forthcoming sections below.

3.3.1.1 Product Evaluation

Product evaluations ‘*encompass a set of moderately related dimensions including perceived quality, evaluative beliefs, perceived worth or value and overall affect*’ (Olson, 1977; p. 283) and understanding how these evaluations are formed is one of the principal questions of consumer behaviour research. This research project tests if product evaluation differs by touch environment, that is, whether product favourability can be driven through product touch. Comprehension of how product evaluations are influenced (in this case through product touch) will lead to a better understanding of how these evaluations can be effectively influenced to yield greater purchase intentions, increased sales, brand equity and/or customer satisfaction, using product touch.

3.3.1.2 Purchase Intention

Grewal, Monroe, & Krishnan (1998) define purchase intention as the probability that lies in the hands of the customers who intend to purchase a particular product. These intentions may be driven by personal experiences with products or recommendations from other customers, such as through reviews for example. Although the predictive

power of purchase intentions on actual behaviour is debatable (Chandon et al., 2005) accounting for purchase intentions is still valuable to theory development and to practitioners. The examination of antecedents of purchase intentions has therefore spanned across various factors such as service quality and consumer satisfaction (Taylor & Baker, 1994), store, brand name and price discounts (Grewal, Krishnan, Baker, & Borin, 1998), retail price promotion framing (Chen, Monroe, & Lou, 1998) and counterfeit products (Cordell, Wongtada, & Kieschnick, 1996). Purchase intention represents '*what we think we will buy*' (Blackwell, Miniard, & Engel, 2001, p. 283) and marketing managers use reported purchase intentions as key inputs in predicting future sales and discerning how their decisions and strategies will affect consumers' purchase behaviour (Morwitz, 2014).

3.3.1.3 Confidence in (Product) Judgment

Confidence is the degree of certainty a buyer has towards a product or brand (Howard & Sheth, 1969). Understanding what guides the consumer decision-making process is at the heart of consumer behaviour research; and confidence, be it in products, people, a process or even technology has been shown to be a determinant of purchase intentions (Bennett & Harrell, 1975; Howard & Sheth, 1969). Confidence is viewed as a characteristic of judgment (Berger, 1992; Richard, Petty, Briñol, & DeMarree, 2007) and the level of perceived control in purchase situations may result in confidence given that perceptions of control typically transcend into a state of confidence (Natarajan & Angur, 1998). In relation to touch literature, and hence the definition adopted in this research, confidence in product judgment is defined as confidence in evaluation or judgment of a product (Peck & Childers, 2003b). Early research by Smith & Swinyard (1988) found that direct experience with an object has been reported to increase confidence in judgment. Touch is a form of control (Peck & Shu, 2009) and can thus

lead to a state of confidence in judgment as a higher level of frustration is experienced when consumers cannot physically touch products (Peck & Childers, 2003b).

3.3.1.4 Willingness to Pay

Wertenbroch & Skiera (2002) define willingness to pay (WTP) as the maximum price a buyer is willing to pay for a given good/s or service/s. Voelckner (2006) views it as a context-specific individual level construct that is considered as a function of the perceived value of a product in the specific 'value elicitation situation.' This suggests that consumers WTP for the same product may differ dependent on the context within which it is presented, which, in this research project, is based on touch and brand conditions. Indeed, Thaler (1985) found that individuals were willing to pay significantly more for beer in a fancy resort (median amount of \$2.65) than the amount they were willing to pay for the same beer from a grocery store (median amount of \$1.50). Although the beer was the same, the WTP difference was subject to the context. This could be explained using the real exposure effect, discovered and defined by Bushong, King, Camerer, & Rangel (2010), who found that the physical presence of an item at the time of choice led to a substantial increase in one's willingness-to-pay for it. Specifically, this effect was heightened when an item was physically present and accessible (not shielded) than physically present and inaccessible (behind a Plexiglas window). Overall, willingness to pay gives an indication of how a brand or product is valued by the consumer which then has implications of price setting and/or product/service/advertisement redesign.

3.3.2 Hypotheses

3.3.2.1 Touch and consumer response

Touch allows for the intrinsic cues of a product to be examined. Intrinsic cues are features of a physical product that cannot be altered without also altering the physical product itself (Olson, 1977). Even a low priced pen is perceived as higher quality when unpackaged because its intrinsic cues are accessible than when presented in packaged form (Pincus & Waters, 1975). Prior studies in the area of touch primarily focused on the effect of intrinsic product cues such as texture (Krishna, Elder, & Caldara, 2010; Marlow & Jansson-Boyd, 2011), temperature (Zwebner et al., 2014), firmness (Krishna & Morrin, 2008) and weight (Jostmann, Lakens, & Schubert, 2009). The more diagnostic the intrinsic cue is in decision-making (such as the texture of a sweater for example) the more influential it is on quality perception (Sprott & Shimp, 2004; Wheatley, Chiu, & Goldman, 1981).

More recently Grohmann, Spangenberg, & Sprott (2007) have shown that the greater the quality of the product (e.g., a pillowcase with a higher thread count than one with a low thread count), the greater the positive evaluation when consumers were allowed to haptically evaluate it. Touch is a form of approach behaviour (Grohmann, Spangenberg & Sprott, 2007) and approach behaviour can result in a positive attitude, liking and preference (Mehrabian, 1981). This affirms what Heslin & Alper (1983) state, that *'touching does, indeed, cause liking'* (p. 63). Touch is important and useful in evaluating product features such as weight, texture, firmness and temperature (Klatzky & Lederman, 1992; Lederman & Klatzky, 1987, 1993; Lindauer et al., 1986) and a general preference is held for engagement with such products in an environment which enables physical touch, before purchase decisions are made (McCabe & Nowlis, 2003; Grohmann et al., 2007). Consistent with prior literature it is therefore proposed that:

H1a. Touch has a significant positive effect on consumer response.

3.3.2.2 Touch, NFT and consumer response (Touch x NFT)

High NFT implies a preference for the haptic examination of products, whether for the purpose of fun or to make a decision. When assessing products with higher touch properties (where touch provides an indication of the quality or the primary functionality of the product, e.g., the texture of a scarf), haptic information stored in the memory is accessed to a greater degree by higher NFT individuals (Peck & Childers, 2003b) and this accessibility enhances the chance that the information will be used in judgment formation (Lingle & Ostrom, 1979). The significance of individual differences in haptic orientation and preference for product based haptic information (NFT) is demonstrated in previous research (Jin, 2011; Krishna & Morrin, 2008; Peck & Childers, 2003a, 2003b; Peck & Johnson, 2011) with the general consensus that responses of those with a high NFT are positively (negatively) influenced when haptic exploration is available (unavailable) while an indifference for low NFT is reported. It is therefore expected that in line with these past studies:

H1b. The effect of touch is a function of NFT. Specifically, the effect of touch is only significant for those with a higher NFT and not a lower NFT.

3.3.2.3 Brand related hypotheses

As discussed above, research supports that touch is significant in influencing consumer behaviour. Yazdanparast & Spears (2013) however find that when touch is unavailable, positive mood, price promotions, and product expertise are influential in increasing purchase intentions and product judgment confidence for high need for touch individuals. However, this research project argues that intrinsic cues (touch) do not

work in isolation and the degree of their effect on consumer behaviour is collectively determined by both intrinsic (touch related) and extrinsic (brand related) cues specifically relating to brand familiarity and brand status.

3.3.2.4 Brand familiarity related hypotheses

Little is known of the influence of brand familiarity on consumer response in the context of product touch, but the information processing theory of schema theory provides insight into predicting this relationship.

3.3.2.4.1 Information processing theories

In order to process the information we are constantly bombarded with on a daily basis, individuals must discerningly process and filter what is deemed as relevant or irrelevant at the time by taking '*cognitive shortcuts*' (Shugan, 1980). Information processing theories explain how such cognitive shortcuts are utilized in the processing of information and subsequently their effect on our perception and behaviour. As a whole, information processing theory is a cognitive psychological approach used to understand how the human mind transforms sensory knowledge, its premise being that incoming information is stored in the memory and may motivate the retrieval of object-relevant thoughts processed previously (Bettman, 1979; Tybout, Calder, & Sternthal, 1981). Drawing from information processing literature, specifically from schema theory, this research predicts that brand familiarity moderates product touch effects.

3.3.2.4.1.1 Schema theory

Schema theory asserts that cognitive processing is influenced by existing knowledge, based on the categorization of information in schemas, where activation of this schema knowledge occurs through cues such as words, symbols or images for example

(Warlaumont, 1997). Bartlett (1932) defines a schema as a unit of knowledge in the memory that additionally contains information regarding how this knowledge is to be used. Schemas can also be considered as the group of associations or associative networks linked to an object or person (Hoyer, MacInnis, & Pieters, 2012).

3.3.2.4.1.2 Origins of schema theory

Bartlett (1932), one of the pioneering researchers of this theory, examined how memory recollection of a story was influenced by existing knowledge (schemas). In one of his experiments, British participants were verbally presented with the story '*The War of the Ghosts*', a Native American legend (unfamiliar to them). These participants were asked to recall this story a short while after and subsequently over a period of months. It was noted that over time participants altered unfamiliar elements to reflect their own understanding thereby altering the story. Bartlett's (1932) seminal work confirmed schema theory and demonstrated that memory is an active process that is continuously altered as one's schemata evolves with experience; memory is a reconstruction and not an exact copy of experiences. Lack of pre-existing schemas slows new incoming information processing which then requires additional information to be sought. According to Beals (1998) when individuals are exposed to different situations or experiences the brain attempts to search for schema matching the experience in order to process it faster; the lack of existing schema therefore slowing down this processing.

Schema knowledge shapes expectations that may sometimes inadvertently lead to erroneous assumptions. As Brewer & Treyens (1981) found, memory recollection of items in a room was influenced by schemas of what people expected to see or find in that room, regardless of what was actually present. In their experiment, participants

were asked to wait in a room that was identified as an academic's study and later questioned about what they saw in the room. Interestingly, some participants recalled seeing books when in actuality, none were present. Just like Bartlett (1932), they confirmed the effects of schema theory by showing that individuals have a tendency to overlook or disregard information not attuned with their schematic information which leads to a degree of bias. And focusing on information that is concomitant with their schemas can lead to what is known as confirmation bias. Confirmation bias signifies *'the seeking or interpreting of evidence in ways that are partial to existing beliefs, expectations, or a hypothesis in hand'* (Nickerson, 1998; p. 175). Early artificial intelligence research drew on Bartlett's (1932) schema theory, led by Minsky's (1975) research to develop machines with human-like capabilities. Minsky's (1975) realization that this human-computer integration was achievable if computers utilized their stored knowledge to carry out processes led to the development of the *frame construct* which, in essence, is similar to a schema.

Social interactions are also driven by schema. The social cognition perspective of schema research indicates that individuals possess four schema types: event schemas, role schemas, self-schemas and person schemas (Fiske & Taylor, 1991). Event schemas, often referred to as scripts (Schank & Abelson, 1977) describe stereotypical behavioural sequences and events such as those occurring when eating at a restaurant. The sequence involves getting into the restaurant, sitting down, ordering a meal, consuming the meal, paying the bill and leaving. Essentially, our notion of what is considered suitable behaviour within certain contexts is stored in our memory. Role schemas dictate expected norms and behaviour of achieved roles such as a doctor, and ascribed roles such as age, race or gender (Rosch, 1978; Rosch, Mervis, Gray, Johnson, & Boyes-Braem, 1976; Rosch, 1975). These roles are ordinarily known as stereotypes.

Self-schemas refer to the information we store about ourselves which informs our self-concept; and, lastly, person schemas are patterns of personality traits that we use to classify people and interpret their behaviour. In effect, schemas influence the evaluation of incoming information and subsequently inform our suppositions and actions (Axelrod, 1973). As Fiske & Taylor (1991, p. 98) note, schemas '*allow us the comforting sense that we understand our world.*' The following section presents schema theory as situated in the marketing literature.

3.3.2.4.1.3 Schema and consumers

Consumers are constantly bombarded with vast amounts of product and brand related information. Walker-Smith from Yankelovich Consumer Research states that '*We've gone from being exposed to about 500 ads a day back in the 1970s to as many as 5,000 a day today*' (Johnson, 2006). As a result, consumers unconsciously apply filters based on existing schema to extract information useful in their decision-making (Shugan, 1980). Individuals possess schemas about people (e.g., celebrities association with style), companies (e.g., Apple's association with innovation) or places (e.g., Disneyland's association with wholesome family entertainment) and consumer schemas are made up of these specific sets of associations (Hoyer & MacInnis, 2008). The three key types of consumer schemata of predominant focus in the marketing literature are *product category schema* (Meyers-Levy & Tybout, 1989; Mita Sujan, 1985), *advertisement (ad) schema* (Goodstein, 1993) and *brand schema* (Dahlén et al., 2005; Halkias & Kokkinaki, 2013, 2014; Lange & Dahlen, 2003; Wansink & Ray, 1996). The focus of this study is on brand schemas, therefore product category and ad schemas are only briefly discussed.

3.3.2.4.1.4 Product category schemas, ad schemas and their effects

Product category schemas represent features that consumers associate with specific products or product categories, such as beverages (Meyers-Levy & Tybout, 1989), a camera (Sujan, 1985) or high and low end automobiles (Brown, 1992) for example. While the aforementioned researchers have focussed only on the product aspect, others have gone one step further and examined how and when these schemas are accessed and consequently their effects on consumer decision-making. Schemas possess both subjective and objective knowledge of ‘what’ something is. Product schema can sometimes be viewed as brand schema such as with the case of the brand Sellotape that is commonly used in reference to all transparent adhesive tape (Halkias, 2015) or the iPod brand being associated with the digital music player product schema (Wayne Hoyer & MacInnis, 2008). Ad schemas consist of information regarding how advertising is carried out, the layout, visual aspects, characters, execution structures, auditory components and the scenes used (Stoltman, 1991). This knowledge may be based in product category schema, such as what is considered as a stereotypical toothpaste advert (e.g., filmed in a bathroom) or brand schema (e.g., Intel Insides patented musical jingle played at the end of every ad).

Advertising research points to the positive effects of brand familiarity in advertising. Within advertising clutter, familiar brand advertisements are more identifiable than unfamiliar brands (Alba & Hutchinson, 1987; Dahlén & Lange, 2004). Additionally, in the face of competition the persuasive power of familiar brands remains unaffected by competing brands (Kent & Allen, 1994). Even when an advertisement message differs from the brand’s image, a familiar brand will still be more memorable and viewed more favourably than an unfamiliar brand (Dahlén et al., 2005; Lange & Dahlen, 2003; Törn & Dahlén, 2007).

3.3.2.4.1.5 Brand schemas

Brand schemas are the associations consumers attach to the brand as well as its benefits and market position, representing both functional and symbolic knowledge regarding the brand (Dahlén et al., 2005; Dahlén & Lange, 2004; Halkias & Kokkinaki, 2013; Hoyer & MacInnis, 2008). A consumer's luxury brand handbag schema may thus contain information pertaining to the characteristics of the handbag (e.g., black, lightweight, signature features), symbolism attached to the luxury brand (e.g., exclusivity, class, sophistication) and a general attitude towards the brand (positive or negative). One of the most distinguishing features between brands is brand familiarity (Lange & Dahlen, 2003) and from a brand perspective, schema theory has been predominantly applied to explain the effects of familiar versus unfamiliar brands in the domains of advertising and brand extensions (Aaker & Keller, 1990). Familiar brands (in comparison to unfamiliar brands) possess a more developed brand schema that serves as the basis of future comprehension of additional or new information and are often considered more trustworthy and hence more favourable (Aaker, 1991; Keller, 1993).

Current schema research has established that our memory and the content of our schemas, is not innate and changes in accordance with our encounters and experiences (Bartlett, 1932). As such, schema is continuously constructed and determined by the interaction between stimuli from the environment and the internal state (schema) which we possess at that time. It is possible, then, that the degree of influence of touch (external environment) on consumer response may be a product of the brand schema and associations possessed (internal environment) by the consumer at the time of evaluation. However, scant research has attempted to examine the role of extrinsic cues

(cues although related to a product that are not physically part of it (Olson, 1977) such as brand for example) on the effect of product touch.

3.3.2.4.2 Brand familiarity and consumer response

Familiarity is indicative of prior exposure and the mere exposure effect (Zajonc, 1968) proposes that increased stimulus exposure leads to more favourable evaluations, irrespective of context. Schemas significantly affect how new information is processed (Sujan & Bettman, 1989), and familiar brands present a current pool of information from which to draw. When there is existing knowledge in memory regarding a brand (brand schema), retrieval and storage of information is easier (Dahlén & Lange, 2004; Kent & Allen, 1994) and the reliance on cognitive processing of incoming information reduces with increased familiarity (Alba & Hutchinson, 1987). Therefore brand familiarity eases the encoding, retrieval and storage of information. Previous research findings show that this ease leads to greater preference accorded to familiar brands over unfamiliar brands (Campbell & Keller, 2003) such as through more favourable restaurant evaluations (Tam, 2008) for example. In Tam's (2008) study, consumers reported a higher re-patronage intention for a known restaurant despite low satisfaction in the known restaurant. This supports Brewer & Treyens (1981) schema expectation and memory recollection disparity inference about confirmation bias.

Additional research points to the positive effects of brand familiarity in advertising (Campbell & Keller, 2003; Kent & Allen, 1994) on product choice and purchase intentions (Hoyer & Brown, 1990; Jiménez & San Martín, 2010). In the context of advertising, familiar brand advertisements are more recognizable and stand out amidst the advertising clutter consumers are exposed to (Alba & Hutchinson, 1987; Dahlén & Lange, 2004). Advertisements from familiar brands also have greater persuasive power

compared to those from competing brands (Kent & Allen, 1994). Similar to Tam's (2008) findings on the influence of memory over experience (as discussed in the preceding paragraph), Dahlén et al. (2005) showed that even when an advertisement message differed from the brand's image, a familiar brand was still viewed more favourably. Essentially, brand familiarity enhances '*perceptual identification of a brand, increases the probability of inclusion in the evoked set, generates positive affect toward the brand, and motivates purchase behaviour*' (Baker et al., 1986; p. 637). This positive affect is transferable from the existing brand schema to the product (Fiske, 1982). Brand familiarity would therefore increase positive affect towards the familiar branded product and have an overall positive effect on consumer response, compared to unfamiliar brands, irrespective of the purchase context (touch or no touch). Brand familiarity forms the basis of initial judgments irrespective of the context but as product interaction increases this dissipates in favour of product based judgments (Hoyer & Brown, 1990). This suggests that until consumers engage with products, they ultimately opt for brands they know regardless of the intrinsic product properties.

Overall, prior literature demonstrates that brand familiarity positively affects consumer decision making. These findings are further supported by the information integration theory, which explores how attitudes are formed and changed through the integration (combining) of new information with existing information or thoughts (Anderson, 1981). Information integration theory would therefore postulate that initial judgments based on brand familiarity are driven by a top down approach of information processing (derived from knowledge/familiarity with the brand), whereas an unfamiliar brand invokes a bottom up approach (derived from an experiential/sensory product level). This top down and bottom up information then combine to form a summary impression of the product being evaluated (Anderson, 1965, 1981; Tybout et al., 1981).

Based on previous research as well as support from the aforementioned theory, the following proposition is made:

H2a. A familiar branded product has a more positive effect on consumer response, than an unfamiliar branded product.

3.3.2.4.3 Touch, brand familiarity and consumer response (Touch x Brand Familiarity)

Brand familiarity is a well-recognized moderator in various areas including consumer satisfaction and repatronage intentions (Tam, 2008), purchase intentions (Arora & Stoner, 1996), product choice/selection (Hoyer & Brown, 1990), advertising impact and recall (Campbell & Keller, 2003; Kent & Allen, 1994; Machleit et al., 1993) and new brand information impact on judgment (Dawar & Lei, 2009; Sundaram & Webster, 1999). Familiarity is considered an antecedent of confidence (Flanagan, Johnston, & Talbot, 2005; Laroche et al., 1996; Siegrist, Gutscher, & Earle, 2005) and less confidence increases the propensity to acquire more information to reduce purchase uncertainty (Locander & Hermann, 1979). Given that touch increases confidence in judgment (Peck & Childers, 2003b), the uncertainty experienced with unfamiliar brands may be alleviated via touch. Dependent on the level of brand schema, limited or non-existent brand schema may motivate the acquisition of knowledge, or additional information search. Therefore, in seeking to acquire additional information, touch may serve as the conduit for this information. The greater uncertainty characteristic of online purchase environments (which are no touch environments) means brand familiarity has a greater positive impact in such situations (Degeratu, Rangaswamy, & Wu, 2000). Lack of confidence derived from exposure to an unfamiliar branded product combined with the inability to haptically gain

information about that unknown brand product would therefore decrease overall confidence and its evaluation.

Even negative word of mouth is shown to have a greater negative effect on unfamiliar than familiar brands, resulting in lower product and brand evaluations for example (Sundaram & Webster, 1999). Based on those empirical findings, it is rational to predict that the positive effect of touching products would be experienced to a greater extent for unfamiliar than familiar brands. Therefore this research proposes that touch will improve consumer response, but this effect will only be apparent for unfamiliar branded products because no pre-existing schema is contained for the unfamiliar brand, touch serves as a conduit through which information is used to build new schema and reduce uncertainty. Schema theory proposes that individuals with higher familiarity possess existing information (brand schemas) thus reducing the need for additional information required to assess a product. Therefore, from a touch perspective, it is possible that despite consumer preference for physically touching products high in diagnostic feedback during the pre-purchase stage (McCabe & Nowlis, 2003), lack of the opportunity to touch may be compensated for by brand familiarity. As such, for familiar brands, existing brand schemas may alleviate the requirement of acquiring additional information via the haptic system, hence touching or not touching a product from a familiar brand may have no significant effect on consumer response. As such, the following proposition is made:

H2b. The effect of touch on consumer response is a function of brand familiarity. Specifically, for the lower familiar (unfamiliar) branded products touch will have a positive effect but no significant effect for the higher familiar branded products will be found.

3.3.2.4.4 Touch, brand familiarity, need for touch and consumer response (Touch x Brand Familiarity x NFT)

In examining brand familiarity moderation of product touch effects it is pertinent to also consider that it may be subject to an individuals' NFT. Despite prior literature informing of the negative response by high NFT individuals when they cannot (versus when they can) touch products (Jin, 2011; Krishna & Morrin, 2008; Peck & Childers, 2003b; Peck & Johnson, 2011) it is possible that this negative effect can be attenuated/compensated for using non-haptic related cues (Yazdanparast & Spears, 2013), in this case through brand familiarity. Therefore, given that product touch is known to be more significant for high NFT individuals (see section 3.3.2.2 for a detailed discussion), one may argue that NFT may moderate the previously proposed two-way interaction (touch x brand familiarity). It is expected for high NFT individuals, the effect of touch will be positive for both familiar and unfamiliar brands, but this effect is greater for the unfamiliar branded products. Conversely, given that low NFT individuals (not as reliant on touch during evaluation) would probably draw inference from brand familiarity when determining their response to the products, the familiar brand would be favoured more irrespective of touch. As such:

H2c. There is a three-way interaction between touch, brand familiarity, need for touch. Specifically, individuals with higher NFT will respond more positively when they can touch an unfamiliar branded product than when they cannot. Lower NFT individuals will respond more positively to the familiar branded products irrespective of touch.

3.3.2.4.5 Mediation of product touch effects for unfamiliar branded products

Product touch was hypothesized to only have an effect for unfamiliar branded products; therefore the mediation hypotheses are only predicted for the unfamiliar branded products.

3.3.2.4.5.1 Psychological ownership

The terms psychological ownership and perceived ownership are used interchangeably as both refer to a mental state of ownership that differs from legal ownership as it can occur irrespective of legal ownership (Etzioni, 1991; Furby, 1980; Isaacs, 1933). In regard to its origin, researchers have conjectured and proposed varied opinions that can be viewed from two perspectives. The first being the view that psychological ownership is resultant of a biological link innate in one's genetics (McDougall, 1923) while the second attributes socialization as the origin of psychological ownership (McCracken, 1986). In effect, individuals are either born with an instinctive need to possess or they learn it based on their interaction with others and with the world. Notwithstanding this debate, the psychology of ownership has been investigated across various milieus for over 70 years including child development (Isaacs, 1933), the elderly (Cram & Paton, 1993) within diverse socio-economic classes (Rochberg-Halton, 1980) and in the work environment (Dirks, Cummings, & Pierce, 1996; Pierce et al., 2001; Pratt & Dutton, 2000).

Over the last 20 years most studies in business and management on psychological ownership have been contextually based in employee and organizational behavioural studies. Researchers have looked at defining psychological ownership (Pierce et al., 2001; 2003), different forms of psychological ownership (Avey, Avolio, Crossley, & Luthans, 2009) and consequences of psychological ownership (Buchko, 1993;

O'Driscoll, Pierce, & Coghlan, 2006; Ozler, Yilmaz, & Ozler, 2008; Pierce, O'Driscoll, & Coghlan, 2004; Van Dyne & Pierce, 2004; Vandewalle et al., 1995; Wagner, Parker, & Christiansen, 2003). Pierce et al. (2001; 2003) propose three pathways or routes to psychological ownership namely controlling the ownership target, intimate knowledge of an object (coming to intimately know the target) and identification or immersion of oneself in an object (investing the self into the target).

First, controlling the ownership target denotes the ability to use and control who uses an object (Rudmin & Berry, 1987) which, as research shows, results in feelings of ownership (Adler, Csikszentmihalyi, & Rochberg-Halton, 1983). According to Rudmin & Berry (1987), ownership is the ability to use and control the use of a target (object). As stated by Pierce et al. (2003), research shows that control of an object leads to ownership feelings (Adler et al., 1983; Dixon & Street, 1975; Tuan, 1984). McClelland (1951) believes that when objects can be controlled, they are deemed to be part of the self. Second, intimate knowledge of an object involves the cultivation of feelings of ownership about objects through a living association with them (James, 1890) through which a merging of the self with the object occurs (Beaglehole, 1932). According to Pierce et al. (2003) association is greatly linked with coming to know a target and it is through this association that acquisition of information about the target (object) is gained and one comes to know it intimately (Beggan & Brown, 1994; Rudmin & Berry, 1987). Beaglehole (1932) also contends that as a result of this intimate knowledge is a merging of the self with the target (object) which therefore leads to a feeling of psychological ownership. Lastly, immersion of oneself relates to investment of time and effort. Fundamentally, the theoretical core and motivational epicentre of psychological ownership is a feeling of '*possession*' (Wilpert, 1991) where ownership

feelings can develop for objects both material and immaterial in nature (Pierce et al., 2001).

3.3.2.4.5.2 Affective reaction

The Merriam Webster⁷ dictionary defines *affect* as '*the conscious subjective aspect of an emotion considered apart from bodily changes.*' In keeping with a more academic discourse view, Cohen, Pham, & Andrade (2006) consider *affect* as a term describing an internal feeling state, distinct from liking, as liking is more derivative of an evaluative judgment as opposed to being an internal state. The primary focus of affect research in consumer literature is centred on moods (Cohen & Andrade, 2004; Pham, 1998), demonstrating the positive effect of a good mood on brand extensions (Barone, Miniard, & Romeo, 2000) and product evaluations for example. A few researchers have also examined the effect of specific emotions such as disgust, sadness and effects of economic decisions (Lerner, Small, & Loewenstein, 2004), the influence of sadness on low risk or safer choices and anxiety on rewarding and comforting options (Rajagopal Raghunathan, Pham, & Corfman, 2006; Raghunathan & Pham, 1999). Peck & Shu (2009) refer to affective reaction as the intensity of one's emotional response to a given stimulus and despite the growing interest and comprehension of *affect*'s role in consumer behaviour, the topic is barely in its adolescence (Cohen et al, 2006) therefore further research in the area is encouraged.

3.3.2.4.6 Psychological ownership and affective reaction as mediators of product touch effects for unfamiliar branded products

Research shows that individuals tend to have a higher valuation for things they perceive owning (Kahneman, Knetsch, & Thaler, 1990; Knetsch & Sinden, 1984; Peck

⁷ <http://www.merriam-webster.com/dictionary/affect>

& Shu, 2009; Thaler, 1980). More recently researchers have examined psychological ownership in the realm of product touch (Brasel & Gips, 2014; Peck et al., 2013; Peck & Shu, 2009; Shu & Peck, 2011). When touching a product provides positive tactile feedback, psychological ownership increases leading to greater willingness to pay for it (Peck & Shu, 2009). Interestingly, even negative tactile feedback increased psychological ownership, despite it not leading to greater willingness to pay (Peck & Shu, 2009). In effect, this demonstrates the strength that touch has on activating a sense of ownership (psychological ownership), despite the context within which this touch occurs. Individuals do not necessarily have to touch an item to feel closer to it, even imagining touching it increases these feelings of psychological ownership (Peck et al., 2013). Similarly, even ‘touching’ products via a touchscreen has the same effect (Brasel & Gips, 2014). Shu & Peck (2011) have shown psychological ownership to be a consistent mediator of willingness to pay. Overall, it is rational to predict that if touch leads to feelings of ownership, it is possible that in addition to willingness to pay more, this may translate into feeling more confident in evaluative judgments (confidence in judgment), viewing the product more favourably (product evaluation) and wanting to purchase the product (purchase intention). As such:

H3a. Touching unfamiliar branded products leads to an increase in psychological ownership which then leads to a positive consumer response.

From an interpersonal touch perspective, being touched (interpersonal touch) increases positive feelings towards the person instigating the touching (Fisher et al., 1976; Patterson et al., 1986), when the person is not considered threatening or untrusting. A shopping or consumption experience is also capable of eliciting affect. While interpersonal touch can cause affective responses towards humans, the same occurs

when products are touched (Peck & Shu, 2009). Greater positive affect is experienced when one touches a pleasant rather than unpleasant surface, the result of which determines the valence of product evaluations. In Peck & Wiggins' (2006) study, participants received a pamphlet requesting a donation of time and money to a local arboretum which contained either a manipulation eliciting a positive touch sensation (a feather), a negative sensation (sandpaper) or a neutral sensation (tree bark). Consistent with results in prior research, the pamphlet containing the positive manipulation elicited stronger positive affect hence increased attitudes toward the message and willingness to donate, than the negative manipulation. Altering the product surface texture can make consumers feel attached to a product on an affective level (Schifferstein & Hekkert, 2011) which translates to increased purchase and repeat purchase intentions (Jansson-Boyd, 2011).

From the discussion in this section, it is evident that there are at least two reasons why touch plays an important role in consumer product perception and hence evaluation: psychological ownership and affect. It is possible for psychological ownership to increase yet still have a negative effect on product evaluation as seen in Peck & Shu's (2009) study. The valence (positive or negative) of the experience consumers have is the key to defining the direction of their response. In essence, psychological ownership and affect work in tandem. Additionally, touch may also increase positive consumer feelings. Some research however has not found support for affect as a mediator, concluding instead that the relationship may be information processing mechanism-based, aimed at extracting the diagnostic attributes of a product, as opposed to affect based (Grohmann et al., 2007). This inconsistency in establishing the definitive role of affect's influence, independent of and in relation to psychological ownership in touch

literature, calls for additional research, more so now, when considering the contributing effect of brand name. As such, it is proposed that:

H3b. Touching unfamiliar branded products leads to an increase in affective reaction which then leads to a positive increase in consumer response.

Next, the research hypotheses regarding brand status are presented.

3.3.2.5 Brand status related hypotheses

3.3.2.5.1 Influence on brand status on product touch effects

Up to this point, the research discussed has not taken brand status into account. Another novelty of my research project is that it tests whether documented effects of product touch still hold when brand status is introduced as a moderator.

Beyond the functional benefits associated with luxury brands and products (e.g., high quality), the heart of luxury lies in the ‘*symbolic desire to belong to a superior class*’ (Kapferer & Bastien, 2009, p. 314). Thus, exposure to luxury brands may motivate the desire to physically interact (touch) with the products to symbolically feel closer to the luxury brand. Indeed, the opportunity to see and touch luxury products (e.g., garments) is essential as consumers feel that online (a no touch environment) luxury brand shopping lacks the ‘environmental quality’ which they enjoy in a luxury store (Dall’Olmo Riley & Lacroix, 2003). According to the Luxury Brand Society webpage, high net worth individuals are becoming more discerning about where they spend their money and are craving innovative and immersive brand experiences above all else (Vallois, 2015).

Supporting the aforementioned statement, recent insight into luxury retail shopping indicates that consumers prefer to engage and interact with products in a physical atmosphere. A study by ATKearney (2014)⁸ reveals that in 2013, physical retail stores accounted for 90% of annual sale income, despite their omnichannel presence (online and offline). The report further revealed that even when consumers chose to purchase online, two thirds visited a physical store prior to and after their online purchase. As such, the physical store plays a significant role in influencing a sale or converting a visit to a sale. The premise behind this being that *'stores provide consumers with a sensory experience that allows them to touch and feel products, immerse in brand experiences, and engage with sales associates who provide tips and reaffirm shopper enthusiasm for their new purchases'* (ATKearney, 2014).

3.3.2.5.2 Touch and consumer response (luxury branded products)

An individual's brand schema contains a variety of brand associations formed through direct experience with a company, word of mouth publicity, celebrity endorsements, advertisements, or by the product or service of the product itself. For example, Apple is associated with innovation, Hyatt Hotels with sophistication and BMW cars with superior engineering. Luxury brand schemas primarily possess associations of high price, excellent quality, rarity, aesthetic appeal, extraordinariness and symbolism (Dubois, Laurent, & Czellar, 2001) which have implications on how consumers choose to purchase luxury brands and products. Despite limited expertise and infrequent purchase of luxury, individuals still express a liking and interest towards luxury (Dubois & Laurent, 1994). Therefore, products that possess the 'essence' of luxury brands (brand contagion) would be judged based on the known qualities of this brand

⁸ An independent survey of more than 2,500 consumers and dozens of retail executives

(brand schema). Following the same rationale provided in section 3.3.2.1, that touch has a positive influence on consumer response, it is predicted that:

H4a. Touch has a significant positive effect on consumer response to luxury branded products.

3.3.2.5.3 Touch, NFT and consumer response (Touch x NFT)

Consistent with prior literature informing of the positive effect of touch for high NFT individuals when they can (versus when they cannot) touch products (Jin, 2011; Krishna & Morrin, 2008; Peck & Childers, 2003a, 2003b; Peck & Johnson, 2011) it is expected that the same will be true for luxury branded products. Therefore:

H4b. The effects of touch on consumer response for luxury branded products is a function of NFT. Specifically, touch effects will be significant for those with a higher NFT but not a lower NFT.

3.3.2.5.4 Touch brand status and consumer response (Touch x brand status)

Similar to touch and brand familiarity, little is known about the relationship between touch and brand status. However, contagion theory provides insight into predicting the relationships between touch and brand status.

3.3.2.5.4.1 Contagion Theory

Contagion theory is one of the central laws of sympathetic magic developed by Frazer, (1981) in the late 1800s to explain the pervasive magical practices and rituals in traditional cultures (Rozin et al., 1986). According to this theory, when a person or object (source) comes into contact with another person or object (target) either directly

or indirectly, properties from the source are transferred to the target (Rozin & Nemeroff, 1990). When the two are in contact the source transfers its positive or negative ‘essence’ (all or part of its properties) to the target object either mentally, physically or morally (Nemeroff & Rozin, 1994; Rozin et al., 1986). Once contact is made, the ‘contaminating’ source properties are perceived as being transferred to the target.

In an early experiment Rozin et al. (1986) found that when participants filled two bottles with sugar, labelling one *sucrose* and the other *sodium cyanide* (*with a red ‘poison’ sticker printed below the label*), participants were still hesitant to drink a sugar solution made from the sugar labelled sodium cyanide. The results implied that despite individuals being aware that both containers were filled with sugar (having filled and labelled them themselves), the poisonous label managed to transfer its negative ‘essence’ to the sugar solution.

3.3.2.5.4.2 Contagion theory in consumer behaviour literature

Marketing literature has also explored the role of contagion and shown that the closeness to the source heightens feelings of contagion (Argo et al., 2006; Mishra, 2009; Morales & Fitzsimons, 2007). Products in close proximity to one another are capable of ‘contaminating’ other products (Morales & Fitzsimons, 2007). For example, product contagion stipulates that when a product eliciting disgust physically comes into contact with a target product (e.g., in a grocery cart), its negative properties are transferred to the target object consequently lowering its evaluation (Morales & Fitzsimons, 2007). In one of their studies, Morales & Fitzsimons (2007) presented a source item (Stayfree feminine napkins), target item (unbranded packaged cookies) and non-target items (Cheerios cereal, laundry detergent) on a table in a straight line. In one

condition, the source (feminine napkins thought to elicit disgust) and target items touched each other while in the other both were six inches apart. After viewing these items, participants reported lower evaluations and willingness to try the cookies in the product touch than the no touch condition, implying that feminine napkins were thought to physically contaminate the packaged cookies by mere contact.

The law of contagion also applies from person to product, meaning that a person can transfer their 'essence' to or contaminate a product they have come into contact with. Applying contagion theory in a consumer context, Argo et al. (2006) proposed a theory of consumer contamination defined as '*contamination from consumer touching*' (p. 31). In their study, when consumers saw or were made aware that another customer had touched a T-Shirt prior to them coming into contact with it, their overall liking and purchase intentions for the shirt were lowered, with disgust being the underlying mechanism resulting in this effect. The overarching conclusion was that consumers like to touch products themselves but respond negatively when others have done so because they feel the product has been contaminated by others.

Contrary to this, later research revealed that contact can elicit a positive response (positive consumer contamination). In Argo, Dahl, & Morales' (2008) study, higher product evaluations, purchase intentions and willingness to pay were noted for a T-shirt believed to have been touched or worn by an attractive person prior to customer contact with it. If the source of contamination is considered positive the target is favourably influenced. One such example of contagion's positive effect in the real world is seen in consumers' willingness to pay exorbitant prices for items that have come into contact with celebrities. In 2004, Britney Spears' used chewing gum was sold for \$14,000, a Super Bowl space suit outfit worn by Justin Bieber for \$5,800 and more surprisingly

Justin Timberlake's half eaten French toast for \$3,154. Possession of used chewing gum or half-eaten French toast which has no functional value implies that the value may stem from their symbolism to the individual. Beyond an associative perspective (value derived from items serving as reminders of celebrities), Newman, Diesendruck, & Bloom (2011) found that although economic value (potential resale value) has an influential role in valuation, contagion was the most critical factor affecting the valuation of celebrity items. Interestingly, items associated with a celebrity who was viewed favourably were valued for both their contact with the celebrity (contagion) as well as its potential resale value (market value). Conversely, items associated with a celebrity who was viewed unfavourably were only valued based on their potential resale value. The preceding studies demonstrate that contagion effects can be positive or negative.

3.3.2.5.4.3 Gap in contagion theory in consumer behaviour literature

On review of the contagion theory marketing literature presented above, one key aspect noted is that studies fall into two main categories: product-to-product contagion (Morales & Fitzsimons, 2007) and person-to-product contagion (Argo et al., 2006, 2008; Newman et al., 2011). As Argo et al. (2008) suggest, certain brand types could elicit particular positive feelings or associations that could drive positive contagion but to my knowledge no study has empirically examined contagion theory from a brand perspective. This research project aims to fill this gap by examining contagion effects from a brand status (luxury or non-luxury) perspective. Based on the theoretical framework, the term brand contagion was proposed to reflect a brand-product contagion effect and this research project argues that brand contagion can occur (brand-to-product contagion) and that this effect is transferred to consumers when the consumer makes physical contact with the 'the 'contaminated' branded product. This is

one of the first studies that proposes this type of relationship (brand-to-product contagion, and its transfer of effects through product touch) and by so doing provides new insight into if and how a brand contagion effect occurs. In summary, the findings will contribute to a deeper understanding of contagion theory in touch literature and brand literature. Drawing on contagion theory, a discussion of the relationship between product touch and brand status is now presented.

3.3.2.5.5 Touch, brand status and consumer response (Touch x Brand status)

Luxury consumption satisfies both extrinsic motivations ranging from status, social recognition and impression management (Brinberg & Plimpton, 1986; Mason, 1992; Novak & MacEvoy, 1990; Vickers & Renand, 2003; Vigneron & Johnson, 1999) as well as the intrinsic motivations of pleasure seeking (Vickers & Renand, 2003). The experientialism and symbolic dimensions of the Vickers & Renand (2003) model identifies that luxury differs from non-luxury in that luxury stimulates sensory pleasure (experientialism) and represents self enhancement, status and a sense of group membership (symbolic interaction). The concept of a luxury brand is fundamentally driven by the hedonic associations we hold of them (Patrick & Hagtvedt, 2014). Internationally acclaimed psychologist Paul Bloom (2010, p. 22) contends that *‘the pleasure we get from many things and activities is based in part on what we see as their essences....it underlies our passions, our appetites and our desires.’* As such, a piece of art elicits greater pleasure when it is considered an original piece of art from a master artist, wine tastes better when it is associated with a prominent name as it implies higher quality and we cherish items that have been touched by famed individuals (Bloom, 2010; Newman et al., 2011). This suggests that engagement with a luxury brand may therefore yield greater pleasure than non-luxury brands.

A luxury brand's characteristic association with status and prestige (Kapferer & Bastien, 2009; Veblen, 1899), exclusivity, high quality (Dubois et al., 2001), heightened pleasure and increased self-esteem collectively embody a positive '*luxury essence*.' This research project argues that this *essence* is transferrable from the luxury brand (source) to an individual (target) coming into contact with a luxury branded product. Accordingly, the positivity derived from the transference of this essence is bound to be greater for luxury than non-luxury brands. Additionally, as proximity heightens the feelings of contagion (Argo et al., 2006; Mishra, 2009; Morales & Fitzsimons, 2007) it would be expected that the *luxury essence* is greater in the touch environment where proximity is enhanced. In a touch environment, an individual comes into direct physical contact with the source item and drawing on contagion theory this research infers that this brand contagion effect is activated through physical touch with the product. For product categories that typically require physical evaluation (i.e., touch is diagnostic), some of the information desirable for making a purchase decision is not available in a no touch environment. Consequently, brand status may serve as an important surrogate for intrinsic product attribute information. Thus:

H4c. Brand status moderates the effect of touch on consumer response. Specifically, for higher luxury branded products product touch has a positive effect. Conversely, for lower luxury branded products (non-luxury), there is less likely to be a significant effect of touch.

3.3.2.5.6 Touch, NFT and brand status and consumer response (Touch x NFT x brand status)

In the absence of intrinsic cues (through touch for example) it is possible that extrinsic cues (such as brand name) would serve predictors of product quality and affect overall

judgment (Olson & Jacoby, 1972), thereby serving as a compensatory mechanism for high NFT individuals. Yazdanparast & Spears (2013) found that in an online environment (no touch) purchase intentions and confidence in judgment for high and low NFT individuals were comparable when those with a high NFT had a positive mood, but a negative mood decreased both outcome variables to a greater extent for high versus low NFT individuals. Similarly, the researchers found that in the presence of online promotions, purchase intentions and confidence and judgment for high and low individuals were similar but the absence of online promotions significantly reduced this for high NFT compared to low NFT individuals. Therefore price promotions acted as a form of 'risk reduction' in an online (no touch) environment that Peck & Childers (2003b) showed adversely affect high NFT individuals. Low NFT individuals' confidence in judgment is however not dependent on them touching the product (Peck & Childers, 2003a). Along the same compensatory research findings as Yazdanparast & Spears (2013), it is proposed that a luxury brand name can be considered as a non-haptic factor that may be drawn on in instances when haptic exploration is unavailable for high NFT individuals. As such:

H4d. There is a three-way interaction between touch, NFT and brand status. When evaluating a lower luxury (non-luxury) branded product, consumer response in the no touch environment will be greater for lower NFT than higher NFT. When evaluating a higher luxury branded product, there will be no difference in consumer response in the no touch environment between higher and lower NFT individuals.

3.3.2.5.7 Mediation of product touch effects for luxury branded products

3.3.2.5.8 Psychological ownership and affective reaction

The rarity and exclusivity principle of luxury means that luxury branded products are desired by many but owned by a certain few (Laurent & Dubois, 1996). Unlike non-luxury branded products that have widespread availability, luxury brand ownership is a privilege. By the very nature of luxury shopping being a holistic pleasurable experience (Dall’Olmo Riley & Lacroix, 2003), there may be more need to greater engage with products from such brands, which would then increase consumer affect. It is safe to assume then that anything that brings individuals closer to such products may bestow a sense of ‘pride in membership’ therefore affect. However, for non-luxury brands, due to widespread availability and lack of exclusivity, touching products may not necessarily yield greater affect when compared to luxury brands, but a greater sense of connection with the products (psychological ownership). That said, touch and touch imagery (imagining touch) are known to increase both psychological ownership and affect (Peck et al., 2013; Peck & Shu, 2009) therefore both mediators could be the conduit through which this occurs for luxury brands. Therefore, the following propositions are made:

H4e. Psychological ownership mediates the effect of touch on consumer response to luxury branded products.

H4f. Affect mediates the relationship between touch and consumer response for luxury branded products.

A summary of all the hypotheses proposed are tabulated below (Table 4).

3.4 Study hypotheses summary

Table 4. Hypotheses Summary

HYPOTHESES		HYPOTHESIS NUMBER	HYPOTHESES
TOUCH	Touch environment, need for touch and consumer response	H1a	<i>Touch has a significant effect on consumer response.</i>
		H1b	<i>The effect of touch is a function of NFT. Specifically, the effect of touch is only significant for those with a higher NFT and not a lower NFT.</i>
BRAND FAMILIARITY	Brand familiarity and touch environment	H2a	<i>A familiar branded product has a more positive effect on consumer response, than an unfamiliar branded product.</i>
		H2b	<i>The effect of touch on consumer response is a function of brand familiarity. Specifically, for the lower familiar (unfamiliar) branded products touch will have a positive effect but no significant effect for the higher familiar branded products will be found.</i>
		H2c	<i>There is a three-way interaction between touch, brand familiarity, need for touch. Specifically, individuals with higher NFT will respond more positively when they can touch an unfamiliar branded product than when they cannot. Lower NFT individuals will respond more positively to the familiar branded products irrespective of touch.</i>
		H3a.	<i>Touching unfamiliar branded products leads to an increase in psychological ownership which then leads to a positive consumer response.</i>
		H3b.	<i>Touching unfamiliar branded products leads to an increase in affective reaction which then leads to a positive increase in consumer response.</i>
BRAND STATUS	Brand status and touch environment	H4a	<i>Touch has a significant positive effect on consumer response to luxury branded products.</i>
		H4b	<i>The effects of touch on consumer response for luxury branded products is a function of NFT. Specifically, touch effects will be significant for those with a higher NFT but not a lower NFT.</i>
		H4c	<i>Brand status moderates the effect of touch on consumer</i>

HYPOTHESES		HYPOTHESIS NUMBER	HYPOTHESES
			<i>response. Specifically, for higher luxury branded products product touch has a positive effect. Conversely, for lower luxury branded products (non-luxury), there is less likely to be a significant effect of touch.</i>
		H4d	<i>There is a three-way interaction between touch, NFT and brand status. When evaluating a lower luxury (non-luxury) branded product, consumer response in the no touch environment will be greater for lower NFT than higher NFT. When evaluating a higher luxury branded product, there will be no difference in consumer response in the no touch environment between higher and lower NFT individuals.</i>

3.5 CHAPTER SUMMARY

Chapter 3 began by presenting the theoretically grounded conceptual framework as well as a detailed discussion of the theory and concepts underpinning the propositions developed for testing. Descriptions of the constructs in the model were provided and the proposed relationships (between the constructs) in the model discussed. Next, Chapter 4 presents the set of procedures followed and formal method employed to facilitate the examination of these propositions.

CHAPTER 4: Research Methodology

4.1 INTRODUCTION

Preceding chapters have presented the context, research objectives, literature review, conceptual framework and hypothesized relationships. Chapter 4 reports the set of procedures followed and method employed to examine the proposed relationships. A detailed discussion of the research approach, sampling method, participant assignment, questionnaire design, reliability of measures, validity of measures and research design, measures, stimuli/product selection, brand selection, pilot study, main study design, manipulations, additional analysis and ethics adhered to during the research is provided in this chapter.

4.2 Research Approach

4.2.1 Purpose of Inquiry

The purpose of inquiry in research is determined by what the researcher intends to deduce from the data, and can be classified in three different ways: *exploratory*, *descriptive* and *explanatory* (Blanche, Durrheim, & Painter, 2007). Exploratory studies entail making initial investigations into comparatively unknown areas of research utilizing a flexible and inductive approach (e.g., using interviews) set at searching for new insights into a given phenomenon (Blanch et al., 2007). Descriptive studies aim at providing an accurate description of phenomena while explanatory studies, endeavour to provide causal explanations of phenomena (Bryman, 2012). The purpose of this research is testing the direct and indirect (moderation and mediation) relationships proposed and is therefore classified as being explanatory in nature.

4.2.2 Research Paradigm

A paradigm is a ‘cluster of beliefs and dictates’ (Bryman, 1988, p. 4) influencing what should be studied, how research is undertaken and how results are interpreted (Bryman, 2012). ‘To ensure a robust research design, researchers must choose a research paradigm that is congruent with their beliefs about the nature of reality’ (Mills, Bonner, & Francis, 2006, p. 2). The research project situates itself in the philosophical paradigm of positivism, as it seeks to generate hypotheses for testing (Bryman, 2012) that will allow for the prediction and control of phenomena (Guba & Lincoln, 1994). Philosophers such as Aristotle, Bacon, Locke, Comte, and Kant advocated for this *rationalistic, empiricist philosophy* (Mertens, 2005, p. 8) which they felt ‘*reflects a deterministic philosophy where causes probably determine effects or outcomes*’ (Creswell, 2003, p. 7). In this positivist paradigm, the purpose of theory is to generate testable hypotheses that will allow explanations of laws to be assessed (Bryman, 2012). Accordingly, drawing from touch (stimulus organism response model and contagion theory) and brand literature (schema theory), relationships were proposed in the form of hypotheses.

4.2.3 Research Design

A research design forms the ‘framework for the generation of evidence that is suited both to a *certain set of criteria* and to the *research question* in which the investigator is interested’ (Bryman, 2012, p. 45).

4.2.3.1 Research Method

Positivism advocates for a quantitative research design employing a hypothetico-deductive approach (Bryman, 2012; Somekh & Lewin, 2006) where proven hypotheses are seen as acceptable facts or laws (Guba & Lincoln, 1994). A review of

previous work on the study of touch in the marketing literature shows that the experiments have been the predominant research method in testing hypothesized relationships (e.g. Argo, Dahl, & Morales, 2006, 2008; Grohmann, Spangenberg, & Sprott, 2007; Klatzky & Peck, 2012; Peck, Barger, & Webb, 2013; Peck & Shu, 2009). This precedent, in addition to the research paradigm and approach within which this research is situated called for the use of quantitative methods synonymous with a deductive approach, specifically via the use of experiments.

Experiments facilitate control over an independent variable (Freedman, Pisani, & Purves, 2007; Kirk, 2009) which in this case is touch, for the purpose of measuring its influence on consumer response. In effect, experiments aid in the examination of the effect of different levels of an independent variable(s) on a dependent variable(s) (Kuhfeld, Tobias, & Garratt, 1994). Causality establishment required stringent control measures to counter any exogenous variables that could have affected or explained observed effects, separate from effects generated from the variables intentionally manipulated (in this case, touch). In addition, determination of this effect required the manipulation of touch (the independent variable) to form comparable groups (a control group - no touch; and an experimental group - touch). An extensive literature review and pilot testing informed the plan for running the experiments (experimental design).

4.2.3.1.1 Experimental design

An experimental design outlines the '*plan for assigning experimental units to treatment levels and the statistical analysis associated with the plan*' (Kirk, 1995,; p. 1). The most common design approaches for experiments are within subject and between subject designs. In a within subject design participants are exposed to all

levels of the independent variable and in a between subjects design, participants are only subjected to one of the various treatment conditions (Keppel & Wickens, 2004). A key advantage of within subject designs is using the same subjects in all treatment conditions makes the results more comparable and thus sensitive (Keppel & Wickens, 2004). However, using the same participant's exposes them to all treatments therefore may inadvertently reveal the aim of the research study. In this research project, the same products were used in each treatment condition, but their brand names changed across treatments. Thus, using the same participants would have alerted participants of this and possibly influenced their response to them in the touch and no touch conditions. As such, an alternative research design was sought.

The alternative research design is a between subjects design which allows for multiple variables to be tested concurrently, where participants are assigned to only one treatment group (Christensen, 2004; Keppel & Wickens, 2004). As the prime focus of this research lay in determining if and how the touch effect varied in relation to brand familiarity and brand status separating participants through the between subjects design limited carryover effects in the experiment from occurring. Specifically, the *participant fatigue effect* which negatively impacts participation concentration and the *practice effect* (where repeated exposure leads to learning), both of which interfere with study results (Keppel & Wickens, 2004). In addition to limiting the aforementioned effects, the between subjects design separated the touch (touch, no touch) and brand (familiar, unfamiliar; luxury, non-luxury) groups and allowed for the true purpose of the experiment to remain hidden. In each respective Study (1 and 2), the stimuli used across participants in the control and treatment groups (three different products) were kept constant. The between subjects design is not without its limitations however, specifically, a decreased sensitivity of its

findings therefore the requirement of a larger sample size (compared to a within subjects design) (Keppel & Wickens, 2004). To allow for a statistically significant effect size to be derived Keppel & Wickens (2004) recommend using a sample size of at least 30 per experimental condition. To increase the likelihood of achieving these numbers in this research, steps were taken in the participant recruitment phase to reach a large number of potential participants (e.g. through emails, posters, flyers) as well as encourage participation through incentives.

Within subject and between subject designs serve as the foundations for factorial designs (Keppel & Wickens, 2004). Factorial designs enable the examination of two or more variables to determine their independent and interactive effects on the dependent variable (Christensen, 2004). As the interaction effect of touch and brand (brand familiarity and brand status) was also of interest to the researcher, this research adopted a factorial between subject design where participants were randomly assigned to different treatment groups within each experiment.

4.2.3.1.2 Experiment setting adopted

Experiments are carried out in one of two settings: non-contrived settings (field experiments) or contrived settings (lab experiments). A field experiment is defined as ‘a true randomized experiment conducted in a natural setting (Hewstone & Stroebe, 2015; p. 6). This natural setting (that is, the real world) increases ecological validity which is advantageous (Bryman, 2012) but also means that the researcher has less control over the experiment (Hoyer & MacInnis, 2008). The uncontrollable intricacy inherent to field experiments (e.g. reduced experimenter control and uncontrolled extraneous variables) further creates issues with inference that may result in lower internal validity (Brehmer & Dorner, 1993).

On the contrary, contrived settings (i.e. artificially simulated environments normally occurring in a lab setting) provide a greater degree of control over the experimental activities (Sekaran, 2000). A lab experiment is a 'research study in which the variance of all, or nearly all, of the possible influential independent variables not pertinent to the immediate problem of the investigation is kept at a minimum' (Kerlinger & Lee, 2000; p. 579). Consumer behaviour lab experiments endeavour to examine the behaviour-environment relationships by eliminating a large number of extraneous variables that could influence antecedents and consequences of consumer behaviour (Foxall, 2016). By reducing the number of, and controlling for these extraneous variables the actual causal effects of the investigated independent variable on the dependent variable can be deduced (Sekaran, 2000).

The advantages and disadvantages of using lab experiments have given rise to discourse within both behavioural and social scientific research (Foxall, 2016). As previously mentioned, lab experiments are advantageous as a researcher has a higher degree of control of the experiment (e.g. through assignment of subjects to treatment conditions), which likely increases internal validity (Bryman, 2012). Additionally, this level of control of the experimental environment means that lab experiments are more straightforward to replicate than field experiments are (Bryman, 2012). Notably, one of the key limitations of lab experiments is the difficulty in establishing ecological validity (Bryman, 2004, 2012; Foxall, 2016), as the experimental setting used is unlikely to be related to a real world context (Bryman, 2012). Although lab experiments are often criticized for their artificiality, they nevertheless exhibit *experimental realism*, in which participants are sufficiently engrossed and actively involved in the experiment and thus genuinely respond to the treatment they are exposed to (Aronson & Carlsmith, 1968). As such, it is arguable that experiments do

represent a form of reality. In this research, the main purpose was to examine the moderating effect of brand familiarity and brand status on touch's effects thus a more controlled environment was required. As such the experiments were conducted in the contrived setting of lab based experiments.

4.3 Sampling Method

Consistent with prior experimental touch research (Citrin et al., 2003; Grohmann, Spangenberg, & Sprott, 2007; McCabe & Nowlis, 2003; Peck, Barger, & Webb, 2013; Peck & Shu, 2009; Peck & Wiggins, 2006), the non-probability sampling method of convenience sampling was adopted, where some subjects within the population had a greater chance of being selected than others (Bryman, 2012). Non-probability sampling is a preferred method in this study as it is cheaper, faster and resource friendly (Somekh & Lewin, 2006) than probability sampling where subjects have an even or known chance of selection (Christensen, 2004; Somekh & Lewin, 2006). Although probability samples have a lower risk of selection bias, they are still susceptible to a level of sampling error that would account for the variance in characteristics of the sample and the population (Christensen, 2004; Somekh & Lewin, 2006). Experimental researchers note that probability sampling is seldom attainable in reality, and therefore samples used in experiments tend to be '*samples of convenience*' (Keppel & Wickens, 2004, p. 9). Consequently, respondents were randomly allocated to different treatment groups by allocating them to different time slots and alternating the treatment administered in each. Each participant had no prior knowledge of the condition they would be assigned to.

4.3.1 Sample

Convenience sampling involves using samples that are readily accessible to the researcher (Somekh & Lewin, 2006) and this method was employed to recruit a university student sample for this research. Using university students decreases the probability of extraneous variables (unexplained variance) from affecting experimental analysis and therefore the research outcome (Reynolds, Simintiras, & Diamantopoulos, 2003; Laroche, Yang, McDougall, & Bergeron, 2005). University students also provide insightful data regarding basic psychological processes and are suitable samples for basic research on causal mechanisms (Kadres, 1996). In addition, a university student sample is deemed appropriate for this research as similar samples have been used extensively in prior touch related studies (Atakan, 2014; Brasel & Gips, 2014; Klatzky & Peck, 2012; Peck & Johnson, 2011; Peck & Shu, 2009; Peck & Wiggins, 2006). Furthermore, lab research with a university student sample is cost effective and efficient.

The sample was drawn specifically from the University of Kent, UK, for two reasons. First, this location contained the population of interest (homogenous group of university students) and second, it was convenient as the researcher is based in the region and therefore had easier access to the population.

4.4 Participant assignment

In a bid to overcome *assignment bias* often touted as a disadvantage of a between subjects design, subjects were randomly assigned to one treatment group. Each treatment was conducted on different days in different classrooms. At the time of signing up to the experimental treatments participants were unaware of what specific treatment they would undergo thus they selected attendance based on timing only.

Effort was made to recruit participants from across the university through widespread use of posters and use of classrooms at the University of Kent Business, Economics, Psychology, Engineering and Mathematics. This randomization is considered a key foundation of good experimental design (Fisher, 1925; 1935)⁹ that aids in limiting the probability of systematic differences in the characteristics of participants from affecting results, resulting in an outcome attributable to the specific experimental treatment (Keppel & Wickens, 2004). Randomization also allowed for the control of possible nuisance variables¹⁰ (Kerlinger, 1986) by distributing their effects equally across groups (Sekaran, 2000). Therefore, increasing the likelihood that individual factors that could influence the observed effect were spread out equally among all groups, thus increasing the probability of internal validity (Bryman, 2012).

4.5 Questionnaire Design

4.5.1 Question format

Constructs were measured on Likert (Agree-Disagree) and Semantic Differential scale (item specific) formats. Likert scales are popular among social scientists and marketing researchers as evidenced in *The Marketing Scales Handbook*, which reports numerous citations to articles that have used such scales. Easy visual display, a wide range of measurable constructs and quick administration are cited among some of the reasons for this popularity (Revilla, Saris, & Krosnick, 2014). Despite this, it is acknowledged that using Likert scale questions increases the susceptibility of acquiescence response bias (Billiet & McClendon, 2000; Watson, 1992). This is the tendency for respondents to agree, rather than disagree with every question

⁹ Sir Ronald Fisher (1890-1962) was a leading statistician, eugenicist, evolutionary biologist, geneticist, and considered father of modern experimental design.

¹⁰ Factors that may influence the value of the dependent variable other than the treatment of interest' (Keppel and Wickens, 2004, p. 6).

irrespective of the content (Baumgartner & Steenkamp, 2001) due in part to effort avoidance in answering questions effectively (Krosnick, 1991), and as such, yielding lower quality data. In light of this, measures were taken to reduce the acquiescence bias of the questionnaire. Specifically, question response categories were partially labelled (that is, only endpoints were labelled), as the fully labelled categories have been shown to reinforce the influence of this ‘positivity bias’ (Weijters et al., 2010). Additionally, effort was made to ensure that constructs were measured successfully and following the recommendation by Wetzel (1977, p. 89) who states that, ‘*One of the cardinal rules of experimentation is to measure the major dependent variables first,*’ the dependent measures were placed prior to the demographic and all other measures in the questionnaires.

4.6 Reliability of measures

Reliability relates to the consistency of a measure, more specifically, the degree to which a rating scale produces consistent and steady results (Wilson, 2003; Christensen, 2004). The reliability of a measure ‘indicates the extent to which the measure is without bias and hence offers consistent measurement across time and across the various items in the instrument’ (Sekaran, 2000; p. 204), and is assessed by examining the degree of consistency between measurements of a variable (Hair, Black, Babin, & Anderson, 2010). It measures the degree to which a measure is error free and therefore consistent across time and across the items included in that measure (Sekaran, 2000).

Two methods can be used to derive an estimate of reliability; split half reliability tests and/or interitem consistency reliability (Sekaran, 2000). Split half reliability is a test of reliability that measures reliability by dividing the test items into two equal

halves, each of which is then scored and results compared to each other (Christensen, 2004), thus giving a measure of the equivalence of the content of the test (Jackson, 2015). The test is assumed to be reliable if equivalent results are obtained from each half (Christensen, 2004). Essentially, Split half reliability method measures the degree to which all parts of the test contribute equally to what is being measured but is affected by the reduction in length, thus is a favored method when the number of items in a measure is large (George and Mallery, 2016). Interitem consistency reliability tests respondent consistency in assigning the same value to items in a measure (Sekaran, 2000). Dependent on the type of variable being dealt with two tests can be used to this effect: Cronbach coefficient alpha (Cronbach, 1951) and Kuder-Richardson formulas (Kuder & Richardson, 1937). Of the two, Cronbach coefficient α is the most popular and is used for multi-item scales items while Kuder-Richardson for dichotomous items (Sekaran, 2000). Reliability for each of the constructs in this research was assessed using Cronbach's Alpha coefficient (α) in Study 1 and 2 (Sections 5.4 and 6.4).

4.7 Validity of measures

Measurement validity refers to the degree to which a measurement instrument actually measures what it is designed to measure (Field, 2013). Three main categories of validity are of specific interest where self-report measures such as questionnaires are concerned: content, construct and criterion related validity (Christensen, 2004; Sekaran, 2000; Field, 2013). **Content validity** (also known as face validity) is related to the degree to which items in a scale are truly representative of the construct they are intended to measure (Field & Hole, 2003). That is, that the individual items in the measurement encompass the full range of the construct (Field,

2013). Content validity increases the chance that the items are representative and are drawn from a universal pool of questions (items) (Cronbach, 1971).

To increase content validity, the questionnaire was vetted by one marketing academic before the pilot study and feedback received included using a purchase intention measure consisting of more than two items as initially planned. Literature informs of a debate regarding the use of single or multiple items scales in marketing research. A recent methodological paper in the *Academy of Marketing Science Journal* notes that despite the advantageous parsimony and ease of administration offered by single item over multiple item scales (e.g. Fuchs & Diamantopoulos, 2009; Wanous, Reichers, & Hudy, 1997), researchers should not be too quick in adopting single item scales (Diamantopoulos, Sarstedt, Fuchs, Wilczynski, & Kaiser, 2012) as in most empirical settings multi-item scales clearly outperform single items scales in terms of predictive validity.

Indeed, multiple item scale use is standard practice in academic marketing research (as noted by (Diamantopoulos et al., 2012), further evidenced by their prevalence in numerous marketing scale handbooks (e.g. Bearden, Netemeyer, & Haws, 2011; Bruner, Hensel, & James, 2005). Accordingly, Diamantopoulos, Sarstedt, Fuchs, Wilczynski, & Kaiser (2012) advise that researchers follow what they term as ‘conventional wisdom’ and opt for multiple item scales in empirical studies, a sentiment endorsed by extant literature (e.g. DeVellis, 2003; Netemeyer, Bearden, & Sharma, 2003; Spector, 1992). Their suggestion in addition to the previously mentioned feedback from an academic led to the decision to adopt the norm; multi item scales in this research project. The procedure of manipulation of the independent variable touch was adopted from prior research (Grohmann, 2002;

Grohmann et al., 2007) and all definitions and scale items were adopted from existing well established measures with demonstrated content validity.

Construct validity is defined as the extent to which an operational set of items accurately measures the concept under investigation (Netemeyer, Bearden, & Sharma, 2003). It essentially assesses the link between the measure and the theory. Construct validity is increased where scales possess multi (versus single) items (DeVellis, 2003), therefore this research used well established multi item scale measures with proven construct validity.

Criterion related validity is attained when the measure used differentiates respondents on the criterion it is expected to predict (Sekaran, 2000). Criterion validity is normally assessed through the use of correlation coefficients; however, as no new measures were developed to measure constructs in this study, no steps were taken to check for this in this research project.

In addition to measurement validity, the validity of the research design was also considered and discussed.

4.8 Validity of research design

As experiments were used in this research, steps were taken to increase validity through experimental design and measurement. Internal validity of the research design relates to the degree to which '*we can accurately infer that the independent and dependent variables are causally related*' (Sekaran, 2000, p. 198) while external validity is the '*extent to which the experimental results can be generalized across*

variations in people, settings, treatments, outcomes and time' (Sekaran, 2000, p. 216).

Control of experimental procedures, measures, treatments and participants are ways in which internal validity can be increased in experimental research (Creswell, 2012; Creswell, 2013). In this research, the likelihood of internal validity was increased through control by design (the same procedure in the touch conditions and the same procedure in the no touch conditions, across all experiments), experimental procedures (standardized instructions were used for each of the experiments - see Appendix 4, 5 and 6) and counterbalancing the order in which products were presented to participants.

Regarding participants, control by randomization was used where participants were randomly assigned to the experimental groups which assured that any dissimilarity of participants was not methodically related to the treatments administered. Through randomization, both known and unknown factors (nuisance variables) that could 'contaminate' or affect the given relationship under investigation, were spread across all groups hence reducing the effect of possible confounding effects by individual variables (Sekaran, 2000) and increasing the probability of internal validity (Bryman, 2012). These methods improved the degree of comparability of measures taken from the different experimental groups in the study. In an effort to increase ecological validity (generalizability of results across settings) multiple products were used in each experimental treatment. Specifically, participants evaluated three products, one at a time, presented in rotation such that the order in which products were presented varied.

4.9 Measures

The measures used were carefully derived from prior studies based on an extensive literature review with proven validity as discussed below.

4.9.1 Product evaluation

How consumers evaluate products is one of the central questions of consumer behaviour research and is of interest to both academics and marketing practitioners alike. Product evaluation was included to assess participants' overall product liking and was operationalized as 'attitude towards the product.' An attitude is a set of beliefs, experienced and feelings forming a predisposition to act in a given direction (Fishbein & Ajzen, 1975) affecting intentions and consumer behaviour. A favourable product attitude often translates into favourable brand attitudes and choice (Posavac, Sanbonmatsu, Seo, & Iacobucci, 2014). This research project proposes and tests whether product touch can be an antecedent to product attitude formation (product evaluation) when those products can be touched versus cannot be touched; that is, whether product evaluation can be driven through product touch. Comprehension of how attitudes towards products are influenced (in this case through product touch) will lead to a better understanding as to how these attitudes can be effectively influenced to yield greater purchase intentions, increased sales, brand equity and/or customer satisfaction, through the use of product touch.

Product evaluation is operationalized and measured using the three-item seven-point 'Attitude Toward the Product' scale adapted from Holbrook & Batra (1987) with endpoints 'Strongly Agree' and 'Strongly Disagree.' The three items were: *'I like this (product)'*, *'I feel positive toward the (product)'* and *'The (product) is good.'* Although originally used to assess responses to advertising, the flexibility of this

scale has seen it used to measure various constructs such as product evaluation (Muthukrishnan & Ramaswami, 1999), service evaluation (Stafford & Day, 1995) hotel chains evaluation (Posavac, Sanbonmatsu, Kardes, & Fitzsimons, 2004), events evaluation (Ruth & Simonin, 2003) and country of origin evaluation (Gurhan Canli & Maheswaran, 2000). This extensive use gives an indication of the quality of the measure and its reliability therefore it was adopted in this research.

4.9.2 Confidence in judgment

In this research, confidence in judgment is viewed in relation to the confidence in individual attitudes and evaluations of the product (after experimental exposure). This was assessed using one question with two seven-point semantic differential scales (1 = Not very confident, 7 = Very confident and 1 = Not very sure, 7 = Very sure) adopted from Peck & Childers' (2003b), where participants were asked '*How confident are you with your product evaluation?*'. Given that the scale only had two response categories, a Pearson's bivariate correlation was run with the two items (see sections 5.4 (Study 1) and 6.4 (Study 2) for results), with results showing a significant high correlation, indicative that both measured the same aspect. Consequently scores were averaged and combined into one.

4.9.3 Purchase Intention

Purchase intention was measured to assess 'an individual's conscious plan to make an effort to purchase a brand' (Spears & Singh, 2004, p. 56). Fishbein & Ajzen (1975) consider purchase intention as a subjective inclination toward a product, which serves as a predictor of behaviour. This predictive link to actual behaviour has made this concept one of interest in numerous marketing studies (Chandon, Morwitz, & Reinartz, 2005; Dholakia & Morwitz, 2002; Mittal & Kamakura, 2001; Morwitz,

2001). Researchers have made reference to purchase intention using different terms such as ‘possible to buy’ and ‘intended to buy’ (Zeithaml, 1988). Accordingly, past studies have measured this concept using different sets of items, making the choice of an appropriate scale a confounding exercise for any researcher. For example MacKenzie, Lutz, & Belch (1986) use a three-item seven-point scale (likely/unlikely, probably/improbable and possible/impossible) while Batra & Ray (1986) use a single item seven-point scale (definitely would buy/definitely would not buy).

Previous scales have also varied by the number of items: two-item scales (e.g., Boulding, Kalra, Staelin, & Zeithaml, 1993), three-item scales (e.g., MacKenzie et al., 1986), four-item scales (e.g., Prendergast & Hwa, 2003). Spears & Singh (2004) note that despite its popularity, no standard purchase intention scale with psychometric validity exists, leading them to develop a scale that they successfully validated and empirically replicated. Consequently this research adopts the Spears & Singh (2004) five- item (never/definitely, definitely do not intend to buy/ definitely intend to buy, very low/high purchase interest, definitely not buy it/definitely buy it) measure. One adjustment was made to change the response categories from the original five to seven to provide participants with more options thereby increasing the likelihood of a greater spread of data (Dawes, 2008) and decreased likelihood of ceiling and flooring effects.

4.9.4 Willingness to Pay (WTP)

Willingness to pay (WTP) is defined as the maximum price a buyer is willing to pay for a given good/s or service/s (Wertenbroch & Skiera, 2002). In this research, the purchasing context is either a touch or no touch setting and understanding WTP from a touch and brand perspective may inform a number of decisions such as in-store

design, product display, promotional activities and new product design. For example, if touching increases ones willingness to pay for unfamiliar brands, stores may opt to use free samples or facilitate in-store consumer-product interaction as a market penetration strategy. A recent review (Miller, Hofstetter, Krohmer, & Zhang, 2011) classifies WTP measurement approaches into two main categories: Hypothetical WTP (non-incentive based) and Actual WTP (incentive based) (See Table 5).

Table 5 Willingness to Pay Measurement Approaches

CONTEXT	APPROACH	NAME	DEFINITION
HYPOTHETICAL WTP (<i>Non-incentive based</i>)	Direct	Open-ended question (OE)	Asking consumers directly to state their WTP for a specific product
	Indirect	Choice-based conjoint (CBC) analysis	WTP is calculated on the basis of consumers' choices among several product alternatives and a "none" choice option
ACTUAL WTP (<i>Incentive based</i>)	Direct	BDM (Becker–DeGroot–Marschak) mechanism	Participant is obligated to purchase a product if the price drawn from a lottery is less than or equal to his or her stated WTP
	Indirect	Incentive-aligned choice-based conjoint (ICBC) analysis	Participants are also obligated to make a purchase based on WTP inferred from their revealed preference (among alternatives), using the BDM mechanism.

Adopted from Miller, Hofstetter, Krohmer, & Zhang (2011)

A number of studies find that using hypothetical WTP results in a degree of hypothetical bias¹¹, where hypothetical WTP is substantially higher than real WTP (Botelho & Pinto, 2002; Johannesson, Liljas, & O'Connor, 1997; Neill, Cummings, Ganderton, Harrison, & McGuckin, 1994), as there is no incentive for truthful estimations (Wertenbroch & Skiera, 2002). Consequently, this reported inaccuracy and hypothetical bias make actual WTP a favoured and more reliable approach in experiments (e.g. Ding, Grewal, & Liechty, 2005; Peck & Shu, 2009). However,

¹¹ Bias induced by the hypothetical nature of a task (Harrison & Rutström, 2008)

using actual WTP (auction and bidding approaches such as with the Becker–DeGroot–Marschak mechanism and the incentive-aligned-choice-based conjoint analysis respectively) are not a realistic representation of a normal retail setting therefore do not accurately depict consumer decision-making (Hoffman, Menkhaus, Chakravarti, Field, & Whipple, 1993). This subsequently restricts the practical validity of these actual WTP approaches (Voelckner, 2006). Additionally, incentive based WTP methods are most suitable where inexpensive products are concerned (such as phone cards (Voelckner, 2006)) as they can be quite costly to execute (Miller et al., 2011). Because this research project is dealing with clothing (sweater) and household (bath towel, mug and pillowcase) items, and given the budgetary constraints of this research, an incentive based approach was not feasible.

Miller et al. (2011) note that hypothetical approaches such as Open Ended (OE) WTP questions are just as capable of yielding accurate demand curves and are therefore still useful. The open-ended approach is similar to the survey based economic method known as *contingent valuation method (CVM)* introduced by Davis (1963) where consumers directly state their WTP. The aim of capturing willingness to pay in this research is to examine the effect of the context within which the WTP decision is made (touch and no touch environment). In an attempt to reduce the chances of extreme outliers distorting analysis results, a price range within which responses could fall was set in the questionnaire.

4.9.5 Need for touch

The NFT scale, developed by Peck & Childers (2003b), measures the degree to which individuals have a need for instrumental touch (touch with a salient purchase goal in mind) and/or autotelic touch (touch for the sake of touching). This research

adopts the NFT Scale from Peck & Childers (2003b) made up of 12 questions, six measuring instrumental touch and six measuring autotelic touch, all measured on a seven-point Likert scale anchored with '1= Strongly Disagree' and '7= Strongly Agree' (e.g., 'I place more trust in products that can be touched before purchase' and 'Touching products can be fun') (see Appendix 10). This 12-item measurement scale captures differences in individual need for touch, highlighting the fact that individuals with a higher NFT experience less confidence when they cannot directly touch a product while, on the contrary, for those with a low NFT confidence levels are unaffected when they cannot touch (Peck, 2010). High NFT individuals possess a higher salience of haptic information and are therefore more likely to use such information in their product judgments.

4.9.6 Psychological ownership

The items of this measure are adopted from the study by Peck & Shu (2009), who adapted it from psychological ownership used in a workplace context (Pierce, Kostova, & Dirks, 2001). The scale consists of three questions, each on a seven-point scale anchored by endpoints 'Strongly Disagree' and 'Strongly Agree.' These are; '*I feel like this is my (product)*', '*I feel a very high degree of personal ownership for the (product)*' and '*I feel like I own this (product).*'

4.9.7 Affective reaction

The affective reaction scale designed by Derbaix (1995) has been adapted in previous touch studies (Chark & Muthukrishnan, 2013; Peck & Shu, 2009; Peck & Wiggins, 2006). Peck & Shu (2009) refer to affective reaction as the intensity of one's emotional response to a given stimulus. In this research project this measure is used to capture the emotions individuals feel when they can and cannot touch a

product and thereby adopts the affective reaction scale as used in Peck & Shu's (2009) study. Participants were presented with the statement: *'Here is a list of emotional reactions you may have experienced. Please indicate how much you felt each of these emotional reactions.'* Responses were measured on a seven-item seven-point Likert scale with endpoints 'Not at all' and 'A lot.' The seven items are *interested, moved, captivated, delighted, enthusiastic, appealed, and amused.*

4.9.8 Demographic Variables

Three variables are captured: gender, age and nationality. The variables were selected based on their prospective explanatory relevance of touch effects. For example, Citrin, Stem, Spangenberg, & Clark's (2003) research shows that women need tactile input considerably more than men when evaluating products. As age increases, it significantly impacts touch sensitivity leading to reduced tactile sensitivity (Spence & Gallace, 2011) so younger and older consumers may perceive and react to touch differently. Lastly, the sample used is drawn from a large university with individuals from Europe, Africa, Asia, Australia, North and South America, therefore nationality was captured. Gender, age nationality were however not eventually used in any analyses conducted in this research.

4.9.9 Manipulation and Confounds and Checks

Perdue & Summers' (1986) review of 34 marketing experimental studies highlights the minimal emphasis given to confounding and manipulation checks in experimental marketing research, despite their acknowledged role in ruling out additional variable effects on observed differences between groups (separate from the intended manipulations). In keeping with good research practice, this research incorporated both manipulation and confound checks as elaborated on below.

As experiments were used, a brand familiarity manipulation check was conducted, confirming that the brand familiarity manipulation was successful. Because the key aim of this research is the examination of the influence of brand name on touch effects, possible product-related factors that could confound results were controlled for, namely product knowledge and product involvement.

4.9.9.1 Relationship between product knowledge and product involvement

Consumer behaviour researchers underscore the significance of the relationship between product involvement and product knowledge (Andrews, 1988; Celsi & Olson, 1988; MacInnis, Moorman, & Jaworski, 1991; Petty & Cacioppo, 1986; Zaichkowsky, 1985) but differ in their stance on whether the two constructs are independent of each other. Some demonstrate a high correlation and therefore combine the two constructs into one measure during analysis (Celsi & Olson, 1988) despite the fact that they are separate constructs. Celsi & Olson (1988) for example showed that product knowledge and product involvement correlation of was 0.61 while Batra & Ray (1986) showed that the subjective product knowledge and product involvement correlation coefficient was 0.49 (for a variety of products including photographic film, deodorants, facial moisturizers, instant coffee, instant chocolate drink mixes and frozen pizzas).

Examining the nature of association between the two constructs, (Park & Moon, 2003) demonstrate that the correlation is dependent on the type of product knowledge and type of product examined. The correlation between product involvement and objective product knowledge for example is higher for a utilitarian (as opposed to hedonic) product, while the correlation between product involvement and subjective product knowledge is higher for a hedonic product. Overall findings

collectively seem to imply that the greater the involvement, the more the consumer tries to attain product knowledge (Andrews, 1988; Batra & Ray, 1986; Markus, 1977; Petty, Cacioppo, & Goldman, 1981) or that product knowledge and involvement are related to knowledge in long term memory (Park & Moon, 2003). Consequently, some researchers have combined these two constructs based on their high correlation (e.g. Batra & Ray, 1986).

On the contrary, others report low correlations between the two constructs and assert their independence in information processing (Bei & Heslin, 1997; Zaichkowsky, 1985). With a reported low correlation of 0.22, Bei & Heslin (1997) found that highly knowledgeable and highly involved individuals differ in their brand choices. Specifically, knowledgeable individuals (less involved) base their brand decisions on product and price thus opting for brands that provide more value for money, while highly involved individuals (less knowledgeable) look beyond price and product and base brand choices on other factors such as brand prestige (Bei & Heslin, 1997). To these highly involved consumers, the prestige of the brand justifies the higher price. Zaichkowsky (1985) similarly reported low correlations between product knowledge and product involvement of 0.14 (for 35 mm cameras) and -0.08 (for and red wine), which were not statistically significant. As Gensch & Javalgi (1987) found, higher product involvement does not equate higher product knowledge. In their research, fertilizer buyers who were classified into either high or low involvement groups did not significantly differ in their level of subjective product knowledge across the groups.

Given the wide divergence of opinion, the contradicting findings about their relationship and the fact that neither has been examined in the context of product

touch, this research chose to treat product knowledge and product involvement as distinct constructs. This way, keeping them separate provides a clearer initial depiction of their influence in this research context. Each is discussed in detail next.

4.9.9.1.1 Product knowledge

Following the suggestion by McCabe & Nowlis (2003), individual differences in product knowledge of the products used in the research was captured to rule out the possibility that it confounded results observed. It is possible that individuals with a significantly high knowledge of products with material properties would choose such products in both a touch and no touch environment because they recall what it is like. As such, there might be no difference in the response in both environments, thus product knowledge may be a possible confounding variable.

Early research in marketing viewed knowledge as equivalent to familiarity (Johnson & Russo, 1984) while later research identified three categories of consumer knowledge: *subjective knowledge* (what we think we know), *objective knowledge* (what we actually know) and *experience* (with the product category) (Brucks, 1985). Alba & Hutchinson (1987) went on to further classify consumer knowledge as comprising two parts: familiarity and expertise, defining familiarity as the ‘*number of product related experiences that have been accumulated by the consumer*’ and expertise as ‘*the ability to perform product related tasks successfully*’ (p. 411). The synonymous use of familiarity and knowledge to reflect the same thing is evident in later research by Park & Lessig (1981) who used the term product familiarity and suggest two ways in which it can be measured: one measuring how much a person *knows* about the product (actual knowledge) and the other measuring how much a person *thinks they know* about a product (subjective knowledge).

Self-reported product knowledge (subjective knowledge) as opposed to expertise or actual (objective) knowledge is captured as it is a better indicator of cognitive responses and general attitudinal evaluations (Meeds, 2004) which encompass the core dependent measures examined in this research. Product knowledge was measured on a four-item, seven-point Likert scale (1=Strongly Disagree and 7=Strongly Agree) developed by Smith & Park (1992) that measures individual self-assessed evaluations of knowledge. Study participants indicated their level of agreement with the four statements regarding how knowledgeable they felt about the product, amount of additional knowledge they would need to make a purchase decision or quality judgment of the product and confidence in discerning the difference in products within that category. These statements included '*I feel very knowledgeable about this product*', '*If a friend asked me about this product, I could give them advice about different brands of this product*', '*If I had to purchase this product today, I would need to gather very little information in order to make a wise decision*' and '*I feel very confident about my ability to tell the difference in quality among different brands of this product.*'

4.9.9.1.2 Product Involvement

Product involvement is defined as consumers' perceived significance or relevance of product class based on their intrinsic needs, interests, and beliefs (Olsen, 2007; Zaichkowsky, 1985). The concept of product involvement has amassed great interest amongst consumer researchers over the past three decades (Laurent & Kapferer, 1985; Michaelidou & Dibb, 2006; Zaichkowsky, 1985), its significance stemming from its ability to affect decision making, product information search, product adoption, attitudes towards a product and brand (Bauer, Sauer, & Becker, 2006; Brisoux & Cheron, 1990; Celsi & Olson, 1988; Charters & Pettigrew, 2006; Iwasaki

& Havitz, 1998; Park & Young, 1986). Overall, attitudes and behaviours relating to a product or thing are to a relative extent influenced by involvement (Slama & Tashchian, 1985). For example, consumer decision-making tends to differ subject to the extent of their involvement with a product (Laurent & Kapferer, 1985), influencing factors such as willingness to pay (Amendah & Park, 2008) and product usage (Mittal, 1995).

Product involvement has been comprehensively used as an explanatory variable in consumer behaviour (Dholakia, 1997, 1998) and prior research suggests that consumers with high product involvement have greater motivation to assign cognitive effort to evaluating the real qualities of a product (e.g., Browne & Kaldenberg, 1997; Celsi & Olson, 1988) while less effort is or can be dedicated to processing information when product involvement is low (Chung, Zhao, & Cruces, 2003). Recognizing the potential influence of purchase involvement on consumer response (based on the discussion in the preceding paragraph), coupled with the fact that product involvement effects were not the primary research objective, its effects needed to be controlled for.

A review of consumer behaviour literature reveals a number of involvement measures and as Michaelidou & Dibb (2006) note, the choice of method is based on 'whether involvement is identified as a unidimensional or multidimensional construct' (p. 445). Zaichkowsky (1985) was amongst the first to develop an involvement scale, termed as the Personal Involvement Inventory (PII). This PII was based on a unidimensional view of involvement as relating to personal relevance, which consisted of a 20 item semantic differential scale. Although useful in advancing product involvement knowledge, this unidimensional view served as its

criticism, leading to a number of amendments to the scale in subsequent research that took multidimensionality into account (Kapferer & Laurent, 1993; Gilles Laurent & Kapferer, 1985; McQuarrie & Munson, 1986; Mittal & Lee, 1988). Laurent & Kapferer (1985) for example developed the Consumer Involvement Profile (CIP) measure which identified 5 antecedents of involvement (interest, sign, pleasure, risk importance, risk probability). They contend that involvement is a hypothetical concept that cannot be measured directly, but can be surmised from these antecedents (Goldsmith & Emmert, 1991). McQuarrie & Munson (1992) further identified 2 facets of involvement namely perceived importance and interest.

Building upon the shortcomings of the PII scale (impracticality of use, uncertain discriminant validity, limited criterion validity and narrow conceptualization of involvement McQuarrie & Munson (1992) developed a revised PII (RPII) scale that essentially encompassed subsets of the original PII scale that they felt best characterised involvement (Zaichkowsky, 1994). In comparison to the PII, the RPII is shorter (contains 10 items as opposed to the 20 of the PII), maintains its reliability, mainly uses short and simple words, strongly predicts information search and processing and is effective at discerning felt involvement across situations (McQuarrie & Munson, 1992). Although studies have chosen to adopt the full 10 item RPII scale (e.g. Koufaris, 1991), in this research only 4 of the 10 items from McQuarrie & Munson's (1992) scale were adapted to measure product involvement. The reason for this decision was to avoid adding to an already lengthy questionnaire, therefore the researcher selected two items she felt adequately captured the 2 facets of involvement as identified by McQuarrie & Munson's (1992), namely, perceived importance (important, care) and interest (exciting, interesting). Questions were rephrased accordingly to read as follows: '*(X's) are important to me*', '*I perceive*

(X's) as exciting products', '(X's) are interesting products' and 'I care about the (X's) I buy', with X's representing each product used (e.g., sweaters are important to me or mugs are important to me). Additionally, to align the measure with questionnaire format, a Likert scale as opposed to semantic differential scale was used, anchored on endpoints '1=Strongly Disagree' and '7=Strongly Agree.'

4.9.10 Brand familiarity

To gauge the success of the brand familiarity manipulations, that is, brand familiarity corresponded to that of the experimental condition, participants completed a scale from Kent & Allen (1994) in each experimental condition. Previously reported reliability of this scale is above 0.85 (Kent & Allen, 1994). Brand familiarity was measured on a seven-point scale with endpoints 1=Strongly Disagree and 7=Strongly Agree, on the following three statements: *'I am familiar with this brand'*, *'I know a great deal about this brand'* and *'I have no knowledge about this brand.'* Overall familiarity was assessed on their level of agreement with the aforementioned statements.

4.10 Stimuli/ Product selection

A review of previous touch-related studies reveals that the importance of touch varies by product category (Grohmann et al., 2007; McCabe & Nowlis, 2003; Peck & Childers, 2003a) with a number of products having been examined (See Table 6). Products for which touch provides important haptic information (e.g., a blanket) are preferred in a real setting such as a physical store, rather than online (McCabe & Nowlis, 2003). The reason being that they contain touch diagnostic information useful in decision-making as most are said to contain 'material properties' (e.g., texture of a pillowcase, washcloth etc.) as opposed to geometric properties (e.g. size

and shape of a box of biscuits). Jansson-boyd & Marlow (2011) for example established that for objects with geometric properties (soap and biscuit boxes) vision and not haptics (touch) played a greater role in influencing evaluation, suggesting that a consumer's perception of the packaging of fast moving consumer goods is affected more by vision than touch. As Peck & Shu (2009) suggest, there is need for research that examines products that provide (product related) information through touch input.

As not all products appeal to an individual haptically (Klatzky & Peck, 2012), nor do individuals consider touching them as crucial in the pre-purchase evaluation stage (McCabe & Nowlis, 2003), it was necessary to ensure that the sample (university students) considered touch as critical for the products used in the study. Grohmann et al. (2007) identify the following categories (in descending frequency) where touch is considered important: clothing, shoes, fruit, cars, books, furniture, bed linen, bread, blankets, pillows and bath towels, carpeting, toilet paper and magazines. Products that were gender specific and those not easily evaluated in a lab setting were eliminated resulting in the gender neutral material products of pillowcases and washcloths (Grohmann et al., 2007). T-shirts and fleece sweaters have also been employed in prior research (Grohmann, 2002). Citrin et al. (2003) found that clothing, and flower purchases were negatively related to online (no touch) shopping channels. Similarly, clothing (Citrin et al., 2003), bath towels and carpeting possess material properties that vary significantly in quality within each product category and thus considered important to touch during evaluation (McCabe & Nowlis, 2003) and sweaters for example have predominantly featured as a material property-based stimulus in prior studies (Morales & Fitzsimons, 2007; Subhash, 2013).

Table 6. Products used in past studies

AUTHOR	PRODUCT CATEGORY	PRODUCTS USED	MANIPULATION	STUDY
(Jansson-boyd & Marlow, 2011)	Packaged goods, FMCG's	Dove Soap box, Sainsbury's biscuit box	Texture	Product perception and evaluation.
(McCabe & Nowlis, 2003)	Unpackaged goods	Apparel, home furnishings, electronic goods, pens, fleeces	None (actual products not used)	Decision making (remote versus actual store purchase)
(Grohmann et al., 2007)	Diagnostic ¹² tactile input (product quality)	Ball point pen, fleece headband, flashlight key chain, pillowcases, washcloth	Touch, texture	Product evaluation
(Brasel & Gips, 2014)	-	Sweatshirts, New York City tours (both done in a virtual environment/online)	Haptic interface used (iPad, desktop computer, tablet)	Product evaluation

The aforementioned research (Table 6) informed the choice of specific product categories for use in the first study of this research project (Study 1). The researcher opted for items from the clothing and household category as touch is considered important in their evaluation. Similar to Peck & Shu (2009) the researcher sought to select products that would be familiar to participants to minimize any effects of product unfamiliarity, therefore capturing the full effect of the manipulations done. The study was carried out in the City of Canterbury, Kent, which is located in the South of England, an area that is susceptible to continental weather influences that bring cold spells and chilly weather (MetOffice, 2013). Consequently sweaters,

¹² Diagnostic touch is predictive of substance properties relevant to product performance (Grohmann, Spangenberg, & Sprött, 2007, p. 238)

which the British Council¹³ also recognizes as an essential item present in most student wardrobes in the UK (BritishCouncil, 2015), were reasoned to be familiar to those living in this area. Pillowcases and bath towels were selected as these are products university students (if not majority of people in general) own, use on a daily basis or have purchased at one point in time therefore are products familiar to the sample in this research. Additionally, prior literature has identified that touch is considered important when examining both products (Grohmann et al., 2007; McCabe & Nowlis, 2003). Thus for Study 1 three products were selected: a sweater, pillowcase and bath towel.

For Study 2 the pillowcase was replaced with a mug (which is not considered important to touch) in order to examine if results would differ across product categories considered more (pillowcase) and less (mug) important to touch during the pre-purchase evaluative phase. The aim of using multiple products from different categories (all with high touch diagnostic feedback), was to test the generalizability of the hypotheses across product categories and consequently aid in obtaining normally distributed samples thus avoiding floor and ceiling effects. *Floor effects* occur when the majority of response scores for a given dependent measure are close to the minimum value while in the *ceiling effect* the majority of scores are close to the maximum possible value (Christensen, 2004; Keppel & Wickens, 2004).

Prior studies have tended to focus on examination of touch effects solely from a product category perspective. However, consumer purchase decisions in reality are often influenced not only by the product itself but brand name too; therefore it seems reasonable to assume that brand name would play a role in affecting consumer

¹³ On their Education UK (www.educationuk.org) website for international students who are interested in a UK education

response to product touch. Brand familiarity is a common denominator in repeat purchase, product and brand liking and brand recall (in favour of a familiar brand over an unfamiliar brand), and consumers' perception and behaviour varies when dealing with a luxury brand and non-luxury brand (stemming perhaps from perceptions of quality or exclusivity for example).

4.11 Brand Selection

The brand selection process had two objectives (1) select two non-luxury brands representing two levels of brand familiarity (familiar, unfamiliar) and (2) select one familiar luxury brand. Real brands were used as it was important for participants to have some prior beliefs about the brands (in terms of familiarity) in order to test the brands' effects in a touch and no touch situation. The researcher designed the questionnaire (which adopted the brand familiarity measure from Kent & Allen (1994)), and tested it on two PhD students to attain feedback on content validity and questionnaire format. Both PhD students confirmed that the wording and format were clear and appropriate.

4.11.1 Brand selection questionnaire, sample and procedure

Questionnaire items were adopted from Kent & Allen's (1994) 3 item scale of brand familiarity ('I am familiar with (this brand)', 'I know a great deal about (this brand)' and 'I have no knowledge about (this brand)'), measured on a seven-point Likert Scale (endpoints Strongly Disagree and Strongly Agree). Results of a reliability test carried out by the researcher proved the scale was reliable, with a Cronbach's alpha value score of .775 which exceeded Nunnally & Bernstein's (1994) threshold of 0.7. In addition, the demographic variables of gender, age and nationality were captured.

Questionnaires were randomly distributed around the University of Kent campus which resulted in a convenience sample of 22 university students (68% female, 32% male), aged between 18-24, with the majority from the UK (73%). University students were randomly approached individually by the researcher outside and inside the University of Kent Library. The researcher first inquired if the students were students at the university and proceeded to explain to those who were that a study was being carried out on their general attitudes towards certain brands. In addition, the researcher explained that the questionnaire would not take more than 5 minutes to fill out and that all information would be kept confidential. Potential participants were informed that participation was not compulsory but their assistance would be greatly appreciated. To avoid any bias that could come from guessing the purpose of study in the questionnaire, respondents were not informed of the luxury status of any of the brands. The questionnaires were filled out as the researcher waited nearby.

4.11.2 Brand pre-selection

4.11.2.1 Non-luxury brands

As previously stated this research was carried out in the city of Canterbury, Kent. For the familiar brands, the researcher selected brands that had a retail outlet in the city centre and were targeted/ frequented by the age group of the sample used in this research. The five stores selected for examination (to select the most familiar) were H&M, New Look, Primark, Topshop, and Matalan. For the unfamiliar brands, the researcher selected existing brands with similar price points that are predominantly based outside Europe and the US thus likely unfamiliar to the UK based study sample. The four unfamiliar brands selected were Truworths, Woolworths, Mr. Price and 4U2. In total, participants were presented with 9 brands which they evaluated

based on familiarity. See Appendix 1 for questionnaire and Appendix 11 for brand selection results.

4.11.2.1.1 Non-luxury (familiar and unfamiliar) brands selected

Of the non-luxury brands, descriptive statistics indicated that Primark had the numerically highest familiarity mean score while 4U2 had the lowest familiarity mean score ($M_{\text{Primark}} = 5.86$, $M_{4u2} = 1.65$). The results of a paired sample t-test gave a clear indication that the two brands differed significantly on familiarity ($t(21) = 10.76$, $p = .000$) thus Primark was selected as the familiar brand and 4u2 as the unfamiliar brand.

4.11.2.2 Luxury brands

Luxury is regarded as the *'images in the minds of consumers that comprise associations about a high level of price, quality, aesthetics, rarity, extraordinariness and a high degree of non-functional associations'* (Heine, 2011, p. 32). According to the Financial Times, Burberry, Ralph Lauren, Louis Vuitton, Prada and Chanel are some of the most valuable luxury brands as ranked by Interbrand (Rapoza, 2013). These five brands were therefore selected for evaluation in the luxury brand selection phase to determine which was the most familiar.

4.11.2.2.1 Luxury (familiar) brands selected

Of the luxury brands, Chanel was rated as the most familiar ($M = 5.17$, $SD = 1.57$) and thus selected as the luxury brand (see Appendix 11).

4.12 Pilot Study (Touch, brand familiarity and consumer response)

4.12.1 Overview of Pilot Study

A pilot study is a mini version of the full scale study that pre-tests the research instrument, assesses the feasibility of the main study, helps identify logistical issues, estimate variability in outcome to aid in sample size calculations and assess the effectiveness of the research protocol (Teijlingen & Hundley, 2002). In the pilot study, only non-luxury brands that differed in familiarity were considered. This was deemed appropriate because the main purpose of this pilot study was to: 1) check participant understanding of the instrument (Kezar, 2000), 2) understand how respondents reacted to the stimuli and 3) check for ceiling and flooring effects that may render the independent variable effects ineffective (Christensen, 2004). Perdue & Summers (1986) recommend that extensive testing of the manipulations at this pilot study phase reduces the need for manipulation and confounding checks in the main experiment. Despite their significance however, pilot studies are said to be ‘under discussed, underused and underreported’ (Prescott & Soeken, 1989, p. 60). To improve the internal validity of the questionnaire and research protocol prior to the main study, the checklist in Table 7 was used as a guide during and after the pilot study phase.

Table 7 Pilot study checklist

NO.	CHECKLIST ITEMS
1.	Administer the questionnaire to pilot subjects in exactly the same way as it will be administered in the main study
2.	Ask the subjects for feedback to identify ambiguities and difficult questions
3.	Record the time taken to complete the questionnaire and decide whether it is reasonable
4.	Discard all unnecessary, difficult or ambiguous questions
5.	Assess whether each question gives an adequate range of responses
6.	Establish that replies can be interpreted in terms of the information that is required
7.	Check that all questions are answered
8.	Re-word or re-scale any questions that are not answered as expected

NO.	CHECKLIST ITEMS
9.	Revise questionnaire

Adopted from Peat, Mellis, Williams, & Xuan (2002, p. 123)

4.12.2 Pilot study participant recruitment and incentives

Many universities have an existing participation pool of university students, often already incentivised and motivated to participate in experimental studies (Christensen, 2004). At the University of Kent, this pool exists at the School of Psychology but when the researcher sought access permissions to this undergraduate psychology student mailing list from an official representative of the School, access was not granted. At this stage of the research it was deemed unnecessary to publicly advertise the study (e.g., using posters around campus) as a smaller group was required and that doing so could lead to confusion or boredom from the general population when the main study recruitment exercise was carried out. Participants were therefore solicited via email (see Appendix 3). Due to budgetary constraints and after consultation with an academic on alternative incentive methods, the initial plan of giving out a bar of chocolate was scrapped in place of providing light refreshments (juice) for participants that took part. The pilot study required participant cooperation and feedback and it was felt that the provision of light refreshments would help create an atmosphere conducive for this. Refreshments were thus handed out during the feedback discussions after the experiment was complete.

4.12.3 Pilot study design

4.12.3.1 Experimental design and Stimuli

The Pilot study adopted a 2 (touch: touch versus no touch) x 2 (brand familiarity: familiar versus unfamiliar) between subjects design, with stimuli presented within subjects. Across all groups a sweater, pillowcase and bath towel were used.

4.12.3.2 Sample

A total of 32 undergraduate students (full-time or part-time) took part in the pilot study. On the day of the study each treatment was conducted with three participants at a time, each presented with a sweater, pillowcase and bath towel in different order.

4.12.3.3 Method/ Procedure

The study was carried out in a classroom where three stations had been created (A, B and C) with one type of product placed on a table at a specific station (i.e., the sweater was located at Station A, pillowcase at Station B and bath towel at Station C). Once a participant entered the room they proceeded to sit at any one of the stations. After signing the informed consent¹⁴ form provided at the start of the experiment participants were told to read the experiment instruction leaflet and follow the instructions (touch or no touch instructions).

Participants were informed that the products belonged to a specific brand (either Primark-familiar, or 4U2-unfamiliar). To reduce the chances that brand logo and product information tags would influence participant responses, brand labels and product information tags were removed from each product. Although it is acknowledged that this could have negatively impacted believability that the products belonged to the brands specified, it was deemed necessary in order to maintain brand name as the only varying product related factor across all conditions. It was explained that once participants had examined the product and completed the questionnaire at that station, they were to move to the next station and carry out the same process. These instructions were verbally communicated as well as written down on the instruction sheet that each participant read prior to beginning. Similar to

¹⁴ Read and signed consent forms placed on each desk.

the study by Peck et al. (2013), participants were asked to spend one minute carrying out the product examination (visual or physical). This kept evaluation time consistent across all conditions therefore reducing the chances that time was a confounding variable. This also ensured that in the touch condition participants actually physically interacted with the products, and in the no touch condition, spent an appropriate amount of time visually evaluating the products.

After examination, participants responded to the following items in the questionnaire: dependent measures (product evaluation, confidence in judgment, purchase intentions and willingness to pay). They also responded to the manipulation and confound checks of brand familiarity (Kent & Allen, 1994) and product knowledge (Smith & Park, 1992). Once questionnaires at all three stations were complete, a participant was handed the last section of the questionnaire by the experimenter. This last section captured data regarding brand familiarity, need for touch, as well as demographic information pertaining to age, gender and nationality (rationale provide in Section 4.9.8). This section of the questionnaire was intentionally excluded from the main questionnaire handed to participants at the start of the study as the researcher felt that the need for touch related questions may inadvertently inform participants of one of the primary reasons of the study and therefore influence their initial responses to the questions. Questionnaires were then collected and following Aronson & Carlsmith's (1968) recommendation, a discussion was held between the researcher and participants who were asked to provide their feedback on the length and wording of the questionnaire as well as overall comments of the experimental procedure. Participants were then debriefed and thanked.

4.12.3.4 Implications for the main studies

Implications of the pilot study are presented based on the 3 objectives it was intended to achieve namely:

1) Check participant understanding of the instrument (Kezar, 2000)

It was noted that despite instructions listed on the questionnaire, some respondents ticked two answers for one question while some sections were left completely blank. Consequently it was deemed necessary to make improvements to the questionnaire layout. Specifically, to avoid participants ticking two answers for one question or leaving a response blank, the line spacing between rows was increased from 1.15 to 1.5. This way the questions would appear visually clearer therefore decrease the chances of human error when ticking answers.

2) Understand how respondents reacted to the stimuli

Despite questionnaire instructions stating that the product should not be touched, three participants in the no touch condition touched the product and were immediately excluded from the study. Therefore it was observed that there was need in the main study to clearly verbally state instructions to participants, after they had completed reading them.

The researcher also noted that two participants talked to each other as they filled out the questionnaire. To avoid the possibility of this occurring in the main study and possibly contaminating results, participants were to be seated facing different directions of the room at a minimum distance of 3ft apart.

3) Check for ceiling and flooring effects that may render the independent variable effects ineffective (Christensen, 2004)

Although the sample sizes per experimental condition were relatively small (6-7 per condition) with an overall sample size of 32, descriptive statistics did not give an indication that there were issues with ceiling and flooring effects.

4.13 Main Studies Design

Two studies (experiments) were conducted for the main study. The objectives of Study 1 being to (1) examine the effect of touch on consumer response (product evaluation, purchase intention, confidence in judgment and willingness to pay); (2) the moderating effect of need for touch; (3) the moderating effect of brand familiarity (non-luxury brands) and (4) the mediating effects of psychological ownership and affective reaction on the touch effects for unfamiliar branded products.

Another novelty of my research is that it extended Study 1 and conducted a second study (Study 2) that tested whether documented effects of product touch still hold when luxury branded products are used. Specifically, Study 2 examines (1) the effect of touch on consumer response to luxury branded products; (2) if this differs by need for touch; and, (3) the mediating effects of psychological ownership and affective reaction.

The researcher then went one step further and combined data from Study 1 and 2 in order to empirically examine and establish if brand status moderates the effect of product touch on consumer response. The process by which participants were recruited, incentivised and experimental manipulations conducted for both Study 1 and 2 is presented next.

4.14 Participant recruitment and incentives

Initial thoughts were to recruit participants via flyer administration outside the university library, grocery store and Kent Business School. On further review it was decided that leaving stacks of flyers at the Kent Business School and grocery store which potential participants could pick up would be a less intrusive method. Moreover, students were sent flyers via email and posters advertising the studies were displayed across campus (see Appendix 9).

As a measure to avoid recruitment of the same cohort from the pilot study phase, participants at the pilot phase were informed that they could not participate in the main study (the researcher compared their details (names and email address details) on the pilot study attendance sheets to those of main study registered participants). Participants in Study 1 received a chocolate bar while those in Study 2 received a £5 participation incentive. The design of each of the studies is discussed in detail in the sections below.

4.15 Manipulations

4.15.1 Touch manipulation (Study 1 and 2)

Using the presence and absence method (Keppel & Wickens, 2004) the independent variable touch was manipulated into two conditions; no touch (control condition) and touch (treatment condition) with instructions for the touch and no touch conditions adapted from Grohmann et al. (2007). The original instructions asked participants in the no touch condition ‘to visually inspect the products only but not touch them’ while in the touch condition participants were instructed to ‘touch the products.’ The use of the word ‘touch’ in the instructions was avoided in this research as it could subconsciously alert participants of the nature of the study, therefore Grohmann et

al.'s (2007) instructions were adapted by removing the word touch from both sets of instructions resulting in the use of 'only visually examine the product' in the no touch condition and 'please pick up the product' in the touch condition (see Appendix 4b).

4.15.2 Brand familiarity manipulation check (Study 1)

Primark was used in the familiar brand condition while 4U2 was used in the unfamiliar brand condition. A one way ANOVA showed that brand familiarity was higher for the Primark brand ($M = 4.95$, $SD = 1.44$) than the 4U2 brand ($M = 1.80$, $SD=1.01$) supporting the manipulations within the experiment, $F(1, 117) = 192.64$, $p = .000$. This demonstrated that the manipulation was successful.

4.15.3 Brand status manipulation (Combined data set analyses)

Given that study 1 and 2 analyse the moderation effect of brand familiarity on touch effects and the touch effects for luxury branded products respectively, the researcher was also interested in determining if a brand status moderation effect existed. Accordingly, data from Study 1 and 2 was combined for analysis, using Primark as the non-luxury and Chanel as the luxury brand.

4.16 Study 1

4.16.1 Experimental Design

Study 1 was a 2 (Touch condition: touch, no touch) x 2 (Brand familiarity: familiar, unfamiliar) x 2 (Need for touch: low need for touch, high need for touch) between subjects factorial design study, with the sweater, pillowcase and bath towel products manipulated within subjects. The three stimuli (products) used in the experiment were chosen based on their possession of salient haptic attributes properties, in that

they have all been shown to be considered important to touch when making purchase evaluations and decisions (Peck & Childers, 2003a, 2003b; Peck & Wiggins, 2006; Yazdanparast & Spears, 2013). One unfamiliar (4U2) and one familiar (Primark) brand were used.

4.16.2 Sample

Study 1 consisted of a sample size of 119 students from the University of Kent who participated in groups of three. Participants were relatively evenly distributed (28-30 respondents per condition) across treatment groups thus meeting the recommended sample size to attain statistical significance in experimental research (Keppel & Wickens, 2004).

4.16.3 Method/Procedure

Same as pilot study (see section 4.12.3.3).

4.16.4 Measures

1. *Moderating variables*
 - *Brand familiarity.* The key moderating variable under examination was brand familiarity (Primark – unfamiliar, 4U2 - familiar).
 - *Need for touch.* High versus low need for touch.
2. *Manipulation check.* To confirm that the brand familiarity moderation was successful, each participant's brand familiarity was then measured with a three-item scale.
3. *Covariate.* Product knowledge.
4. *Mediating variables.* Psychological ownership and affective reaction.

5. *Dependent variables.* Same as pilot study (product evaluation, purchase intention, confidence in judgment and willingness to pay).

See Appendix 6 for questionnaire.

4.16.5 Researcher's Observation and Learning Points (Implications for Study 2)

Study 1 data were gathered over a 1.5 month period, over three separate periods designated a week apart. Participants for the initial period (pilot study) were recruited via email solicitation. However, this method proved to be inefficient in drawing in the numbers required therefore participation for Study 1 was solicited by attending seminars and explaining the study to students within those seminars. Over the subsequent periods of data collection, the researcher found that simply posting signs on neon coloured paper advertising that free chocolate was available (at whichever room the study was running in on the day) drew in the most numbers of participants (far exceeding walking around campus and scheduling people into timeslots which they did not end up attending anyway). This way, it was found that participants came in out of curiosity and once the study was explained and participants informed that it would only take 20 minutes to complete, 99% stayed on and completed the study, receiving a chocolate bar on completion. Participant recruitment proved to be a very challenging and time consuming process, but a critical and valuable learning point for the researcher.

4.17 Study 2

4.17.1 Experimental Design

Study 2 was a two-factor (Touch condition: touch, no touch) between subjects design study. Similar to Study 1, the sweater and bath towel products were used, with the

addition of a mug instead of the pillowcase. The pillowcase was replaced with a mug, as a mug represented a product with low haptic salience compared to the bath towel and sweater, therefore providing a basis of comparison for low (mug) versus high haptic salient products (sweater and bath towel). Luxury brand selection was based on results of the brand selection process (see Section 4.11.2.2) which indicated that the brand Chanel was the most familiar luxury brand. Participants were therefore informed that all products came from this brand.

4.17.2 Sample

Study 2 consisted of a sample size of 65 students from the University of Kent who participated in groups of three.

4.17.3 Method/Procedure

Same as Study 1, except that Station B contained a mug instead of a pillowcase.

4.17.4 Measures

1. *Moderating variables.*
 - *Need for touch.* High versus low need for touch.
2. *Covariates.* Product knowledge and product involvement.
3. *Mediating variables.* Psychological ownership and affective reaction.
4. *Dependent variables.* Same as Study 1.

See Appendix 7 for questionnaire.

4.18 Combined data set (Study 1 and 2)

As previously mentioned, in order to empirically determine if brand status moderation on the relationship between touch and consumer response exists it was

necessary to combine data from Study 1 and Study 2. This resulted in a 2 (Touch condition: touch, no touch) x 2 (Brand status: non-luxury brand, luxury brand) between subjects design.

4.18.1 Sample

The combined data set consisted of a sample size of 123 students from the University of Kent who participated in groups of three.

4.18.2 Measures

1. *Moderating variables.*
 - a. *Brand Status.* Non-luxury versus luxury brand.
 - b. *Need for touch.* High versus low need for touch.
2. *Covariate.* Product knowledge.
3. *Mediating variables.* Psychological ownership and affective reaction.
4. *Dependent variables.* Same as Study 1 and 2.

4.19 Ethics

4.19.1 Ethical approval and informed consent

The Kent Business School Ethics Approval Board granted ethical approval for this study prior to commencement of data collection (see Appendix 2). To ensure that the participants were aware of any aspects of the study that could influence their decision to volunteer (Christensen, 2004), informed consent (see Appendix 8) was sought prior to the commencement of each of the experiments. The procedures and participation incentives involved were communicated (Christensen, 2004) in the flyers during the participant recruitment process. However, full awareness of the study could influence how participants reacted and responded to the study, and also

reduce their motivation to participate (Resnick & Schwartz, 1973) therefore the true nature of what was being tested was not disclosed. The signed consent forms served as a repository of evidence of acceptance to participate in case any future issues were presented by participants or other parties.

4.20 CHAPTER SUMMARY

Chapter 4 presented a detailed discussion of the research approach, sampling method, participant assignment, questionnaire design, reliability of measures, validity of measures and validity of research design, measures, stimuli/product selection, brand selection, pilot study, main study design, manipulations, Study 1 description, Study 2 description, combined data set description and ethics adhered to during the research. Chapter 5 will now present the data preparation and results of Study 1.

**CHAPTER 5: Study 1 (Effect of touch,
NFT Moderation, Brand Familiarity
Moderation, Psychological Ownership and
Affective Reaction Mediation)
Data Preparation, Analysis and Results**

5.1 INTRODUCTION

Study 1 sought to answer research questions 1 to 7. To achieve this, analyses were run to examine the effect of touch on consumer response (H1a), the moderating effect of need for touch (H1b), the direct effect of brand familiarity on consumers' response (H2a), the moderating effect of brand familiarity (H2b) and how brand familiarity moderation differed by need for touch (H2c). Furthermore, the results of supplementary analyses carried out by the researcher which examined the relationship between touch, brand familiarity and product knowledge is presented (Product knowledge related hypothesis 1 and 2). Based on results of H2b, it was not necessary to conduct the mediation analyses (psychological ownership (H3a) and affective reaction (H3b)). The reasoning behind this decision is presented in section 5.5.6. Chapter 5 begins with a discussion of the data preparation process, followed a description of respondents by demographic profile, the scale reliability test results, data analysis and empirical results and concludes with a summary of the chapter.

5.2 Data preparation

All questionnaires were coded and keyed into the SPSS 21 data analysis program (Statistical Package for Social Science), and prior to commencing data analysis, data was screened to exclude errors in preparation for both descriptive and inferential statistics. This screening included data cleaning, reverse item coding and outlier examination, which is elaborated on in the sections below. In addition, measurement validation (validity and reliability) was carried out and findings reported. Data cleaning is an essential process that allows for the identification of logical inconsistencies (response does not make sense), unexplained missing values and extreme outliers (e.g., a response very different from responses given by other

participants for the question) and the process by which this was done is discussed below.

5.2.1 Logical inconsistencies

Logically inconsistent entries were examined during data entry and were deemed to be missing values. For example, inconsistent responses were noted primarily for the variable brand familiarity, where one reverse coded statement was used. This would mean that in order to give a logically consistent answer, respondents should have rated this item opposite to the other two measures. Some respondents provided the same response value for all three questions, which produced contradictory information. For example, indicating that one knows a great deal about the brand yet has no knowledge about the brand. This implied that the respondent did not read the statements in detail and possibly provided a response for all three statements based on simply reading the first. For these reasons, the researcher decided to exclude the brand familiarity rating for eight respondents. Next, data was examined for missing data.

5.2.2 Missing data entries

A missing value (or missing data entry) occurs when no data value is recorded for a particular variable in a given observation or case, resulting from participant non-response. The issue of cases with missing values is prevalent in quantitative research (Baraldi & Enders, 2010) and so is the lack of consensus on how to effectively deal with them. In some instances missing values in data analysis is tolerable (1% being trivial and 1-5% considered manageable), however, when this percentage ranges above 5% they need to be managed because they can lead to misinterpretation of statistical findings (Acuna & Rodriguez, 2004). In dealing with missing values,

researchers employ either case and pairwise deletion methods or imputation methods. Case (listwise) and pairwise deletion are the most standard ways of dealing with missing values where cases with missing values are discarded, thereby limiting analysis to cases that have complete data (Baraldi & Enders, 2010). Although advantageous in generating a complete data set that enables the use of standard analysis techniques, it also results in a reduced sample size which then decreases the statistical power due to increased error (McKnight, McKnight, Sidani, & Figueredo, 2007). To alleviate this, imputation methods are often employed where instead of deletion, missing values are replaced with either a mean or regression value (Baraldi & Enders, 2010).

5.2.2.1 Missing data in Study 1

As previously mentioned, case (listwise) and pairwise deletion are by far the most common missing data handling methods in many areas of social and behavioural sciences (Peugh & Enders, 2004). It is acknowledged however that the American Psychological Association Task Force on Statistical Inference (Wilkinson, 1999; p. 598) state that *‘the two popular methods for dealing with missing data that are found in basic statistical packages (listwise and pairwise deletion of missing values) are among the worst methods available.’* Despite this, their convenience and simplicity of use as well as their availability as standard options on statistical packages (such as SPSS) are some of the advantages that attract researcher use (Baraldi & Enders, 2010).

Missing data analysis revealed that 20 cases had missing values (the descriptive output of this can be found in Table 8 below) and the decision regarding the method employed to deal with them was based on two aspects. First, as is common with most

experimental studies the sample for this study was relatively small (N = 119), and deleting cases based on missing data would have resulted in 20 cases being dropped and a final sample size of 99. This would then have led to the undesirable outcome (from a statistical viewpoint) of significantly reducing the sample size per experimental condition. Second, the key focus of Study 1 was moderation analysis using complete case analysis methods such as ANCOVA which disregard cases with missing values and instead only analyse cases with complete data (Hayes, 2013). As such, the data set needed to be dealt with in a way that would not reduce overall sample size. To achieve this, the single imputation method that allows a researcher to fill in/replace missing data with an appropriate value(s) (Baraldi & Enders, 2010) was thought the most appropriate for Study 1. The researcher specifically used the *mean imputation* method and replaced missing values with the mean of the existing data set.

Table 8. Study 1 Missing Values Descriptives

Univariate Statistics					
	N	Mean	Std. Deviation	Missing Count	Missing Percent
PE_Sweater	118	4.50	1.252	1	.8
PE_Pillowcase	119	3.94	1.447	0	.0
PE_Bath towel	117	5.20	1.250	2	1.7
PI_Sweater	114	2.92	1.485	5	4.2
PI_Pillowcase	119	2.82	1.422	0	.0
PI_Bath towel	118	3.73	1.463	1	.8
CJ_Sweater	114	5.05	1.402	5	4.2
CJ_Pillowcase	116	4.79	1.573	3	2.5
CJ_Bath towel	117	5.16	1.311	2	1.7
PK_Sweater	119	4.59	1.205	0	.0
PK_Pillowcase	118	3.36	1.334	1	.8
PK_Bath towel	119	3.92	1.385	0	.0
WTP Sweater	119	15.6448	12.48052	0	.0
WTP Pillowcase	119	6.5111	5.75312	0	.0
WTP Bath towel	119	10.7896	6.18176	0	.0

Univariate Statistics					
	N	Mean	Std. Deviation	Missing Count	Missing Percent
PE –Product Evaluation					
PI – Purchase Intention					
CJ – Confidence in Judgment					
		PK – Product knowledge			
		WTP – Willingness to pay			

5.2.3 Reverse item coding

Failure to reverse code items can hamper reliability analysis (Field (2006). The last item of the brand familiarity scale was negatively worded and was thus reverse coded.

5.2.4 Outlier examination

An outlier is considered to be any observation that ‘deviates so much from other observations as to arouse suspicions that it was generated by a different mechanism’ (Hawkins, 1980, p. 1). From a statistical viewpoint, outliers can be described as values falling outside the range of majority of the other data, such as three standard deviations from the mean (Keppel & Wickens, 2004). Despite the F-test being robust regarding violations of the normality of data assumption, checking for and correcting outliers is crucial as these scores can dis-appropriately influence the mean and inflate the variance score (Keppel & Wickens, 2004; Osborne & Overbay, 2004). Outliers can additionally lead to inflated error rates and distortions of parameter and statistic estimates when using either parametric or non-parametric tests (Osborne & Overbay, 2004) and as such should be dealt with appropriately.

Overall, the rule of thumb for an observation to be considered an outlier is if it lies three or more standard deviations from the mean (Keppel & Wickens, 2004; Osborne & Overbay, 2004). A box plot, which is one of the most common methods of outlier

detection, is a graphical representation of the data and boxplots for each variable were generated. Given that this research is experimental, with four conditions, the researcher decided that outliers would not be removed from the data. Indeed, Laurent (2013) supports this stance and argues that removal of outliers prior to using ANOVA/ANCOVA analysis on experimental data is likely to positively bias the F-tests, at the expense of ensuring that the data set adheres to a normal or Gaussian distribution.

5.3 Study 1 respondent profile and data descriptives

Table 9 illustrates the percentage distribution of participants by gender, age and nationality (N = 119). The majority were female at 64.7% followed by males at 31.1% (the remaining 4.2% did not indicate their gender). Most participant ages ranged from 18 to 36 years with 86.6% between 18 and 24 years, 11.8% between 25 to 30 years and the remaining 1.7% between 31 to 36 years. Lastly, 44.5% were British while 45.4% were non-British.

Table 9. Study 1 Respondent Profile

CHARACTERISTIC	CATEGORIES	N	PERCENT
Gender (N = 119)	Male	37	31.1%
	Female	77	64.7%
	N/A	5	4.2%
Age (N = 119)	18 – 24 yrs	103	86.6%
	25 – 30 yrs	14	11.8 %
	31-36 yrs	2	1.7%
Nationality (N = 119)	British	53	44.5%
	Non- British	66	45.4%
	N/A	12	10.1%

5.3.1 Overall Descriptive Statistics (Mean and Standard Deviations)

Descriptive statistics aid in the summary of the characteristics of a data set and the means and standard deviations were calculated for the following variables: product evaluation, purchase intention, confidence in judgment, willingness to pay, psychological ownership, affective reaction and product knowledge for all three products tested in the study (sweater, pillowcase and bath towel). Overall brand familiarity and need for touch mean and standard deviations were also calculated.

On a 7 point Likert scale, the overall product evaluation mean was highest for the bath towel at 5.20 followed by the sweater at 4.50 and pillowcase at 3.94. Purchase intentions were generally low across all three products with the highest mean calculated for the bath towel at 3.73, then sweater at 2.92 and pillowcase at 2.82. Confidence in judgment was the greatest for the bath towel at 5.16 followed by the sweater at 5.05 and pillowcase at 4.79. There was a higher willingness to pay for the sweater (£ 15.64) compared to the bath towel (£ 10.79) and pillowcase (£ 6.51). Psychological ownership was highest for the bath towel at 2.89 followed by the pillowcase at 2.50, then sweater at 2.46. Affective reaction was highest for the bath towel at 3.44 followed by the sweater at 3.32 and pillowcase at 2.77. Product knowledge was highest for the sweater at 4.59 followed by the bath towel at 3.92 and pillowcase at 3.36. Overall means for brand familiarity and need for touch were 3.34 and 5.25 respectively. Table 10 depicts a summary of means and standard deviations.

Table 10. Descriptive Statistics Summary - Product Evaluation, Purchase Intention, Confidence in Judgment, Willingness to Pay, Psychological Ownership, Affective Reaction, Product knowledge, Brand Familiarity and Need for Touch

				Std.	Varian	Skewness	Kurtosis
N	Min	Max	Mean	Deviat	ce		

				ion			Std.		Std.	
							Statistic	Error	Statistic	Error
PE Sweater	119	2	7	4.50	1.24	1.55	-.360	.222	-.533	.440
PE Pillowcase	119	1	7	3.94	1.44	2.09	-.025	.222	-.828	.440
PE Bath towel	119	2	7	5.20	1.24	1.53	-.612	.222	.031	.440
PI Sweater	119	1	6	2.92	1.45	2.11	.453	.222	-.739	.440
PI Pillowcase	119	1	7	2.82	1.42	2.02	.685	.222	-.234	.440
PI Bath towel	119	1	7	3.73	1.45	2.12	.468	.222	-.718	.440
CJ Sweater	119	1	7	5.05	1.37	1.88	-.619	.222	-.048	.440
CJ Pillowcase	119	1	7	4.79	1.55	2.41	-.489	.222	-.407	.440
CJ Bath towel	119	2	7	5.16	1.30	1.68	-.399	.222	-.617	.440
WTP Sweater	119	1.00	80	15.64	12.48	155.76	2.53	.222	8.83	.440
WTP Pillowcase	119	1.00	40	6.51	5.75	33.09	2.57	.222	9.74	.440
WTP Bath towel	119	2.00	35	10.78	6.18	38.21	1.74	.222	3.94	.440
PO Sweater	119	1	7	2.46	1.56	2.45	.981	.222	.071	.440
PO Pillowcase	119	1	7	2.50	1.54	2.38	1.02	.222	.473	.440
PO Bath towel	119	1	7	2.89	1.70	2.90	.725	.222	-.460	.440
ER Sweater	119	1	7	3.32	1.34	1.79	.050	.222	-.720	.440
ER Pillowcase	119	1	6	2.77	1.35	1.83	.558	.222	-.315	.440
ER Bath towel	119	1	7	3.44	1.38	1.91	.140	.222	-.639	.440
PK - Sweater	119	1	7	4.59	1.20	1.45	-.569	.222	.218	.440
PK - Pillowcase	119	1	7	3.36	1.32	1.76	.347	.222	-.286	.440
PK – Bath towel	119	1	7	3.92	1.38	1.91	.137	.222	-.368	.440
Brand Familiarity	119	1	7	3.34	2.00	4.01	.295	.222	-1.27	.440
Average NFT	119	3	7	5.25	.925	.85	-.554	.222	.061	.440

							Skewness		Kurtosis	
				Std.						
N	Min	Max	Mean	Deviation	Standard Deviation	Statistic	Std. Error	Statistic	Std. Error	
PE – Product Evaluation							ER – Affective Reaction			
PI – Purchase intention							PK – Product Knowledge			
CIJ – Confidence in Judgment							NFT – Need for Touch			
PO – Psychological Ownership							WTP – Willingness to Pay			

5.3.2 Mean and standard deviations per treatment condition

To help the researcher familiarize herself with the data, descriptive analysis was run per treatment condition and a detailed tabulation of this can be found in Appendix 12.

5.4 Measurement reliability test and results

Prior to research model testing (data analysis), it is imperative to check and confirm that the measurements used in the research are robust, reliable and valid (Oppenheim, 2000). Validity has already been discussed thus no further discussion is provided here (see Section 4.7). Therefore, the main focus of this section is on reliability test results. Reliability was tested using SPSS software. Cronbach's alpha coefficient (α) was used to examine the internal consistency of the following multi-item scales: product evaluation, purchase intention, psychological ownership, affective reaction, product knowledge, brand familiarity and need for touch. Overall the Cronbach's alpha scores ranged from .767 to .944 (see Table 11 below) which exceed Nunnally & Bernstein's (1994) threshold of 0.7, consequently proving that the scales are reliable. The multi items in each scale were thus combined and merged to form an average score for each variable.

As confidence in judgment was measured using one question with two seven-point semantic differential scales (1 = Not very confident, 7 = Very confident and 1 = Not very sure, 7 = Very sure), Pearson bivariate correlation coefficient values as opposed to Cronbach values were computed. The results showed a high correlation between the items across all three products (for the sweater; $r = .842^{**}$, pillowcase; $r = .856^{**}$ and bath towel; $r = .797^{**}$), indicative that the two items have a strong positive association. Therefore, the overall confidence measure was calculated by taking an average of the two items, similar to the study by Peck & Childers (2003).

Table 11. Study 1 Cronbach's Alpha Results

ITEMS	CRONBACH'S ALPHA RESULTS					
	CRONBACH ALPHA (α)			CRONBACH ALPHA (α)		
	Sweater	Pillow case	Bath towel	If items deleted Sweater	Pillow case	Bath towel
PRODUCT EVALUATION	.944	.934	.909			
I like this product				.892	.849	.895
I feel positive toward the product				.812	.827	.868
The product is good				.871	.931	.895
PURCHASE INTENTION	.944	.934	.909			
I would definitely purchase this product				.933	.924	.904
I definitely intend to buy this product				.919	.907	.870
I have a high purchase interest in this product				.930	.914	.878
I definitely buy this product				.924	.908	.871
I probably buy this product				.949	.938	.916
PSYCHOLOGICAL OWNERSHIP	.942	.922	.940			
I feel like this is my product				.931	.879	.951
I feel a very high degree of personal ownership for this product				.917	.866	.878
I feel like I own this product				.897	.913	.909
AFFECTIVE REACTION	.905	.915	.915			
How interested were you when evaluating the product?				.897	.908	.910
How moved were you when evaluating the product?				.897	.916	.912
How captivated were you when evaluating the product?				.883	.895	.897
How delighted were you when evaluating the product?				.878	.893	.889
How enthusiastic were you when evaluating the product?				.879	.891	.888
How appealed were you when evaluating the product?				.893	.899	.905

CRONBACH'S ALPHA RESULTS						
ITEMS	CRONBACH ALPHA (α)			CRONBACH ALPHA (α) If items deleted		
	Sweater	Pillow case	Bath towel	Sweater	Pillow case	Bath towel
How amused were you when evaluating the product?				.907	.914	.910
PRODUCT KNOWLEDGE	.767	.795	.837			
I am very knowledgeable about the product				.684	.702	.756
If a friend asked me about the product, I could give them advice about different brands of the product				.619	.732	.782
If I had to purchase such a product today, I would need to gather very little information in order to make a wise decision				.831	.815	.836
I feel very confident about my ability to tell the difference in quality among different brands of this product				.674	.723	.800
			CRONBACH ALPHA (α)	CRONBACH ALPHA (α) If items deleted		
BRAND FAMILIARITY			.909			
I am familiar with the brand						
I know a great deal about the brand						
I have no knowledge about the brand (BFam_RC)* *Reverse coded						
NEED FOR TOUCH			.859			
When walking through stores, I can't help touching all kinds of products						
Touching products can be fun						
When browsing in stores, it is important for me to handle all kinds of products						
I like to touch products even if I have no intention of buying them						
When browsing in stores, I like to touch lots of products						
I find myself touching all kinds of products in stores						
I place more trust in products that can be touched before purchase						
I feel more comfortable purchasing a product after physically examining it						
If I can't touch a product in the store, I am reluctant to purchase the product						
I feel more confident making a purchase after touching a product						
The only way to make sure a product is worth buying is to actually touch it						
I would only buy a product if I could handle them before purchase						

5.5 Data analysis

ANCOVA analysis assumes that certain conditions have been met: (1) normality, (2) homogeneity of variance, (3) independence of the covariate and treatment effect and (4) homogeneity of regression slopes (Hair et al., 2010; Hair, Anderson, Tatham, & Black, 1999) hence the first step involved testing that these ANCOVA assumptions had been met. The results of this are discussed below.

5.5.1.1 ANCOVA Assumption testing

5.5.1.1.1 Normality test results

The assumption of normality was assessed by examining the Shapiro Wilk scores which showed that the some of the scores were significant at the 5% level (see Table 12), indicating a departure from normality. However, ANCOVA is relatively robust to departure from normality especially when sample sizes are large (Rutherford, 2001) so variables with values deviating from normality were included as such.

Table 12. ANCOVA normality assumption

TESTS OF NORMALITY								
Dependent variable	Product	Touch Condition	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
			Statistic	df	Sig.	Statistic	df	Sig.
PRODUCT EVALUATION	Sweater	Touch	.099	62	.200*	.964	62	.066
		No Touch	.147	57	.004	.958	57	.044
	Pillowcase	Touch	.092	62	.200*	.964	62	.064
		No Touch	.086	57	.200*	.979	57	.412
	Bath towel	Touch	.144	62	.003	.927	62	.001
		No Touch	.113	57	.066	.962	57	.069
PURCHASE INTENTION	Sweater	Touch	.110	62	.060	.928	62	.001
		No Touch	.103	57	.200*	.949	57	.018
	Pillowcase	Touch	.124	62	.018	.943	62	.006
		No Touch	.165	57	.001	.916	57	.001
	Bath towel	Touch	.123	62	.020	.960	62	.040
		No Touch	.130	57	.017	.941	57	.008
CONFIDENCE IN JUDGMENT	Sweater	Touch	.176	62	.000	.945	62	.007
		No Touch	.178	57	.000	.936	57	.005
	Pillowcase	Touch	.128	62	.013	.945	62	.008
		No Touch	.170	57	.000	.933	57	.004
	Bath towel	Touch	.226	62	.000	.915	62	.000
		No Touch	.134	57	.013	.930	57	.003
WILLINGNESS TO PAY	Sweater	Touch	.236	62	.000	.751	62	.000
		No Touch	.181	57	.000	.766	57	.000
	Pillowcase	Touch	.199	62	.000	.719	62	.000
		No Touch	.300	57	.000	.762	57	.000
	Bath towel	Touch	.213	62	.000	.828	62	.000
		No Touch	.163	57	.001	.848	57	.000
*. This is a lower bound of the true significance.								
a. Lilliefors Significance Correction								

5.5.1.1.2 Homogeneity of Variance test results

To test this assumption, Levene's test of equality of variances was run, with results showing that the assumption was met for the majority of dependent variables

(Product evaluation: sweater $F(7, 111) = 1.50, p = .172$ and pillowcase $F(7, 111) = .578, p = .773$; Purchase intention: sweater $F(7, 111) = .486, p = .843$ and pillowcase $F(7, 111) = .956, p = .467$; Confidence in judgement: sweater $F(7, 111) = .984, p = .447$, pillowcase $F(7, 111) = .748, p = .632$ and bath towel $F(7, 111) = 1.48, p = .179$; Willingness to pay: bath towel $F(7, 111) = 1.80, p = .094$).

However, product evaluation of the bath towel $F(7, 111) = 2.90, p = .008$, purchase intention of the bath towel $F(7, 111) = 2.15, p = .043$ and willingness to pay for the sweater $F(7, 111) = 2.96, p = .007$ and pillowcase $F(7, 111) = 3.78, p = .001$ were significant at the 5% level. The relative robustness of ANOVA/ANCOVAs to deviations from homogeneity of variance (Field, 2006, 2013) qualifies the inclusion of these variables with significant Levene scores in this study. Results are summarized in Table 13.

Table 13. Study 1 Levene Statistics - H1a, H1b, H2a, H2b and H2c

DEPENDENT VARIABLE	LEVENE STATISTIC
PRODUCT EVALUATION	
Sweater	$F(7, 111) = 1.50, p = .172$
Pillowcase	$F(7, 111) = .578, p = .773$
Bath towel	$F(7, 111) = 2.90, p = .008$
PURCHASE INTENTION	
Sweater	$F(7, 111) = .486, p = .843$
Pillowcase	$F(7, 111) = .956, p = .467$
Bath towel	$F(7, 111) = 2.15, p = .043$
CONFIDENCE IN JUDGMENT	
Sweater	$F(7, 111) = .984, p = .447$
Pillowcase	$F(7, 111) = .748, p = .632$
Bath towel	$F(7, 111) = 1.48, p = .179$
WILLINGNESS TO PAY	
Sweater	$F(7, 111) = 2.96, p = .007$
Pillowcase	$F(7, 111) = 3.78, p = .001$
Bath towel	$F(7, 111) = 1.80, p = .094$

5.5.1.1.3 Independence of the covariate and treatment effect test results

This is an important assumption to check as including a covariate in a model that differs across treatment groups would effectively not ‘control for’ those differences (Lord, 1967, 1969) deeming it an unsuitable covariate. The likelihood of this occurring can be reduced through random assignment of participants to experimental groups (Field, 2013) which was achieved in this study. This assumption was tested using an ANOVA with touch as the independent variable and the covariate (product knowledge) as the dependent variable. Results were all insignificant (sweater $F(1, 117) = .397, p = .530$, pillowcase $F(1, 117) = .959, p = .330$ and bath towel $F(1, 117) = 2.21, p = .139$). Therefore implying that the covariate did not significantly differ across touch treatment groups (see Table 14) and thus suitable for inclusion as a covariate.

Table 14. Study 1 Independence of the covariate (product knowledge) and treatment effect

INDEPENDENCE OF THE COVARIATE (PRODUCT KNOWLEDGE) AND TREATMENT EFFECT				
	df1	df2	F	Sig.
Product Knowledge - SWEATER	1	117	.397	.530
Product Knowledge - PILLOWCASE	1	117	.959	.330
Product Knowledge - BATH TOWEL	1	117	2.216	.139

5.5.1.1.4 Homogeneity of regression slopes (covariate coefficients) test results

This examines the relationship between the covariate and the dependent variable/s and assumes that their outcome (interaction effect) is the same for each of the treatment groups (Field, 2013). This test evaluated the interaction between the covariate (product knowledge) and the independent variables (touch x brand familiarity x need for touch) in predicting the dependent variables examined such

that insignificant results would demonstrate that the overall regression model is an accurate representation of all the treatment groups (Field, 2013).

The assumption was met for product evaluation of the sweater ($F(1, 110) = 1.83, p = .077$), product evaluation of the bath towel ($F(1, 110) = 1.33, p = .234$), purchase intention of the sweater ($F(1, 110) = .772, p = .628$), purchase intention of the pillowcase ($F(1, 110) = 1.68, p = .110$), purchase intention of the bath towel ($F(1, 110) = 1.86, p = .073$), confidence in judgement for the pillowcase ($F(1, 110) = .812, p = .594$) and confidence in judgement for the bath towel ($F(1, 110) = 1.25, p = .266$).

However, some results were significant implying that the assumption was not met for these (product evaluation of the pillowcase ($F(1, 110) = 2.89, p = .006$), confidence in judgement for the sweater ($F(1, 110) = 2.68, p = .010$), willingness to pay for the sweater ($F(1, 110) = 4.26, p = .000$), willingness to pay for the pillowcase ($F(1, 110) = 2.46, p = .017$) and willingness to pay for the bath towel ($F(1, 110) = 3.87, p = .000$). A summary of results is presented in Table 15 below.

Table 15. Study 1 ANCOVA Homogeneity of regressions slopes

HOMOGENEITY OF REGRESSION SLOPES RESULTS					
		df1	df2	F	Sig.
Product Evaluation	Sweater	1	110	1.83	.077
	Pillowcase	1	110	2.89	.006
	Bath towel	1	110	1.33	.234
Purchase Intention	Sweater	1	110	.772	.628
	Pillowcase	1	110	1.68	.110
	Bath towel	1	110	1.86	.073
Confidence in Judgment	Sweater	1	110	2.68	.010
	Pillowcase	1	110	.812	.594
	Bath towel	1	110	1.25	.266

HOMOGENEITY OF REGRESSION SLOPES RESULTS					
		df1	df2	F	Sig.
WTP	Sweater	1	110	4.26	.000
	Pillowcase	1	110	2.46	.017
	Bath towel	1	110	3.87	.000

As the hypothesis in the results are referred to by their number (e.g. H1a), the researcher included the full hypotheses in Table 16 below to remind the reader of which hypothesis corresponds to each number.

Table 16. Hypothesis 1a, 1b, 1c, 2a, 2b and 2c (Study 1)

HYPOTHESIS NUMBER	HYPOTHESIS DESCRIPTION
H1a	<i>Touch has a significant positive effect on consumer response.</i>
H1b	<i>The effect of touch is a function of NFT. Specifically, the effect of touch is only significant for those with a higher NFT and not a lower NFT.</i>
H2a	<i>A familiar branded product has more positive effect on consumer response, than an unfamiliar branded product.</i>
H2b	<i>The effect of touch on consumer response is a function of brand familiarity. Specifically, for the lower familiar (unfamiliar) branded products touch will have a positive effect but no significant effect for the higher familiar branded products will be found.</i>
H2c	<i>There is a three-way interaction between touch, brand familiarity, need for touch. Specifically, individuals with higher NFT will respond more positively when they can touch an unfamiliar branded product than when they cannot. Lower NFT individuals will respond more positively to the familiar branded products irrespective of touch.</i>

The results of hypothesis 1a, 1b, 2a, 2b and 2c are now presented in the following sections.

5.5.2 Results H1a, H1b, H2a, H2b and H2c

The proposed direct, moderating and interaction effects controlling for the covariate of product knowledge were examined across all three products (sweater, pillowcase

and bath towel). Accordingly, a series of three-way Analysis of Covariance's also known as ANCOVAs (Touch condition: *touch, no touch*; Need for touch: *high need for touch, low need for touch* and brand familiarity: *familiar (Primark), unfamiliar (4U2)*) were computed for each product. An ANCOVA allows for the effects of a covariate¹⁵ on the dependent variable to be removed from the data, therefore reducing error and increasing the power of the *F*-test (Gray & Kinnear, 2012). Lastly, a brand familiarity manipulation check was undertaken and the results indicated that the manipulation was successful; ($F(1, 117) = 192.64, p = .000$). Results of the analyses are presented below.

5.5.2.1 Product evaluation

H1a. The ANCOVA was run to test the effect of touch on product evaluation, using product knowledge as a covariate (for each of the three products). The results reveal a significant effect of touch on product evaluation of the pillowcase ($F(1, 110) = .877, p = .004$). Specifically, individuals in the touch condition gave higher product evaluation scores ($M_{\text{Touch}} = 4.26, M_{\text{NoTouch}} = 3.58$) indicating that touch has a positive effect on product evaluation. Therefore, H1a is supported.

Additional ANCOVA results showed no significant differences in product evaluation between touch conditions for the sweater ($M_{\text{Touch}} = 4.52, M_{\text{NoTouch}} = 4.48; F(1, 110) = .025, p = .875$) and bath towel ($M_{\text{Touch}} = 5.22, M_{\text{NoTouch}} = 5.18; F(1, 110) = .098, p = .755$) suggesting that touch has no effect on product evaluation of the sweater and bath towel thus H1a is rejected.

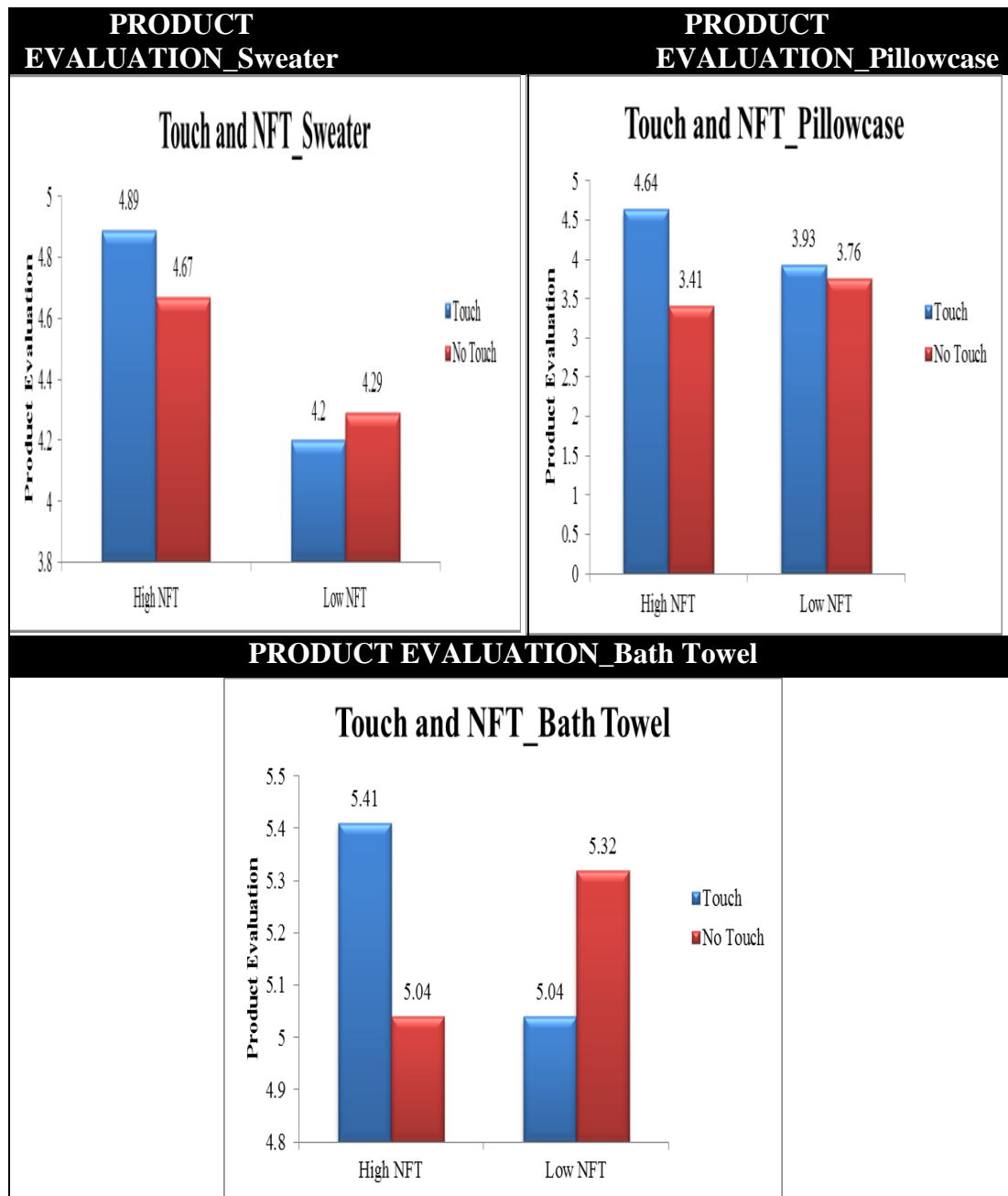
¹⁵ A confounding (or covariate) variable is any variable other than the experimental manipulation that affects the outcome variable (Field, 2013; Gray & Kinnear, 2012).

H1b. The ANCOVA was run to test the effect of touch and NFT (a median split was used to categorize respondents into high and low NFT groups) on product evaluation, using product knowledge as a covariate. Results reveal a significant interaction effect between touch and NFT for the pillowcase $F(1, 110) = 4.76, p = .031$. Pairwise comparisons show that product evaluation is significantly higher for high NFT individuals in the touch condition ($M_{\text{Touch}} = 4.64$ versus $M_{\text{NoTouch}} = 3.41; p = .000$) but insignificant for those with a low NFT ($M_{\text{Touch}} = 3.93$ versus $M_{\text{NoTouch}} = 3.73; p = .574$). This indicates that there is a positive significant difference in purchase intentions for high NFT individuals in the touch as opposed to no touch condition but no difference for low NFT individuals. Therefore H1b is supported.

However, ANCOVA results revealed no significant interaction effect for the sweater $F(1, 110) = .317, p = .575$ and bath towel $F(1, 110) = .189, p = .171$, indicating that there is no difference in product evaluation between high and low NFT individuals in the touch and no touch conditions, therefore H1b is rejected.

See Figure 3 for a diagrammatical representation of product evaluation H1a and H1b results.

Figure 3. Touch, NFT and product evaluation (H1a and H1b)



H2a. The ANCOVA was run to test the effect of brand familiarity on product evaluation, using product knowledge as a covariate. Results reveal no significant differences in product evaluations for the familiar (Primark) and unfamiliar branded (4u2) sweater ($M_{\text{Primark}} = 4.32$, $M_{4u2} = 4.67$; $F(1, 110) = 1.93$, $p = .167$), pillowcase ($M_{\text{Primark}} = 3.89$, $M_{4u2} = 3.94$; $F(1, 110) = .370$, $p = .544$) and bath towel ($M_{\text{Primark}} =$

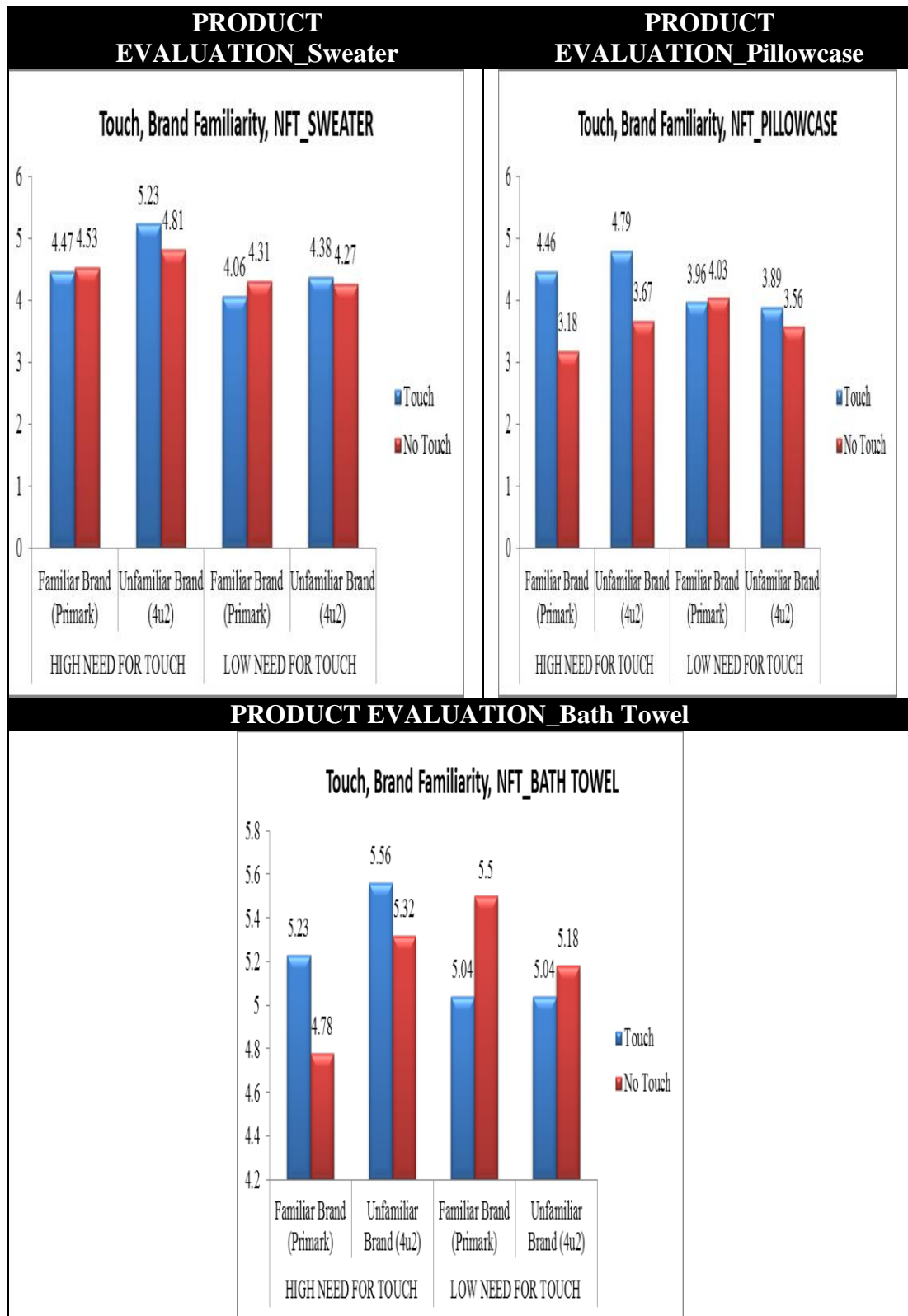
5.11, $M_{4u2} = 5.28$; $F(1, 110) = .615$, $p = .435$). The results indicate brand familiarity has no effect on product evaluation therefore H2a is rejected.

H2b. The ANCOVA was run to test the effect of touch and brand familiarity on product evaluation, using product knowledge as a covariate. Results reveal no significant interaction effect of touch and brand familiarity on product evaluation of the sweater, $F(1, 110) = .647$, $p = .423$; pillowcase, $F(1, 110) = .194$, $p = .660$ and bath towel - $F(1, 110) = .022$, $p = .882$). The results indicate that product evaluation scores in the touch and no touch conditions do not differ by brand familiarity therefore H2b is rejected.

H2c. The ANCOVA was run to test the interaction effect of touch, brand familiarity and NFT on product evaluation, using product knowledge as a covariate. Results reveal no significant interaction effect on product evaluation of the sweater $F(1, 110) = .019$, $p = .891$, pillowcase $F(1, 110) = .085$, $p = .771$ and bath towel - $F(1, 110) = .109$, $p = .741$. The results do not support the hypothesized three way interaction therefore H2c is rejected.

See Figure 4 for a diagrammatical representation of product evaluation H2a, H2b and H2c results.

Figure 4. Touch, Brand Familiarity, NFT and product evaluation (H2a, H2b, H2c)



5.5.2.2 Purchase intention

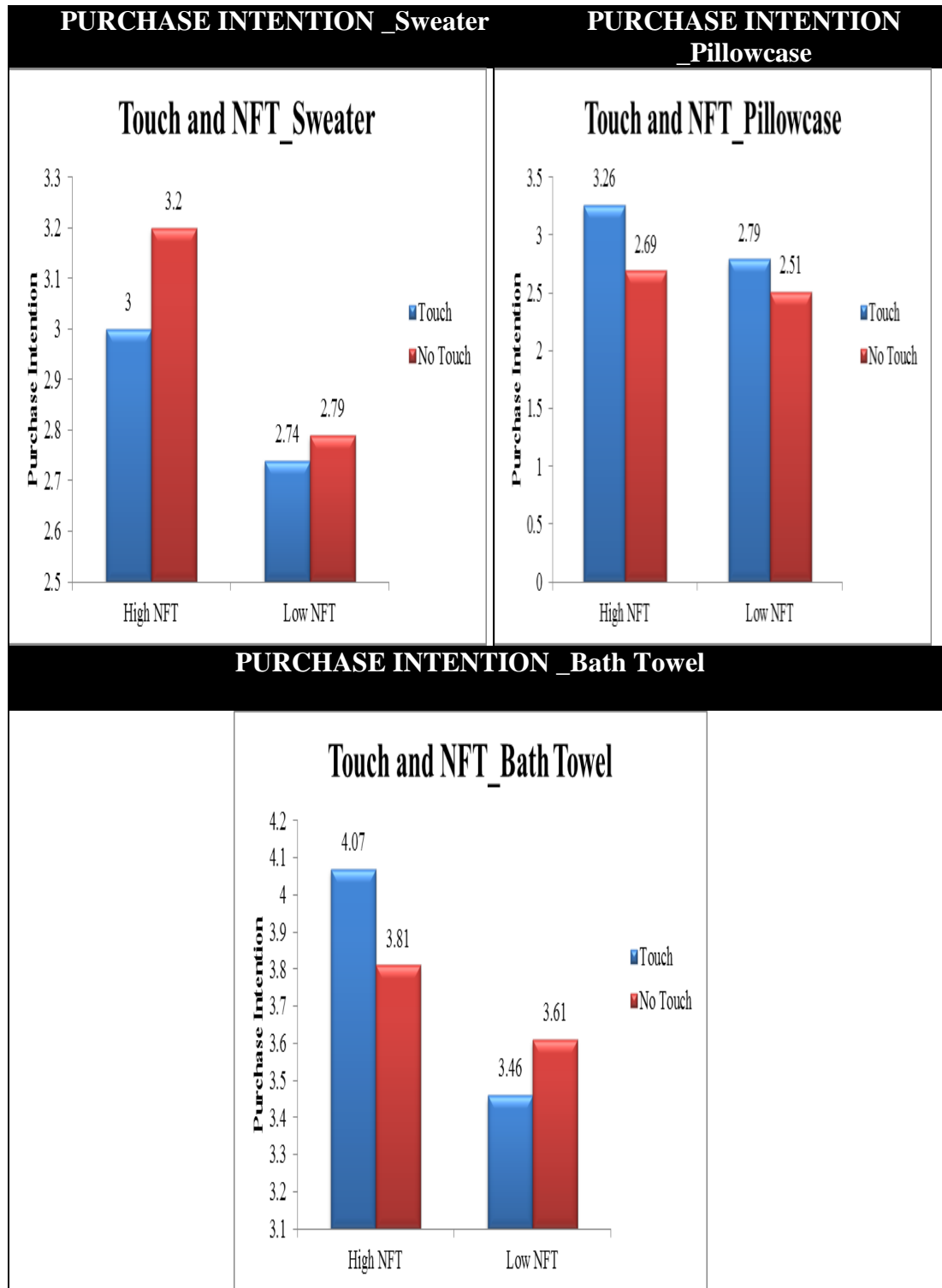
H1a. The ANCOVA was run to test the effect of touch on purchase intention using product knowledge as a covariate (for each of the three products). The results reveal a marginally significant main effect of touch on purchase intention of the pillowcase after controlling for product knowledge, $F(1, 110) = 3.36, p = .069$. Individuals in the touch condition gave higher purchase intention scores ($M_{\text{Touch}} = 3.01, M_{\text{NoTouch}} = 2.60$) indicating that touch has a positive effect on purchase intention. Therefore H1a is marginally supported.

Further ANCOVA results showed no significant differences in purchase intention between touch conditions for the sweater ($M_{\text{Touch}} = 2.86, M_{\text{NoTouch}} = 3.00; F(1, 110) = .331, p = .567$) and bath towel ($M_{\text{Touch}} = 3.75, M_{\text{NoTouch}} = 3.71; F(1, 110) = .248, p = .619$). This indicates that touch has no effect on purchase intentions for the sweater and bath towel therefore H1a is rejected.

H1b. The ANCOVA was run to test the effect of touch and NFT (a median split was used to categorize respondents into high and low NFT groups) on purchase intention, using product knowledge as a covariate. Results reveal no significant interaction effect between touch and NFT for the sweater ($F(1, 110) = 1.03, p = .311$), pillowcase ($F(1, 110) = .825, p = .366$) and bath towel ($F(1, 110) = 1.59, p = .209$), indicating that purchase intentions do not differ for high and low NFT individuals in either touch condition. Therefore H1b is rejected.

See Figure 5 for a diagrammatical representation of purchase intention H1a and H1b results.

Figure 5. Touch, NFT and purchase intention (H1a and H1b)



H2a. The ANCOVA was run to test the effect of brand familiarity on purchase intention, using product knowledge as a covariate. Results reveal no significant effect of brand familiarity on purchase intention for the sweater ($M_{\text{Primark}} = 2.93$, $M_{4u2} =$

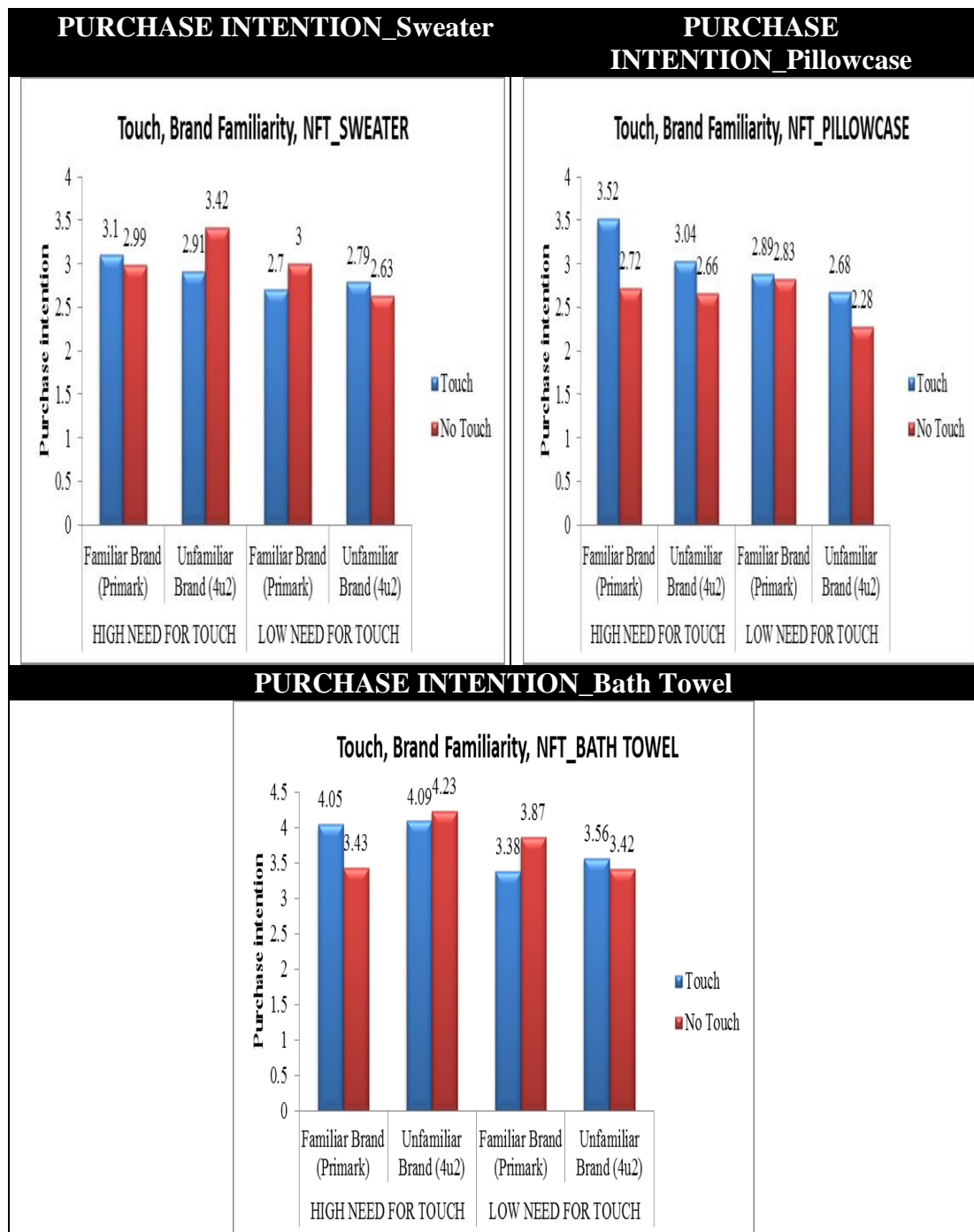
2.92; $F(1, 110) = .011$, $p = .916$), pillowcase ($M_{\text{Primark}} = 2.98$, $M_{4u2} = 2.66$; $F(1, 110) = 1.01$, $p = .315$) and bath towel ($M_{\text{Primark}} = 3.64$, $M_{4u2} = 3.82$; $F(1, 110) = .740$, $p = .392$), indicating that brand familiarity has no effect on purchase intentions therefore H2a is rejected.

H2b. The ANCOVA was run to test the effect of touch and brand familiarity on purchase intention, using product knowledge as a covariate. Results reveal no significant interaction effect of touch and brand familiarity on purchase intentions for the sweater $F(1, 110) = .072$, $p = .78$, pillowcase $F(1, 110) = .009$, $p = .923$ and bath towel $F(1, 110) = .007$, $p = .935$. The results indicate that product evaluation scores in the touch and no touch conditions do not differ by brand familiarity therefore H2b is rejected.

H2c. The ANCOVA was run to test the interaction effect of touch, brand familiarity and NFT on purchase intention, using product knowledge as a covariate. Results reveal no significant interaction effect on purchase intention for the sweater $F(1, 110) = 1.00$, $p = .318$, pillowcase $F(1, 110) = .294$, $p = .589$ and bath towel $F(1, 110) = .727$, $p = .396$). The results do not support the hypothesized three way interaction therefore H2c is rejected.

See Figure 6 for a diagrammatical representation of purchase intention H2a, H2b and H2c results.

Figure 6. Touch, Brand Familiarity, NFT and purchase intention (H2a, H2b, H2c)



5.5.2.3 Confidence in judgment

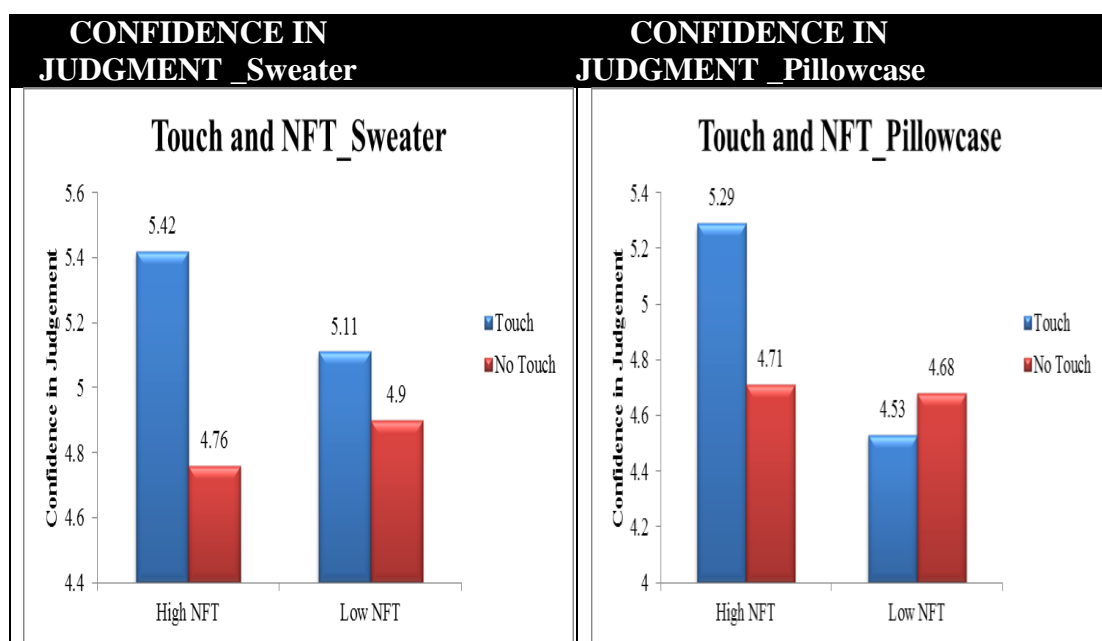
H1a. The ANCOVA was run to test the effect of touch on confidence in judgment, using product knowledge as a covariate (for each of the three products). Results reveal no significant differences confidence in judgement between touch conditions for the sweater ($M_{\text{Touch}} = 5.25$, $M_{\text{NoTouch}} = 4.83$; $F(1, 110) = 2.34$, $p = .129$),

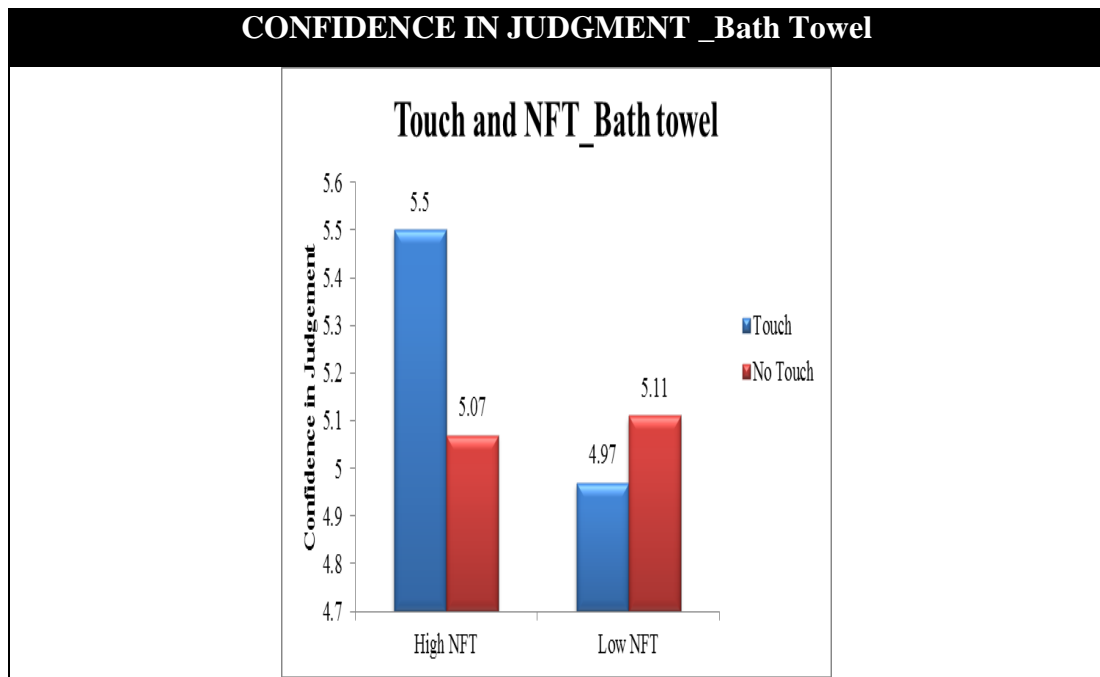
pillowcase ($M_{\text{Touch}} = 4.88$, $M_{\text{NoTouch}} = 4.69$; $F(1, 110) = .690$, $p = .408$) and bath towel ($M_{\text{Touch}} = 5.22$, $M_{\text{NoTouch}} = 5.09$; $F(1, 110) = .589$, $p = .445$). This indicates that touch has no effect on confidence in judgment experienced across three products and thus H1a is rejected.

H1b. The ANCOVA was run to test the effect of touch and NFT (a median split was used to categorize respondents into high and low NFT groups) on confidence in judgement, using product knowledge as a covariate. Results reveal no significant interaction effect of touch and NFT for the sweater ($F(1, 110) = 1.04$, $p = .309$), pillowcase ($F(1, 110) = 1.60$, $p = .209$) and bath towel ($F(1, 110) = 1.63$, $p = .203$). This indicates that high and low NFT individuals do not differ in their confidence in judgements in the touch and no touch conditions, therefore H1b is rejected.

See Figure 7 for a diagrammatical representation of confidence in judgment H1a and H1b results.

Figure 7. Touch, NFT and confidence in judgement (H1a and H1b)





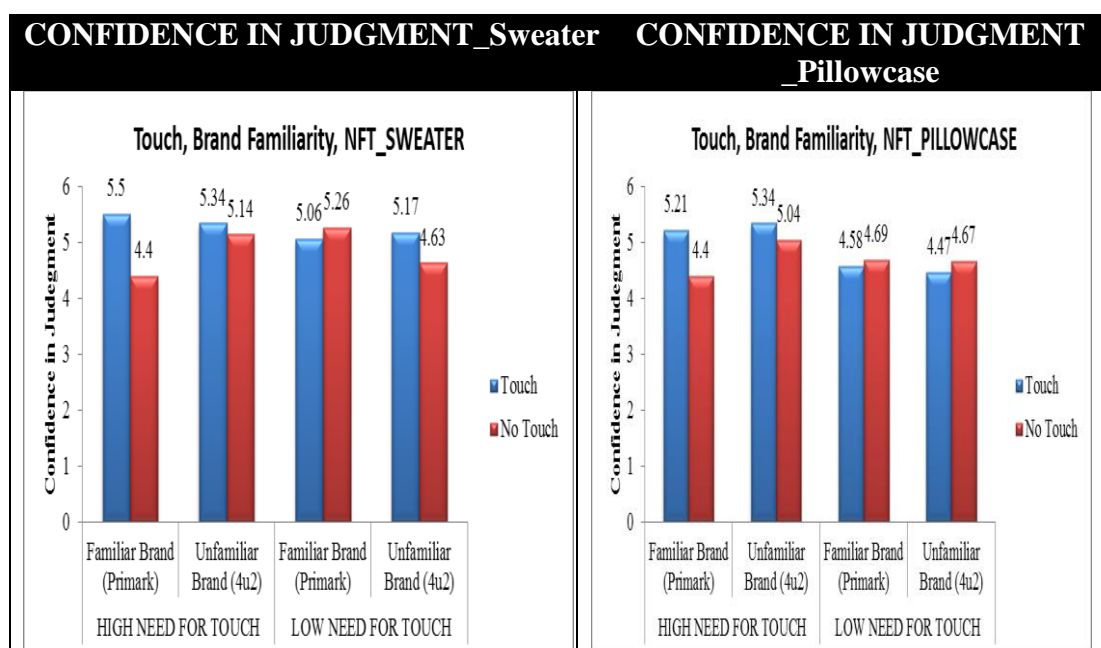
H2a. The ANCOVA was run to test the effect of brand familiarity on confidence in judgement, using product knowledge as a covariate. Results reveal no significant differences in confidence in judgement for the familiar (Primark) and unfamiliar branded (4u2) sweater ($M_{\text{Primark}} = 5.03$, $M_{4u2} = 5.07$; $F(1, 110) = .008$, $p = .930$), pillowcase ($M_{\text{Primark}} = 4.70$, $M_{4u2} = 4.88$; $F(1, 110) = .478$, $p = .491$) and bath towel ($M_{\text{Primark}} = 5.15$, $M_{4u2} = 5.17$; $F(1, 110) = .017$, $p = .896$). The results indicate brand familiarity has no effect on confidence in judgement therefore H2a is rejected.

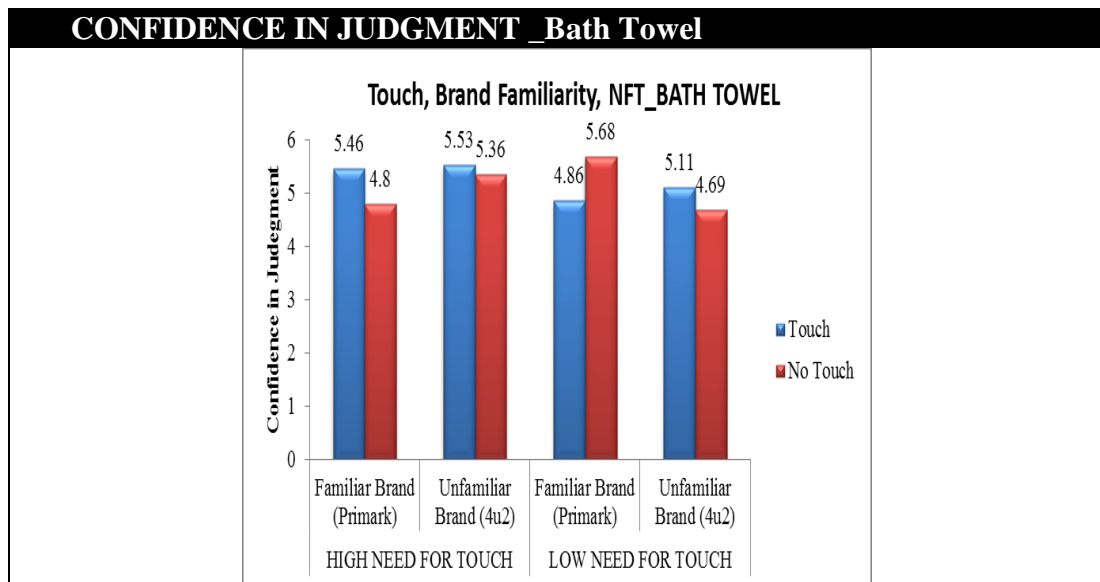
H2b. The ANCOVA was run to test the effect of touch and brand familiarity on confidence in judgement, using product knowledge as a covariate. Results reveal no significant interaction effect of touch and brand familiarity on confidence in judgement for the sweater $F(1, 110) = .194$, $p = .661$, pillowcase $F(1, 110) = .189$, $p = .665$ and bath towel $F(1, 110) = .702$, $p = .404$. The results indicate that confidence in judgement scores in the touch and no touch conditions do not differ by brand familiarity therefore H2b is rejected.

H2c. The ANCOVA was run to test the interaction effect of touch, brand familiarity and NFT on confidence in judgement, using product knowledge as a covariate. Results reveal a marginally significant interaction effect on confidence in judgement for the sweater ($F(1, 110) = 2.93, p = .090$). Specifically, for the familiar branded (Primark) sweater those with a high NFT had greater confidence in judgment in the touch (versus no touch) ($M_{\text{Touch}} = 5.50$ versus $M_{\text{NoTouch}} = 4.40; p = .024$). Despite this significant result, it was hypothesized that this effect would be shown for the unfamiliar and not the familiar branded product. Therefore H2c is rejected. ANCOVA results revealed no significant interaction effect for the pillowcase ($F(1, 110) = .057, p = .812$) and bath towel ($F(1, 110) = 2.11, p = .149$), therefore H2c is rejected.

See Figure 8 for a diagrammatical representation of purchase intention H2a, H2b and H2c results.

Figure 8. Touch, Brand Familiarity, NFT and confidence in judgment (H2a, H2b, H2c)



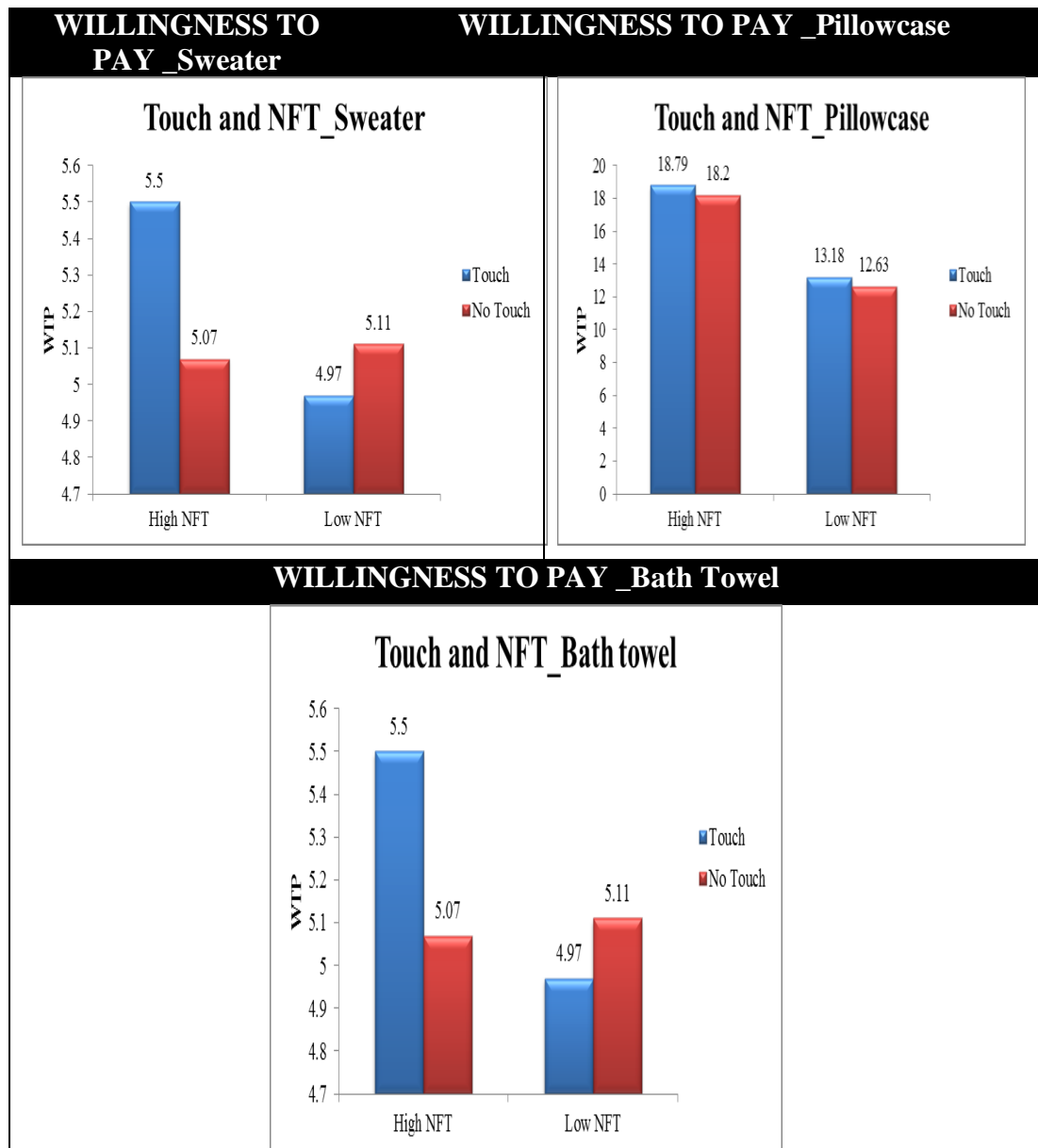


5.5.2.4 Willingness to pay

H1a. The ANCOVA was run to test the effect of touch on willingness to pay, using product knowledge as a covariate (for each of the three products). Results reveal no significant differences willingness to pay between touch conditions for the sweater ($M_{\text{Touch}} = 15.80$, $M_{\text{NoTouch}} = 15.46$; $F(1, 110) = .018$, $p = .893$), pillowcase ($M_{\text{Touch}} = 7.16$, $M_{\text{NoTouch}} = 5.80$; $F(1, 110) = 1.70$, $p = .195$) and bath towel ($M_{\text{Touch}} = 11.07$, $M_{\text{NoTouch}} = 10.48$; $F(1, 110) = .558$, $p = .457$). This indicates that that touch has no effect on willingness to pay across the three products and thus H1a is rejected.

H1b. The ANCOVA was run to test the effect of touch and NFT (a median split was used to categorize respondents into high and low NFT groups) on willingness to pay, using product knowledge as a covariate. Results reveal no significant interaction effect of touch and NFT for the sweater ($F(1, 110) = .101$, $p = .751$), pillowcase ($F(1, 110) = .308$, $p = .580$) and bath towel ($F(1, 110) = 1.11$, $p = .292$). This indicates that high and low NFT individuals do not differ in their willingness to pay scores in the touch and no touch conditions, thus H1b is rejected. See Figure 9 for a diagrammatical representation of willingness to pay H1a and H1b results.

Figure 9. Touch, NFT and willingness to pay (H1a and H1b)



H2a. The ANCOVA was run to test the effect of brand familiarity on product evaluation, using product knowledge as a covariate. Results reveal significant brand familiarity effects for the sweater ($M_{\text{Primark}} = 11.09$, $M_{4u2} = 19.97$; $F(1, 110) = 17.96$, $p = .000$), pillowcase ($M_{\text{Primark}} = 4.98$, $M_{4u2} = 7.96$; $F(1, 110) = 8.20$, $p = .005$) and bath towel ($M_{\text{Primark}} = 8.39$, $M_{4u2} = 13.06$; $F(1, 110) = 19.76$, $p = .000$). The results indicate that the unfamiliar branded products received higher product evaluation scores. Although significant, the results are in the opposite direction hypothesized (it

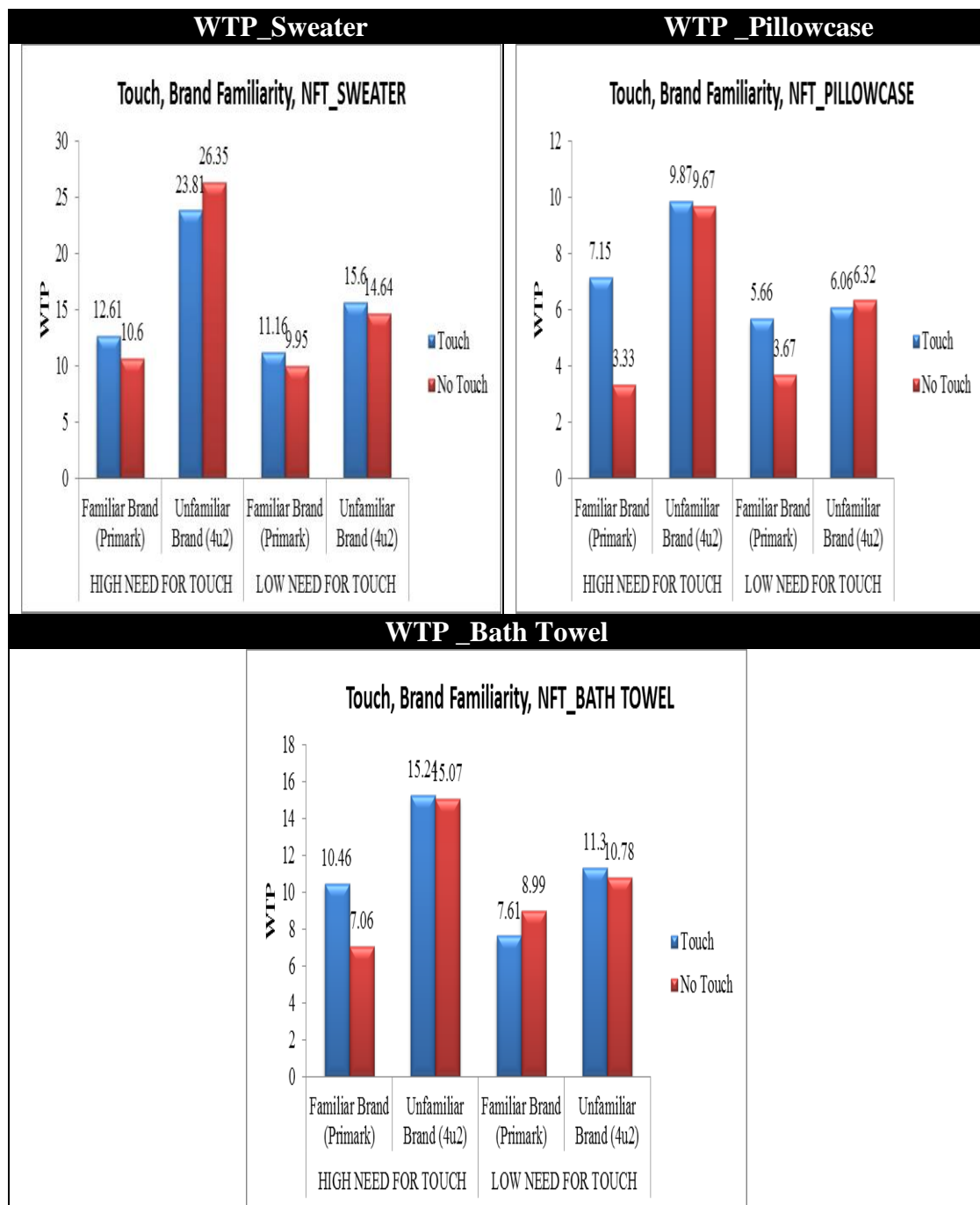
was proposed that familiar branded products would receive higher scores), therefore H2a is rejected.

H2b. The ANCOVA was run to test the effect of touch and brand familiarity on willingness to pay, using product knowledge as a covariate. Results reveal no significant interaction effect of touch and brand familiarity on willingness to pay for the sweater $F(1, 110) = .429, p = .514$, pillowcase $F(1, 110) = 2.37, p = .127$ and bath towel $F(1, 110) = .092, p = .762$. The results indicate that willingness to pay scores in the touch and no touch conditions do not differ by brand familiarity therefore H2b is rejected.

H2c. The ANCOVA was run to test the interaction effect of touch, brand familiarity and NFT on willingness to pay, using product knowledge as a covariate. Results reveal no significant interaction effect on willingness to pay for the sweater $F(1, 110) = .261, p = .611$, pillowcase $F(1, 110) = .195, p = .660$ and bath towel $F(1, 110) = 1.19, p = .277$. The results do not support the hypothesized three way interaction therefore H2c is rejected.

See Figure 10 for a diagrammatical representation of willingness to pay H2a, H2b and H2c results.

Figure 10. Touch, Brand Familiarity, NFT and willingness to pay (H2a, H2b and H2c)

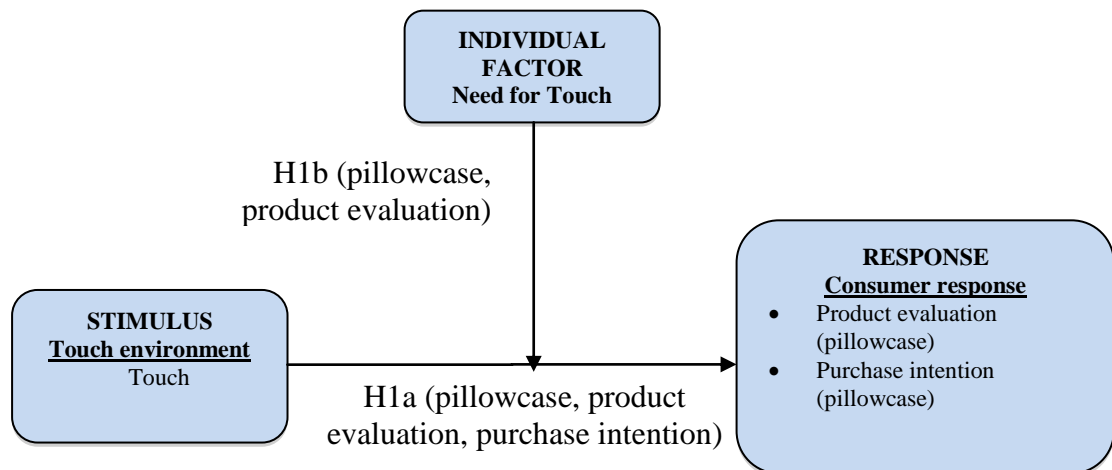


5.5.3 Results Summary H1a, H1b, H2a, H2b and H2c

A concise pictorial summary depicting only significant results (for easier and clearer interpretation given that 3 products were examined per hypothesis) of the hypothesized relationships is presented in Figure 11 below, followed by a written

summary of the overall results of Study 1 (both significant and insignificant findings).

Figure 11. Study 1 results (significant results)



The results showed that as predicted touch positively influenced consumer response, specifically for product evaluation and purchase intention of the pillowcase (H1a). Results also supported the hypothesis that product evaluation of the pillowcase was only significant for those with a high NFT (H1b). Both results reaffirm prior literature findings (Peck, 2010; Peck & Childers, 2006; Peck & Johnson, 2011; Peck & Shu, 2009). Hypothesis 2a proposed that irrespective of touch the Primark branded products (by virtue of being a familiar brand) would be considered more favourably than the 4U2 ones (unfamiliar), however, the results showed support in the opposite direction in that willingness to pay was higher for the 4U2 (unfamiliar) branded sweater, pillowcase and bath towel. No significant results were reported for brand familiarity moderation (H2b) but marginal support was found for the interaction effect of touch, NFT and brand familiarity (H2c). Specifically, those with a high NFT had significantly higher confidence in judgment when they touched the unfamiliar branded (Primark) sweater.

The lack of significant support for the proposed brand familiarity moderation effect was unexpected, which led the researcher to speculate about the possible reasons for this. As a result, supplementary analyses were run to further examine the role of attitudes towards the brands used and the influence of product knowledge in potentially elucidating the aforementioned findings.

5.5.4 Supplementary Analyses

5.5.4.1 Attitudes towards familiar (Primark) and unfamiliar brand (4u2)

Across all three products, brand familiarity did not moderate touch effects on consumer response (H2b) leading to speculation as to the reasons behind it. First, the researcher decided to test if the two brands used, despite differing in familiarity, actually differed in attitudes towards them as similar attitudes could suggest that participants classed them similarly, possibly deeming the effect of brand name irrelevant. Data collected during the pre-test was used ($n = 22$). Attitude towards the brand was captured on a five-item, seven-point semantic differential scale adopted from Kent & Allen (1994) with the following adjectives '*unappealing/appealing*', '*bad/good*', '*unpleasant/pleasant*', '*unfavourable/favourable*' and '*unlikable/likable*.' The results of a paired sample t-test (Primark and 4U2) revealed that there was a significant difference in attitudes toward the brand ($p = .015$) in that there were higher positive attitudes towards for the familiar ($M_{\text{Primark}} = 5.13$) compared to the unfamiliar brand ($M_{4u2} = 3.75$). The 95% confidence interval for the difference is (.309, 2.44). The results ruled out this first speculation, leading to the second speculation that product knowledge (although run was a covariate in the preceding analysis) could be a possible moderator that directly influences brand familiarity moderation. The rationale is provided in the following section.

5.5.4.2 Product knowledge related hypotheses

Product knowledge has long been of interest to researchers in consumer behaviour and studies have found that it plays a significant role in the consumer decision-making process (Bettman & Park, 1980; Brucks, 1985; Rao & Monroe, 1988; Mita Sujan, 1985) such as purchase intentions (Fu & Elliott, 2013). Marks & Olson (1981) conceptualize product familiarity as cognitive structures of knowledge (e.g., usage, product class information, product attributes) concerning the product stored in memory, derived from direct or indirect experiences (e.g., advertisements) with that product, that distinguish products in ways useful for decision-making (Alba & Hutchinson, 1987) as greater knowledge of a product/category accelerates the search for relevant product information (Brucks, 1985). Product knowledge refers to ‘the amount of accurate information held in the memory as well as self-perceptions of product knowledge’(Rao & Sieben, 1992, p. 258) and consumers have a tendency to make a purchase decision based on their knowledge relevant to the product.

Generally, more knowledgeable consumers possess a better understanding of what product information is relevant when faced with a particular product decision (Johnson & Russo, 1984) and in most cases tend to use intrinsic cues related to the product (e.g., texture of a sweater) as opposed to extrinsic cues (e.g., price or brand) to gauge the product (Darden & Schwinghammer, 1985; Etgar & Malhotra, 1978; Olson & Jacoby, 1972; Szybillo & Jacoby, 1974b; Zeithaml, 1988). However, when intrinsic cues are unavailable they can rely on their current product knowledge for judgment. Conversely, less knowledgeable individuals (novices) are known to be more reliant on external (e.g., price or brand name) than internal cues compared to highly knowledgeable individuals (experts) (Alba & Hutchinson, 1987) when making judgments and arriving at decisions. When such external cues (e.g., brand

name) are unfamiliar (hence pre-existing schema from which to make inference is missing), it is feasible to assume that less knowledgeable individuals would need to acquire more information about the product (such as through touch). Touch may therefore have a significant effect on the outcome for less knowledgeable individuals when brand familiarity is low.

Brand familiarity moderation of touch effects may be dependent on the product knowledge individuals possess of the products under examination. Alba & Hutchinson (1987) note that less knowledgeable individuals (novices) rely more on external cues, than higher knowledgeable individuals (experts). However, when few product relevant external cues are present (e.g., an unknown brand hence no brand schema to draw from), consumer response for less knowledgeable individuals could be based on the information acquired from intrinsic factors (i.e., through product touch). Furthermore, low product and brand familiarity means that no existing schema exists to pull from and decisions/conclusions about a product are better reached when haptic information is provided through touch.

It is thus anticipated that touch would have a significant effect for unfamiliar brands, when product knowledge is low, as it would act as a mechanism through which product (knowledge) and brand schema are increased. Additionally, where less product touch is available to acquire product information, less brand schema is present (unfamiliar brand) but product knowledge is high, product knowledge would be drawn on and lead to a more positive consumer response. From the discussions above, two propositions are thus made:

Product knowledge related Hypothesis 1. The effect of touch is significant for those with lower product knowledge but not those with higher product knowledge.

Product knowledge related Hypothesis 2. There is a three-way interaction between product touch, brand familiarity and product knowledge. When product knowledge is lower touch has a positive effect on consumer response when brand familiarity is lower. When product knowledge is higher, touch has no effect on consumer response when brand familiarity is higher.

While considering product knowledge as a moderator of touch effects seems quite intuitive, to the researchers' knowledge, until now it had yet to be empirically examined in the context of product touch. In summary, from the additional proposed hypotheses above, it was expected that brand familiarity moderation was significant but only when product knowledge was low, specifically, touch effects were more significant when both brand familiarity and product knowledge were low. To test these hypotheses a series of three way Analysis of Variances also known as ANOVAs (touch condition: *touch, no touch*; product knowledge: *high PK, low PK*; brand familiarity: *familiar (Primark), unfamiliar (4U2)*) were computed for each of the three products (sweater, pillowcase and bath towel). Homogeneity of variance results are presented in Table 17 below, followed by the ANOVA results.

Table 17. Levene statistics (product knowledge related hypotheses)

DEPENDENT VARIABLE	PRODUCT	F	DF1	DF2	SIG.
PRODUCT EVALUATION	Sweater	.785	7	111	.602
	Pillowcase	.573	7	111	.776
	Bath towel	1.481	7	111	.181
PURCHASE INTENTION	Sweater	1.02	7	111	.416
	Pillowcase	.603	7	111	.752
	Bath towel	.925	7	111	.072

DEPENDENT VARIABLE	PRODUCT	F	DF1	DF2	SIG.
CONFIDENCE IN JUDGMENT	Sweater	.316	7	111	.249
	Pillowcase	.370	7	111	.918
	Bath towel	1.13	7	111	.349
WILLINGNESS TO PAY	Sweater	1.63	7	111	.134
	Pillowcase	2.54	7	111	.018
	Bath towel	2.10	7	111	.049

5.5.5 Results for product knowledge related hypotheses ANOVA's

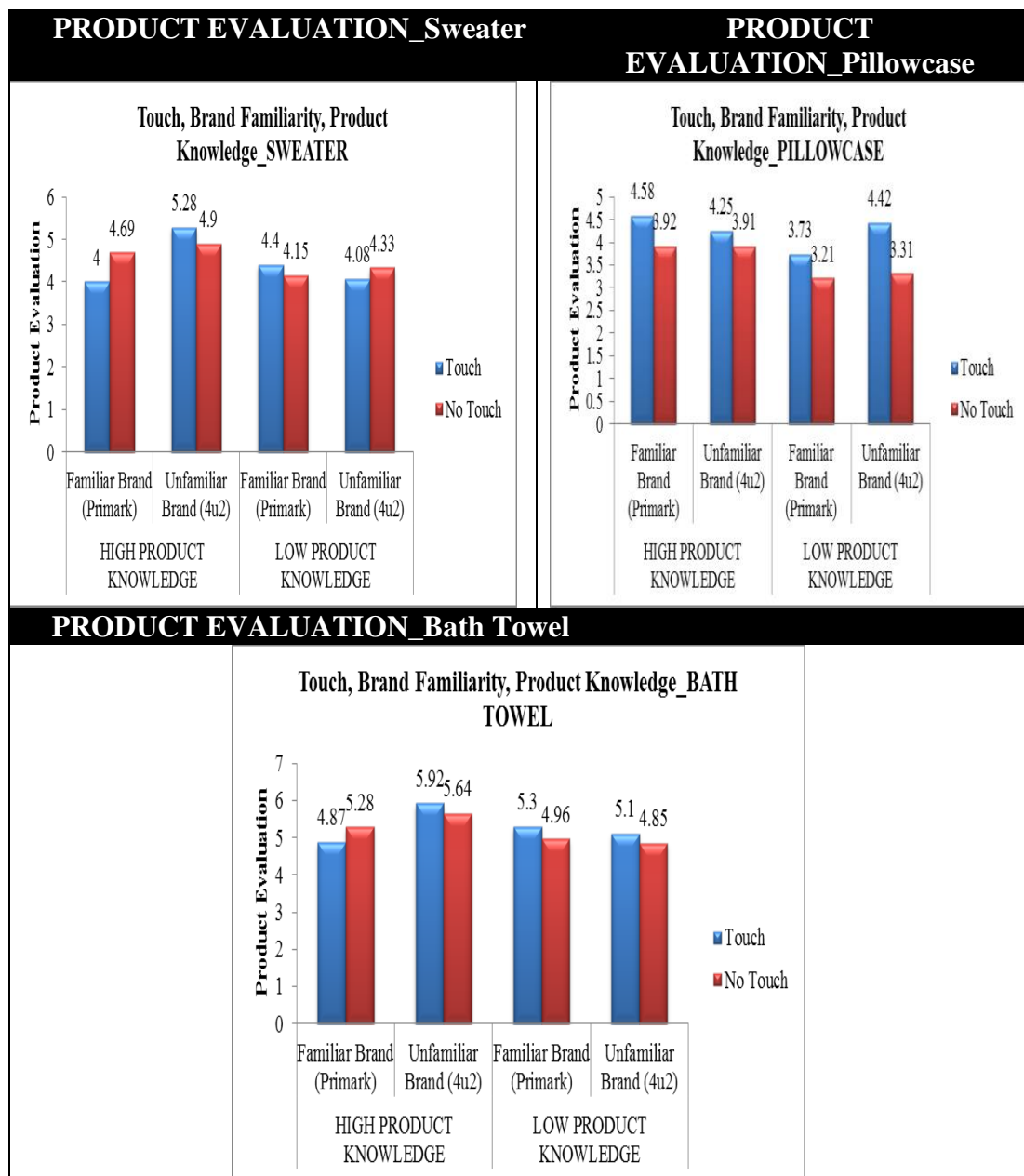
5.5.5.1 Product evaluation

Product knowledge related Hypothesis 1. ANOVA's were run to test the moderation effect of product knowledge on the relationship between touch and product evaluation. ANOVA results reveal no significant moderation effect of product knowledge on touch and product evaluation of the sweater $F(1, 111) = .112$, $p = .739$, pillowcase $F(1, 111) = .364$, $p = .547$ and bath towel $F(1, 111) = .593$, $p = .443$. The results indicate that product knowledge is not a moderator of touch effects therefore the hypothesis is rejected.

Product knowledge related Hypothesis 2. The ANOVA's also tested the three way interaction effect of touch, brand familiarity and product knowledge. ANOVA results reveal no significant 3 way interaction effect on product evaluation of the sweater, $F(1, 111) = 2.96$, $p = .088$, pillowcase $F(1, 111) = .765$, $p = .364$ and bath towel $F(1, 111) = .657$, $p = .443$. The results indicate that no three way interaction effect exists therefore the hypothesis is rejected.

See Figure 12 for a diagrammatical representation of the aforementioned product evaluation results.

Figure 12. Touch, brand familiarity, product knowledge and product evaluation
(Product related hypotheses 1 and 2)



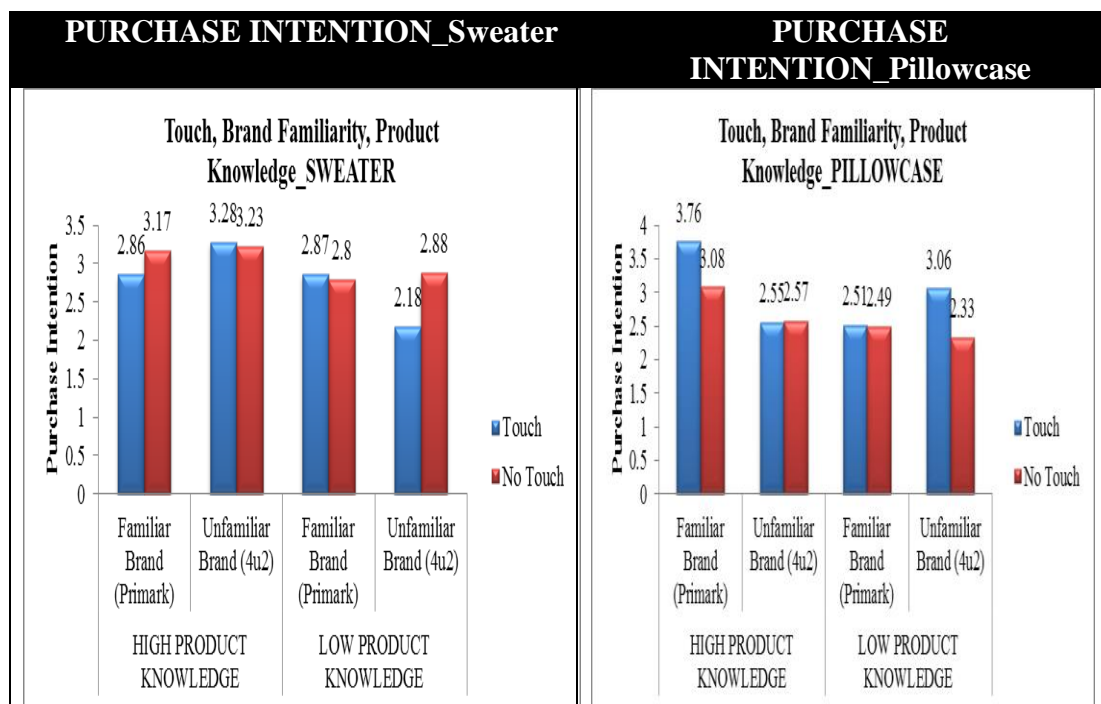
5.5.5.2 Purchase intention

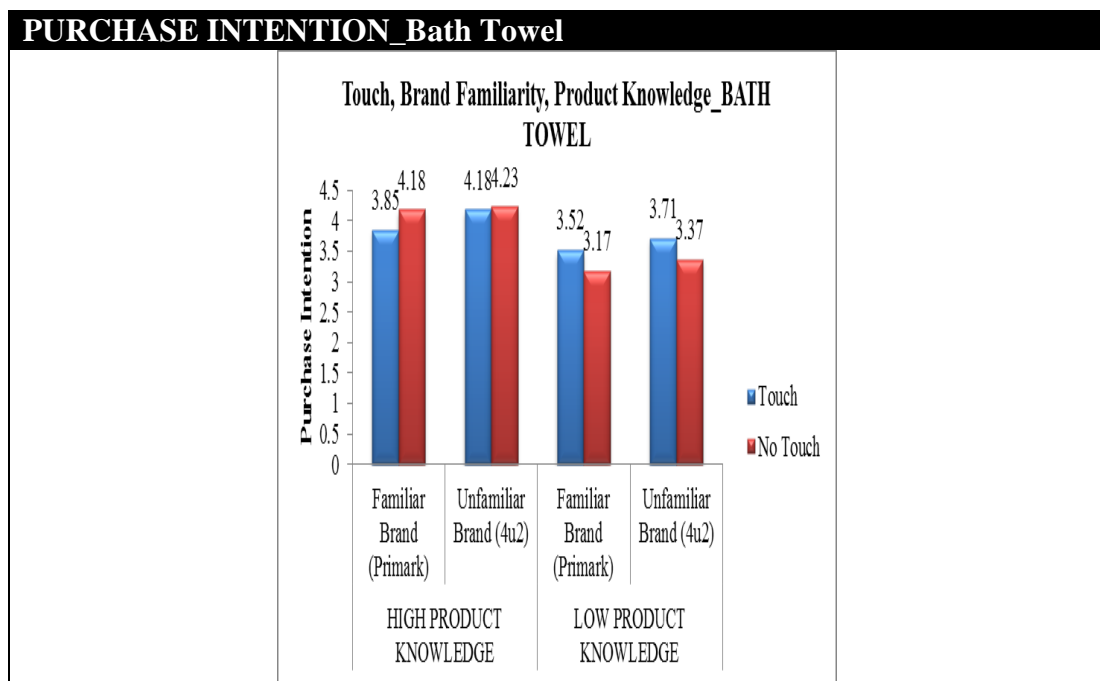
Product knowledge related Hypothesis 1. ANOVA's were run to test the moderation effect of product knowledge on the relationship between touch and purchase intention. ANOVA results reveal no significant moderation effect of product knowledge on touch and purchase intention for the sweater $F(1, 111) = .109$, $p = .742$, pillowcase $F(1, 111) = .364$, $p = .547$ and bath towel $F(1, 111) = .946$, $p =$

.333). The results indicate that product knowledge is not a moderator of touch effects therefore the hypothesis is rejected.

Product knowledge related Hypothesis 2. The ANOVA's also tested the three way interaction effect of touch, brand familiarity and product knowledge. ANOVA results reveal no significant 3 way interaction effect on purchase intention of the sweater, $F(1, 111) = 1.05$, $p = .307$, pillowcase $F(1, 111) = 1.90$, $p = .170$ and bath towel $F(1, 111) = .068$, $p = .795$. The results indicate that no three way interaction effect exists therefore the hypothesis is rejected. See Figure 13 for a diagrammatical representation of the aforementioned purchase intention results.

Figure 13. Touch, Brand Familiarity, Product knowledge and purchase intention (Additional hypothesis 1 and 2)



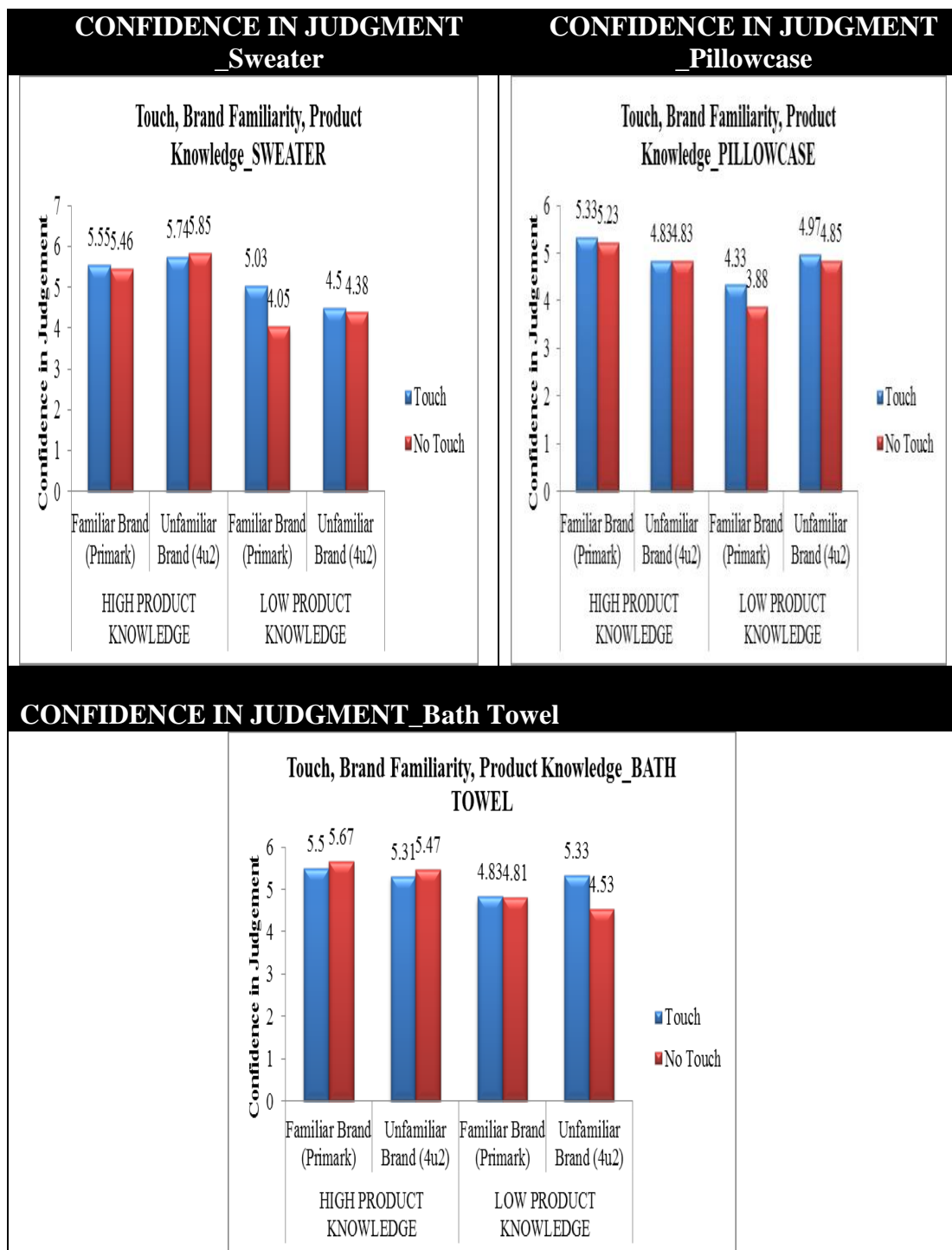


5.5.5.3 Confidence in Judgment

Product knowledge related Hypothesis 1. ANOVA's were run to test the moderation effect of product knowledge on the relationship between touch and confidence in judgement. ANOVA results reveal no significant moderation effect of product knowledge on touch and confidence in judgment for the sweater $F(1, 111) = 1.46$, $p = .229$, pillowcase $F(1, 111) = .176$, $p = .676$ and bath towel $F(1, 111) = 1.35$, $p = .246$. The results indicate that product knowledge is not a moderator of touch effects therefore the hypothesis is rejected.

Product knowledge related Hypothesis 2. The ANOVA's also tested the three way interaction effect of touch, brand familiarity and product knowledge. ANOVA results reveal no significant 3 way interaction effect on confidence in judgement of the sweater, $F(1, 111) = .483$, $p = .488$, pillowcase $F(1, 111) = .043$, $p = .837$ and bath towel $F(1, 111) = .607$, $p = .438$. The results indicate that no three way interaction effect exists therefore the hypothesis is rejected. See Figure 14 for a diagrammatical representation of the aforementioned confidence in judgement results.

Figure 14. Touch, Brand Familiarity, Product knowledge and confidence in judgement (Additional hypothesis 1 and 2)



5.5.5.4 Willingness to pay

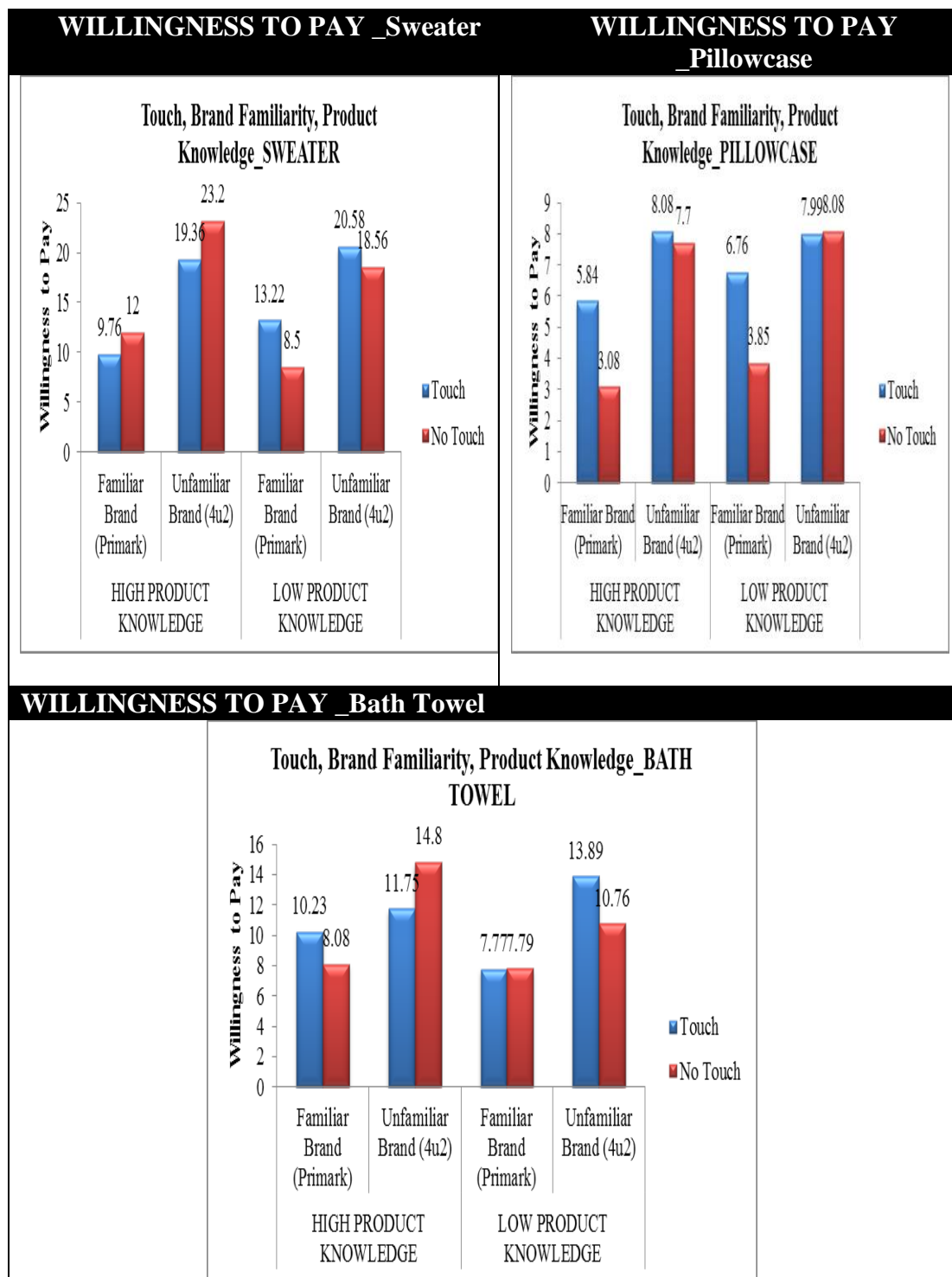
Product knowledge related Hypothesis 1. ANOVA's were run to test the moderation effect of product knowledge on the relationship between touch and

willingness to pay. ANOVA results reveal no significant moderation effect of product knowledge on touch and willingness to pay for the sweater $F(1, 111) = 2.04$, $p = .155$, pillowcase $F(1, 111) = .006$, $p = .939$ and bath towel $F(1, 111) = .835$, $p = .363$. The results indicate that product knowledge is not a moderator of touch effects therefore the hypothesis is rejected.

Product knowledge related Hypothesis 2. The ANOVA's also tested the three way interaction effect of touch, brand familiarity and product knowledge. ANOVA results reveal a marginally significant three way interaction effect on willingness to pay for the bath towel ($F(1, 111) = 3.62$, $p = .060$). Pairwise comparisons showed that when touch was available, there is a higher willingness to pay for the unfamiliar brand ($M = 13.89$) compared to the familiar branded bath towel ($M = 7.77$) when product knowledge was low ($p = .001$). Additionally, when touch was unavailable, there was a greater willingness to pay for the unfamiliar branded bath towel ($M = 14.80$) compared to the familiar branded bath towel ($M = 8.08$) only when product knowledge was high ($p = .003$). The results indicate that a three way interaction effect does exist and therefore the hypothesis is supported.

However, the ANOVA results revealed no significant 3 way interaction effect on willingness to pay for the sweater $F(1, 111) = .483$, $p = .488$ and pillowcase $F(1, 111) = .043$, $p = .837$. Therefore indicating that there is no three way interaction for the sweater and pillowcase and consequently the hypothesis is rejected for these two products. See Figure 15 for a diagrammatical representation of the aforementioned willingness to pay results.

Figure 15. Touch, Brand Familiarity, Product knowledge and willingness to pay
(Additional hypothesis 1 and 2)



A summary of Study 1 direct, moderation and interaction hypotheses results is presented in Table 18 below.

Table 18. RESULTS SUMMARY (H1a, H1b, H2a, H2b, H2c, Product knowledge related Hypothesis 1 and 2)

NO.	HYP.	DEPENDENT VARIABLE	SWEATER	PILLOW CASE	BATH TOWEL
H1a.	Touch has a significant positive effect on consumer response	Product evaluation	Not Supported F (1, 110) = .025, p = .875 M _{Touch} = 4.52, M _{NoTouch} = 4.48	Supported F (1, 110) = .877, p = .004 M _{Touch} = 4.26, M _{NoTouch} = 3.58	Not Supported F (1, 110) = .098, p = .755 M _{Touch} = 5.22, M _{NoTouch} = 5.18
		Purchase intention	Not Supported F (1, 110) = .331, p = .567	Marginally supported F (1, 110) = 3.36, p = .069 M _{Touch} = 3.01, M _{NoTouch} = 2.60	Not Supported F (1, 114) = .322, p = .571
		Confidence in Judgment	Not Supported F (1, 110) = 2.34, p = .129 M _{Touch} = 5.25, M _{NoTouch} = 4.83	Not Supported F (1, 110) = .690, p = .408 M _{Touch} = 4.88, M _{NoTouch} = 4.69	Not Supported F (1, 110) = .589, p = .445 M _{Touch} = 5.22, M _{NoTouch} = 5.09
		Willingness to pay	Not supported F (1, 110) = .018, p = .893 M _{Touch} = 15.80, M _{NoTouch} = 15.46	Not Supported F (1, 110) = 1.70, p = .195 M _{Touch} = 7.16, M _{NoTouch} = 5.80	Not Supported F (1, 110) = .558, p = .457 M _{Touch} = 11.07, M _{NoTouch} = 10.48
H1b.	The effect of touch is a function of NFT. Specifically, the effect of touch is only significant for those with a higher NFT and not a lower NFT.	Product evaluation	Not Supported F (1, 110) = .317, p = .575	Supported (F (1, 110) = 4.76, p = .031) (High NFT, M _{Touch} = 4.64 versus M _{NoTouch} = 3.41; p = .000)	Not Supported F (1, 110) = .189, p = .171
		Purchase intention	Not Supported F (1, 110) = 1.03, p = .311	Not Supported F (1, 110) = .825, p = .366	Not Supported F (1, 110) = 1.59, p = .209
		Confidence in Judgment	Not Supported F (1, 110) = 1.04, p = .309	Not Supported F (1, 110) = 1.60, p = .209	Not Supported F (1, 110) = 1.63, p = .203
		Willingness to pay	Not Supported F (1, 110) = .101, p = .751	Not Supported F (1, 110) = .308, p = .580	Not Supported F (1, 110) = 1.11, p = .292
	A familiar branded product	Product evaluation	Not Supported	Not Supported	Not Supported

NO.	HYP.	DEPENDENT VARIABLE	SWEATER	PILLOW CASE	BATH TOWEL
H2a.	has a more positive effect on consumer response, than an unfamiliar branded product		F (1, 110) = 1.93, p = .167 M _{Primark} = 4.32, M _{4u2} = 4.67	F (1, 110) = .370, p = .544 M _{Primark} = 3.89, M _{4u2} = 3.94	F (1, 110) = .615, p = .435 M _{Primark} = 5.11, M _{4u2} = 5.28
		Purchase intention	Not Supported F (1, 110) = .011, p = .916 M _{Primark} = 2.93, M _{4u2} = 2.92	Not Supported F (1, 110) = 1.01, p = .315 M _{Primark} = 2.98, M _{4u2} = 2.66	Not Supported F (1, 110) = .740, p = .392 M _{Primark} = 3.64, M _{4u2} = 3.82
		Confidence in Judgment	Not Supported F (1, 110) = .008, p = .930 M _{Primark} = 5.03, M _{4u2} = 5.07	Not Supported F (1, 110) = .478, p = .491 M _{Primark} = 4.70, M _{4u2} = 4.88;	Not Supported F (1, 110) = .017, p = .896 M _{Primark} = 5.15, M _{4u2} = 5.17
		Willingness to pay	Not Supported F (1, 110) = 17.96, p = .000 M _{Primark} = 11.09, M _{4u2} = 19.97	Not Supported F (1, 110) = 8.20, p = .005 M _{Primark} = 4.98, M _{4u2} = 7.96	Not Supported F (1, 114) = 19.76, p = .000 M _{Primark} = 8.39, M _{4u2} = 13.06
H2b.	The effect of touch on consumer response is a function of brand familiarity. Specifically, for the lower familiar (unfamiliar) branded products touch will have a positive effect but no significant effect for the higher familiar branded products will be found.	Product evaluation	Not Supported F (1, 110) = .647, p = .423	Not Supported F(1, 110) = .194, p = .660	Not Supported F (1, 110) = .022, p = .882
		Purchase intention	Not Supported F (1, 110) = .072, p = .788	Not Supported F (1, 110) = .009, p = .923	Not Supported F (1, 110) = .007, p = .935
		Confidence in Judgment	Not Supported F (1, 110) = .194, p = .661	Not Supported F (1, 110) = .189, p = .665	Not Supported F (1, 110) = .702, p = .404
		Willingness to pay	Not Supported F (1, 110) = .429, p = .514	Not Supported F (1, 110) = 2.37, p = .127	Not Supported F (1, 110) = .092, p = .762
H2c.	There is a three-way interaction between touch, brand familiarity, need for touch. Specifically, individuals with higher NFT will respond more positively	Product evaluation	Not Supported F (1, 110) = .019, p = .891	Not Supported F (1,110) = .085, p = .771	Not Supported F (1, 110) = .109, p = .741
		Purchase intention	Not Supported F (1, 110) = 1.00, p = .318	Not Supported F (1, 110) = .294, p = .589	Not Supported F (1, 110) = .727, p = .396
		Confidence in	Not Supported	Not Supported	Not Supported

NO.	HYP.	DEPENDENT VARIABLE	SWEATER	PILLOW CASE	BATH TOWEL
	when they can touch an unfamiliar branded product than when they cannot. Lower NFT individuals will respond more positively to the familiar branded products irrespective of touch.	Judgment	(Marginally significant but for familiar brand) F (1, 110) = 2.93, p = .090 $M_{\text{Touch}} = 5.50$ $M_{\text{NoTouch}} = 4.40$; p = .024 (High NFT, Familiar brand)	F (1, 110) = .057, p = .812	F (1, 110) = 2.11, p = .149
		Willingness to pay	Not supported F (1, 110) = .261, p = .611	Not supported F (1, 110) = .195, p = .660	Not supported F (1, 110) = 1.19, p = .277
Product knowledge related Hypothesis 1	The effect of touch is significant for those with lower product knowledge but not those with higher product knowledge	Product evaluation	Not supported F (1, 111) = .112, p = .739	Not supported F (1, 111) = .364, p = .547	Not supported F (1, 111) = .593, p = .443
		Purchase intention	Not supported F (1, 111) = .109, p = .742	Not supported F (1, 111) = .364, p = .547	Not supported F (1, 111) = .946, p = .333
		Confidence in Judgment	Not supported F (1, 111) = 1.46, p = .229	Not supported F (1, 111) = .176, p = .676;	Not supported F (1, 111) = 1.35, p = .246).
		Willingness to pay	Not supported F (1, 111) = 2.04, p = .155	Not supported F (1, 111) = .006, p = .939	Not supported F (1, 111) = .835, p = .363
Product knowledge related Hypothesis 2	There is a three-way interaction between product touch, brand familiarity and product knowledge. When product knowledge is lower touch has a positive effect on consumer response when brand familiarity is lower. When product knowledge is	Product evaluation	Not supported F (1, 111) = 2.96, p = .088	Not supported F (1, 111) = .765, p = .364	Not supported F (1, 111) = .657, p = .443
		Purchase intention	Not supported F (1, 111) = 1.05, p = .307	Not supported F (1, 111) = 1.90, p = .170	Not supported F (1, 111) = .068, p = .795
		Confidence in Judgment	Not supported F (1, 111) = .483, p = .488	Not supported F (1, 111) = .043, p = .837	Not supported F (1, 111) = .607, p = .438

NO.	HYP.	DEPENDENT VARIABLE	SWEATER	PILLOW CASE	BATH TOWEL
	higher, touch has no effect on consumer response when brand familiarity is higher.	Willingness to pay	Not supported F (1, 111) = .483, p = .488	Not supported F (1, 111) = .043, p = .837	Marginally Supported F (1, 111) = 3.62, p = .060 <ul style="list-style-type: none"> • In touch condition, higher WTP, for unfamiliar brand, product knowledge low • In no touch condition, higher WTP for unfamiliar brand when product knowledge high

5.5.6 Mediation hypothesis (Hypothesis 3a and 3b)

A mediator accounts for the relationship between an independent (predictor) variable and a dependent variable (Baron & Kenny, 1986) and mediation is said to occur when the effect of the independent variable on the dependent variable is transmitted (is explained) by this mediator (Preacher, Rucker, & Hayes, 2007). Essentially, mediation is concerned with the intervening mechanism producing the treatment effect while moderation concerns the factors influencing the magnitude of this effect (Muller, Judd, & Yzerbyt, 2005).

According to Baron & Kenny (1986) and MacKinnon (2011), four conditions are requisite to demonstrate evidence of mediation. First, the independent variable affects the dependent variable (a). That is, there must be evidence of a relationship that can be mediated (Baron & Kenny, 1986; Preacher & Hayes, 2004). Second, the independent variable significantly accounts for variations in the alleged mediator (b). Third, the relationship between the alleged mediator and dependent variable is significant (c). Lastly, the proposed mediator should remain significant in the model after the independent variable, but the effect of the independent variable should reduce significantly or become zero (d). It was proposed that the mediators of psychological ownership and affective reaction would help elucidate the brand familiarity moderation effect, specifically, the touch effect on consumer response to unfamiliar branded products. In this study, results did not demonstrate that the independent variable was significantly related to any of the dependent variables for any of the unfamiliar branded products. Additionally, the independent variable did not significantly influence any of the proposed mediators. As such the first and second conditions of mediation were not met, ruling out the necessity to conduct mediation effect analysis tests. Therefore, the mediation H3a and H3b are rejected.

5.6 CHAPTER SUMMARY

The chapter covered a detailed description of the data preparation and analysis procedures followed in data analysis for Study 1 and the surprising lack of significant findings for the moderation effect of brand familiarity led to additional analyses being carried out. Initial speculation for this was that attitudes towards the brands used (Primark and 4u2) were similar, hence the indifferent results, but this was ruled out using a t-test that revealed greater positive attitudes towards the familiar versus unfamiliar brand. Further speculation then led to testing if touch effects were dependent on product knowledge (Product knowledge related hypothesis 1) and consequently brand familiarity moderation was dependent on the degree of product knowledge one possessed (Product knowledge related hypothesis 2). No support was found for the former hypothesis but some support for the latter was found. As no significant brand familiarity moderation on touch effects was found (H2b) mediation analyses (H3a and H3b) were not conducted.

**CHAPTER 6: Study 2 and Combined Data
(Effect of Brand Status on Consumer
Response and Brand Status Moderation of
Touch Effects)**

Data Preparation and Analysis

6.1 INTRODUCTION

What the results of Study 1 suggest is that merely looking at the presence or absence of brand schema (familiar or unfamiliar), without examining the nature of what that schema contains (e.g., what type of brand, brand status etc.) may not be a sufficient indicator of brands influence on product touch effects. Study 2 was designed to address and test this speculation by replicating Study 1 and examining touch effects on the same relationships (consumer response variables) within the context of a familiar luxury brand (Chanel). Luxury brands tend to be evaluated using different criteria compared to non-luxury brands, more so stemming from the emotional and hedonic benefits they are able to deliver to the consumer (Patrick & Hagtvedt, 2014), therefore it is possible that touch could play a significant role in the evaluative stage of products from such brands.

Building upon the significant and insignificant findings of Study 1, Study 2 examines touch effects for a different brand category; *a luxury brand* and primarily examines the influence of touch on consumer response to luxury branded products (H4a) and how this differs by need for touch (H4b). A combined data set (Study 1 and 2) is then used to determine if brand status moderates the effect of touch (H4c), if touch, brand status and NFT interact to influence consumer response (H4d) and what underlying mechanism could explain touch effects for luxury brands (psychological ownership (H4e) or affective reaction (H4f).

Similar to Study 1, the same sweater and bath towel (both considered as important to touch during evaluation) were used. However, instead of the pillowcase a mug was used. Klatzky, Lederman, & Matula (1993) categorize objects as either material or geometric, such that a material object's most principal attribute relates to its texture,

roughness, hardness, weight or temperature (e.g., an item of clothing); while geometric objects' principal attributes are related to their size or shape (e.g., a can of soda, books, calculator or a mug). As such, vision provides adequate information for evaluating geometric products while preference for material properties is determined more by their haptic properties (McCabe & Nowlis, 2003). By incorporating a geometric product (a mug) in Study 2, the aim was to further generalize findings across products with differing haptic salience (importance of touch) properties, as such, to yield deeper insights into consumer behaviour in a product touch luxury brand context. Lastly, an additional covariate, product involvement was included (justification for this can be found in section 4.9.9.1.2). Chapter 6 presents a discussion of Study 2 data preparation techniques, measurement reliability results, data analysis results and the combined data set analysis and results.

6.2 Data preparation

Subsequent to data entry into the SPSS 21 (Statistical Package for Social Science), the task of data cleaning was conducted. Data was screened to exclude errors in preparation for both descriptive and inferential statistics that were run using SPSS. As with Study 1, screening included data cleaning and outlier examination, further elaborated upon in the sections below.

6.2.1 Missing data in Study 2

As discussed in the previous chapter (Section 5.2.2), the commonly used approaches to dealing with missing data in social and behavioural sciences are case (listwise) and pairwise deletion (Peugh & Enders, 2004), based primarily on their relative ease of use and availability in most statistical software programs (Baraldi & Enders, 2010). Similar to Study 1, the choice of approach in Study 2 was based on two factors: the

size of the sample and the analysis method adopted. The sample size of Study 2 was relatively small ($N = 65$) and despite only two cases having missing values, dropping these cases would result in an even smaller sample size of 63. Furthermore, as ANCOVA analysis (as used in Study 2) is a complete case analysis method that does not take account of incomplete cases (Hayes, 2013). Therefore, a single imputation method (Baraldi & Enders, 2010) allowing for the inclusion of the two missing data cases was felt suitable. Thus as in Study 1 *mean imputation* was used, replacing the missing values with the mean of the existing data set.

6.2.2 Outlier examination

In Study 2, a total of 7 outliers were found across WTP for all three products (the ranges included values above £70 for the sweater, values above £20 for the mug and values above £24 for the bath towel). The brand under examination is a luxury brand (Chanel) and the outliers (all in the upper price range) could just be a reflection of the expected expensive of luxury brands. Therefore, the researcher decided to leave the identified outliers in the data set. This decision is further supported by Laurent (2013) who argues for the non-removal of outliers prior to using ANOVA/ANCOVA analysis on experimental data.

6.3 Study 2 respondent profile and data descriptives

Table 19 illustrates the percentage distribution of participants by gender, age and nationality ($N = 65$). The majority were female at 66.2% followed by males at 33.8%. The participants' ages ranged from 18 to 30 years with 96.9% between 18 and 24 years and 3.1% between 25 to 30 years. Lastly, 64.6% were British while 35.4% were non-British.

Table 19. Study 2 Respondent Profile

STUDY 2 RESPONDENT PROFILE			
	Characteristic	Frequency	Percent
Gender (N = 65)	Male	22	33.8 %
	Female	43	66.2 %
Age (N = 65)	18 – 24 yrs	63	96.9 %
	25 – 30 yrs	2	3.1 %
Nationality (N = 65)	British	42	64.6 %
	Non- British	23	35.4 %

6.3.1 Overall Descriptive Statistics (Mean and Standard Deviations)

Mean and standard deviations were calculated for the following variables: product evaluation, purchase intention, confidence in judgment, willingness to pay, psychological ownership, affective reaction, product knowledge and product involvement for all three products tested in the study (sweater, mug and bath towel). Need for touch mean and standard deviation was also calculated.

On a 7 point Likert scale, the overall product evaluation mean was highest for the bath towel at 5.22 followed by the sweater at 4.47 and mug at 4.43. Purchase intentions were generally low across all three products with the highest mean calculated for the bath towel at 3.70, then mug at 2.93 and sweater at 2.84. Confidence in judgment was the greatest for the bath towel at 5.26 followed by the mug at 5.02 and sweater at 5.00. There was a higher willingness to pay for the sweater (£225) followed by the mug (£100) and bath towel (£80). Psychological ownership was highest for the bath towel at 2.56, followed by the sweater at 2.23 then mug at 2.14. Affective reaction was highest for the sweater at 3.31 followed by the bath towel at 3.24 then mug at 3.04. Product knowledge was highest for the sweater at 4.47, followed by the bath towel at 3.55 and mug at 3.37. Product involvement was highest for the sweater at 5.04 followed by the mug at 4.20 and

bath towel at 4.19. Lastly, overall need for touch was 5.13. Table 20 depicts a summary of means and standard deviations.

Table 20. Descriptive Statistics Summary - Product Evaluation, Purchase Intention, Confidence in Judgment, Willingness to Pay, Affective Reaction, Psychological Ownership, Product Knowledge, Product Involvement and Need for Touch

VARIABLE							Skewness		Kurtosis	
	N	Min	Max	Mean	Std. Dev.	Variance	Statistic	Error	Statistic	Error
PE Sweater	65	1	7	4.47	1.56	2.44	-.419	.297	-.750	.586
PE Mug	65	1	7	4.43	1.48	2.21	-.178	.297	-.665	.586
PE Bath towel	65	3	7	5.22	1.08	1.18	-.301	.297	-.632	.586
PI Sweater	65	1	6	2.84	1.60	2.56	.510	.297	-.968	.586
PI Mug	65	1	6	2.93	1.47	2.17	.695	.297	-.575	.586
PI Bath towel	65	1	6	3.70	1.34	1.81	-.160	.297	-.822	.586
CIJ Sweater	65	2	7	5.00	1.48	2.20	-.418	.297	-.515	.586
CIJ Mug	65	1	7	5.02	1.56	2.43	-.694	.297	-.199	.586
CIJ Bath towel	65	2	7	5.26	1.45	2.11	-.691	.297	-.373	.586
WTP Sweater	65	1.00	225.00	32.64	40.03	1603.14	2.95	.297	9.57	.586
WTP mug	65	1.00	100.00	10.43	17.24	297.23	4.03	.297	17.60	.586
WTP Bath towel	65	3.00	80.00	18.38	18.58	345.43	2.30	.297	4.75	.586
PO Sweater	65	1	6	2.23	1.43	2.05	1.05	.297	.232	.586
PO Mug	65	1	6	2.14	1.42	2.03	1.33	.297	1.03	.586
PO Bath towel	65	1	6	2.56	1.61	2.60	.775	.297	-.678	.586
ER Sweater	65	1	6	3.31	1.24	1.53	.012	.297	-.749	.586
ER Mug	65	1	6	3.04	1.19	1.43	.562	.297	-.030	.586
ER Bath towel	65	1	7	3.24	1.26	1.61	.548	.297	.032	.586
PK Sweater	65	1	7	4.47	1.44	2.07	-.460	.297	-.207	.586
PK Mug	65	1	7	3.37	1.22	1.50	.438	.297	-.117	.586
PK Bath towel	65	1	7	3.55	1.36	1.85	.348	.297	-.437	.586
PIV Sweater	65	2	7	5.04	1.20	1.45	-.452	.297	-.336	.586
PIV Mug	65	1	7	4.20	1.54	2.38	-.053	.297	-.594	.586
PIV Bath towel	65	1	7	4.19	1.36	1.86	-.089	.297	-.376	.586
NFT	65	3	7	5.13	.89	.80	-.777	.297	.529	.586
Valid N (listwise)	65									
PE – Product Evaluation					PO – Psychological Ownership					
PI – Purchase intention					PK – Product Knowledge					
CIJ – Confidence in Judgment					PIV – Product Involvement					
WTP – Willingness to Pay					NFT – Need for Touch					
ER – Affective Reaction										

6.3.2 Mean and standard deviations per treatment condition

Similar to Study 1, descriptive analysis was run per treatment condition to familiarise the researcher with the data. A detailed tabulation of this can be found in Appendix 13.

6.4 Measurement reliability test and results

Cronbach's alpha coefficient (α) was used to examine the internal consistency of the following multi-item scales: purchase intention, product evaluation, affective reaction, psychological ownership, product knowledge, product involvement and need for touch. The results showed that all Cronbach's alpha scores except product knowledge for the mug (0.625) ranged from .734 to .955 (see Table 21 below) which exceed Nunnally & Bernstein's (1994) threshold of 0.7, consequently proving that the scales are reliable. However, given the low reliability score for product knowledge of the mug, the researcher made the decision to remove the third item from the product knowledge scale across all three products as this increased the alpha values to 0.835 (sweater), 0.702 (mug), and 0.776 (bath towel), all of which met the required threshold of 0.7. Overall, the Cronbach's alpha scores presented in this section prove that the measurement instruments used in the study are reliable. The multi items in each scale were thus combined and merged to form an average score for each variable.

Similar to Study 1 confidence in judgment was a two-item scale measured using two seven-point scales ("not very confident" to "very confident" and "not very sure" to "very sure"). A Pearson's bivariate correlation was run with the two items and results revealed a high correlation between them across all three products (for the sweater $r = .803^{**}$, mug $r = .888^{**}$ and bath towel $r = .767^{**}$), therefore the two items have a

strong positive association and the overall confidence measure was calculated by taking an average of the two items. Willingness to pay was measured similar to Study 1 using the open ended question that read ‘How much are you willing to pay for the (product)? On a scale from £1 to £250.’

Table 21. Study 2 Cronbach's Alpha Results

CRONBACH'S ALPHA RESULTS						
ITEMS	CRONBACH ALPHA (α)			CRONBACH ALPHA (α) If items deleted		
	Sweater	Mug	Bath towel	Sweater	Mug	Bath towel
PRODUCT EVALUATION	.942	.888	.879			
I like this product				.922	.760	.765
I feel positive toward the product				.948	.844	.852
The product is good				.876	.905	.860
PURCHASE INTENTION	.955	.941	.913			
I would definitely purchase this product				.956	.944	.923
I definitely intend to buy this product				.937	.918	.886
I have a high purchase interest in this product				.943	.921	.883
I definitely buy this product				.941	.918	.876
I probably buy this product				.943	.932	.898
PSYCHOLOGICAL OWNERSHIP	.866	.877	.888			
I feel like this product is mine				.832	.837	.782
I feel a very high degree of personal ownership for this product				.825	.841	.867
I feel like I own this product				.784	.803	.865
AFFECTIVE REACTION	.852	.848	.856			
How interested were you when evaluating the product?				.853	.821	.849
How moved were you when evaluating the product?				.865	.833	.834
How captivated were you when evaluating the product?				.828	.810	.829
How delighted were you when evaluating the product?				.824	.802	.813
How enthusiastic were you when evaluating the product?				.824	.823	.821
How appealed were you when evaluating the product?				.824	.804	.834
How amused were you when evaluating the product?				.871	.883	.869
PRODUCT INVOLVEMENT	.762	.838	.813			
(Product) are important to me				.728	.785	.817

CRONBACH'S ALPHA RESULTS						
ITEMS	CRONBACH ALPHA (α)			CRONBACH ALPHA (α) If items deleted		
	Sweater	Mug	Bath towel	Sweater	Mug	Bath towel
I perceive (product) as exciting products				.699	.800	.715
(Product) are interesting products				.640	.773	.724
I care about the (product) I buy				.741	.822	.792
PRODUCT KNOWLEDGE	.825	.625	.734			
I am very knowledgeable about the product				.755	.499	.610
If a friend asked me about the product, I could give them advice about different brands of the product				.759	.541	.686
If I had to purchase such a product today, I would need to gather very little information in order to make a wise decision				.835	.702	.776
I feel very confident about my ability to tell the difference in quality among different brands of this product				.764	.485	.605
NEED FOR TOUCH				.812		
When walking through stores, I can't help touching all kinds of products					.798	
Touching products can be fun					.788	
When browsing in stores, it is important for me to handle all kinds of products					.794	
I like to touch products even if I have no intention of buying them					.788	
When browsing in stores, I like to touch lots of products					.772	
I find myself touching all kinds of products in stores					.784	
I place more trust in products that can be touched before purchase					.800	
I feel more comfortable purchasing a product after physically examining it					.799	
If I can't touch a product in the store, I am reluctant to purchase the product					.808	
I feel more confident making a purchase after touching a product					.799	
The only way to make sure a product is worth buying is to actually touch it					.821	
I would only buy a product if I could handle them before purchase					.825	

6.5 Data analysis

6.5.1 Hypothesis 4a and 4b

As in Study 1 ANCOVA assumptions of normality, homogeneity of variance, independence of the covariate and treatment effect and homogeneity of regression slopes were tested. The results are presented next.

6.5.1.1 ANCOVA Assumption testing

6.5.1.1.1 Normality test results

Shapiro Wilk scores showed that the majority of the results were significant at the 5% level, implying that there was a departure from normality (see Table 22) but ANCOVA's robustness to departure from normality (Rutherford, 2001) allowed for the analyses to proceed.

Table 22. ANCOVA normality assumption H4a and H4b

Dependent variable	Product	TESTS OF NORMALITY						
		Touch	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Condition	Statistic	df	Sig.	Statistic	df	Sig.
PRODUCT EVALUATION	Sweater	Touch	.158	30	.054	.948	30	.152
		No Touch	.122	34	.200*	.955	34	.175
	Mug	Touch	.122	30	.200*	.967	30	.452
		No Touch	.073	34	.200*	.976	34	.629
	Bath towel	Touch	.133	30	.188	.956	30	.239
		No Touch	.097	34	.200*	.949	34	.114
PURCHASE INTENTION	Sweater	Touch	.136	30	.167	.920	30	.027
		No Touch	.192	34	.003	.882	34	.002
	Mug	Touch	.159	30	.052	.925	30	.036
		No Touch	.169	34	.015	.902	34	.005
	Bath towel	Touch	.092	30	.200*	.979	30	.784
		No Touch	.137	34	.109	.940	34	.063
CONFIDENCE IN JUDGMENT	Sweater	Touch	.158	30	.053	.925	30	.036
		No Touch	.143	34	.076	.936	34	.046
	Mug	Touch	.164	30	.039	.903	30	.010
		No Touch	.159	34	.029	.932	34	.036
	Bath towel	Touch	.239	30	.000	.866	30	.001
		No Touch	.176	34	.009	.934	34	.041
WILLINGNESS TO PAY	Sweater	Touch	.329	35	.000	.648	35	.000
		No Touch	.282	30	.000	.690	30	.000
	Mug	Touch	.361	35	.000	.517	35	.000
		No Touch	.256	30	.000	.587	30	.000
	Bath towel	Touch	.258	35	.000	.711	35	.000
		No Touch	.282	30	.000	.603	30	.000
*. This is a lower bound of the true significance								
a. Lilliefors Significance Correction								

6.5.1.1.2 Homogeneity of variance test results

Homogeneity of variance tests were run and Levene statistics results revealed that the assumption was met for majority of the variables (Product evaluation: sweater, $F(3, 61) = 1.22, p = .309$; mug, $F(3, 61) = 1.15, p = .335$ and bath towel, $F(3, 61) = 1.73, p = .168$; Purchase intention: sweater, $F(3, 61) = .883, p = .455$; mug, $F(3, 61) = .405, p = .750$ and bath towel, $F(3, 61) = .090, p = .965$; Confidence in judgement: mug, $F(3, 61) = .623, p = .603$ and bath towel, $F(3, 61) = .955, p = .420$; Willingness to pay: sweater, $F(3, 61) = 2.01, p = .122$ and bath towel, $F(3, 61) = 1.22, p = .310$). Only confidence in judgment for the sweater, ($F(3, 61) = 2.69, p = .053$) and willingness to pay for the mug, ($F(3, 61) = 3.93, p = .012$) were significant at the 5 % level (see Table 23 below). As previously stated, ANCOVAs are robust to deviations from homogeneity of variance (Field, 2013) therefore the significant results are deemed acceptable in the study.

Table 23. Levene Statistics

DEPENDENT VARIABLE	LEVENE STATISTIC
PRODUCT EVALUATION	
Sweater	$F(3, 61) = 1.22, p = .309$
Mug	$F(3, 61) = 1.15, p = .335$
Bath towel	$F(3, 61) = 1.73, p = .168$
PURCHASE INTENTION	
Sweater	$F(3, 61) = .883, p = .455$
Mug	$F(3, 61) = .405, p = .750$
Bath towel	$F(3, 61) = .090, p = .965$
CONFIDENCE IN JUDGMENT	
Sweater	$F(3, 61) = 2.69, p = .053$
Mug	$F(3, 61) = .623, p = .603$
Bath towel	$F(3, 61) = .955, p = .420$
WILLINGNESS TO PAY	
Sweater	$F(3, 61) = 2.01, p = .122$
Mug	$F(3, 61) = 3.93, p = .012$
Bath towel	$F(3, 61) = 1.22, p = .310$

6.5.1.1.3 Independence of covariate and treatment effect test results

This assumption was tested using an ANOVA with touch as the independent variable and the covariates (product knowledge and product involvement) as the dependent variables with all results showing an insignificant effect implying that the covariates did not significantly differ across touch treatment groups (Product knowledge: sweater ($F(1, 63) = .924, p = .340$), mug ($F(1, 63) = .452, p = .504$) and bath towel ($F(1, 63) = .060, p = .807$); Product involvement: sweater ($F(1, 63) = 1.24, p = .269$), mug ($F(1, 63) = .143, p = .706$) and bath towel ($F(1, 63) = 1.36, p = .246$) (see Table 24). The two variables were thus suitable for inclusion as covariates.

Table 24. Study 2 Independence of the covariate (product knowledge and product involvement) and treatment effect

INDEPENDENCE OF THE COVARIATE AND TREATMENT EFFECT					
		df1	df2	F	Sig.
Product Knowledge	Sweater	1	63	.924	.340
	Mug	1	63	.452	.504
	Bath towel	1	63	.060	.807
Product Involvement	Sweater	1	63	1.24	.269
	Mug	1	63	.143	.706
	Bath towel	1	63	1.36	.246

6.5.1.1.4 Homogeneity of regression slopes (covariate coefficients) test results

This test evaluated the interaction between the covariates (product knowledge and product involvement) and the independent variable (touch) in predicting the dependent variables examined such that insignificant results demonstrate that the overall regression model is an accurate representation of all the treatment groups (Field, 2006, 2013). The assumption was met for product evaluation of the sweater ($F(4, 60) = 1.60, p = .186$), purchase intention of the sweater ($F(4, 60) = .359, p = .837$), confidence in judgement for the sweater ($F(4, 60) = 1.07, p = .379$), mug ($F(4, 60) = .740, p = .568$) and bath towel ($F(4, 60) = .476, p = .753$) and willingness

to pay for the sweater ($F(4, 60) = .915, p = .461$), mug ($F(4, 60) = 1.81, p = .328$) and bath towel ($F(4, 60) = 2.23, p = .075$). However, some results were significant implying that the assumption was not met for these (product evaluation of the mug ($F(4, 60) = 3.10, p = .022$) and bath towel $F(4, 60) = 2.83, p = .032$); purchase intention of the mug ($F(4, 60) = 4.97, p = .002$) and bath towel ($F(4, 60) = 5.96, p = .000$)). A summary of results is presented in Table 25 below.

Table 25. Study 2 ANCOVA Homogeneity of regressions slopes

HOMOGENEITY OF REGRESSION SLOPES RESULTS					
		df1	df2	F	Sig.
PRODUCT EVALUATION	Sweater	4	60	1.60	.186
	Mug	4	60	3.10	.022
	Bath towel	4	60	2.83	.032
PURCHASE INTENTION	Sweater	4	60	.359	.837
	Mug	4	60	4.97	.002
	Bath towel	4	60	5.96	.000
CONFIDENCE IN JUDGMENT	Sweater	4	60	1.07	.379
	Mug	4	60	.740	.568
	Bath towel	4	60	.476	.753
WTP	Sweater	4	60	.915	.461
	Mug	4	60	1.81	.328
	Bath towel	4	60	2.23	.075

Results are now presented for the following hypotheses:

H4a. Touch has a significant positive effect on consumer response to luxury branded products

H4b. The effects of touch on consumer response for luxury branded products is a function of NFT. Specifically, touch effects will be significant for those with a higher NFT but not a lower NFT.

6.5.2 Results H4a and H4b

The proposed direct and moderating effects, controlling for the covariates of product knowledge and product involvement were examined across all three products (sweater, mug and bath towel) using a series of two-way ANCOVA's (Touch condition: *touch, no touch*; Need for touch: *high need for touch, low need for touch*). The luxury brand Chanel was used for all three products and the results of these analyses are presented below.

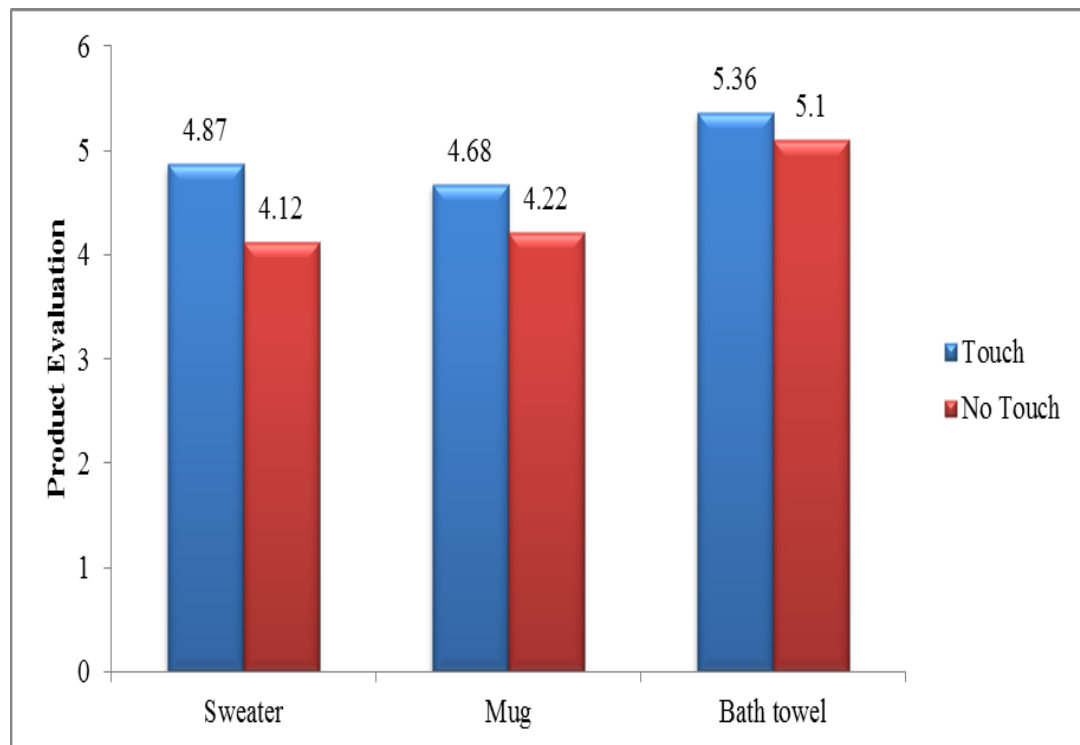
6.5.2.1 Product evaluation

H4a. The ANCOVA was run to test the effect of touch on product evaluation, using product knowledge and product involvement as covariates. The results reveal a significant effect of touch on product evaluation of the sweater ($F(1, 59) = 5.11, p = .027$). Specifically, individuals in the touch condition gave higher product evaluation scores ($M_{\text{Touch}} = 4.87, M_{\text{NoTouch}} = 4.12$) indicating that touch has a positive effect on product evaluation. Therefore, H4a is supported.

Additional ANCOVA results also showed a marginally significant effect of touch on product evaluation on the mug ($F(1, 59) = 3.06, p = .085$), with touch leading to increased evaluation scores ($M_{\text{Touch}} = 4.68$ versus $M_{\text{NoTouch}} = 4.22$). Similar to the sweater, these results also indicate that a positive effect of touch on product evaluation does exist and therefore the H4a is supported. ANCOVA results however showed no significant differences in product evaluation between touch conditions for the bath towel ($M_{\text{Touch}} = 5.36, M_{\text{NoTouch}} = 5.10; F(1, 59) = 1.76, p = .189$), indicating that the main effect of touch does not exist and therefore the H4a is rejected for the bath towel.

See Figure 16 for a diagrammatical representation of product evaluation results for H4a.

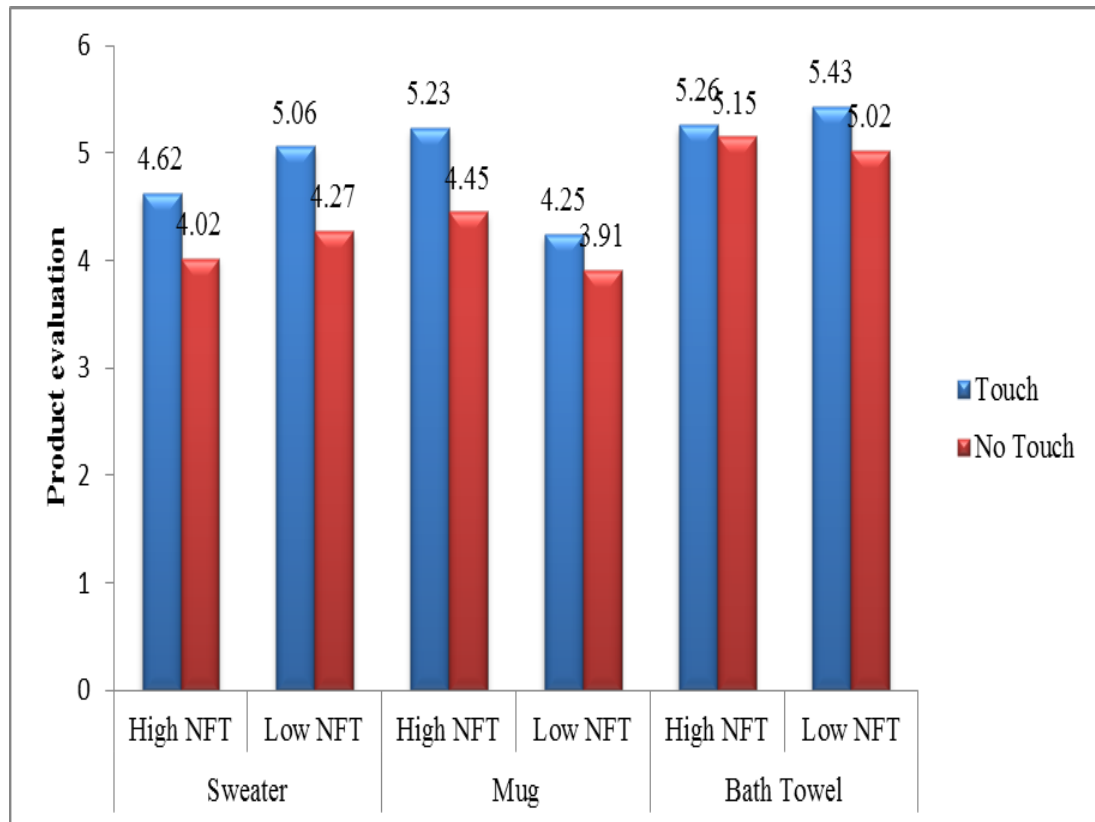
Figure 16. Touch and product evaluation_Luxury brand (Chanel)_H4a



H4b. The ANCOVA was run to test the effect of touch and NFT (a median split was used to categorize respondents into high and low NFT groups) on product evaluation, using product knowledge and product involvement as covariates. Despite the reported significant main effect results in H4a for sweater and mug, the ANCOVA results revealed no significant interaction effect between touch and NFT on product evaluation of sweater ($F(1, 59) = .091, p = .764$) and mug ($F(1, 59) = .096, p = .758$). Results indicate that NFT does not moderate touch effects on product evaluation for these two products and therefore H4b is rejected. Additional ANCOVA results for the bath towel revealed similar insignificant results ($F(1, 59) = .108, p = .743$), indicating that NFT moderation of touch is not present and therefore H4b is rejected.

See Figure 17 for a diagrammatical representation of product evaluation results for H4b.

Figure 17. Brand Status, NFT and product evaluation_Luxury brand (Chanel)_H4b

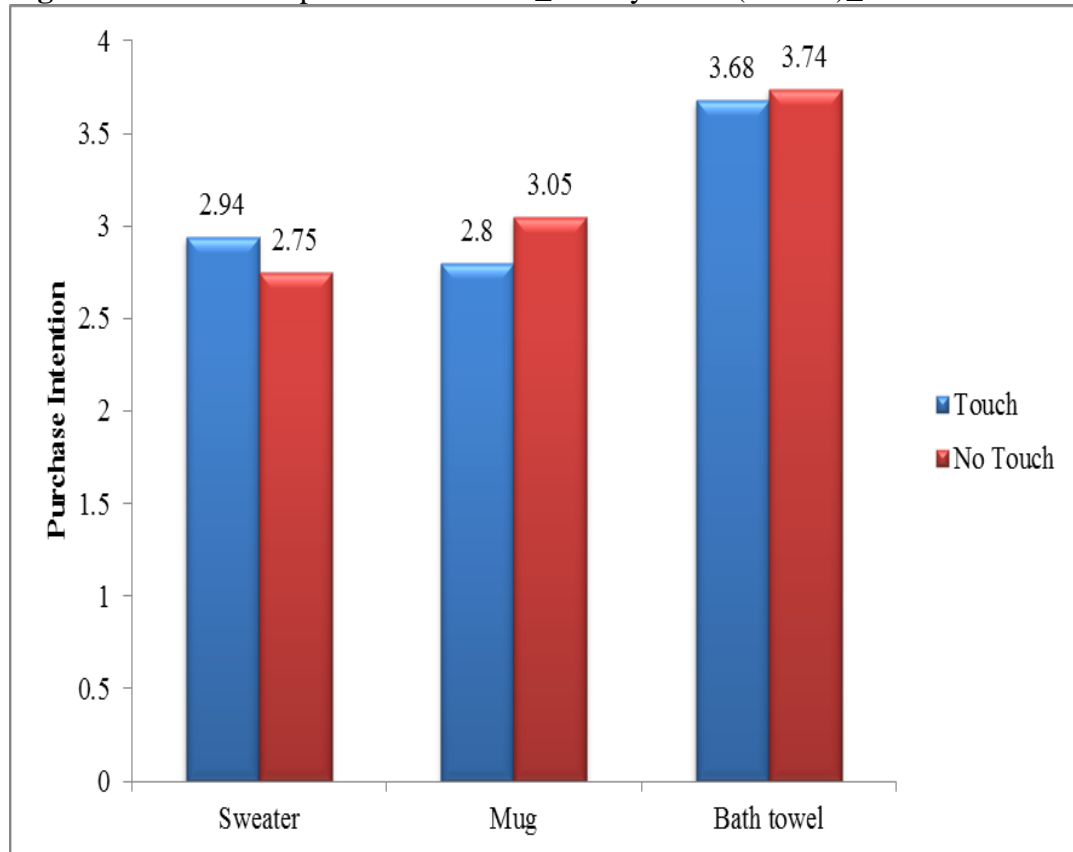


6.5.2.2 Purchase intention

H4a. The ANCOVA was run to test the effect of touch on purchase intention using product knowledge and product involvement as covariates. The results reveal no significant effect of touch on purchase intention for the sweater ($M_{\text{Touch}} = 2.94$, $M_{\text{NoTouch}} = 2.75$; $F(1, 59) = .373$, $p = .564$), mug ($M_{\text{Touch}} = 2.8$, $M_{\text{NoTouch}} = 3.05$; $F(1, 59) = .094$, $p = .760$) and bath towel ($M_{\text{Touch}} = 3.68$, $M_{\text{NoTouch}} = 3.74$; $F(1, 59) = .047$, $p = .828$). These results indicate that touch has no effect on purchase intentions, therefore H4a is rejected.

See Figure 18 for a diagrammatical representation of purchase intention results for H4a.

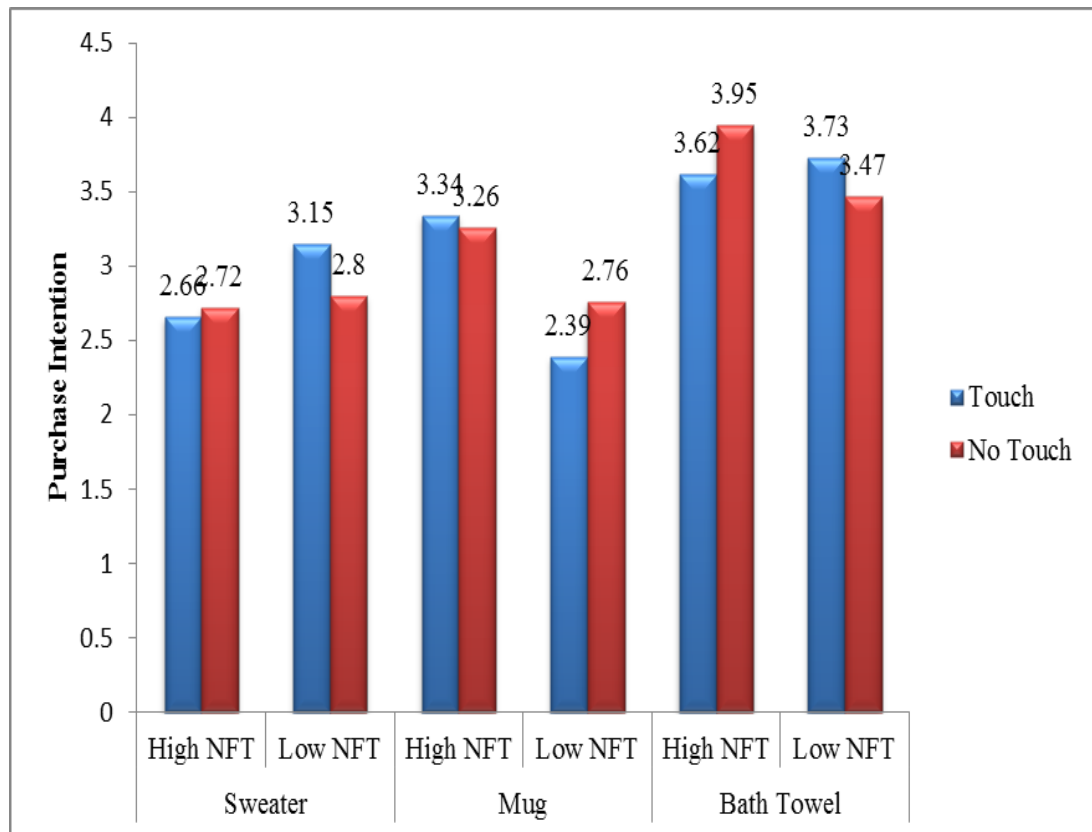
Figure 18. Touch and purchase intention_Luxury brand (Chanel)_H4a



H4b. The ANCOVA was run to test the effect of touch and NFT (a median split was used to categorize respondents into high and low NFT groups) on purchase intention, using product knowledge and product involvement as covariates. The results reveal no significant interaction effect between touch and NFT on purchase intention for the sweater ($F(1, 59) = .023, p = .881$), mug ($F(1, 59) = .014, p = .908$) and bath towel ($F(1, 59) = .594, p = .444$). These results indicate that NFT does not moderate product touch effects on purchase intention, therefore H4b is rejected.

See Figure 19 for a diagrammatical representation of purchase intention results for H4b.

Figure 19. Brand Status, NFT and purchase intention_Luxury brand (Chanel)_H4b

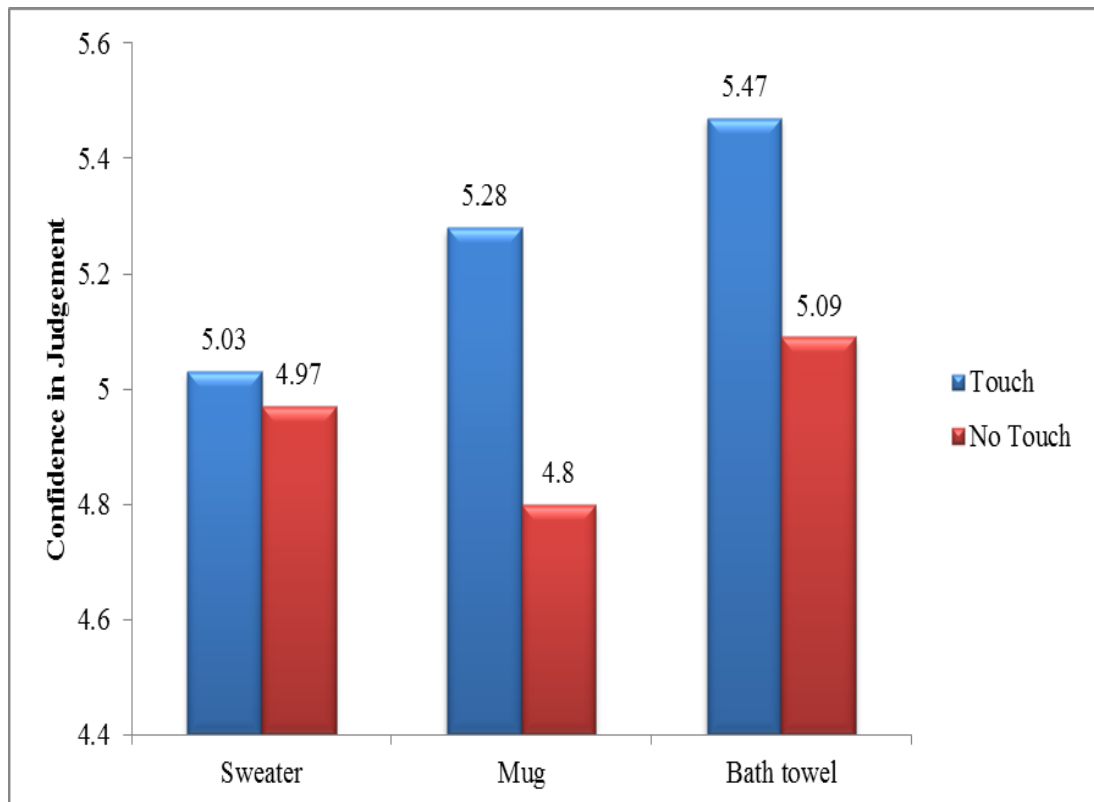


6.5.2.3 Confidence in Judgment

H4a. The ANCOVA was run to test the effect of touch on confidence in judgement using product knowledge and product involvement as covariates. The results reveal no significant effect of touch on confidence in judgement for the sweater ($M_{\text{Touch}} = 5.03$, $M_{\text{NoTouch}} = 4.97$; $F(1, 59) = .006$, $p = .937$), mug ($M_{\text{Touch}} = 5.28$, $M_{\text{NoTouch}} = 4.8$; $F(1, 59) = 1.70$, $p = .196$) and bath towel ($M_{\text{Touch}} = 5.47$, $M_{\text{NoTouch}} = 5.09$; $F(1, 59) = .783$, $p = .380$). These results indicate that touch has no effect on confidence in judgement, therefore H4a is rejected.

See Figure 20 for a diagrammatical representation of confidence in judgement results for H4a.

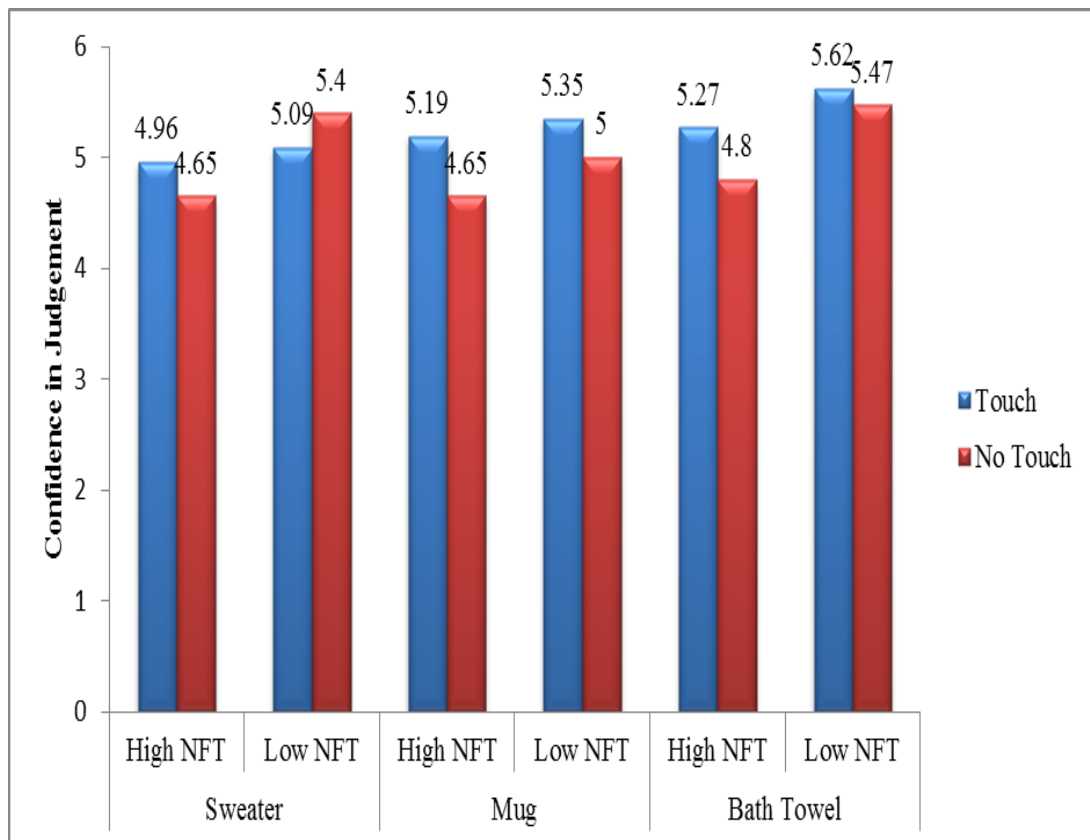
Figure 20. Touch and confidence in judgement_Luxury brand (Chanel)_H4a



H4b. The ANCOVA was run to test the effect of touch and NFT (a median split was used to categorize respondents into high and low NFT groups) on confidence in judgement, using product knowledge and product involvement as covariates. The results reveal no significant interaction effect between touch and NFT on confidence in judgement for the sweater ($F(1, 59) = .824, p = .368$), mug ($F(1, 59) = .019, p = .891$) and bath towel ($F(1, 59) = .204, p = .653$). These results indicate that NFT does not moderate product touch effects on confidence in judgement across all three products, therefore H4b is rejected.

See Figure 21 for a diagrammatical representation of confidence in judgement results for H4b.

Figure 21. Brand Status, NFT and confidence in judgement_Luxury brand (Chanel)_H4b

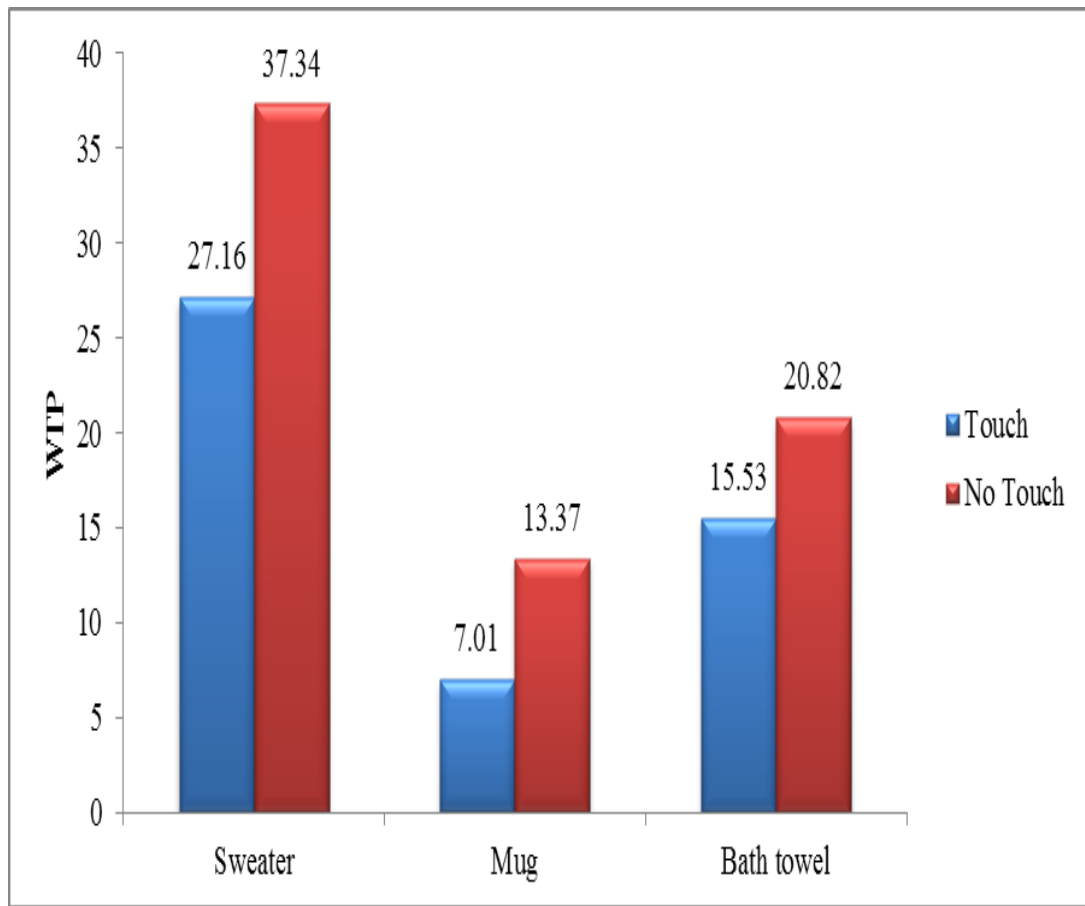


6.5.2.3.1 Willingness to pay

H4a. The ANCOVA was run to test the effect of touch on purchase intention using product knowledge and product involvement as covariates. The results reveal no significant effect of touch on willingness to pay for the sweater ($M_{\text{Touch}} = 27.16$, $M_{\text{NoTouch}} = 37.34$; $F(1, 59) = .650$, $p = .423$), mug ($M_{\text{Touch}} = 7.01$, $M_{\text{NoTouch}} = 13.37$; $F(1, 59) = 1.99$, $p = .164$) and bath towel ($M_{\text{Touch}} = 15.53$, $M_{\text{NoTouch}} = 20.82$; $F(1, 59) = .692$, $p = .409$). These results indicate that touch has no effect on willingness to pay, therefore H4a is rejected.

See Figure 22 for a diagrammatical representation of willingness to pay results for H4a respectively.

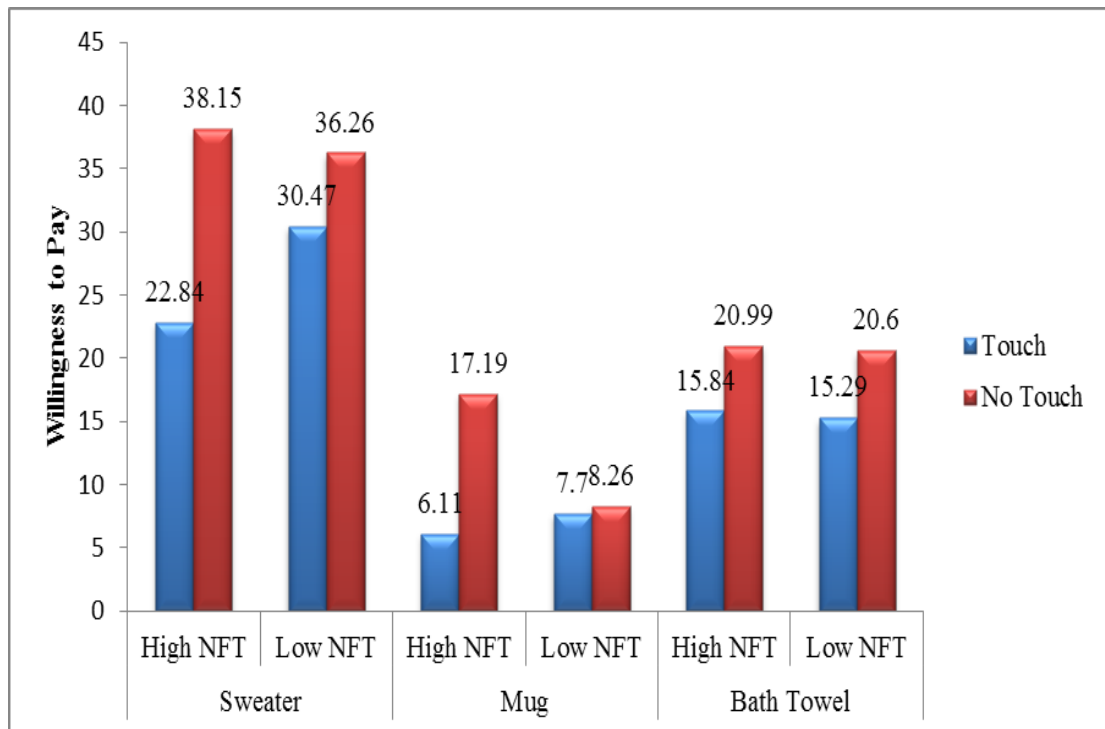
Figure 22. Touch and willingness to pay_Luxury brand (Chanel)_H4a



H4b. The ANCOVA was run to test the effect of touch and NFT (a median split was used to categorize respondents into high and low NFT groups) on willingness to pay, using product knowledge and product involvement as covariates. The results reveal no significant interaction effect between touch and NFT on willingness to pay for the sweater ($F(1, 59) = .012, p = .912$) mug ($F(1, 59) = 2.23, p = .141$) and bath towel ($F(1, 59) = .128, p = .722$). These results indicate that NFT does not moderate product touch effects on willingness to pay, therefore H4b is rejected.

See Figure 23 for a diagrammatical representation of willingness to pay results for H4b.

Figure 23. Brand Status, NFT and willingness to pay_Luxury brand (Chanel)_H4b



6.5.2.4 Results Summary – H4a and H4b

The results of Study 2 thus far show that the sweater and mug (marginally significant) received higher product evaluations when participants could touch them compared to when they could not, thereby supporting Hypothesis 4a. On further examination of whether an individual's degree of NFT would moderate touch on consumer response, the results showed that there was no moderation effect on any of the dependent variables. Thus, no support for the predicted Hypothesis 4b was found.

6.6 Combined data (Study 1 and 2)

In Study 1 (non-luxury branded sweater- Primark) an insignificant touch effect on product evaluation of the sweater was revealed while in Study 2 (luxury branded sweater – Chanel) a significant touch effect was revealed on the same sweater. Given that the same sweater was used with only the brand name differing in both studies, gives the indication that a brand status moderation effect could exist.

However, to empirically examine and establish if brand status could be a moderator, data from Study 1 (*familiar non-luxury: Primark*) for the sweater (for all the dependent variables) was combined with similar data from Study 2 (*familiar luxury: Chanel*). Additionally, the covariate product knowledge which was present in both studies was combined but product involvement was excluded as it was not measured in Study 1. Unlike the proposed relationship between touch and brand familiarity, where it was hypothesized that no significant difference would be noted in a touch or no touch environment for familiar brands, with the combined data set it is proposed that in spite of familiarity the nature of the brand name itself (relating to its luxury brand status) could significantly influence consumer response to touch. In addition, that the brand status moderation effects would be dependent on NFT. Specifically, the following relationships were tested using data from the combined data set:

H4c. Brand status moderates the effect of touch on consumer response. Specifically, for higher luxury branded products product touch has a positive effect. Conversely, for lower luxury branded products (non-luxury), there is less likely to be a significant effect of touch.

H4d. There is a three-way interaction between touch, NFT and brand status. When evaluating a lower luxury (non-luxury) branded product, consumer response in the no touch environment will be greater for lower NFT than higher NFT. When evaluating a highly luxury branded product, there will be no difference in consumer response in the no touch environment between higher and lower NFT individuals.

To test the aforementioned hypotheses, three-way ANCOVA's were run (**Touch:** *touch, no touch*; **Brand status:** *luxury (Chanel), non-luxury (Primark)*; **Need for touch:** *low NFT, high NFT*), using product knowledge as a covariate. Descriptives of the data by treatment condition is provided next, followed by results of homogeneity of variance and the results of the ANCOVA's run.

6.6.1 Combined data set descriptive statistics by treatment condition

Data was first organized and presented by descriptive statistics to give an overall view of the combined data set, by treatment condition (N = 123).

The luxury branded (Chanel) sweater received higher product evaluations in the touch condition ($M_{\text{Touch}} = 4.87$, $M_{\text{NoTouch}} = 4.12$), higher purchase intentions in the touch condition ($M_{\text{Touch}} = 2.94$, $M_{\text{NoTouch}} = 2.75$), higher confidence in judgement scores in the touch condition ($M_{\text{Touch}} = 5.03$, $M_{\text{NoTouch}} = 4.97$) but higher willingness in the no touch condition ($M_{\text{NoTouch}} = 37.34$, $M_{\text{Touch}} = 27.16$). On the contrary, the non-luxury branded (Primark) sweater received higher product evaluations in the no touch condition ($M_{\text{NoTouch}} = 4.43$, $M_{\text{Touch}} = 4.23$), higher purchase intentions in the no touch condition ($M_{\text{NoTouch}} = 2.99$, $M_{\text{Touch}} = 2.87$) and higher willingness to pay in the touch condition ($M_{\text{Touch}} = 11.77$, $M_{\text{NoTouch}} = 10.31$). Similar to the luxury branded sweater however, higher confidence in judgement scores were also reported in the touch condition ($M_{\text{Touch}} = 5.25$, $M_{\text{NoTouch}} = 4.78$). Table 26 depicts a summary of these means and standard deviations.

Table 26. Brand Status Moderation Descriptives by treatment condition (Sweater)

PRODUCT EVALUATION	TOUCH CONDITION	BRANDSTATUS_RC	NEED FOR TOUCH	MEAN	STD. DEVIATION	N
	No Touch	Non-luxury Brand (Primark)	Low Need for Touch	4.67	1.354	9
			High Need for Touch	4.31	1.196	18
			Total	4.43	1.236	27
		Luxury Brand	Low Need for Touch	4.27	1.634	15

	TOUCH CONDITION	BRANDSTATUS S_RC	NEED FOR TOUCH	MEAN	STD. DEVIATION	N
		(Chanel)	High Need for Touch	4.02	1.670	20
			Total	4.12	1.635	35
		Total	Low Need for Touch	4.42	1.517	24
			High Need for Touch	4.16	1.453	38
			Total	4.26	1.472	62
	Touch	Non-luxury Brand (Primark)	Low Need for Touch	4.08	1.362	17
			High Need for Touch	4.42	1.403	14
			Total	4.23	1.368	31
		Luxury Brand (Chanel)	Low Need for Touch	5.06	1.345	17
			High Need for Touch	4.62	1.477	13
			Total	4.87	1.397	30
		Total	Low Need for Touch	4.57	1.423	34
			High Need for Touch	4.51	1.415	27
			Total	4.54	1.408	61
	Total	Non-luxury Brand (Primark)	Low Need for Touch	4.28	1.362	26
			High Need for Touch	4.36	1.270	32
			Total	4.32	1.301	58
		Luxury Brand (Chanel)	Low Need for Touch	4.69	1.517	32
			High Need for Touch	4.25	1.601	33
			Total	4.47	1.563	65
		Total	Low Need for Touch	4.51	1.451	58
			High Need for Touch	4.31	1.437	65
			Total	4.40	1.441	123
PURCHASE INTENTION	No Touch	Non-luxury Brand (Primark)	Low Need for Touch	3.33	1.625	9
			High Need for Touch	2.82	1.335	18
			Total	2.99	1.428	27
		Luxury Brand (Chanel)	Low Need for Touch	2.80	1.575	15
			High Need for Touch	2.72	1.725	20
			Total	2.75	1.639	35
		Total	Low Need for Touch	3.00	1.580	24
			High Need for Touch	2.77	1.533	38
			Total	2.86	1.543	62
	Touch	Non-luxury Brand (Primark)	Low Need for Touch	2.79	1.419	17
			High Need for Touch	2.97	1.833	14
			Total	2.87	1.593	31
		Luxury Brand (Chanel)	Low Need for Touch	3.15	1.632	17
			High Need for Touch	2.66	1.520	13
			Total	2.94	1.577	30
		Total	Low Need for Touch	2.97	1.517	34
			High Need for Touch	2.82	1.664	27
			Total	2.90	1.572	61
	Total	Non-luxury Brand (Primark)	Low Need for Touch	2.98	1.484	26
			High Need for Touch	2.89	1.547	32
			Total	2.93	1.506	58
		Luxury Brand (Chanel)	Low Need for Touch	2.99	1.589	32
			High Need for Touch	2.70	1.623	33
Total			2.84	1.600	65	
Total		Low Need for Touch	2.98	1.530	58	
		High Need for Touch	2.79	1.576	65	
		Total	2.88	1.551	123	
CONFIDENC E IN JUDGMENT	No Touch	Non-luxury Brand (Primark)	Low Need for Touch	4.95	1.211	9
			High Need for Touch	4.70	1.717	18
			Total	4.78	1.547	27
		Luxury Brand (Chanel)	Low Need for Touch	5.40	1.168	15
			High Need for Touch	4.65	1.514	20
			Total	4.97	1.409	35
		Total	Low Need for Touch	5.23	1.179	24
			High Need for Touch	4.67	1.591	38
			Total	4.89	1.461	62
	Touch	Non-luxury Brand (Primark)	Low Need for Touch	4.94	1.357	17
			High Need for Touch	5.61	.900	14
			Total	5.25	1.203	31
Luxury Brand (Chanel)	Low Need for Touch	5.09	1.864	17		
	High Need for Touch	4.96	1.216	13		

	TOUCH CONDITION	BRANDSTATUS S_RC	NEED FOR TOUCH	MEAN	STD. DEVIATION	N
		Total	Total	5.03	1.592	30
			Low Need for Touch	5.02	1.607	34
			High Need for Touch	5.30	1.094	27
			Total	5.14	1.400	61
	Total	Non-luxury Brand (Primark)	Low Need for Touch	4.95	1.283	26
			High Need for Touch	5.10	1.472	32
			Total	5.03	1.381	58
		Luxury Brand (Chanel)	Low Need for Touch	5.23	1.561	32
			High Need for Touch	4.77	1.392	33
			Total	5.00	1.484	65
		Total	Low Need for Touch	5.11	1.438	58
			High Need for Touch	4.93	1.430	65
			Total	5.01	1.431	123
WILLINGNE TO PAY	No Touch	Non-luxury	Low Need for Touch	9.83	7.99	9
			High Need for Touch	10.55	4.83	18
			Total	10.31	5.92	27
		Luxury Brand	Low Need for Touch	36.26	43.91	15
			High Need for Touch	38.15	56.08	20
			Total	37.34	50.52	35
		Total	Low Need for Touch	26.35	36.97	24
			High Need for Touch	25.07	42.67	38
			Total	25.57	40.25	62
	Touch	Non-luxury	Low Need for Touch	11.35	9.34	17
			High Need for Touch	12.28	7.04	14
			Total	11.77	8.26	31
		Luxury Brand	Low Need for Touch	30.47	25.89	17
			High Need for Touch	22.84	15.71	13
			Total	27.16	22.06	30
		Total	Low Need for Touch	20.91	21.48	34
			High Need for Touch	17.37	12.95	27
			Total	19.34	18.15	61
	Total	Non-luxury	Low Need for Touch	10.82	8.76	26
			High Need for Touch	11.31	5.86	32
			Total	11.09	7.24	58
		Luxury Brand	Low Need for Touch	33.18	35.01	32
			High Need for Touch	32.12	44.92	33
			Total	32.64	40.03	65
		Total	Low Need for Touch	23.16	28.74	58
			High Need for Touch	21.87	33.70	65
			Total	22.48	31.33	123

6.6.2 Homogeneity of variance test results

To test this assumption, homogeneity of variance tests were run for the combined data set, with results revealing that the assumption was met for three of the dependent variables (Product evaluation $F(7, 115) = .677$, $p = .691$, purchase intention $F(7, 115) = .874$, $p = .530$ and confidence in judgement: $F(7, 115) = 2.07$, $p = .052$). The assumption was however not met for willingness to pay $F(7, 115) = 4.98$, $p = .000$ but ANCOVA's are robust to deviations from homogeneity of variance (Field, 2013).

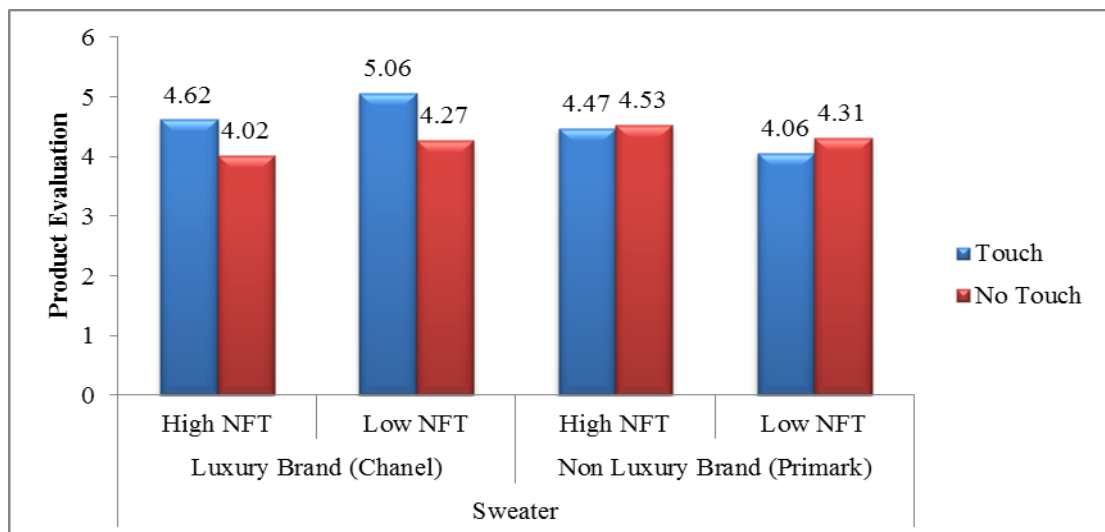
6.6.2.1 Results H4c and H4d

6.6.2.1.1 Product evaluation

H4c. The ANCOVA was run to test for the moderation effect of brand status on touch effects on product evaluation, controlling for product knowledge. Results revealed a marginally significant effect on product evaluation of the sweater, $F(1,114) = 3.07$, $p = .082$. Pairwise comparisons show that touch increased product evaluation for the Chanel (luxury) branded sweater ($M_{\text{Touch}} = 4.87$, $M_{\text{NoTouch}} = 4.12$; $p = .057$) but not for the Primark (non-luxury) branded sweater ($M_{\text{Touch}} = 4.43$, $M_{\text{NoTouch}} = 4.23$; $p = .541$). This indicates that a brand status effect does may exist and therefore H4c is marginally supported.

H4d. ANCOVA results revealed no significant interaction between touch, brand status and need for touch ($F(1, 114) = .642$, $p = .425$). This indicates that touch, brand status and NFT do not jointly influence product evaluation therefore H4d is rejected. See Figure 24 for a diagrammatical representation of product evaluation H4c and H4d results.

Figure 24. Touch, Brand Status, NFT and product evaluation (H4c and H4d)

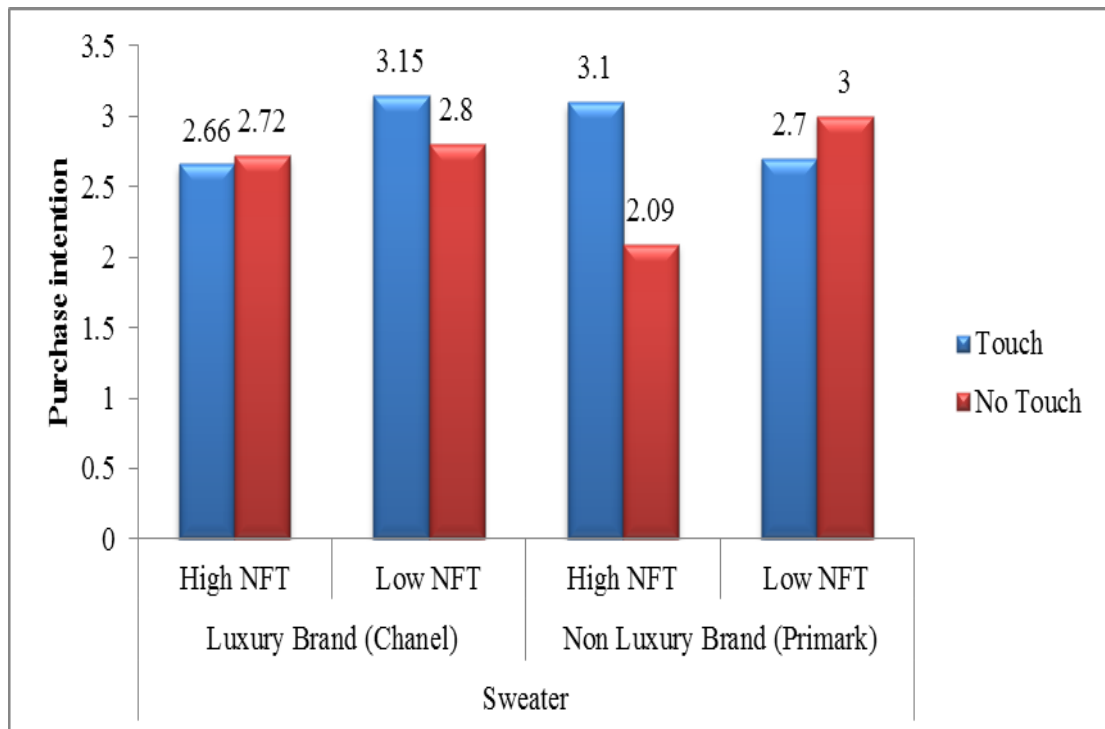


6.6.2.1.2 Purchase intention

H4c. The ANCOVA was run to test for the moderation effect of brand status on touch and purchase intention, controlling for product knowledge. Results revealed no significant interaction effect between touch and brand status on purchase intention, $F(1,114) = .349$, $p = .556$. This indicates that across both touch conditions, brand status has no influence on purchase intentions, therefore H4c is rejected.

H4d. ANCOVA results revealed no significant interaction between touch, brand status and need for touch ($F(1, 114) = .859$, $p = .356$). This indicates that touch, brand status and NFT do not jointly influence purchase intention therefore H4d is rejected. See Figure 25 for a diagrammatical representation of purchase intention H4c and H4d results.

Figure 25. Touch, Brand Status, NFT and purchase intention (H4c and H4d)

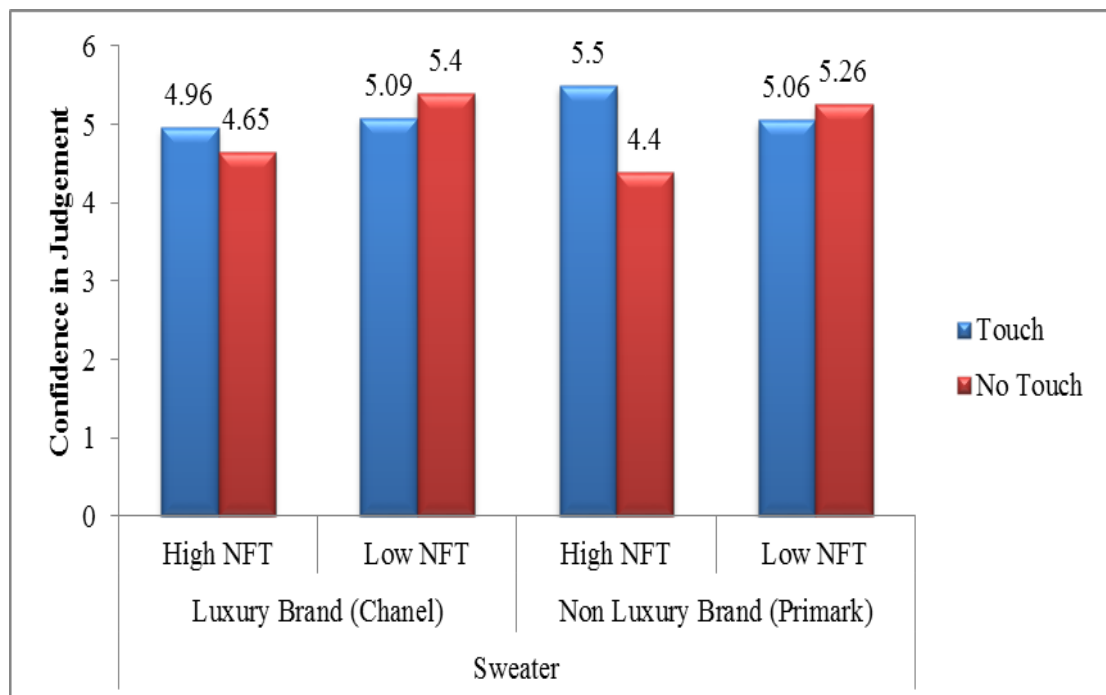


6.6.2.1.3 Confidence in judgment

H4c. The ANCOVA was run to test for the moderation effect of brand status on touch and confidence in judgment, controlling for product knowledge. Results revealed no significant interaction effect between touch and brand status on confidence in judgment $F(1,114) = .657, p = .419$. This indicates that across both touch conditions, brand status has no influence on confidence in judgement, therefore H4c is rejected.

H4d. ANCOVA results revealed no significant interaction between touch, brand status and need for touch ($F(1, 114) = .031, p = .861$). This indicates that touch, brand status and NFT do not jointly influence confidence in judgement therefore H4d is rejected. See Figure 26 for a diagrammatical representation of confidence in judgement H4c and H4d results.

Figure 26. Touch, Brand Status, NFT and confidence in judgement (H4c and H4d)



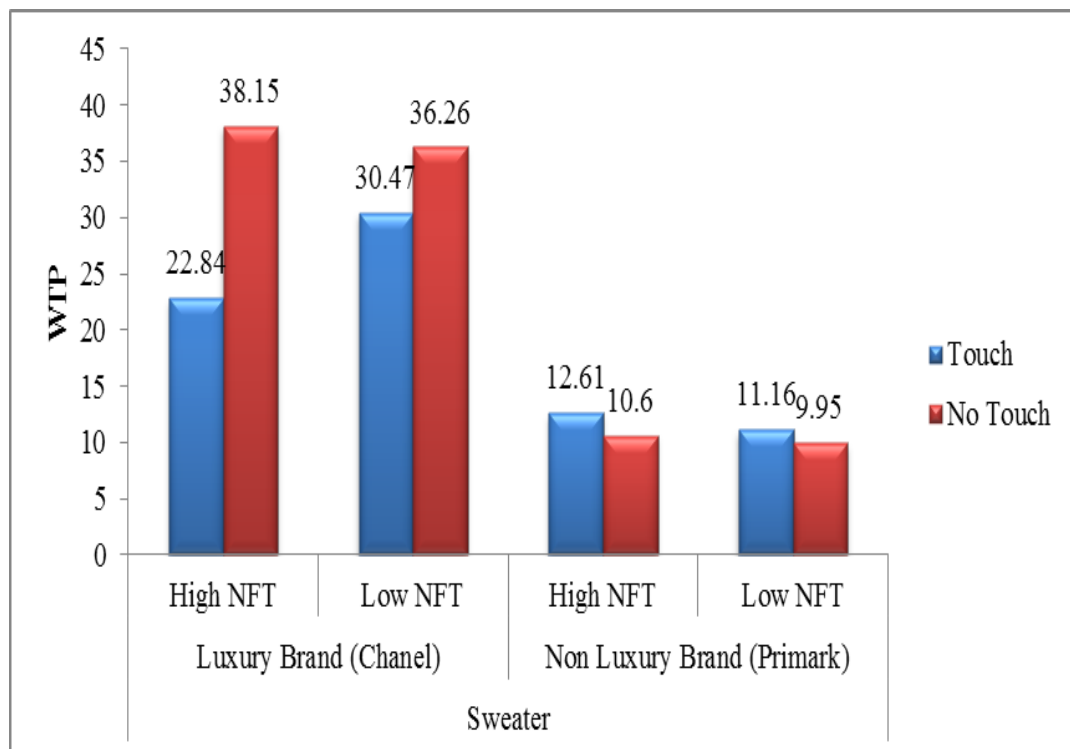
6.6.2.1.4 Willingness to pay

H4c. The ANCOVA was run to test for the moderation effect of brand status on touch and willingness to pay, controlling for product knowledge. Results revealed no significant interaction effect between touch and brand status on willingness to pay, $F(1,114) = 1.12$, $p = .292$. This indicates that across both touch conditions, brand status has no influence on willingness to pay, therefore H4c is rejected.

H4d. ANCOVA results revealed no significant interaction between touch, brand status and need for touch ($F(1, 114) = .122$, $p = .728$). This indicates that touch, brand status and NFT do not jointly influence willingness to pay therefore H4d is rejected.

See Figure 27 for a diagrammatical representation of WTP H4c and H4d results.

Figure 27. Touch, Brand Status, NFT and WTP (H4c and H4d)



6.6.2.2 Results Summary – H4c and H4d

Brand status moderated (marginally) the effect of touch on product evaluation of the Chanel (luxury brand) sweater ($F(1,118) = 3.317, p = .071$) but not purchase intentions, confidence in judgment or willingness to pay. Specifically, product evaluation was significantly higher in the touch condition for the Chanel (luxury) branded sweater ($M_{\text{Touch}} = 4.87, M_{\text{NoTouch}} = 4.12; F(1,118) = 4.363, p = .039$) but insignificantly different for the Primark (non-luxury) branded sweater ($M_{\text{Touch}} = 4.43, M_{\text{NoTouch}} = 4.23; F(1,118) = .280, p = .598$). This implies that touch effects on product evaluation is only significant when considering luxury branded clothing items and not non-luxury branded ones (H4c). Additionally, touch effects to the luxury branded product did not differ by NFT (H4d).

The next stage of analyses examines the predicted mediation hypotheses of psychological ownership and affective reaction. According to Baron & Kenny (1986) and Preacher & Hayes (2004) there must first be evidence of a relationship that can be mediated. That is, the independent variable affects the dependent variable (a). The only direct touch effect found in the combined data set was product evaluation for the sweater. Therefore it was only necessary to carry out mediation tests for product evaluation of the luxury (Chanel) branded sweater.

6.6.2.3 Mediation hypotheses (Psychological ownership and affective reaction)

To test hypotheses that psychological ownership and affective reaction are the underlying mechanisms through which touch influences consumer response to luxury branded products, a series of regression analyses using the Hayes PROCESS (Model 4) were conducted. Data from the combined data set (Product evaluation of the sweater in Study 1 and 2) was used ($N = 122$). The indirect effect was tested using a

bootstrap estimation approach with 5000 samples and the results are discussed below.

H4e. Psychological ownership mediates the effect of touch on consumer response to luxury branded products.

H4f. Affect mediates the effect of touch on consumer response to luxury branded products.

6.6.2.3.1 Mediation analyses results (H4e and H4f)

6.6.2.3.2 Product Evaluation (Sweater)

H4e. The results showed that touch was not a significant predictor of psychological ownership, $b = .028$, $SE = .287$, $p = .922$, but that psychological ownership was a significant predictor of product evaluation, $b = .516$, $SE = .068$, $p = .000$ despite brand status moderation of product evaluation increasing in significance, $b = -.959$, $SE = .415$, $p = .058$. This indicates that psychological ownership is not a mediator of touch effects on product evaluation of the luxury (Chanel) branded sweater, therefore the hypothesis is not supported.

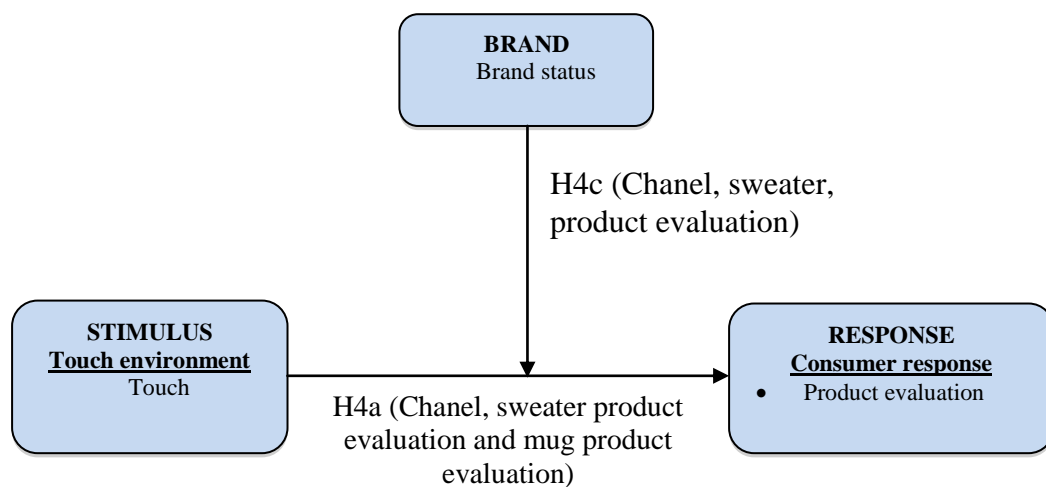
H4f. The results showed that touch was not a significant predictor of affective reaction, $b = -.264$, $SE = .234$, $p = .261$, but that affective reaction was a significant predictor of product evaluation, $b = .597$, $SE = .085$, $p = .000$ despite brand status moderation increasing in significance, $b = -1.12$, $SE = .439$, $p = .011$. This indicates that affective reaction is not a mediator of touch effects on product evaluation of the luxury (Chanel) branded sweater, therefore the hypothesis is not supported.

Overall, neither psychological ownership (H4e) nor affective reaction (H4f) mediates the relationship between touch and product evaluation of the luxury branded (Chanel) sweater.

6.6.3 Results Summary

A concise pictorial summary depicting only significant results (for easier and clearer interpretation given that 3 products were examined per hypothesis) of the hypothesized relationships is presented in Figure 28 below, followed by a written summary of the overall results of Study 2 (both significant and insignificant findings).

Figure 28. Study 2 results (significant)



Overall, the results indicated that touch did have a positive effect on product evaluation of the luxury branded sweater (H4a) and that need for touch did not moderate this effect (H4b), which indicates that irrespective of the degree of an individual's need for touch, touch plays a central role in enhancing the positive response to luxury brands.

To empirically test that brand status was a moderator of touch effect (H4c), a combined data set consisting of consumer response variables for the non-luxury brand (Primark) and luxury branded sweater (Chanel) was analysed. Results provided marginally significant support that brand status is a moderator, in favour of the luxury brand when considering product evaluation of the sweater ($p = .082$). The results also showed that this brand status moderation effect did not differ by NFT (H4d). Lastly, examination of the possible underlying mechanism responsible for this effect (psychological ownership and affective reaction) yielded no statistical support for the mediation hypotheses (H4e and H4f).

6.7 CHAPTER SUMMARY

Chapter 6 presented Study 2 which built on the previous study (Study 1 as discussed in Chapter 5). Specifically, Study 2 took brand status (luxury branded products) into account which to the researchers' knowledge has not been examined in the context of product touch, therefore adding to the novelty of this research. This chapter presented a detailed description of the data preparation procedures undertaken, descriptions of the data by respondent profile, measurement validity, data analysis and results for Hypotheses 4a, 4b, 4c, 4d, 4e and 4f. The last chapter of thesis (Chapter 7) now provides an overall discussion of Study 1 and 2 results, the theoretical contributions of the research, practical implications, limitations of the research and the recommendations for future research.

CHAPTER 7: Discussion and conclusion

7.1 INTRODUCTION

Chapter 7 discusses the research findings and concludes the thesis by presenting a brief recap of the overarching purpose of this research project, an overview of the proposed research hypotheses, followed by a discussion of the results. Results from both Study 1 and 2 presented expected and unexpected results and a detailed discussion of the findings and speculations surrounding this is then provided. Additionally, this chapter highlights the key theoretical contributions of this research, consequent practical implications, the limitations of the research and the recommendations for future research. This is then followed by a conclusion and chapter summary.

7.2 Recap- Research gaps, research project purpose and research questions

There is a general consensus in prior touch-related research that although product touch does influence consumer decision-making but there is yet to be an understanding of the effect of touch on consumer behaviour where products are branded (Grohmann et al., 2007; Jansson-Boyd & Marlow, 2011; Peck & Childers, 2003a, 2003b). Some even propose for example that brand name could signal both high and low NFT consumers to forgo product touch during evaluation (Peck, 2010) which seems rational as brand names influence consumer perceptions and serve as prime cues in purchase decisions (Aaker, 1996; Aaker, 1991; Erdem & Swait, 1998; Keller, 1993; Low & Fullerton, 1994). However, research has not conceptualized and/or tested how these brand names influence the effect of product touch on attitude, perception and (intended) behaviour, until now.

Of the various brand concepts that exist in the marketing literature, brand familiarity is consistently shown to have a significant impact on consumer information

processing and decision-making (Biswas, 1992; Hoyer & Brown, 1990; Johnson & Russo, 1984; Kent & Allen, 1994; Park & Lessig, 1981; Rao & Monroe, 1988). When faced with a familiar brand, the brand related experiences and knowledge of that brand are activated in the consumer's mind (Alba & Hutchinson, 1987), accelerating decision-making in favour of the familiar (versus unfamiliar) brand. This is because as familiarity increases consumer expertise in executing product related tasks (Alba & Hutchinson, 1987; Fiske & Taylor, 1991; Park & Lessig, 1981; Raju, 1977; Rao & Monroe, 1988; Sujan, 1985). Another brand concept, brand status (luxury versus non-luxury), has tended to place research emphasis on definitions and conceptualizations of luxury brands despite recognition (e.g., Patrick & Hagtvedt, 2014) that further research is required to explore or explain luxury brand evaluation and how luxury brand information is processed. Extending prior literature, this research project therefore chose to examine the moderating effects of brand familiarity and brand status in the context of touch.

The principal purpose of this research project was therefore to determine if the effect of product touch on product evaluation, purchase intention, confidence in judgment and WTP (consumer response) are dependent on brand familiarity (familiar versus non-familiar) or brand status (luxury versus non-luxury). Extending prior touch and brand literature, this research project also examined if the influence of brand name was determined by NFT, and tested if the previously shown underlying mechanisms informing product touch effects of psychological ownership (cognition) and affective reaction (affect) still stand in explicating touch's effects on consumer response to branded products. The researcher then went one step further and carried out supplementary analysis examining the influence of product knowledge on touch effects for familiar and unfamiliar branded products.

Based on a multi-discipline literature review, a conceptual framework and related propositions were developed. To test the relationships proposed in the conceptual framework, two lab based experiments were carried out (Study 1 and Study 2). Study 1 used familiar (Primark) and unfamiliar (4u2) non-luxury branded products (sweater, pillowcase and bath towel) and Study 2 used luxury (Chanel) branded products (sweater, mug and bath towel). The lab based experiments created scenarios where participants were faced with products from different brands (familiar, unfamiliar, luxury or non-luxury), which they were either allowed or not allowed to touch. All this was done with the aim of answering the following research questions:

1. What effect does product touch have on consumer response (product evaluation, purchase intention, confidence in judgment and willingness to pay) (RQ1a)
2. Does the aforementioned effect differ by NFT (RQ1b)?
3. Are familiar brands viewed more positively (RQ2a)?
4. Does brand familiarity then moderate product touch effects on consumer response (RQ2b)?
5. How does this moderation effect differ by individual NFT (RQ2c)?
6. Is the effect of product touch on consumer response to unfamiliar branded products mediated by psychological ownership (RQ3a)?
7. Is the effect of product touch on consumer response to unfamiliar branded products mediated by affective reaction (RQ3b)?
8. Does product touch have an effect on consumer response to luxury branded products (RQ4a)?
9. How does the effect of touch (for luxury branded products) differ by individual NFT (RQ4b)?
10. Does brand status moderate product touch effects (RQ4c)?
11. Does this brand status moderation differ by NFT (RQ4d)?

12. Is the effect of touch on consumer response to luxury branded products mediated by psychological ownership (RQ4e)?
13. Is the effect of touch on consumer response to luxury branded products mediated by affective reaction (RQ4f)?

A summary of the results of the above-mentioned research questions and the specific hypotheses related to each is provided in Table 27 below. The aforementioned research questions present the overarching relationship of interest while the corresponding hypotheses indicate the specific direction in which the results are hypothesized. The supplementary hypotheses and results related to product knowledge that arose in Study 1 are also presented in the table. A discussion of the findings is thereafter reported in section 7.3.

Table 27. Study 1 and 2 Results Summary

HYPOTHESES RESULTS SUMMARY				
RESEARCH QUESTION	STUDY 1 HYPOTHESIS	SWEATER	PILLOWCASE	BATH TOWEL
RQ1a	H1a. Touch has a significant positive effect on consumer response.	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in judgment WTP 	<ul style="list-style-type: none"> Product evaluation Marginally supported <ul style="list-style-type: none"> Purchase intention Not supported <ul style="list-style-type: none"> Confidence in judgment WTP 	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in judgment WTP
RQ1b	H1b. The effect of touch is a function of NFT. Specifically, the effect of touch is only significant for those with a higher NFT and not a lower NFT.	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in judgment WTP 	<ul style="list-style-type: none"> Product evaluation Not supported <ul style="list-style-type: none"> Purchase intention Confidence in judgment WTP 	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in judgment WTP
RQ2a	H2a. A familiar branded product has a more positive effect on consumer response, than an unfamiliar branded product.	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in judgment WTP 	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in judgment WTP 	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in judgment WTP
RQ2b	H2b. The effect of touch on consumer response is a function of brand	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention 	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention 	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention

HYPOTHESES RESULTS SUMMARY				
RESEARCH QUESTION	STUDY 1 HYPOTHESIS	SWEATER	PILLOWCASE	BATH TOWEL
	familiarity. Specifically, for the lower familiar (unfamiliar) branded products touch will have a positive effect but no significant effect for the higher familiar branded products will be found.	<ul style="list-style-type: none"> Confidence in judgment WTP 	<ul style="list-style-type: none"> Confidence in judgment WTP 	<ul style="list-style-type: none"> Confidence in judgment WTP
RQ2c	H2c. There is a three-way interaction between touch, brand familiarity, need for touch. Specifically, individuals with higher NFT will respond more positively when they can touch an unfamiliar branded product than when they cannot. Lower NFT individuals will respond more positively to the familiar branded products irrespective of touch.	Not supported <ul style="list-style-type: none"> Confidence in judgment 	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in judgment WTP 	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in judgment WTP
Product knowledge related hypothesis 1	The effect of touch is significant for those with lower product knowledge but not those	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in 	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in judgment 	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in judgment

HYPOTHESES RESULTS SUMMARY				
RESEARCH QUESTION	STUDY 1 HYPOTHESIS	SWEATER	PILLOWCASE	BATH TOWEL
	with higher product knowledge.	judgment • WTP	• WTP	• WTP
Product knowledge related hypothesis 2	There is a three-way interaction between product touch, brand familiarity and product knowledge. When product knowledge is lower touch has a positive effect on consumer response when brand familiarity is lower. When product knowledge is higher, touch has no effect on consumer response when brand familiarity is higher.	Not supported • Product evaluation • Purchase intention • Confidence in judgment • WTP	Not supported • Product evaluation • Purchase intention • Confidence in judgment • WTP	<u>Marginally Supported</u> • WTP Not supported • Product Evaluation • Purchase intention • Confidence in judgment
RQ3a	H3a. Touching unfamiliar branded products leads to an increase in psychological ownership which then leads to a positive consumer response.	Not run	Not run	Not run
RQ3b	H3b. Touching unfamiliar branded	Not run	Not run	Not run

HYPOTHESES RESULTS SUMMARY				
RESEARCH QUESTION	STUDY 1 HYPOTHESIS	SWEATER	PILLOWCASE	BATH TOWEL
	products leads to an increase in affective reaction which then leads to a positive increase in consumer response.			
	STUDY 2 HYPOTHESIS	SWEATER	MUG	BATH TOWEL
RQ4a	H4a. Touch has a significant positive effect on consumer response to luxury branded products.	<u>Supported</u> <ul style="list-style-type: none"> Product evaluation Not supported <ul style="list-style-type: none"> Purchase intention Confidence in judgment WTP 	<u>Marginally supported</u> <ul style="list-style-type: none"> Product evaluation Not supported <ul style="list-style-type: none"> Purchase intention Confidence in judgment WTP 	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in judgment WTP
RQ4b	H4b. The effects of touch on consumer response for luxury branded products is a function of	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in judgment WTP 	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in judgment WTP 	Not supported <ul style="list-style-type: none"> Product evaluation Purchase intention Confidence in judgment WTP

HYPOTHESES RESULTS SUMMARY				
RESEARCH QUESTION	STUDY 1 HYPOTHESIS	SWEATER		PILLOWCASE BATH TOWEL
	NFT. Specifically, touch effects will be significant for those with a higher NFT but not a lower NFT..			
STUDY 1 AND 2 COMBINED DATA SET (Sweater)				
	HYPOTHESIS	SWEATER		
RQ4c	H4c. Brand status moderates the effect of touch on consumer response. Specifically, for higher luxury branded products product touch has a positive effect. Conversely, for lower luxury branded products (non-luxury), there is less likely to be a significant effect of touch.	<p><u>Marginally supported</u> <u>Product Evaluation</u> <p>(p = .082)</p> <p>Marginally significant for luxury brand (+) (p = .057) Insignificant for non – luxury brand (p = .541)</p> <p>Not supported</p> <ul style="list-style-type: none"> • Purchase intention • Confidence in judgment • WTP </p>		
RQ4d	H4d. There is a three-way interaction between touch, NFT and brand status. When evaluating a lower luxury (non-luxury) branded product, consumer response in the no touch environment	<p>Not supported</p> <ul style="list-style-type: none"> • Product evaluation • Purchase intention • Confidence in judgment • WTP 		

HYPOTHESES RESULTS SUMMARY				
RESEARCH QUESTION	STUDY 1 HYPOTHESIS	SWEATER	PILLOWCASE	BATH TOWEL
	will be greater for lower NFT than higher NFT. When evaluating a higher luxury branded product, there will be no difference in consumer response in the no touch environment between higher and lower NFT individuals.			
RQ4e	H4e. Psychological ownership mediates the effect of touch on consumer response to luxury branded products.	<ul style="list-style-type: none"> • Product evaluation • Purchase intention • Confidence in judgment • WTP 	Not supported	
RQ4f	H4f. Affect mediates the relationship between touch and consumer response for luxury branded products.	<ul style="list-style-type: none"> • Product evaluation • Purchase intention • Confidence in judgment • WTP 	Not supported	

7.3 Findings and discussion

7.3.1 Touch, NFT and consumer response

7.3.1.1 RQ1a. *What effect does product touch have on consumer response (product evaluation, purchase intention, confidence in judgment and WTP)?*

Study 1 used a sweater, pillowcase and bath towel whose primary touch-related dimension was texture. In keeping with precedent from preceding literature regarding touch's positive effects on such products with 'material properties' (McCabe & Nowlis, 2003), it was expected that the same positive effect would be found irrespective of the brand familiarity. Controlling for the possible effects of product knowledge which McCabe & Nowlis (2003) acknowledge could reduce the impact of product touch, the hypothesis was supported by results for one of the products (pillowcase) where touch led to overall higher product evaluation, supporting the findings by Grohmann et al. (2007) and Jansson-Boyd (2011). Also, marginal support was further found for touch increasing purchase intention for the pillowcase. However, WTP and confidence in judgment did not increase with touch, contradicting prior research by Peck & Shu (2009). Product evaluation was measured using an 'attitude towards the product' scale; so, the overall results indicate that although product evaluation (attitude toward the pillowcase) is increased with touch, this is not an automatic indicator of the monetary value consumers would place on it.

Early research demonstrates this attitude-behaviour gap (e.g., Corey, 1937; Defleur & Westie, 1958). Over the period of one semester, Corey (1937) found inconsistencies between student's attitudes towards cheating and their actual behaviour as reflected in the scores they gave themselves when given the opportunity to assess their own tests. Similarly, Defleur & Westie (1958) found that attitudes toward African Americans were unsuccessful in predicting one's willingness to take

a picture with an African American of the opposite sex. Seemingly, attitudes in isolation are generally not strong predictors of behavioural intention or behaviour (Kraus, 1995) and additional factors such as price, quality, convenience and brand familiarity are still considered the most significant decision making criteria (Carrigan & Attala, 2001; Weatherell, Tregear, & Allinson, 2003). This could be the reason for the marginal (as opposed to fully significant) support for pillowcase purchase intentions as well as insignificant WTP results.

Touching clothing items (garments) is said to aid consumers in assessing the quality of the product and determining if it will fulfil its required purpose (Cho & Workman, 2011). It was surprising that the results showed no significant touch effects on any of the four consumer response variables for the sweater and bath towel, which are considered high haptic salient products (Grohmann et al., 2007; McCabe & Nowlis, 2003). For the sweater and bath towel, insignificant results imply that touch alone was insufficient to increase product evaluations, induce feelings of confidence in judgment of the product, increase intentions to purchase or WTP more for the products. Similarly, Jha & Balaji (2015) also found no main effect of touch on purchase intention. The insignificant sweater and bath towel results may mean that both items possibly provided haptic related information through vision in the no touch condition, which was deemed satisfactory enough to arrive at a decision, in line with what Klatzky et al. (1993) term as the *visual preview model*. As such responses to product evaluations, intentions to purchase and confidence in judgment and WTP did not differ across touch environments for the sweater and bath towel.

Interestingly, although significant touch effects were found for product evaluation and purchase intentions of the pillowcase, all but one of the results for each

dependent measure (i.e. purchase intentions for the sweater which showed a negative effect of touch) across all three products indicate the same positive direction of effect. That is, the insignificant results followed the same pattern. This possibly implies that the predicted positive touch effect on consumer response could exist, despite results being insignificant. Perhaps additional ‘noise’ caused by factors such as need for touch and product involvement could account for this.

7.3.1.2 RQ1b. *Do product touch effects differ by NFT*

One significant result was found in support of H1b, with high NFT individuals reporting higher product evaluations for the pillowcase when touch was available. As predicted no difference was noted for low NFT individuals in the touch or no touch environment, lending support to prior research on NFT (Grohmann et al., 2007; Peck & Childers, 2003b). Although NFT was not statistically found to influence touch effects on consumer response for the sweater and bath towel, these insignificant results (except for sweater purchase intentions that were lower in the touch condition) indicated the same direction of effect, indicating that touch had a positive influence on those with a high NFT individuals across the dependent variables. This implies that NFT may influence the effect of touch on behavioural variables although results were insignificant. As expected, consumer responses for low NFT individuals were insignificant across touch conditions.

Interestingly, Jha & Balaji (2015) did find a significant positive effect of an individual related factor (NTI) on purchase intentions. However, their results are questionable for a number of reasons. First, they captured individual need for touch using the NTI scale (need for tactile input) by Citrin et al. (2003), which only constitutes half of the NFT scale items. Second, no products were physically present

in their study and participant responses were made on the basis of a written description asking them to imagine the purchase situation. As such their treatment conditions did not capture the actual physical experience participants had with the product, thus any possible physical haptic attributes experienced that may have influenced their decision were not captured. In my research project where actual products were used in both touch and no touch treatment conditions, purchase intentions were not influenced by NFT. This could be as a result of the original positive touch effect on purchase intentions (H1a) being marginally significant therefore further dissection of the relationship produced effects that were too minor to come out.

7.3.2 Brand familiarity related findings

7.3.2.1 RQ2a. Brand familiarity direct effect

Brand familiarity is a prominent influencer of consumer perception, attitude, judgment and behaviour (e.g., Biswas, 1992; Hoyer & Brown, 1990; Johnson & Russo, 1984; Kent & Allen, 1994; Park & Lessig, 1981; Rao & Monroe, 1988). Its positive effects are evident across various contexts ranging from brand evaluations (e.g., Sundaram & Webster, 1999), product evaluation (e.g., Jha & Balaji, 2015), advertising (e.g., Campbell & Keller, 2003; Dahlén & Lange, 2004) and restaurant evaluations (Tam, 2008). Accordingly a similar pattern was expected in this research project, that irrespective of the availability of touch the familiar branded products (e.g. Primark) would elicit a greater positive consumer response compared to the unfamiliar branded ones (e.g. 4U2). The premise of this proposition being that cognitive processing of the brand is influenced by existing knowledge as supported by schema theory.

Surprisingly, the results did not support the direction proposed in H2a with the only significant results showing the opposite to be true. Specifically, there was a higher WTP for all three unfamiliar (4U2) branded products than for the familiar (Primark) brand. Solicitation of WTP (e.g., using a direct approach such as questionnaires as undertaken in this research) for unfamiliar products is a cognitively difficult task (Brown, Champ, Bishop, & McCollum, 1996). Breidert, Hahsler, & Reutterer (2006) propose solicitation could possibly result in an over- or under-estimation bias. This bias could be one reason explaining the higher WTP exhibited for the unfamiliar (4U2) branded products compared to the familiar (Primark) branded ones. Overall, the insignificant results across product evaluation, confidence in judgment and willingness to pay all indicate the same direction of effect, telling of the likelihood that a negative brand familiarity effect could indeed exist, which contradicts the original expectation of this research. Initial speculation for this was that perhaps attitudes towards the 4U2 (unfamiliar) brand were more positive, but examination of brand attitude data ruled this out, as the unfamiliar brand (4U2) actually had lower attitude ratings than that of the familiar (Primark) brand. From this emerges an apparent disconnect between the predictive nature of brand attitudes on more downstream variables such as product evaluation and confidence in judgement for these evaluations.

As the degree of confidence towards a brand is influenced by familiarity with the brand (Laroche et al., 1996) it would be expected that brand familiarity would increase confidence in the brand and its related products. Unlike this and other research findings demonstrating that familiarity serves as a precursor to confidence (Flanagan et al., 2005; Laroche et al., 1996; Siegrist et al., 2005) in this research results suggest the opposite. Granted that the difference in confidence in an

individual's evaluation of the product for the unfamiliar and familiar brands was fairly small hence insignificant, familiarity did little to increase confidence, implying perhaps that individuals need more than simply familiarity with a brand to be confident in their decisions or judgments regarding its products.

The negative effect of brand familiarity has recently been found within the context of *viral marketing*. In spite of the preponderance of literature informing of the positive effects of brand familiarity, Huang & Zhou (2016) in a series of two experiments found that attitudes towards viral advertisements were significantly lower for a familiar compared to an unfamiliar brand, and consequently so was participant intention of forwarding a viral ad of the familiar brand. Premised on the elaboration likelihood model, when a familiar brand (Coca Cola) was placed in an online print ad, attitudes towards the brand were lower than that of the unfamiliar brand (PayEasy) and consequently lower intentions to forward the Coca Cola ad to friends (via email), compared to the PayEasy ad. Simply put, it is not refuted that familiarity increases brand cognition and processing fluency, but what Huang & Zhou (2016) show is that in the context of viral advertisements, people are more likely to forward advertisements that they find entertaining because forwarding interesting content as opposed to processing brand information (say through an informative advert) is deemed as the critical factor to the success of viral advertising (which leads to high involvement processing), as such, implying that brand familiarity effects are context specific and do not have a positive influence in the domain of viral marketing.

Despite the similarity of findings from this research project and those of Huang & Zhou (2016), in that brand familiarity has a negative effect, the proposed reason for this differs from the explanation the aforementioned researchers gave. In my research

project, it is proposed that one reason for negative (though insignificant) findings for product evaluation and confidence ratings for the familiar branded products may be due to the specific nature of the content of the Primark brand schema individuals possess (e.g., its brand image). Hoyer & Brown (1990) note brand familiarity forms the basis of preliminary judgments regardless of the product related properties but the aforementioned results indicate that it is actually the nature of the information contained in that brand familiarity schema that would determine if its effect was positive or negative. Primark has a known brand image of being ‘super-cheap’ (Economist, 2015; Moore, 2013) which may have influenced the lower capped willingness to pay amount (and lower product evaluation and confidence). In contrast the lack of pre-existing schema worked in favour of the 4U2 brand (unfamiliar) as no preconceived notions were held.

Unlike the pattern shown for the aforementioned dependent variables, purchase intention was higher for two products for the familiar brand (sweater and pillowcase) suggesting the probability that results support previous findings on brand familiarity’s positive influence on product choice and purchase intentions (e.g., Hoyer & Brown, 1990; Jha & Balaji, 2015; Jiménez & San Martín, 2010).

7.3.2.2 RQ2b. Brand familiarity as a moderator of touch effects

As negative information is shown to have a greater impact on unfamiliar than familiar brands (e.g., Sundaram & Webster, 1999) and a no touch environment negatively impacts consumer choice and decisions (e.g., Peck & Childers, 2003a) it was expected in the touch environment consumer response would be greater for the unfamiliar (than familiar) branded products. Surprisingly, the results did not show significant effects for brand familiarity moderation, contradicting existing research

that informs of brand familiarity moderation (e.g., Hoyer & Brown, 1990; Campbell & Keller, 2003; Kent & Allen, 1994; Machleit et al., 1993; Dawar & Lei, 2009; Sundaram & Webster, 1999). Also, the results did not support the findings of Jha & Balaji (2015) who actually found that brand familiarity influenced product touch effects, where unfamiliar branded product purchase intention was lower when touch (or in their case ‘imagined touch’ as no actual products were used) was unavailable but not significantly different for a familiar brand in either touch environment (touch or no touch). Their product stimulus choice was a mobile phone, which in comparison to the products used in this research (sweater, pillowcase and bath towel) is lower in haptic salience, implying perhaps that brand familiarity moderation could be product type based. Future research could investigate this further.

Yazdanparast & Spears (2013) found that the negative feeling of frustration caused by lack of touch experienced more so by high NFT individuals was offset by their positive mood. In the same vein, given that the results (as discussed in Section 7.2.2.1 above) suggest a pattern that points to an overall more positive consumer response to the unfamiliar branded products irrespective of touch, it could be that the negative effect of not touching was negated by another factor (e.g., by participant mood which this research project did not account for). Perhaps where brand familiarity was concerned, the “touch” effect was too subtle to come through even within the contrived settings of a laboratory based experimental design.

However, some of the differences were as predicted but not statistically significant, showing that touch resulted in higher product evaluation and confidence in judgment for all three unfamiliar (4U2) branded products. This pattern is indicative of the possibility that brand familiarity moderation could exist, where touch reduces the

uncertainty experienced with unfamiliar brands and increases evaluation of their products. Given that brand familiarity manipulation was successful, one reason why the effect was insignificant could be the touch manipulation (adopted from Grohmann et al., 2007) was not as effective as expected. Perhaps putting a product in front of an individual and asking them to not touch it created an artificial situation, as in most cases touch is discretely restricted through the use of glass display cases, shelves or indicated through signage for example. The use of glass boxes was considered in this research, however due to budgetary constraints the glass boxes were not used.

The insignificant results also led to further speculation that additional factors related to the individuals themselves could yield more insightful results, specifically, an individual's NFT as well as the product knowledge they possessed of the products presented. Those with a high NFT are more adversely affected than low NFT individuals when touch is unavailable, therefore it could be that brand familiarity would have a greater influence in their decision-making. It is also possible that, as suggested by Peck & Childers (2003b), brand familiarity (brand name) could signal high NFT individuals to forgo touch, such that when touch was unavailable, information contained in brand familiarity schema could be drawn from to make inferences regarding the product. In effect, familiarity with the brand would be a positive thing when high NFT individuals could not touch a product. This line of thought is discussed in detail in the next section.

7.3.2.3 RQ2c. Moderation effect of NFT on touch effects for familiar and unfamiliar branded products

Interestingly, brand familiarity alone did not moderate touch effects (H2b) but when considered in relation to NFT, a significant three way effect was revealed. The relationship initially hypothesized was that there would be a three way interaction effect between touch, brand familiarity and NFT on consumer response. Specifically, those individuals with high NFT would respond more positively when they could touch an unfamiliar branded product than when they could not. Results were significant but for the familiar brand (Primark) and not the unfamiliar brand (4u2) as expected. Those with a high NFT were found to exhibit greater confidence in judgment for the Primark branded sweater when they could touch it.

A possible reason for this unexpected result could be explained using the expectation disconfirmation theory. According to this theory, expectations together with perceived performance lead to post-purchase (dis)satisfaction, which is mediated by either positive or negative disconfirmation between expectations and performance (Oliver, 1980). Thus there is positive disconfirmation when the product exceeds expectations and negative disconfirmation when it falls below expectations (Oliver, 1980). Early research by Cardozo (1965) and Cohen & Goldberg (1970) demonstrated that when products performed/delivered lower than was originally expected (negative disconfirmation), product ratings were lower. For individuals where touch plays a decisive role in product evaluation (high NFT individuals) touching allowed them to acquire diagnostic haptic information which they could then compare with pre-existing schema regarding the brand. Consequently enabling them to confirm or disconfirm their expectations and thus be in an overall position where their confidence in their evaluative judgments was increased. For the

unfamiliar brand (4U2) no pre-existing schema was held thus no comparison could be made, implying perhaps that additional information (in addition to touch) would be needed in order to increase their confidence in judgment. In effect, confidence was a function of expectation disconfirmation. Overall, brand familiarity did not act as a substitute when touch was unavailable as Peck & Childers (2003b) had proposed but instead enhanced their confidence in judgment of the Primark brand, thus touch acted as a confirmatory mechanism. For low NFT individuals it was expected that they would respond more positively to the familiar branded products irrespective of touch but no support was found for this.

7.3.2.4 Supplementary analysis

Given that the individual related factor of NFT did not have a significant influence on brand familiarity moderation, an additional influence could be product related. Following McCabe & Nowlis' (2003) proposal that higher (as opposed to lower) product knowledge may reduce the likelihood that touch was influential in decision making, this research project chose to examine it as a moderator and its contribution to a three-way touch and brand familiarity interaction. The two way interaction findings of touch and product knowledge are first discussed followed by those of the three way interaction of touch, product knowledge and brand familiarity.

7.3.2.4.1 Product knowledge related hypothesis 1 (Touch, product knowledge and consumer response)

The results did not support the hypothesis that the effect of touch is greater for those with lower product knowledge and not those with higher product knowledge. However, although insignificant, the results presented a pattern indicating that for those with lower product knowledge, touch positively influenced product evaluation,

purchase intention (except purchase intentions of the sweater where the reverse was shown), confidence in judgment and WTP across all three products. The results imply that product knowledge moderation could exist, as in reality, both product and brand related information affects consumer decision-making. The lack of statistical significance of this effect may have been as a result of the uneven sample sizes that occurred once product knowledge data (captured during and not prior to the study) was separated into high and low product knowledge categories using median splits.

7.3.2.4.2 Product knowledge related hypothesis 2 (Touch, product knowledge, brand familiarity and consumer response)

There is marginally significant support for the touch, product knowledge and brand familiarity moderation effect, where touch increased WTP for the bath towel when brand familiarity (4U2 brand) and product knowledge was low. This result provides an indication of the prominent influence of product knowledge in facilitating brand familiarity moderation (which was previously found not to be insignificant as a moderator of touch effects on its own, see section 7.3.2.2). What this implies is that when faced with an unfamiliar brand, for which an individual has low product knowledge of, their WTP for the product is higher when they can touch it. Therefore when brand and product schema are low, touch has a positive effect on consumer WTP as it acts as a conduit through which new information is gathered. In summary, touch matters when an individual possesses low brand familiarity and low product knowledge. Insignificant results were reported for sweater and pillowcase (regarding product evaluation, purchase intention, confidence in judgment and willingness to pay) and bath towel (regarding product evaluation, purchase intention and confidence in judgment).

7.3.2.5 RQ3a and RQ3b. Psychological ownership and affective reaction as mediators of touch effects on consumer response to unfamiliar branded products

Although psychological ownership and affective reaction were proposed as mediators of touch effects on consumer response to unfamiliar branded products, mediation analysis was not run, and the detailed rationale for this is provided in section 5.5.6.

7.3.3 Brand status related findings

7.3.3.1 RQ4a. Influence of touch on consumer response to luxury branded products

The results showed that touch increased product evaluations for the luxury branded (Chanel) sweater as well as had a marginally significant positive effect on product evaluation of the mug (providing partial support for H4a). The product evaluation results of the bath towel although insignificant showed a similar pattern. Confidence in judgment results were insignificant, but showed a pattern indicative of an increase where touch was (versus was not) allowed. The effect of touch may not have been as strong for a number of reasons. First, no actual luxury brand logos were used on the products (see Section 4.11.2.2) and participants had to rely on the questionnaire and the verbal instructions given by the researcher that the products presented were from the Chanel brand. Lee, Ko, & Megehee (2015) find that the presence of a logo influences perceptions of an individual wearing a product with visible luxury brand logo clothing conveying considerably higher status and wealth ratings of the wearer compared to those in an item with non-luxury brand logo or no logo at all. Therefore, despite higher product evaluations when touched, the lack of logos on the products may have reduced the authenticity of the product brand status which then served to

lower confidence in this judgment. The touch effect might have been stronger if brand logos/brand name labels were used. Alternatively, it could be that touch simply does not increase confidence in judgment given that the luxury brand Chanel already has a stable and favourable reputation, and touching did nothing to increase this. Future research can look into this. However, both product evaluation and confidence in judgment findings suggest that a positive product touch effect on luxury branded products could exist.

Purchase intentions did not significantly increase with touch. This shows that simply because one likes or thinks a luxury branded product is good (i.e., has higher product evaluations of it) touching it does not necessarily make them want it, and that purchase intentions for luxury branded products are not solely driven by the effects of touching it but may be attributable to additional factors. Indeed prior research identifies a number of factors that drive luxury brand consumption relating to the product/brand, social-function attitudes (external environment) and individual characteristics (e.g. ones need for uniqueness), because consumers often use luxury brands to demonstrate their individuality and exhibit their social standing (Nueno & Quelch, 1998; Vigneron & Johnson, 2004; Wilcox, Kim, & Sen, 2009; Berthon et al., 2009; Tsai, 2005). Hung et al. (2011) found that purchase intentions for luxury brand products are driven by the functional (perceived quality) and experiential (rarity and uniqueness perception) values of the luxury brand and social influences such as how one will be perceived by others positively.

On an individual level, one factor could be one's need for uniqueness, which is defined as *'the trait of pursuing differentness relative to others through the acquisition, utilization, and disposition of consumer goods for the purpose of*

developing and enhancing one's self-image and social image' (Tian, Bearden, & Hunter, 2001,; p. 52). This need for uniqueness influences the degree of affect elicited by and therefore purchase intentions for luxury brands (Bian & Forsythe, 2012). Another individual level factor affecting purchase intentions could be mood. Yazdanparast & Spears (2013) found that in an online environment, which represents a no touch environment, lack of touch did not lead to significant differences in purchase intentions between high and low NFT individuals, if high NFT's were in a positive mood (the researchers' manipulated mood at the start of their experiments). Conversely, when in a negative mood, purchase intentions were lower for those with a high compared to a low NFT. Mood in that instance acted as a compensatory mechanism for touch. It is plausible then that mood may have played a role in influencing the results of Study 2 and future research could account for this.

Luxury purchases have a lot more to do with the individual and touch may play a larger role in influencing consumers already motivated to buy luxury brands. Therefore, solely relying on touch to increase purchase intentions without taking into account the aforementioned factors could have lessened the effect of touch in Study 2. Additionally, the sample used comprised of university students who are less likely to have the financial capacity or interest in purchasing luxury branded products (in comparison perhaps to a luxury target market sample), therefore touching did not influence their intent. These results indicate that effect of touch on evaluation and confidence in judgment are less likely to be transferable to intended behaviour. Purchase intentions can also vary by the impact of factors such as quality and value perception (Zeithaml, 1988). Therefore, as the products used did not originate from the Chanel brand, touching them may have led to a mismatch between product

experience and brand expectation, therefore resulting in no significant difference in purchase intentions when touch was an was not available.

All WTP results were insignificant across all three products, but showed a similar pattern of effect across the board where WTP was lower when products were touched. As the products used in the experiment did not come from the actual Chanel luxury brand as stated, their quality may have contradicted participants' image/views of the Chanel brand. Touching may thus have resulted in the discernment of quality which did not match expected quality expected of a luxury branded product. This reasoning is supported by the confirmation disconfirmation theory (Oliver, 1980).

7.3.3.2 RQ4b. NFT influence on consumer response to touch

No support was found for NFT influence on touch effects on product evaluation, purchase intention, confidence in judgment and willingness to pay for the luxury branded sweater, mug and bath towel. The insignificant results could simply mean that when it comes to luxury branded products (specifically the sweater in this case) touch increases product evaluations irrespective of one's NFT levels. The results of Study 1 where non-luxury brands were used provided some evidence (for one out of the three products used) that product touch effects are dependent on levels of NFT, specifically, positively affecting those with high NFT. However, as Study 2 implies, when considering luxury branded products, the effect of touch seems to not be dependent on the level of NFT; a finding which is inconsistent with prior literature (Grohmann et al., 2007; Jin, 2011; Krishna & Morrin, 2008; Peck & Childers, 2003a, 2003b; Peck & Johnson, 2011). Therefore implying that NFT moderation effects of product touch is context specific (valid in a brand familiarity context but not in a brand status one).

However, a pattern was noted in the insignificant results where product evaluation was concerned. Product evaluation scores were higher in the touch condition for low NFT individuals, for the sweater and bath towel. Conversely, product evaluation scores were higher in the touch condition for high NFT individuals, for the mug. Sweaters and bath towels are considered to be products high in haptic salience (touch is important during evaluation) while a mug possesses less haptic salience. Therefore it would seem that for the luxury branded products high in haptic salience, touching has a greater effect for those with a low NFT, while for the product with lower haptic salience, touch matters more for high NFT individuals. These results are indicative and it is not immediately clear why this would be the case as literature informs that the difference would be more significant for high NFT individuals for the high haptic salient products (Peck & Childers, 2003b). Another pattern identified was with WTP, where lower WTP scores were noted across all products in the touch condition, for those with a high NFT. As explained in the previous section (section 7.3.3.1) lower WTP pattern could be indicative of a mismatch between expected quality of a luxury branded product and the haptic feedback received from touch. Additionally, Grohmann et al. (2007) highlight that the effect of touch is indifferent for low quality products at high and low levels of NFT thus the lack of significant findings for the sweater, mug and bath towel could suggest that the products were considered as lower quality during the touch experience.

7.3.4 RQ4c. Brand status influence on consumer response to touch

It is likely that the touch effect is more influential for luxury brands as opposed to non-luxury brands and to statistically determine this brand status moderation effect, data from Study 1 and Study 2 (for the sweater) was combined and analysed. As discussed in Chapter 3, the association of luxury brands with status, prestige,

exclusivity, heightened pleasure and self-esteem (Kapferer & Bastien, 2009; Veblen, 1899; Dubois et al., 2001) jointly embody a positive '*luxury essence*.' An essence or what individuals consider to be an essence, forms the basis from which pleasure from things or events is derived (Bloom, 2010). We cherish items that have come into close proximity with famed individuals for example (Bloom, 2010; Newman et al., 2011) and are willing to pay exorbitant prices for items (e.g., in 2004, Britney Spears' used chewing gum was sold for \$14,000, Justin Bieber's worn 2011 Super Bowl space suit outfit for \$5,800 and Justin Timberlake's half eaten French toast for \$3,154). According to contagion theory, when a person or object (source) comes into contact with another person or object (target) either directly or indirectly, properties from the source are believed to be transferred to the target (Rozin & Nemeroff, 1990). When the two are in contact the source transfers its positive or negative '*essence*' (all or part of its properties) to the target object either mentally, physically or morally (Nemeroff & Rozin, 1994; Rozin et al., 1986).

Drawing on contagion theory, this research project argued that in the context of luxury brands, this '*essence*' would be positive and transferrable from the luxury brand to the product. As such, the positivity derived from the transference would result in products from luxury brands receiving a more positive consumer response, compared to products from non-luxury brands. Furthermore, as proximity heightens the feeling of contagion (Argo et al., 2006; Mishra, 2009; Morales & Fitzsimons, 2007) this *luxury essence* would be greater when an individual came into direct physical contact (touch environment) with the source of contagion (in this case the luxury branded product) therefore intensifying this positive consumer response.

Results provided an indication of a brand status influence on product touch effects, where touch increased product evaluations of the luxury (Chanel) branded sweater but not for the non-luxury (Primark) brand sweater. It could be that the perception of the Primark brand as lower quality and ‘super-cheap’ (Economist, 2015; Moore, 2013) influenced overall consumer response irrespective of whether individuals got the chance to touch the product. In the no touch condition for example, there was no difference in product evaluation scores for the luxury and non-luxury branded sweater (surprisingly, product evaluation scores seemed slightly higher for the non-luxury branded sweater instead of the luxury branded one). As such, it can be deduced that no luxury brand essence was transferred to the sweater in this condition (despite the same sweater being used). Therefore, overall product evaluation results imply that the proposed brand contagion effect occurred but was only activated through product touch. Brand status moderation effects for the remaining variables (purchase intention, confidence in judgment and WTP) were insignificant.

The insignificant purchase intentions could be explained with the rationale provided in Section 7.3.3.1. The lack of differences in confidence in judgment may be explained by the fact that the reputation of luxury brands as being good already means that touch does not alter their confidence in evaluative judgments. Consequently, it seems that touching luxury branded products does not reassure consumers of their confidence in judgment but instead serves to help increase their evaluation of the product. The interaction between product touch and brand status has no significant effect on WTP however, but observation of the means implies that WTP irrespective of touch was higher for the luxury than non-luxury branded sweater. This is to be expected as luxury brands are known for being more expensive than luxury brands in general. What is interesting to note is not touching the luxury

sweater had a greater positive effect while not touching the non-luxury sweater had a very slightly negative effect. Overall, touching luxury brands seems to increase evaluations but seemingly has a negative effect on one's WTP for it. The negative effect on WTP may be down to the products used, with existing schema not matching the actual products. However, it is also possible that the results are communicating another message, that not allowing touch increased the value attached to luxury brand products.

Overall, the marginal support for brand status moderation effects suggests two things. First, it implies that the predicted brand contagion effect occurred (branding the sweater as Chanel as opposed to Primark positively influenced product evaluation). Also, that brand status as opposed to brand familiarity is a stronger indicator of when product touch matters. In effect, whether touching products results in a significantly positive consumer response is determined by the level of luxury brand status of the brand. Secondly and perhaps more importantly, the results imply that brand contagion did occur, but was only activated through the individuals' physical contact with the source of the contagion (that is, the luxury branded sweater). The higher the perceived luxury status, the more significant touch became. These findings provide initial empirical feedback to researchers such as Grohmann et al. (2007), Jansson-Boyd & Marlow (2011) and Peck & Childers (2003a, 2003b) who suggested that brand name might have an influence product touch effects.

7.3.5 RQ4d. Touch, brand status and NFT influence on touch effects

The three-way interactions between touch, NFT and consumer response (product evaluation, purchase intention, confidence in judgment and WTP) were all insignificant. It was predicted that when evaluating a non-luxury branded product,

consumer response in the no touch environment would be greater for low NFT than high NFT but no difference in consumer response in the no touch environment between high and low NFT individuals when evaluating a luxury brand. The next step involved testing if psychological ownership or affective reaction mediated touch effects for the luxury branded product.

7.3.5.1 RQ4e and RQ4f. Psychological ownership and affective reaction as mediators of touch effects on consumer response to luxury branded products

The mediation H4e and H4f were not supported contradicting findings of Peck & Shu (2009). These findings demonstrate that although these two underlying mechanisms are shown to explain touch effects they do not apply where luxury branded products are considered. In this research project the duration of physical (touch) and non-physical (no touch) was set at one minute which may not have been long enough to induce feelings of ownership or affect.

7.4 Research contributions and marketing implications

7.4.1 Theoretical Contributions

7.4.1.1 Contribution to brand familiarity literature

- i. The results presented a pattern indicative of a negative brand familiarity effect, which is contradictory to the majority of existing brand familiarity literature. To the researchers knowledge the only other study that has demonstrated this negative effect (viral marketing context) is by Huang & Zhou (2016). As this demonstrates that brand familiarity may not be a precursor to favourable consumer response, it is worth exploring the role additional factors such as brand image or brand reputation play when examining the concept of brand familiarity in future research. This research

therefore contributes to brand familiarity knowledge by being one of the few studies to the researchers' knowledge, to imply that there may be instances where the familiarity of a brand may not work in its favour.

- ii. Despite the plethora of brand familiarity moderation evidence (e.g., Tam, 2008; Arora & Stoner, 1996; Hoyer & Brown, 1990; Campbell & Keller, 2003; Kent & Allen, 1994; Machleit et al., 1993; Dawar & Lei, 2009; Sundaram & Webster, 1999), to the researcher's knowledge little is known regarding its interactive effect with product touch (Jha & Balaji, 2015). Therefore, my research significantly contributes to the limited knowledge in this area. The research specifically contributes to knowledge by showing no statistically significant evidence of this effect in the context of product touch. As such, providing an answer to speculation (e.g., Jansson-Boyd, 2011) that the effect of product touch is a function of brand familiarity. However, it must be said that the insignificant results did point to a possible brand familiarity moderation effect. Specifically, that touching products from an unfamiliar brand resulted in favourable consumer responses (higher confidence in evaluative judgment and product evaluation). These results are however indicative and possibly warrant future examination.

7.4.1.2 Contribution to luxury brand literature

Luxury branding research is limited to a large extent by a focus on definitions and conceptualizations of luxury brands and as Patrick & Hagtvedt (2014) stress, there was need for research regarding the evaluation of luxury brands and processing of luxury brand information. Although the luxury brand status did not act as a surrogate for touch in the no touch condition, it did enhance the effect of product touch, highlighting the power of luxury brands (in comparison to non-luxury brands). In

effect, this is the first study to empirically show that product touch and luxury brands are positively associated. My research therefore contributes to brand luxury literature by extending the concept of luxury brand status to the area of sensory marketing.

7.4.1.3 Contribution to sensory marketing literature

The recognition of sensory marketing is an emerging field in consumer behaviour with tremendous requirement for research (Krishna, 2012) and the consequent exponential growth in attention from both academia and industry (Krishna, Cian, & Sokolova, 2016) is indicative of the potential of this area. Guided by a conceptual framework underpinned by the Stimulus-Organism-Response Model (Mehrabian & Russell, 1974) this research project contributes to this growth by extending current and notably under-researched area of the sense of touch (Krishna, 2012; Peck & Childers, 2005). By doing so, answering several calls for research to investigate the interaction of touch and brand name (Grohmann et al., 2007; Jansson-Boyd, 2011; Peck & Childers, 2003a; Peck, 2010). Specific contributions to this domain are highlighted below:

- i. This research project is one of the first to indicate that product touch effects do not differ by brand familiarity but instead are subject to luxury brand status, as luxury brand product evaluations increase in a touch environment. Consequently, identifying a probable brand related boundary condition for product touch's effects.
- ii. According to existing studies, touch does have a significant positive effect for high NFT individuals and not low NFT individuals (Jin, 2011; Krishna & Morrin, 2008; Peck & Childers, 2003a, 2003b). Indeed, research on the application and effects of NFT differences is still in its infancy (Nusbaum et

al., 2010; Vieira, 2012) and it is hoped that the findings of this research project will be beneficial in facilitating further research in the area. This research project extends the concept of NFT to brand literature and provides novel contributions to existing NFT literature in three specific ways:

- a. First, Study 1 identified a possible brand related boundary condition for NFT moderation, that is, brand familiarity. Specifically, marginal support was found for greater confidence in judgments when a familiar branded product was touched by individuals with a high NFT. To the researcher's knowledge this is the first study to provide some evidence that the influence of NFT on touch effects is context-specific and by doing so provides new insight to NFT knowledge. Brand familiarity and NFT have previously been studied in isolation, but by examining their joint effects, this study extends the current knowledge on NFT.
- b. Second, in the context of non-luxury brands, findings confirmed that NFT does indeed influence touch effects as found in prior literature (Jin, 2011; Krishna & Morrin, 2008; Peck & Childers, 2003a, 2003b).
- c. Third and surprisingly, within the context of luxury brands, an individuals degree of NFT is irrelevant in influencing their response to touch (in a sense, the effect of the brand luxury supersedes the strength of NFT's impact).
- iii. Although prior studies have shown that psychological ownership and affective reaction are mediators of touch effects (Peck & Shu, 2009) the current research contributes to literature by revealing that these prior research findings do not stand in the context of luxury branded products. These findings are surprising but raise questions suggesting that a different

underlying mechanism may be responsible which future research can investigate.

7.4.1.4 Contribution to product knowledge literature

This research project answers McCabe & Nowlis' (2003) proposition that higher (as opposed to lower) product knowledge could reduce the likelihood that touch was influential in decision making, by showing that it does not (where non-luxury brands are concerned). That is, product knowledge does not moderate touch effects. Although the findings were insignificant, they do provide an indication that touch positively influences consumer response when product knowledge is low rather than high. Essentially, this suggests that when faced with an unfamiliar brand, a consumer's WTP for that product is likely to be higher when they can touch it and when they lack (or have minimal) prior knowledge of the product or product category. These findings are indicative rather than conclusive, but nevertheless open up a new avenue for future research to explore as this is one of the first studies to examine this relationship.

7.4.1.5 Contribution to contagion theory literature

Contagion theory states that when an individual or object (i.e. the source) directly or indirectly comes into contact with another person or object (i.e. the target), properties from the source are transferred to the target (Rozin & Nemeroff, 1990). In effect, during contact the source transfers part or all of its positive or negative properties ('*essence*') to the target object mentally, physically or morally (Nemeroff & Rozin, 1994; Rozin et al., 1986). The application of contagion theory in touch literature has contributed to the understanding of three key things. First, that products in close proximity to one another are capable of 'contaminating' other products (referred to

as product contagion by Morales & Fitzsimons, 2007), second, that consumers coming into physical contact with a product can positively contaminate it (referred to as consumer contagion by Argo et al. 2006) and third, that consumers can positively contaminate a product they come into contact with (referred to as positive consumer contamination by Argo, Dahl, & Morales, 2008). In these studies, the extent of contagion effects was determined through subsequently reported consumer behaviour response variables.

In addition to the currently known contagion types, it had been suggested but never was empirically tested that certain brand types could evoke positive feelings or associations that could then drive positive contagion effects (Argo et al., 2008) This research project responded to this suggestion and examined contagion effects from a brand status (luxury or non-luxury) perspective, and contributed to knowledge by providing evidence of a brand contagion effect. More significantly however, a key finding is that in the context of luxury brands this brand contagion effect was activated through product touch. Overall, my research contributes to contagion theory literature by extending the theory to the concept of luxury brands, which to my knowledge has not been examined until now.

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7.4.1.6 Contribution to overall marketing literature

An overview article in the Journal of Marketing notes that empirical and methodological advances have overtaken conceptual advances in the marketing field despite the recognition of and subsequent calls for conceptual research (MacInnis, 2011). Indeed, '*Conceptual advances are critical to the vitality of the marketing discipline*' (MacInnis, 2011; p. 136). Accordingly, research making conceptual advances is valued for its contribution to new ideas through examining previously

unexplored areas. Although some research hypotheses (despite their conceptualization from existing theory and concepts) were not supported, my research still makes a novice contribution to knowledge by conceptualizing previously unexplored relationships between product touch, product knowledge, brand familiarity and brand status. It is therefore my belief that the findings have moved one step further on the journey to a better understanding of these areas, and established a foundation on which future researchers can build upon.

7.4.2 Practical contributions/implications

Consumers are exposed to extrinsic cues during the pre-purchase stage (e.g., brand names) and examining these in addition to touch effects provides a more realistic depiction of an actual purchase situation. From the theoretical contributions made, practical implications of this research can serve both marketers and retailers in the following ways:

- For unfamiliar branded products, results showed that touch is not an influential factor in defining consumer response, meaning that retailers from such brands can afford to have online store presence without hurting their brand. They could instead focus on other factors such as price discounts or price promotions to encourage sales.
- Results are indicative that touch may increase willingness to pay for products that consumers are less knowledgeable about, that also come from unfamiliar brands. Accordingly, new brand retailers with novel or less known products retailers of up and coming or well-known brands may consider setting up physical stores or using seasonal/periodic pop-up shops to sell their products. Alternatively, provide detailed information about the product through

advertisements for example, in order to negate the negative effects of not being able to touch such products.

- Physical stores are the most critical points of contact with luxury consumers who are heavily influenced by what they see and experience in store (Remy et al., 2015). The findings reinforce this and may help explain why consumers prefer to go instore to buy a luxury branded product compared to purchasing them online. Luxury retailers tend to control customer contact with products in a store to preserve the integrity of the products and perhaps uphold an image or sense of exclusivity. Although this rationale seems reasonable, this research proposes that it may be more beneficial for a luxury brand to allow consumers to touch their products instore as this may increase their product evaluations. Furthermore, purchase intentions may increase as a result of this touching. Overall, consumer product touch seems advantageous to luxury brand retailers.
- On average, luxury consumers have more spending clout and are less swayed by marketing strategies that revolve around price promotions. Long-time luxury marketing consultant Tony King for example points that luxury consumers *'respond to access rather than promotion'* (EMarketer, 2013). If anything, the exclusivity that consequently comes from a hefty price tag is desired. According to the Wall Street Journal, a study by Annalect¹⁶ finds that affluent customers (aged between 18 and 59 years) expect a highly customized experience when purchasing luxury goods (Tadena, 2015). Results of the over 300 interviews carried out by Annalect's further highlights that after sales service (71% of respondents) and instore experience (over 64% of respondents) are significant drivers of luxury purchases. In effect, luxury consumers appear to be better swayed by the luxury experience than price promotions when making their

¹⁶ A division of the leading global advertising, marketing and corporate communications company Omnicom Media Group.

purchase decisions. As my research project finds, touching can improve consumer evaluations of luxury branded products therefore reaffirming the need for luxury brand retailers to adopt and further develop an experience based marketing strategy as a way to drive more luxury consumer traffic to their stores.

7.5 Limitations and recommendations for future research

The research project provides an initial response to numerous calls to investigate the role of brand name in moderating effects of product touch, but there are recognized limitations of this research. As a result, a number of recommendations for future researchers are proposed.

Although using a student sample in both studies decreased the probability of extraneous variables (unexplained variance) from affecting experimental analysis and thus the research outcome (Reynolds et al., 2003), the use of a student sample also limits the generalizability of the results, as students represent only a subgroup of consumers in a general population. Future research could strive to undertake studies with a more representative sample (not simply university students) to increase the external validity of the conclusions made. For example, future research can examine the behaviour of a more specific consumer segment, that is, luxury buyers or buyers who have a history of luxury purchases and then test the effect that touch and no touch has on their responses.

Despite every effort being made to recruit participants for the experiments, such as providing incentives (chocolates and £5) and participation requests (walking around campus, approaching various seminar groups, use of posters around the entire

campus), participation was voluntary and ultimately attendance was not within the control of the researcher. The fact that participation in the research project offered no course credits (as noted in some other faculties) further exacerbated this issue. Additionally, during the data collection period the majority of students were busy with seminar attendance or group work. As such, the sample sizes per treatment group attained, although statistically adequate could have been higher. This may have accounted for the lack of significance for a number of the research hypotheses presented, despite their formulation based on sound theory, concepts and prior literature. Future researchers should therefore formulate strategies to achieve these larger sample sizes.

The majority of purchase intentions results did not follow a systematic pattern that would give an indication of overall purchase intentions. Perhaps controlling for additional factors such as financial status (especially in Study 2 where a luxury brand was examined) and looking for ways to evoke (e.g., through using an observation task/experiment) as opposed to solicit purchase intentions through a questionnaire might improve results.

There are also some methodological considerations to make in future research. Because of the nature of experiments used in this research project (lab based experiments), the results are limited by ecological validity. To increase ecological validity future research could consider observing participants in a natural setting (e.g. in an actual store) as this would achieve greater realism. Although this creates more possible confounding variables, it would be useful to see what happens when touch is controlled more naturally.

The products used did not originally come from the brands stated in the experiments. This was done to control exogenous variables as well as keep within the research budget limits. As a result, these products may not have reflected the true nature/quality of the brands used in the experiments. Given that a luxury brand name was used in Study 2, the mismatch between the image created by the brand and product may have been more of an issue. Future research may seek to use products from the actual brands to reduce this mismatch, therefore increasing the realism of the experiment. To increase generalizability of Study 2 conclusions across product categories, future researchers could also examine additional product categories to provide further insight into the working of touch and brand name moderation.

In Study 2, although psychological ownership and affective reaction are shown in prior research to be the underlying mechanism explaining touch effects, they were not shown to apply in a luxury brand context. Future research could increase the duration that participants are exposed to the product could increase psychological ownership. Future research should look into examining other mediators such as emotional contagion, which is defined as ‘the tendency to automatically mimic and synchronize movements, expressions, postures, and vocalizations with those of another person and, consequently, to converge emotionally’ (Hatfield, Cacioppo, & Rapson, 1992; p. 153-154).

The Theory of Reasoned Action (TRA) informs that attitudes influence intention which then affects behaviour. However, the dependent measures of product evaluation (attitude towards product), confidence in judgment, purchase intention (intention) and WTP (intention/behaviour) were not analysed in sequence but as a direct result of the independent variable (product touch). In effect, the study did not

examine the attitude-intention-behaviour model in its entirety; the reasons being, given the relative infancy of touch research in the consumer behaviour literature, the key aim of this research project was examining the separate effects of touch on each of the individual factors, in order to determine the moderating role the brand name played in this relationship. Future research could use the findings from this research as a starting point to model their experiments and analyses in accordance with the TRA and other classic persuasion models of psychology.

Study 1 found no significant effects of brand familiarity on product touch effects on consumer response, for any of the familiar branded products (sweater, pillowcase and bath towel, all of which are known to be high in haptic salience). It could be that the interaction effect of product touch and brand familiarity depends on additional factors like brand image, brand involvement or brand reputation. Future studies could examine the role of these additional brand concepts on touch accessibility outcomes, to further advance understanding on the interactive role of product touch and brand name. Additional research can also account and control for purchase frequency which is known to result in purchase frequency bias.

7.6 CONCLUSION AND CHAPTER SUMMARY

The purpose of this research project was to provide a more complete understanding of how product touch effects differ by brand familiarity (familiar versus unfamiliar brands) and brand status (luxury versus non-luxury brands). By doing so, extending the Stimulus-Organism-Response Model by identifying two additional brand related moderators. This research project provides additional insight into the effects of product touch from the perspective of two contextual variables: brand familiarity and brand status. This final chapter presented a detailed discussion of the results obtained

in both Study 1 (Chapter 5) and Study 2 (Chapter 6). Additionally, the research contributions both theoretically and practically were discussed, followed by the acknowledged limitations of the research project and consequent recommendations to future researchers. Collectively, research findings of this project present significant advancements to both the touch and brand literature, while presenting new opportunities to practitioners for designing marketing activities that take brand and product touch interaction into consideration.

REFERENCES

- Aaker, D. (1996). *Building strong brands*. London: Simon and Schuster.
- Aaker, D. A.. (1991). Managing Brand Equity. *Journal of Marketing*, 56(2), 125.
- Aaker, D. A., & Keller, K. L. (1990). Consumer Evaluations of Brand Extensions. *Journal of Marketing*, 54(1), 27–41.
- Ackerman, J., Nocera, C., & Bargh, J. (2010). Incidental haptic sensations influence social judgments and decisions. *Science*, 328(5986), 1712–1715.
- Acuna, E., & Rodriguez, C. (2004). The treatment of missing values and its effect in the classifier accuracy. In classification, clustering, and data mining applications. In *Classification, clustering, and data mining applications* (pp. 639–647). Springer Berlin Heidelberg.
- Adler, J., Csikszentmihalyi, M., & Rochberg-Halton, E. (1983). The Meaning of Things: Domestic Symbols and the Self. *Contemporary Sociology*, 12, 452.
- Ajzen, I., & Driver, B. L. (1992). Application of the theory of planned behaviour to leisure choice. *Journal of Leisure Research*, 24(3), 207-224.
- Alba, J. W., & Hutchinson, J. W. (1987). Dimensions of Consumer Expertise. *Journal of Consumer Research*, 13(4), 411–454.
- Amendah, E., & Park, J. (2008). Consumer Involvement and Psychological Antecedents on Eco-friendly Destinations: Willingness to Pay More. *Journal of Hospitality Marketing & Management*, 17(3), 262–283.
- Anderson, N. (1965). Averaging versus adding as a stimulus combination rule in impression formation. *Journal of Experimental Psychology*, 2, 1–9.
- Anderson, N. (1981). *Foundations of Information Integration Theory*. New York: Academic Press.
- Andrews, J. C. (1988). Motivation, ability, and opportunity to process information: Conceptual and experimental manipulation issues. *Advances in Consumer*

Research, 15(1), 219–225.

Anisfeld, E., Casper, V., Nozyce, M., & Cunningham, N. (1990). Does infant carrying promote attachment? An experimental study of the effects of increased physical contact on the development of attachment. *Child Development, 61*(5), 1617–1627.

Areni, C. S., & Kim, D. (1994). The influence of in-store lighting on consumers' examination of merchandise in a wine store. *International Journal of Research in Marketing, 11*(2), 117–125.

Argo, J. J., Dahl, D. W., & Morales, A. C. (2006). Consumer Contamination : How Consumers React to Products. *American Marketing Association, 70*(2), 81–94.

Argo, J. J., Dahl, D. W., & Morales, A. C. (2008). Positive Consumer Contagion : Responses to Attractive Others in a Retail Context. *Journal of Marketing Research, 45*(6), 690–701.

Aronson, E., & Carlsmith, M. (1968). Experimentation and social psychology. In G. Lindzey & E. Aronson (Eds.), *The handbook of social psychology*. Reading, MA: Addison-Wesley.

Arora, R., & Stoner, C. (1996). The effect of perceived service quality and name familiarity on the service selection decision. *Journal of Services Marketing, 10*(1), 22–34.

Atakan, S. (2014). Consumer response to product construction: the role of haptic stimulation. *International Journal of Consumer Studies, 38*(6), 586–592.

Atakan, S. S., Bagozzi, R. P., & Yoon, C. (2014). Consumer participation in the design and realization stages of production: How self-production shapes consumer evaluations and relationships to products. *International Journal of Research in Marketing, 31*(4), 395–408.

ATKearney. (2014). *On Solid Ground: Brick-and-Mortar Is the Foundation of*

Omnichannel Retailing., Retrieved on 17 May 2016 from
<https://www.atkearney.com/consumer-products-retail/on-solid-ground>

- Atkinson, J., & Braddick, O. (1982). Sensory and perceptual capacities of the neonate, in *Psychobiology of the Human Newborn*, John Wiley & Sons Ltd, Chichester, 191–220.
- Atwal, G., & Williams, A. (2009). Luxury brand marketing—the experience is everything! *Journal of Brand Management*, 16(5–6), 338–346.
- Avey, J. B., Avolio, B. J., Crossley, C. D., & Luthans, F. (2009). Psychological ownership: Theoretical extensions, measurement and relation to work outcomes. *Journal of Organizational Behavior*, 30 (2), 173–191.
- Axelrod, R. (1973). Schema Theory: An Information Processing Model of Perception and Cognition *. *The American Political Science Review*, 67(4), 1248–1266.
- Bagozzi, R. P. (1986). *Principles of marketing management*. Chicago: Science Research Associates.
- Bagwell, L. S., & Bernheim, B. D. (1996). Veblen Effects in a Theory of Conspicuous Consumption. *American Economic Review*, 86(3), 349–373.
- Baker, J., Grewal, D., & Parasuraman. (1994). The influence of Store Environment on Quality Inferences and Store Image. *Journal of the Academy of Marketing Science*, 22(4), 328–329.
- Baker, W., Hutchinson, J., Moore, D., & Nedungadi, P. (1986). Brand familiarity and advertising: effects on the evoked set and brand preference. *Advances in Consumer Research*, 13(1), 637–642.
- Balaji, M. S., Raghavan, S., & Jha, S. (2011). Role of tactile and visual inputs in product evaluation: a multisensory perspective. *Asia Pacific Journal of Marketing and Logistics*, 23(4), 513–530.

- Baraldi, A. N., & Enders, C. K. (2010). An introduction to modern missing data analyses. *Journal of School Psychology, 48*(1), 5–37.
- Baron, R. M., & Kenny, D. a. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173–1182.
- Barone, M. J., Miniard, P. W., & Romeo, J. B. (2000). The Influence of Positive Mood on Brand Extension Evaluations. *Journal of Consumer Research, 26*(4), 386-400.
- Barsalou, L. W. (2008). Grounded cognition. *Annual Review of Psychology, 59*, 617–45.
- Bartlett, F. C. (1932). Remembering: A Study in Experimental and Social Psychology. Cambridge University Press
- Batra, R., & Ray, M. L. (1986). Affective Responses Mediating Acceptance of Advertising. *Journal of Consumer Research, 13*(2), 234-249.
- Bauer, H., Sauer, N., & Becker, C. (2006). Investigating the relationship between product involvement and consumer decision-making style. *Journal of Consumer Behaviour, 5*(4), 342–354.
- Baumgartner, H., & Steenkamp, J.-B. E. M. (2001). Response Styles in Marketing Research: A Cross-National Investigation. *Journal of Marketing Research, 38*(2), 143–156.
- Beaglehole, E. (1932). *Property: A study in social psychology*. New York: NY: Macmillan.
- Beals, D. E. (1998). Reappropriating Schema: Conceptions of Development From Bartlett and Bakhtin. *Mind, Culture, and Activity, 5*(1), 3–24.
- Bearden, W., & Etzel, M. (1982). Reference Group Influence on Product and Brand

- Purchase Decisions. *Journal of Consumer Research*, 9(2), 183–194.
- Bearden, W. O., Netemeyer, R. G., & Haws, K. L. (2011). *Handbook of marketing scales: Multi-item measures for marketing and consumer behavior research* (3rd Edition). Thousand Oaks: Sage Publications.
- Beggan, J. K., & Brown, E. M. (1994). Association as a Psychological Justification for Ownership. *The Journal of Psychology*, 128(4), 365–380.
- Bei, L. T., & Heslin, R. (1997). The Consumer Reports mindset: Who seeks value - The involved or the knowledgeable? *Advances in Consumer Research*, 24(1), 151–158.
- Bellizzi, J. A., & Hite, R. E. (1992). Environmental color, consumer feelings, and purchase likelihood. *Psychology and Marketing*, 9(5), 347–363.
- Bellizzi, J., Crowley, A., & Hasty, R. (1983). The Effects of Color in Store Design. *Journal of Retailing*, 59(1), 21–45.
- Bennett, P., & Harrell, G. (1975). The role of confidence in understanding and predicting buyers' attitudes and purchase intentions. *Journal of Consumer Research*, 2(2), 110–117.
- Berger, I. (1992). The nature of attitude accessibility and attitude confidence: A triangulated experiment. *Journal of Consumer Psychology*, 1(2), 103–123.
- Berry, C. J. (1994). *The Idea of Luxury : A Conceptual and Historical Investigation*. Cambridge University Press.
- Berthon, J.-P., Berthon, P., Pitt, L. F., & Parent, M. (2009). Aesthetics and ephemerality: Observing and preserving the luxury brand. *California Management Review*, 52(1), 45–66.
- Bettman, J. (1979). Memory Factors in Consumer Choice: A Review. *Journal of Marketing*, 43, 37–53.
- Bettman, J., & Park, C. W. (1980). Effects of Prior Knowledge and Experience and

- Phase of the Choice Process on Consumer Decision Processes: A Protocol Analysis. *Journal of Consumer Research*, 7(3), 234–248.
- Bian, Q., & Forsythe, S. (2012). Purchase intention for luxury brands: A cross cultural comparison. *Journal of Business Research*, 65(10), 1443–1451.
- Billiet, J. B., & McClendon, M. J. (2000). Modeling Acquiescence in Measurement Models for Two Balanced Sets of Items. *Structural Equation Modeling: A Multidisciplinary Journal*, 7(4), 608–628.
- Biswas, A. (1992). The moderating role of brand familiarity in reference price perceptions. *Journal of Business Research*, 25(3), 251–262.
- Bitner, M. J. (1992). Servicescapes: the impact of physical surroundings on customers and employees. *Journal of Marketing*, 56 (2), 57–71.
- Blackwell, R. D., Miniard, P. W., & Engel, J. F. (2001). *Consumer Behavior*. Orlando, FL: The Dryden Press.
- Blanche, M. T., Durrheim, K., & Painter, D. (2007). *Research in practice: Applied methods for the social sciences* (2nd Edition). University of Cape Town press.
- Bloom, P. (2010). *How Pleasure Works: The New Science of Why We Like What We Like*. New York: Norton.
- Bone, P., & Jantrania, S. (1992). Olfaction as a Cue for Product Quality. *Marketing Letters*, 3(3), 289–296.
- Botelho, A., & Pinto, L. C. (2002). Hypothetical, real, and predicted real willingness to pay in open-ended surveys: experimental results. *Applied Economics Letters*, 9(15), 993–996.
- Boulding, W., Kalra, a, Staelin, R., & Zeithaml, V. (1993). A dynamic process model of service quality: From expectations to behavioral intentions. *Journal of Marketing Research*, 30(1), 7–27.
- Brasel, S. A., & Gips, J. (2014). Tablets, Touchscreens, and Touchpads: How

- Varying Touch Interfaces Trigger Psychological Ownership and Endowment. *Journal of Consumer Psychology*, 24(2), 226–233.
- Brehmer, B., & Dorner, D. (1993). with computer-simulated microworlds: Escaping both the € narrow straits of the laboratory and the deep blue sea of the field study. *Computers in Human Behavior*, 9(2–3), 171–184.
- Breidert, C., Hahsler, M., & Reutterer, T. (2006). A Review of Methods for Measuring Willingness-to-pay. *Innovative Marketing*, 2(4), 8–32.
- Brewer, W. F., & Treyens, J. C. (1981). Role of schemata in memory for places. *Cognitive Psychology*, 13(2), 207–230.
- Brinberg, D., & Plimpton, L. (1986). Self-monitoring and product conspicuousness on reference group influence. *Advances in Consumer Research*, 13(1), 297–300.
- Brisoux, J., & Cheron, E. (1990). Brand categorization and product-involvement. *Advances in Consumer Research*, 17, 101–109.
- BritishCouncil. (2015). What to wear in the UK | Education UK (Global). Retrieved May 7, 2015, from <http://www.educationuk.org/global/articles/clothing-what-to-wear-as-a-uk-student/>
- Brown, T., Champ, P., Bishop, R., & McCollum, D. (1996). Which Response Format Reveals the Truth About Donations to a Public Good. *Land Economics*, 72(2), 152–166.
- Brown, T. J. (1992). Schemata in consumer research: A connectionist approach. *Advances in Consumer Research*, 19(1), 787–794.
- Browne, B. a., & Kaldenberg, D. O. (1997). Conceptualizing self-monitoring: links to materialism and product involvement. *Journal of Consumer Marketing*, 14(1), 31–44.
- Brucks, M. (1985). The effects of product class knowledge on information search behavior. *Journal of Consumer Research*, 12(1), 1–16.

- Bruner, G. C. (1990). Music, mood, and marketing. *Journal of Marketing*, 54(4), 94–104.
- Bruner, G. C., Hensel, P. J., & James, K. E. (2005). *Marketing scales handbook: A compilation of multi-Item measures* (Vol. 4). Chicago: American Marketing Association.
- Bryman, A. (1988). *Quantity and Quality in Social Research*. London: Routledge.
- Bryman, A. (2004). *Social Research Methods*. (2nd Edition). Oxford: Oxford University Press.
- Bryman, A. (2012). *Social Research Methods* (4th Edition). New York: Oxford University Press.
- Bryman, A., & Cramer, D. (1999). *Quantitative Data Analysis with SPSS Release 8 for Windows. A Guide for Social Scientists*. London: Routledge.
- Buchko, A. (1993). The Effects Of Employee Ownership On Employee Attitudes: An Integrated Causal Model And Path Analysis. *Journal of Management Studies*, 30(4), 633–657.
- Campbell, M. C., & Keller, K. L. (2003). Brand Familiarity and Advertising Repetition Effects. *Journal of Consumer Research*, 30(2), 292–304.
- Cardozo, R. N. (1965). An experimental study of customer effort, expectation, and satisfaction. *Journal of Marketing Research*, 2(3), 244–249.
- Carrigan, M., & Attala, A. (2001). The myth of the ethical consumer - do ethics matter in purchase behaviour? *Journal of Consumer Marketing*, 18(7), 560–578.
- Celsi, R., & Olson, J. . (1988). The role of involvement in attention and comprehension processes. *Journal of Consumer Research*, 15(2), 210–224.
- Chandon, P., Morwitz, V. G., & Reinartz, W. J. (2005). Do Intentions Really Predict Behavior? Self-Generated Validity Effects in Survey Research. *Journal of Marketing*, 69(2), 1–14.

- Chark, R., & Muthukrishnan, A. V. (2013). The effect of physical possession on preference for product warranty. *International Journal of Research in Marketing*, 30(4), 424–425.
- Charters, S., & Pettigrew, S. (2006). Product-involvement and the evaluation of wine quality. *Qualitative Market Research*, 9(2), 181–194.
- Chattopadhyay, A. (1998). When does Comparative Advertising influence brand attitude? the role of delay and market position. *Psychology & Marketing*, 15(5), 461–475.
- Chebat, J. C., & Michon, R. (2003). Impact of ambient odors on mall shoppers' emotions, cognition, and spending: A test of competitive causal theories. *Journal of Business Research*, 56(7), 529–539.
- Chen, S.-F. S., Monroe, K. B., & Lou, Y.-C. (1998). The effects of framing price promotion messages on consumers' perceptions and purchase intentions. *Journal of Retailing*, 74(3), 353–372.
- Cho, S., & Workman, J. (2011). Gender, fashion innovativeness and opinion leadership, and need for touch: Effects on multi-channel choice and touch/non-touch preference in clothing shopping. *Journal of Fashion Marketing and Management: An International Journal*, 15(3), 363–382.
- Christensen, L. (2004). *Experimental methodology* (6th Edition). Pearson Education Limited.
- Christodoulides, G., Michaelidou, N., & Li, C. H. (2009). Measuring perceived brand luxury: an evaluation of the BLI scale. *Journal of Brand Management*, 16(5-6), 395–405.
- Chung, H., Zhao, X., & Cruces, L. (2003). Humour effect on memory and attitude : moderating role of product involvement. *International Journal of Advertising*, 22(1), 117–144.

- Citrin, A. V., Stem, D. E., Spangenberg, E. R., & Clark, M. J. (2003). Consumer need for tactile input: An internet retailing challenge. *Journal of Business Research*, 56(11), 915–922.
- Cohen, J., & Andrade, E. (2004). Affect regulation, mentalization and development of the self. *Journal of Consumer Research*, 31(2), 358–367.
- Cohen, J. B., & Goldberg, M. E. (1970). The Dissonance Model in Post-Decision Product Evaluation. *Journal of Marketing Research*, 7(3), 315–321.
- Cohen, J. B., Pham, M., & Andrade, E. B. (2006). The Nature and Role of Affect in Consumer Behavior. In C. P. Haugtvedt, P. Herr, & F. R. Kardes (Eds.), *Handbook of consumer psychology* (pp. 1–98). Mahwah, NJ: Lawrence Erlbaum.
- Cooper, L. (2013). Sensory marketing – could it be worth \$100m to brands? Retrieved January 1, 2013, from <https://www.marketingweek.com/2013/10/30/sensory-marketing-could-it-be-worth-100m-to-brands/>
- Cordell, V. V., Wongtada, N., & Kieschnick, R. L. (1996). Counterfeit purchase intentions: Role of lawfulness attitudes and product traits as determinants. *Journal of Business Research*, 35(1), 41–53.
- Corey, S. M. (1937). Professed attitudes and actual behavior. *Journal of Educational Psychology*, 28(4), 271–280.
- Corneo, G., & Jeanne, O. (1997). Conspicuous consumption, snobbism and conformism. *Journal of Public Economics*, 66(1), 55–71.
- Cram, F., & Paton, H. (1993). Personal possessions and self-identity: The experiences of elderly women in three residential settings. *Australian Journal on Ageing*, 12(1), 19–24.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed*

- methods approaches* (2nd Edition). Thousand Oaks: Sage.
- Creswell, J. W. (2012). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (4th Edition). Upper Saddle River, NJ: Merrill.
- Cronbach, L. (1951). Coefficient Alpha and the Internal Structure of Tests. *Psychometrika*, 16(3), 297–334.
- Cronbach, L. (1971). *Educational measurement*. (R. Thorndike, Ed.) *Test validation*. Washington, D.C: American Council of Education.
- CRR. (2015). *Online Retailing: Britain, Europe, US and Canada 2015*. Centre for Retail Research. Accessed on 12 September 2016 from <http://www.retailresearch.org/onlineretailing.php>
- Crusco, A. H., & Wetzel, C. G. (1984). The Midas Touch: The Effects of Interpersonal Touch on Restaurant Tipping. *Personality and Social Psychology Bulletin*, 10(4), 512–517.
- Dahlen, M. (2001). Banner advertisements through a new lens. *Journal of Advertising Research*, 41(4), 23–30.
- Dahlén, M., & Lange, F. (2004). To challenge or not to challenge: Ad-brand incongruity and brand familiarity. *Journal of Marketing Theory & Practice*, 12(3), 20–35.
- Dahlén, M., Lange, F., Sjödin, H., & Törn, F. (2005). Effects of Ad-Brand Incongruence. *Journal of Current Issues & Research in Advertising*, 27(2), 1–12.
- Dall’Olmo Riley, F., & Lacroix, C. (2003). Luxury branding on the Internet: lost opportunity or impossibility. *Marketing Intelligence and Planning*, 21(2), 96–104.
- Darden, W. R., Schwinghammer, J. K. (1985). The influence of social characteristics

- on perceived quality in patronage choice behavior. In *Perceived Quality* (pp. 161–172). Lexington, MA: Lexington Books.
- Davis, R. (1963). *The value of outdoor recreation: an economic study of the Maine Woods*. Harvard University.
- Dawar, N., & Lei, J. (2009). Brand crises: The roles of brand familiarity and crisis relevance in determining the impact on brand evaluations. *Journal of Business Research*, 62(4), 509–516.
- Dawes, J. (2008). Do data characteristics change according to the number of scale points used? An experiment using 5 point, 7 point and 10 point scales. *International Journal of Market Research*, 50(1), 61–77.
- De Barnier, V., Rodina, I., & Valette-florence, P. (2006). Which Luxury Perceptions Affect Most Consumer Purchase Behavior? A Cross Cultural Exploratory Study In France , The United Kingdom And Russia. In *Proceedings des Congr s Paris-Venise des Tendences Marketing* (pp. 1–27).
- De Barnier, V., & Valette-florence, P. (2013). Culture and Luxury: An Analysis of Luxury Perceptions across Frontiers. *Luxury Marketing*, 37–56.
- Defleur, M. L., & Westie, F. R. (1958). Verbal attitudes and overt acts: an experiment on the salience of attitudes. *American Sociological Review*, 23(6), 667–673.
- Degeratu, A. M., Rangaswamy, A., & Wu, J. (2000). Consumer choice behavior in online and traditional supermarkets: The effects of brand name, price, and other search attributes. *International Journal of Research in Marketing*, 17(1), 55–78.
- Derbaix, C. M. (1995). The Impact of Affective Reactions on Attitudes toward the Advertisement and the Brand: A Step toward Ecological Validity. *Journal of Marketing Research*, 32(4), 470–479.
- DeVellis, R. F. (2003). *Scale development: Theory and applications*. Thousand

Oaks: Sage Publications.

Dholakia, P. M., & Morwitz, V. C. (2002). How surveys influence customers. *Harvard Business Review*, 80, 18.

Dholakia, U. M. (1997). An investigation of the relationship between perceived risk and product involvement. *Advances in Consumer Research*, 24(1), 159–167.

Dholakia, U. M. (1998). Involvement-response models of joint effects: an empirical test and extension. *Advances in Consumer Research*, 25(1), 499–506.

Diamantopoulos, A., Sarstedt, M., Fuchs, C., Wilczynski, P., & Kaiser, S. (2012). Guidelines for choosing between multi-item and single-item scales for construct measurement: A predictive validity perspective. *Journal of the Academy of Marketing Science*, 40(3), 434–449.

Dijksterhuis, A., Smith, P. K., van Baaren, R. B., & Wigboldus, D. H. J. (2005). The Unconscious Consumer: Effects of Environment on Consumer Behavior. *Journal of Consumer Psychology*, 15(3), 193–202.

Ding, M., Grewal, R., & Liechty, J. (2005). Incentive-Aligned Conjoint Analysis. *Journal of Marketing Research*, 42(1), 67–82.

Dirks, K. T., Cummings, L. L., & Pierce, J. L. (1996). Psychological ownership in organizations: Conditions under which individuals promote and resist change. In R. W. Woodman, & W. A. Pasmore (Eds.), *Research in organizational change and development* (Vol. 9 pp. 1–23). Greenwich, CT: JAI Press.

Dixon, J. C., & Street, J. W. (1975). The distinction between self and not-self in children and adolescents. *The Journal of Genetic Psychology*, 127(2), 157–162.

Donovan, R. J., & Rossiter, J. R. (1982). Store Atmosphere: An Environmental Psychology Approach. *Journal of Retailing*, 58(1), 34–57.

Donovan, R. J., Rossiter, J. R., Marcoolyn, G., & Nesdale, A. (1994). Store atmosphere and purchasing behavior. *Journal of Retailing*, 70(3), 283–294.

- Douc  , L., Poels, K., Janssens, W., & De Backer, C. (2013). Smelling the books: The effect of chocolate scent on purchase-related behavior in a bookstore. *Journal of Environmental Psychology*, 36(December), 65–69.
- Dubois, B., & Czellar, S. (2002). Prestige Brands or Luxury Brands? An Exploratory Inquiry on Consumer Perceptions. In *European Marketing Academy 31st Conference Proceedings*. Braga, Portugal. Retrieved from <http://archive-ouverte.unige.ch/unige:5816%5Cn20/04/2012>
- Dubois, B., Czellar, S., & Laurent, G. (2005). Consumer segments based on attitudes toward luxury: Empirical evidence from twenty countries. *Marketing Letters*, 16(2), 115–128.
- Dubois, B., & Duquesne, P. (1993). The market for luxury goods: income versus culture. *European Journal of Marketing*, 27(1), 35–44.
- Dubois, B., & Laurent, G. (1994). Attitudes Towards the Concept of Luxury: an Exploratory Analysis. *Association for Consumer Research*, 1, 273–278.
- Dubois, B., Laurent, G., & Czellar, S. (2001). Consumer Rapport to Luxury : Analyzing Complex and Ambivalent Attitudes. *Les Cahiers de Recherche Groupe HEC*, 33(736), 1–56.
- Economist. (2015). Primark: Faste, cheaper fashion. Retrieved from <http://www.economist.com/news/business/21663221-rapidly-rising-super-cheap-irish-clothes-retailer-prepares-conquer-america-rivals-should>
- Ellison, S., & White, E. (2000). ‘Sensory’ marketers say the way to reach shoppers is the nose. *Wall Street Journal*. Retrieved from <http://www.financialexpress.com/old/fe/daily/20001127/fst27007.html>
- EMarketer. (2013). Luxury Consumers Respond to Exclusive Access, Not Promotion. Retrieved from <https://www.emarketer.com/Article/Luxury-Consumers-Respond-Exclusive-Access-Not-Promotion/1010419>

- EMarketer. (2016). UK Social Media Users Turned Off by Brand Bombardment. Retrieved from <https://www.emarketer.com/Article/UK-Social-Media-Users-Turned-Off-by-Brand-Bombardment/1014079>
- Erceau, D., & Guéguen, N. (2007). Tactile contact and evaluation of the toucher. *The Journal of Social Psychology, 147*(4), 441–4.
- Erdem, T., & Swait, J. (1998). Brand equity as a signaling phenomenon. *Journal of Consumer Psychology, 72*(2), 131–157.
- Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2001). Atmospheric qualities of online retailing: A conceptual model and implications. *Journal of Business Research, 54*(2), 177–184.
- Etgar, M., & Malhotra, N. K. (1978). Consumers' reliance on different product quality cues: A basis for market segmentation. In S. C. Jain (Ed.), *Research Frontiers in Marketing: Dialogues and Directions, 1978 Educators' Proceedings*. Chicago: American Marketing Association.
- Etzioni, A. (1991). The Socio-Economics of Property. *Journal of Social Behavior and Personality, 6*(6), 465–468.
- Fenigstein, A., Scheier, M. F., & Buss, A. H. (1975). Public and private self-consciousness: Assessment and theory. *Journal of Consulting and Clinical Psychology, 43*(4), 522–527.
- Field, A. (2006). *Reliability Analysis. Discovering statistics using SPSS* (Vol. 8057).
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (3rd ed.). Chicago: Sage.
- Field, A., & Hole, G. (2003). *How to design and report experiments*. London: Sage Publications.
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention and Behaviour: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.

- Fisher, J., Rytting, M., & Heslin, R. (1976). Hands touching hands: Affective and evaluative effects of an interpersonal touch. *Sociometry*, 39(4), 416–421.
- Fisher, R. (1935). *The Design of Experiments* (2nd Edition). Edinburgh: Oliver & Boyd.
- Fisher, R. A. (1925). *Statistical methods for research workers*. Biological monographs and manuals.
- Fiske, S. (1982). Schema-triggered affect: Applications to social perception. In M. S. Clark & S. T. Fiske (Eds.), *Affect and Cognition: 17th Annual Carnegie Mellon Symposium on Cognition* (pp. 55–78).
- Fiske, S. T., & Taylor, S. E. (1991). *Social cognition*. New York: McGraw-Hill.
- Flanagan, P., Johnston, R., & Talbot, D. (2005). Customer confidence: the development of a “pre -experience” concept. *International Journal of Service Industry Management*, 16(4), 373–384.
- Foxall, G. (Ed.). (2016). *The Routledge companion to consumer behavior analysis*. Routledge.
- Francis, S., Rolls, E. T., Bowtell, R., McGlone, F., O’Doherty, J., Browning, A., Clare, S. and Smith, E. (1999). The representation of pleasant touch in the brain and its relationship with taste and olfactory areas. *Neuroreport*, 10(3), 453–459.
- Frazer, J. G. (1981). *The Golden Bough: The Roots of Religion and Folklore. (reprint of 1890 original)*. New York.: Gramercy Books.
- Freedman, D., Pisani, R., & Purves, R. (2007). *Statistics* (4th Edition). W. W. Norton & Company.
- Fu, F. Q., & Elliott, M. T. (2013). The Moderating Effect of Perceived Product Innovativeness and Product Knowledge on New Product Adoption: An Integrated Model. *The Journal of Marketing Theory and Practice*, 21(3), 257–272.

- Fuchs, C., & Diamantopoulos, A. (2009). Using single-item measures for construct measurement in management research. *Business Administration Review*, 69(2), 195–210.
- Furby, L. (1980). The Origins and Early Development of Possessive Behavior. *Political Psychology*, 2(1), 30–42.
- Gallo, C. (2012). How Apple Store Seduces You With the Tilt of Its Laptops. Retrieved May 17, 2014, from <http://www.forbes.com/sites/carminegallos/2012/06/14/why-the-new-macbook-pro-is-tilted-70-degrees-in-an-apple-store/>
- Gensch, D. H., & Javalgi, R. G. (1987). The influence of involvement on disaggregate attribute choice models. *Journal of Consumer Research*, 14 (1), 71–82.
- George, D. & Mallery, P. (2016). IBM SPSS Statistics 23 Step by Step: A simple guide and reference. Routledge.
- Gibson, J. (1962). The senses considered as perceptual systems. *Psychological Review*, 69(6), 477.
- Gibson, O. (2005, November 19). Shopper's eye view of ads that pass us by. *The New York Times*.
- Glenberg, A. M. (1997). What memory is for. *The Behavioral and Brain Sciences*, 20(1), 1-19-55.
- Goldsmith, R. E., & Emmert, J. (1991). Measuring product category involvement: A multitrait-multimethod study. *Journal of Business Research*, 23(4), 363–371.
- Goodstein, R. C. (1993). Category-Based Applications and Extensions in Advertising: Motivating More Extensive Ad Processing. *Journal of Consumer Research*, 20(1), 87–99.
- Gorn, G. J. (1982). The effects of music in advertising on choice behavior: A

- classical conditioning approach. *The Journal of Marketing*, 46(1), 94–101.
- Gorn, G. J., Goldberg, M. E., & Basu, K. (1993). Mood, Awareness, and Product Evaluation. *Journal of Consumer Psychology*, 2(3), 237–256.
- Gray, C., & Kinnear, P. (2012). *IBM SPSS Statistics 19 Made Simple*. Psychology Press.
- Grewal, D., Krishnan, R., Baker, J., & Borin, N. (1998). The effect of store name, brand name and price discounts on consumers' evaluations and purchase intentions. *Journal of Retailing*, 74(3), 331–352.
- Grewal, D., Monroe, K., & Krishnan, R. (1998). The effects of price-comparison advertising on buyers' perceptions of acquisition value, transaction value, and behavioral intentions. *The Journal of Marketing*, 62(2), 45–59.
- Griffiths, S. (2014). Overspending linked to touching objects in shops because it gives "sense of ownership" | Mail Online. Retrieved May 20, 2014, from <http://www.dailymail.co.uk/sciencetech/article-2593535/Look-dont-touch-Overspending-linked-touching-objects-shops-gives-sense-ownership.html>
- Grimes, A., & Doole, I. (1998). Exploring the relationships between colour and international branding: A cross cultural comparison of the UK and Taiwan. *Journal of Marketing Management*, 14(7), 799–817.
- Grohmann, B. (2002). *An investigation of the role of tactile input in product evaluations*. Thesis, Washington State University
- Grohmann, B., Spangenberg, E. R., & Sprott, D. E. (2007). The influence of tactile input on the evaluation of retail product offerings. *Journal of Retailing*, 83(2), 237–245.
- Guba, E., & Lincoln, Y. (1994). Competing paradigms in qualitative research. *Handbook of Qualitative Research*, In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). London: Sage.

- Gueguen, N., & Petr, C. (2006). Odors and consumer behavior in a restaurant. *International Journal of Hospitality Management*, 25(2), 335–339.
- Gulas, C. S., & Bloch, P. H. (1995). Right under our noses: Ambient scent and consumer responses. *Journal of Business and Psychology*, 10(1), 87–98.
- Gurhan Canli, Z., & Maheswaran, D. (2000). Determinants of Country of Origin Evaluations. *Journal of Consumer Research*, 27(1), 96–108.
- Ha, H., & Perks, H. (2005). Effects of consumer perceptions of brand experience on the web: Brand familiarity, satisfaction and brand trust. *Journal of Consumer Behaviour*, 4(6), 438–452.
- Hair, J., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate Data Analysis* (7th Edition). Prentice Hall.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1999). *Multivariate Data Analysis* (5th Edition). Englewood Cliffs, NJ: Prentice Hall.
- Halkias, G. (2015). Mental representation of brands: a schema-based approach to consumers' organization of market knowledge. *Journal of Product & Brand Management*, 24(5), 438–448.
- Halkias, G., & Kokkinaki, F. (2013). Increasing advertising effectiveness through incongruity-based tactics: The moderating role of consumer involvement. *Journal of Marketing Communications*, 19(3), 182–197.
- Halkias, G., & Kokkinaki, F. (2014). The Degree of Ad–Brand Incongruity and the Distinction Between Schema-Driven and Stimulus-Driven Attitudes. *Journal of Advertising*, 43(4), 397–409.
- Hanna, N., & Wozniak, R. (2001). *Consumer Behavior: An Applied Approach Title*. New Jersey: Upper Saddle River, Prentice Hall.
- Harrison, G. W., & Rutström, E. E. (2008). Risk aversion in Experiments. In J. C. Cox & G. W. Harrison (Eds.), *Research in experimental economics* (12th ed.,

- pp. 41–196). Bingley, UK: Emerald.
- Harvard_Business_Review. (2015). The Science of Sensory Marketing. Retrieved from <https://hbr.org/2015/03/the-science-of-sensory-marketing>
- Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1992). Emotional Contagion. In *Review of Personality and Social Psychology* (14th ed., pp. 151–177). Newbury Park, CA: Sage.
- Hawkins, D. M. (1980). *Identification of outliers*. London: Chapman and Hall.
- Hayes, A. F. (2013). *Introduction to Mediation, Moderation and Conditional Process Analysis: A Regression Based Approach*. Guilford Press.
- Heine, K. (2011). The concept of luxury brands. *Luxury Brand Management*, 1(2). Retrieved from http://www.conceptofluxurybrands.com/content/20110907_Heine_TheConceptofLuxuryBrands.pdf
- Heine, K., & Phan, M. (2011). Trading-up mass-market goods to luxury products. *Australasian Marketing Journal*, 19(2), 108–114.
- Heller, M., & Clark, A. (2008). Touch as a “reality sense.” In Heller, Morton A., and Ashley Clark. “Touch as a ”reality sense“.” *Blindness and brain plasticity in navigation and object perception* (pp. 259–280).
- Hemetsberger, A., Von Wallpach, S., & Bauer, M. (2012). Because I’m worth it - Luxury and the construction of consumers’ selves. *Advances in Consumer Research*, 40, 483–489.
- Hennigs, N., Wiedmann, K.-P., Klarmann, C., Behrens, S., Jung, J., & Hwang, C. S. (2015). When the original is beyond reach: consumer perception and demand for counterfeit luxury goods in Germany and South Korea. *Luxury Research Journal*, 1(1), 58.
- Hertenstein, M. J., Keltner, D., App, B., Bulleit, B. A., & Jaskolka, A. R. (2006).

- Touch communicates distinct emotions. *Emotion (Washington, D.C.)*, 6(3), 528–33.
- Heslin, R., & Alper, T. (1983). *Touching: A bonding gesture. Nonverbal interaction*. Beverly Hills, California: Sage.
- Hewstone, M., & Stroebe, W. (2015). *An Introduction to Social Psychology* (6th Edition). John Wiley and Sons Ltd.
- Hirsch, A. R. (1995). Effects of ambient odors on slot-machine usage in a las vegas casino. *Psychology & Marketing*, 12(7), 585–594.
- Hoffman, E., Menkhaus, D. J., Chakravarti, D., Field, R. A., & Whipple, G. D. (1993). Using Laboratory Experimental Auctions in Marketing Research: A Case Study of New Packaging for Fresh Beef. *Marketing Science*, 12(3), 318–338.
- Holbrook, M. B., & Batra, R. (1987). Assessing the role of emotions as mediators of consumer responses to advertising. *Journal of Consumer Research*, 14(3), 404–420.
- Holbrook, M., & Hirschman, E. (1982). The Experiential Aspects of Consumption: Consumer Fantasies, Feelings and Fun. *Journal of Consumer Research*, 9(2), 132–140.
- Hornik, J. (1991). Shopping Time And Purchasing Behavior As A Result Of In-Store Tactile Stimulation. *Perceptual and Motor Skills*, 73(3), 969–970.
- Hornik, J. (1992). Tactile Stimulation and Consumer Response. *Journal of Consumer Research*, 19(3), 449–459.
- Hornik, J., & Ellis, S. (1988). Strategies to Secure Compliance for a Mall Intercept Interview. *Public Opinion Quarterly*, 52(4), 539.
- Howard, J., & Sheth, J. (1969). *The theory of buyer behavior*. New York: Wayne State University.

- Hoyer, W., & Brown, S. (1990). Effects of Brand Awareness on Choice for a Common, Repeat Purchase Product. *Journal of Consumer Research*, 17(2), 141–148.
- Hoyer, W. D., MacInnis, D. J., & Pieters, R. (2012). *Consumer Behavior* (6th Edition). Wadsworth Publishing Co Inc.
- Hoyer, W., & MacInnis, D. (2008). *Consumer Behavior*. Mason, OH.: Cengage Learning.
- Huang, J., & Zhou, L. (2016). Negative effects of brand familiarity and brand relevance on effectiveness of viral advertisements, 44(7), 1151–1162.
- Huang, X. (Irene), Zhang, M., Hui, M. K., & Wyer, R. S. (2014). Warmth and conformity: The effects of ambient temperature on product preferences and financial decisions. *Journal of Consumer Psychology*, 24(2), 241–250.
- Hultén, B. (2011). Sensory marketing: the multi-sensory brand-experience concept. *European Business Review*, 23(3), 256–273.
- Hulten, B., Broweus, N., & Dijk, M. Van. (2009). *Sensory Marketing*. Palgrave Macmillan Ltd.
- Hung, K.-P., Chen, A. H., Peng, N., Hackley, C., Tiwsakul, R. A., & Chou, C. (2011). Antecedents of luxury brand purchase intention. *Journal of Product & Brand Management*, 20(6), 457–467.
- IAB. (2016). *UK advertising spend passes £20bn as growth hits five-year high*. Internet Advertising Bureau. Retrieved from <http://www.iabuk.net/about/press/archive/uk-advertising-spend-passes-20bn-as-growth-hits-five-year-high>
- Isaacs, S. (1933). Social development in young children. *British Journal of Educational Psychology*, 3(3), 291–294.
- Iwasaki, Y., & Havitz, M. E. (1998). A path-analytic model of the relationship

- between involvement, psychological commitment and loyalty. *Journal of Leisure Research*, 30(2), 256–280.
- Jackson, S. L. (2015). *Research Methods and Statistics: A critical thinking approach*. Cengage Learning.
- Jacoby, L. L. (1983). Perceptual enhancement: persistent effects of an experience. *Journal of Experimental Psychology. Learning, Memory, and Cognition*, 9(1), 21–38.
- James, G. (2015, January). Introducing the UK's first 4D cinema with shaking seats, water spray and scents. *The Mirror UK*. Retrieved from <http://www.mirror.co.uk/news/uk-news/introducing-uks-first-4d-cinema-4994064>
- James, W. (1890). *The principles of psychology*. New York: Holt.
- Jansson-Boyd, C., & Marlow, N. (2007). Not only in the eye of the beholder: Tactile information can affect aesthetic evaluation. *Psychology of Aesthetics, Creativity, and the Arts*, 1(3), 170–173.
- Jansson-Boyd, C. V. (2011). Touch matters: exploring the relationship between consumption and tactile interaction. *Social Semiotics*, 21(4), 531–546.
- Jansson-boyd, C. V. (2011). The Role of Touch in Marketing : An Introduction to the Special Issue. *Psychology and Marketing*, 28(3), 219–221.
- Jansson-boyd, C. V, & Marlow, N. (2011). To Touch or Not to Touch ; That Is the Question . Should Consumers Always Be Encouraged to Touch Products , and Does It Always Alter Product Perception ? *Psychology and Marketing*, 28(3), 256–266.
- Jha, S., & Balaji, M. (2015). I Know it , so I do not Need to Touch it : Role of Brand Familiarity in Tactile Product Evaluation. *Indian Journal of Marketing*, 45(2), 7–19.

- Jiménez, N. H., & San Martín, S. (2010). The role of country-of-origin, ethnocentrism and animosity in promoting consumer trust. The moderating role of familiarity. *International Business Review*, 19(1), 34–45.
- Jin, S. A. (2011). The Impact of 3D Virtual Haptics in Marketing. *Psychology and Marketing*, 28(3), 240–255.
- Jin, S. V., & Phua, J. (2015). The moderating effect of computer users' autotelic need for touch on brand trust, perceived brand excitement, and brand placement awareness in haptic games and in-game advertising (IGA). *Computers in Human Behavior*, 43, 58–67.
- Johannesson, M., Liljas, B., & O'Connor, R. (1997). Hypothetical versus real willingness to pay: some experimental results. *Applied Economics Letters*, 4(3), 149–151.
- Johnson, C. (2006). Cutting through advertising clutter. Retrieved from <http://www.cbsnews.com/news/cutting-through-advertising-clutter/>
- Johnson, E., & Russo, E. (1984). Product Familiarity and Learning New Information. *The Journal of Consumer Research*, 11(1), 542–550.
- Jostmann, N. B., Lakens, D., & Schubert, T. W. (2009). Weight as an embodiment of importance. *Psychological Science*, 20(9), 1169–1174.
- Kadres, F. (1996). In Defense of Experimental Consumer Psychology. *Journal of Consumer Psychology*, 5(3), 279–296.
- Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1990). Experimental Tests of the Endowment Effect and the Coase Theorem. *Journal of Political Economy*, 98(6), 1325 - 1348.
- Kapferer, J.-N. (2015). *Kapferer on Luxury: How Luxury Brands Can Grow Yet Remain Rare*. Kogan Page Limited.
- Kapferer, J.-N., & Bastien, V. (2009). The specificity of luxury management:

- Turning marketing upside down. *Journal of Brand Management*, 16(5–6), 311–322.
- Kapferer, J. N. (1998). Why are we seduced by luxury brands? *Journal of Brand Management*, 6(1), 44–49.
- Kapferer, J. N. (2008). *The New Strategic Brand Management* (4th Edition). London: Kogan Page.
- Kapferer, J. N., & Laurent, G. (1993). Further evidence on the consumer involvement profile: five antecedents of involvement. *Psychology & Marketing*, 10(4), 347–355.
- Keif, M., Twomey, C., & Stoneman, A. (2015). Consumer Perception of Tactile Packaging : A Research Study on Preferences of Soft Touch & Hi Rise Coatings in Cosmetic Packaging. *Journal of Applied Packaging Research*, 7(1), 59–72.
- Keller, K. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *The Journal of Marketing*, 57(1), 1–22.
- Keller, K. L. (2003). Brand Synthesis: The Multidimensionality of Brand Knowledge. *Journal of Consumer Research*, 29(4), 595–600.
- Keller, K. L. (2009). Managing the growth tradeoff: Challenges and opportunities in luxury branding. *Journal of Brand Management*, 16(5-6), 290–301.
- Kemp, S. (1998). Perceiving luxury and necessity. *Journal of Economic Psychology*, 19(5), 591–606.
- Kent, R. J., & Allen, C. T. (1994). Competitive Interference Effects in Consumer Memory for Advertising : The Role of Brand Familiarity. *Journal of Marketing*, 58(3), 97–105.
- Keppel, G., & Wickens, T. D. (2004). *Design and Analysis: A Researcher's Handbook* (4th Edition) (4th Edition). New Jersey: Pearson Prentice Hall.
- Kerlinger, F. (1986). *Foundations of Behavioral Research* (3rd Edition). New York:

Holt, Rinchart and Winston.

Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioral research* (4th Edition). Holt, NY: Harcourt College Publishers.

Kezar, A. (2000). The importance of pilot studies: Beginning the hermeneutic circle. *Research in Higher Education*, 41(3), 385-400.

Kirk, R. (1995). *Experimental Design: Procedures for the Behavioral Sciences* (3rd Edition). Pacific Grove, CA: Brooks/Cole.

Kirk, R. E. (2009). *Experimental Design. The SAGE Handbook of Quantitative Methods in Psychology*. John Wiley and Sons Inc.

Kisabaka, L. (2001). *Marketing für Luxusprodukte*. Cologne.

Klatzky, R. L., & Peck, J. (2012). Please Touch: Object Properties that Invite Touch. *IEEE Transaction on Haptics*, 5(2), 139–147.

Klatzky, R., & Lederman, S. (1992). Stages of manual exploration in haptic object identification. *Perception & Psychophysics*, 52(6), 661–670.

Klatzky, R., Lederman, S., & Matula, D. (1993). Haptic exploration in the presence of vision. *Journal of Experimental Psychology*, 19(4), 726–743.

Knetsch, J., & Sinden, J. (1984). Willingness to pay and compensation demanded: Experimental evidence of an unexpected disparity in measures of value. *The Quarterly Journal of Economics*, 99(3), 507–521.

Kosner, A. (2012). Hug Me: Coca-Cola Introduces Gesture Based Marketing in Singapore. *Forbes*. Retrieved from <http://www.forbes.com/sites/anthonykosner/2012/04/11/hug-me-coca-cola-introduces-gesture-based-marketing-in-singapore/#3650e6075c17>

Kotler, P., Armstrong, G., Harris, L., & Piercy, N. (2013). *Principles of Marketing* (6th Edition). Pearson.

Kraus, S. J. (1995). Attitudes and the prediction of behavior: A meta-analysis of the

- empirical literature. *Personality and Social Psychology Bulletin*, 21(1), 58–75.
- Krishna, A. (2012). An integrative review of sensory marketing: Engaging the senses to affect perception, judgment and behavior. *Journal of Consumer Psychology*, 22(3), 332–351.
- Krishna, A., Cian, L., & Sokolova, T. (2016). The power of sensory marketing in advertising. *Current Opinion in Psychology*, 10(August), 142–147.
- Krishna, A., Elder, R. S., & Caldara, C. (2010). Feminine to smell but masculine to touch? Multisensory congruence and its effect on the aesthetic experience. *Journal of Consumer Psychology*, 20(4), 410–418.
- Krishna, A., & Morrin, M. (2008). Does touch affect taste? The perceptual transfer of product container haptic cues. *Journal of Consumer Research*, 34(6), 807–818.
- Krishna, A., & Schwarz, N. (2014). Sensory marketing, embodiment, and grounded cognition: A review and introduction. *Journal of Consumer Psychology*, 24(2), 159–168.
- Krosnick, J. A. (1991). Response strategies for coping with the cognitive demands of attitude measures in survey. *Applied Cognitive Psychology*, 5 (3), 213–236.
- Kuder, G., & Richardson, M. (1937). The theory of the estimation of test reliability. *Psychometrika*, 2(3), 151–160.
- Kuhfeld, W., Tobias, R., & Garratt, M. (1994). Efficient experimental design with marketing research applications. *Journal of Marketing Research*, 31(4), 545–557.
- Lane, V., & Jacobson, R. (1995). Stock market reactions to brand extension announcements: The effects of brand attitude and familiarity. *Journal of Marketing*, 59(1), 63–77.
- Lange, F., & Dahlen, M. (2003). Let's Be Strange: Brand familiarity and ad-brand incongruency. *Journal of Product & Brand Management*, 12(7), 449–461.

- Langner, T., Fischer, J. P. D. A., & Brune, P. (2013). Choose Your Ad Paper Type Carefully: How Haptic Ad Paper Characteristics Affect Product Judgments. In *Advances in Advertising Research* (Vol. 4, pp. 19–27). Springer Fachmedien Wiesbaden.
- Laroche, M., Kim, C., & Zhou, L. (1996). Brand familiarity and confidence as determinants of purchase intention: An empirical test in a multiple brand context. *Journal of Business Research*, 37(2), 115–120.
- Laurent, G. (2013). EMAC Distinguished Marketing Scholar 2012: Respect the Data! *International Journal of Research in Marketing*, 30(4), 323–334.
- Laurent, G., & Dubois, B. (1996). The functions of luxury: a situational approach to excursionism, in *NA - Advances in Consumer Research Volume 23*, eds. Kim P. Corfman and John G. Lynch Jr., Provo, UT : Association for Consumer Research, Pages: 470-477.
- Laurent, G., & Kapferer, J. (1985). Measuring consumer involvement profiles. *Journal of Marketing Research*, 22(1), 41–53.
- Lederman, S. & Klatzky, R. L. (2009). Haptic Perception: A tutorial. *Attention, Perception and Psychophysics*, 71(7), 1439–1459.
- Lederman, S. & Klatzky, R. (1987). Hand movements: A window into haptic object recognition. *Cognitive Psychology*, 19(3), 342–368.
- Lederman, S. & Klatzky, R. (1993). Extracting object properties through haptic exploration. *Acta Psychologica*, 84(1), 29–40.
- Lee, J., Ko, E., & Megehee, C. M. (2015). Social benefits of brand logos in presentation of self in cross and same gender influence contexts. *Journal of Business Research*, 68(6), 1341–1349.
- Leibenstein, H. (1950). Bandwagon , Snob , and Veblen Effects in the Theory of Consumers Demand. *The Quarterly Journal of Economics*, 64(2), 183–207.

- Lindauer, M. S., Stergiou, E. A., & Penn, D. L. (1986). Seeing and touching aesthetic objects: I. Judgments. *Bulletin of the Psychonomic Society*, 24(2), 121–124.
- Lindström, M. (2010). *Buy Ology: Truth and Lies about Why we Buy. Truth and lies about why we buy*. Broadway Brooks.
- Lingle, J. H., & Ostrom, T. M. (1979). Retrieval selectivity in memory-based impression judgments. *Journal of Personality and Social Psychology*, 37(2), 180-194.
- Locander, W., & Hermann, P. (1979). The effect of self-confidence and anxiety on information seeking in consumer risk reduction. *Journal of Marketing Research*, 16(2), 268–274.
- Lord, F. M. (1967). A paradox in the interpretation of group comparisons. *Psychological Bulletin*, 68(5), 304–305.
- Lord, F. M. (1969). Statistical adjustments when comparing preexisting groups. *Psychological Bulletin*, 72(5), 336–337.
- Low, G., & Fullerton, R. (1994). Brand Management, and the Brand Manager System: A Critical-Historical Evaluation. *Journal of Marketing Research*, 31(2), 173–190.
- Machleit, K. a, Allen, C. T., Madden, T. J., & Machleit, A. (1993). Mature Interest : Alternative of Ad-Evoked Affect Consequence. *Journal of Marketing*, 57(4), 72–82.
- MacInnis, D. (2011). A framework fo conceptual contributions in marketing. *Journal of Marketing*, 75 (4), 136–154.
- MacInnis, D. J., Moorman, C., & Jaworski, B. J. (1991). Enhancing and measuring consumers' motivation, opportunity, and ability to process brand information from ads. *Journal of Marketing*, 55(4), 32–53.
- MacInnis, D. J., & Park, C. W. (1991). The differential role of characteristics of

- music on high-and low-involvement consumers' processing of ad. *Journal of Consumer Research*, 18(2), 161–173.
- MacKenzie, S., Lutz, R. J., & Belch, G. E. (1986). The Role of Attitude Toward the Ad as a Mediator of Advertising Effectiveness: A Test of Competing Explanations. *Journal of Marketing Research*, 23(2), 130–143.
- MacKinnon, D. (2011). Integrating mediators and moderators in research design. *Research on Social Work Practice*, 21(6), 675–681.
- Madzharov, A. V., Block, L. G., & Morrin, M. (2015). The cool scent of power: Effects of ambient scent on consumer preferences and choice behavior. *Journal of Marketing*, 79(1), 83–96.
- Maheshwari, V., & Saraf, R. (2008). Tactile devices to sense touch on a par with a human finger. *Angewandte Chemie - International Edition*, 47(41), 7808–7826.
- Malter, A. J. (1996). An introduction to embodied cognition: Implications for consumer research. *Advances in Consumer Research*, 23(1), 272–276.
- Mandler, J. (1992). How to build a baby: II. Conceptual primitives. *Psychological Review*, 99(4), 587–604.
- Marks, L. J., & Olson, J. C. (1981). Toward a Cognitive Structure Conceptualization of Product Familiarity. In K. B. Monroe (Ed.), *Advances in Consumer Research* (Vol. 8, pp. 145–150). Ann Arbor, MI: Association for Consumer Research.
- Markus, H. (1977). Self-schemata and processing information about the self. *Journal of Personality and Social Psychology*, 35(2), 63–78.
- Mason, R. S. (1992). Modelling the Demand for Status Goods. *Journal of Consumer Research*, 12(3), 341–253.
- McCabe, D. B., & Nowlis, S. M. (2003). The Effect of Examining Actual Products or Product Descriptions on Consumer Preference. *Journal of Consumer Psychology*, 13(4), 431–439.

- McClelland, D. (1951). *Personality*. New York: Holt, Rinehart and Winston.
- McClelland, D. C., Koestner, R., & Weinberger, J. (1989). How do self-attributed and implicit motives differ? *Psychological Review*, 96(4), 690–702.
- McCracken, G. (1986). Culture and Consumption: A Theoretical Account of the Structure and Movement of the Cultural Meaning of Consumer Goods. *Journal of Consumer Research*, 13(1), 71–84.
- McDaniel, C., & Baker, R. (1977). Convenience food packaging and the perception of product quality. *The Journal of Marketing*, 41(4), 57-58.
- McDougall, W. (1923). *An introduction to social psychology* (18th ed.). London: Methuen. Mischel.
- McKnight, P., McKnight, K., Sidani, S., & Figueredo, A. J. (2007). *Missing Data: A Gentle Introduction*. Guilford Press.
- McQuarrie, E. F., & Munson, M. J. (1986). The Zaichkowsky personal involvement inventory: modification and extension. In M. Wallendorf & P. Anderson (Eds.), *Advances in Consumer Research* (pp. 36–40). Provo UT: Advances in Consumer Research 14.
- McQuarrie, E., & Munson, M. (1992). A Revised Product Involvement Inventory: Improved Usability and Validity. *Advances in Consumer Research*, 19(1), 108–115.
- Meeds, R. (2004). Cognitive and attitudinal effects of technical advertising copy: the roles of gender, self-assessed and objective consumer knowledge. *International Journal of Advertising: The Review of Marketing Communications*, 23(3), 309–335.
- Mehrabian, A. (1981). *Silent Messages—Implicit Communication of Emotions and Attitudes* (2nd ed.). Belmont, CA: Wadsworth Publishing Company.
- Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*.

Cambridge Mass The MIT Press (Vol. 315).

Merriam-Webster. (2016). Luxury. Retrieved April 23, 2016, from <http://www.merriam-webster.com/dictionary/luxury>

Mertens, D. (2005). *Research methods in education and psychology: Integrating diversity with quantitative and qualitative approaches* (2nd Edition). Thousand Oaks: Sage.

MetOffice. (2013). Southern England: climate. Retrieved May 6, 2015, from <http://www.metoffice.gov.uk/climate/uk/regional-climates/so>

Meyer, D., & Schvaneveldt, R. (1971). Facilitation in recognizing pairs of words: evidence of a dependence between retrieval operations. *Journal of Experimental Psychology*, 90(2), 227–234.

Meyers-Levy, J., & Tybout, A. M. (1989). Schema Congruity as a Basis for Product Evaluation. *Journal of Consumer Research*, 16(11), 39–54.

Meyers-Levy, J., Zhu, R. (Juliet), & Jiang, L. (2010). Context Effects from Bodily Sensations: Examining Bodily Sensations Induced by Flooring and the Moderating Role of Product Viewing Distance. *Journal of Consumer Research*, 37(1), 1–14.

Michaelidou, N., & Dibb, S. (2006). Product involvement: an application in clothing. *Journal of Consumer Behaviour*, 5(5), 442–453.

Miller, K. M., Hofstetter, R., Krohmer, H., & Zhang, Z. J. (2011). How Should Consumers' Willingness to Pay Be Measured? An Empirical Comparison of State-of-the-Art Approaches. *Journal of Marketing Research*, 48(1), 172–184.

Milliman, R. (1982). Using background music to affect the behavior of supermarket shoppers. *The Journal of Marketing*, 46(3), 86–91.

Milliman, R. E. (1986). The Influence of Background Music on the Behavior of Restaurant Patrons. *Journal of Consumer Research*, 13(2), 286–289.

- Mills, J., Bonner, A., & Francis, K. (2006). The development of constructivist grounded theory. *International Journal of Qualitative Method. International Journal of Qualitative Methods*, 5(1), 1–10.
- Milnes, H. (2017). Not just a fad: Pop-up stores shore up rough retail real estate market. Retrieved March 25, 2017, from <https://digiday.com/marketing/pop-stores-lasting-effect-retail-real-estate-market/>
- Minsky, M. (1975). A framework for representing knowledge. In P. Winston (Ed.), *The Psychology of Computer Vision* (pp. 211–277). New York: McGraw-Hill.
- Miodownik, M. (2005). A touchy subject. *Materials Today*, 8(6), 6. Retrieved from http://scholar.google.co.uk/scholar?q=a+touchy+subject&btnG=&hl=en&as_sdt=0%2C5#0
- Mishra, A. (2009). Influence of Contagious versus Noncontagious Product Groupings on Consumer Preferences. *Journal of Consumer Research*, 36(1), 73–82.
- Mitchell, D. J., Kahn, B. E., & Knasko, S. C. (1995). There's Something in the Air : Effects of Congruent or Incongruent Ambient Odor on Consumer Decision Making. *Journal of Consumer Research*, 22(2), 229–239.
- Mittal, B. (1995). A comparative analysis of four scales of consumer involvement. *Psychology & Marketing*, 12(7), 663–682.
- Mittal, B., & Lee, M.-S. (1988). Separating Brand-Choice Involvement from Product Involvement Via Consumer Involvement Profiles. In *Advances in Consumer Research* (Vol. 15). Houston, M.J.: Association for Consumer Research.
- Mittal, V., & Kamakura, W. A. (2001). Satisfaction, Repurchase Intent, and Repurchase Behavior: Investigating the Moderating Effect of Customer Characteristics. *Journal of Marketing Research*, 38(1), 131–142.
- Montagu. (1986). *Touching. The human significance of the skin*. New York: Harper

& Row Publishers.

- Moore, B. (2013). Primark and the high street: Why are the workers who make our cheap clothes paying with their lives? Retrieved from <http://www.independent.co.uk/voices/comment/primark-and-the-high-street-why-are-the-workers-who-make-our-cheap-clothes-paying-with-their-lives-8590489.html>
- Morales, A. C., & Fitzsimons, G. J. (2007). Product Contagion: Changing Consumer Evaluations Through Physical Contact with “Disgusting” Products. *Journal of Marketing Research*, 44(2), 272–283.
- Morwitz, V. (2014). Consumers’ purchase intentions and their behavior. *Foundations and Trends in Marketing*, 7(3), 181-230
- Morwitz, V. G. (2001). Methods for forecasting from intentions data. *Principles of Forecasting*. Springer US.
- Muller, D., Judd, C. M., & Yzerbyt, V. Y. (2005). When moderation is mediated and mediation is moderated. *Journal of Personality and Social Psychology*, 89(6), 852–863.
- Mummalaneni, V. (2005). An empirical investigation of Web site characteristics, consumer emotional states and on-line shopping behaviors. *Journal of Business Research*, 58(4), 526–532.
- Muthukrishnan, A., & Ramaswami, S. (1999). Contextual effects on the revision of evaluative judgments: An extension of the omission-detection framework. *Journal of Consumer Research*, 26(1), 70–84.
- Natarajan, R., & Angur, M. G. (1998). Perceived control in consumer choice: A closer look. *European Advances in Consumer Research*, 3, 288–292.
- Neill, H. R., Cummings, R. G., Ganderton, P. T., Harrison, G. W., & McGuckin, T. (1994). Hypothetical Surveys and Real Economic Commitments. *Land*

Economics, 70(2), 145–154.

Neisser, U. (1976). *Cognition and reality: Principles and implications of cognitive psychology*. San Francisco: Freeman.

Nemeroff, C., & Rozin, P. (1994). The Contagion Concept Adult Thinking in States : in the United Transmission of Germs and Influence of Interpersonal. *Ethos*, 22(2), 158–186.

Netemeyer, R. G., Bearden, W. O., & Sharma, S. (2003). *Scaling Procedures: Issues and Applications*. London: Sage.

Newman, G. E., Diesendruck, G., & Bloom, P. (2011). Celebrity Contagion and the Value of Objects. *Journal of Consumer Research*, 38(2), 215–228.

Nickerson, R. S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General Psychology*, 2(2), 175–220.

Norton, M. I., Mochon, D., & Ariely, D. (2012). The IKEA effect: When labor leads to love. *Journal of Consumer Psychology*, 22(3), 453–460.

Novak, T. P., & MacEvoy, B. (1990). Segmentation Schemes: The List of Values and Lifestyles. *Journal of Consumer Research*, 17(1), 105–109.

Nowlis, S. M., & Shiv, B. (2005). The Influence of Consumer Distractions on the Effectiveness of Food-Sampling Programs. *Journal of Marketing Research*, 42(2), 157–168.

Nueno, J., & Quelch, J. (1998). The mass marketing of luxury. *Business Horizons*, 41(6), 61–68.

Nunnally, J., & Bernstein, I. (1994). *Psychometric theory* (3rd Edition). New York: McGraw-Hill.

Nuszbaum, M., Voss, A., Klauer, K. C., & Betsch, T. (2010). Assessing Individual Differences in the Use of Haptic Information Using a German Translation of the Need for Touch Scale. *Social Psychology*, 41(4), 263–274.

- O'Cass, A., & Frost, H. (2002). Status brands: examining the effects of non-product-related brand associations on status and conspicuous consumption. *Journal of Product & Brand Management*, 11(2), 67–88.
- O'driscoll, M. P., Pierce, J., & Coghlan, A. (2006). The Psychology of Ownership: Work Environment Structure, Organizational Commitment, And Citizenship Behaviors. *Group Organization Management*, 31(3), 388–416.
- Oliver, R. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17(4), 460–469.
- Olsen, S. (2007). Repurchase loyalty: The role of involvement and satisfaction. *Psychology & Marketing*, 24(4), 315–341.
- Olson, J. C. (1977). Price as an informational cue: Effects on product evaluation. In *Consumer and industrial buying behavior* (pp. 267–286). New York: North Holland Publishing Company.
- Olson, J. C., & Jacoby, J. (1972). Cue Utilization in the Quality Perception Process. In M. Venkatesan (Ed.), *Proceedings of the Third Annual Conference of the Association for Consumer Research* (pp. 167–179). Chicago: IL: Association for Consumer Research.
- Oppenheim, A. N. (2000). *Questionnaire Design* (New Edition). London and New York: Continuum.
- Orth, U. R., Bouzdine-Chameeva, T., & Brand, K. (2013). Trust during retail encounters: A touchy proposition. *Journal of Retailing*, 89(3), 301–314.
- Osborne, J. W., & Overbay, A. (2004). The power of outliers (and why researchers should always check for them). *Practical Assessment, Research & Evaluation*, 96(6), 1–12.
- Ozler, H., Yilmaz, A., & Ozler, D. (2008). Psychological ownership: an empirical study on its antecedents and impacts upon organizational behaviors. *Problems*

and Perspectives in Management, 6 (3), 38–47.

Park, C. W., & Moon, B. J. (2003). The relationship between product involvement and product knowledge: Moderating roles of product type and product knowledge type. *Psychology & Marketing*, 20(11), 977–997.

Park, C. W., & Young, S. M. (1986). Consumer response to television commercials: the impact of involvement and background music on brand attitude formation. *Journal of Marketing Formation*, 23(1), 11–24.

Park, J., & Stoel, L. (2005). Effect of brand familiarity, experience and information on online apparel purchase. *International Journal of Retail & Distribution Management*, 33(2), 148–160.

Park, W., & Lessig, P. (1981). Familiarity and Its Impact on Consumer Decision Biases and Heuristics. *Journal of Consumer Research*, 8(2), 223–231.

Patrick, V., & Hagtvædt, H. (2014). Luxury branding. In D. J. Macinnis, C. W. Park, & J. Priester (Eds.), *Handbook of Brand Relationships* (pp. 267–279). Routledge.

Patterson, M. L., Powell, J. L., & Lenihan, M. G. (1986). Touch, compliance, and interpersonal affect. *Journal of Nonverbal Behavior*, 10(1), 41–50.

Peat, J., Mellis, C., Williams, K., & Xuan, W. (2002). *Health Science Research: A Handbook of Quantitative Methods*. London: Sage.

Peck. (2010). Does touch matter? Insights from haptic research in marketing. In *Sensory marketing: Research on the sensuality of products* (pp. 17–31). New York: NY: Routledge.

Peck, J. (2010). Does Touch Matter? Insights from haptic research in marketing. In *Sensory marketing: Research on the sensuality of products* (pp. 17–31).

Peck, J., Barger, V. A., & Webb, A. (2013). In search of a surrogate for touch: The effect of haptic imagery on perceived ownership. *Journal of Consumer*

Psychology, 23(2), 189–196.

Peck, J., & Childers, L. (2003a). To Have and To Hold: The Influence of Haptic Information on Product Judgements. *Journal of Marketing*, 67(2), 35–48.

Peck, J., & Childers, T. (2005). Self report and behavioral measures in product evaluation and haptic information: Is what I say how I fell? *Advances in Consumer Research*, 32(1), 247.

Peck, J., & Childers, T. (2008). Effects of Sensory Factors on Consumer Behavior: If It Tastes, Smells, Sounds, and Feels like a Duck, Then It Must Be a...; Effects of sensory factors on consumer behaviors. In C. P. Haugtvedt, P. M. Herr, & F. R. Kardes (Eds.), *Handbook of consumer psychology* (pp. 193-219). New York: Psychology Press.

Peck, J., & Childers, T. L. (2003b). Individual Differences in Haptic Information Processing : The 'Need for Touch' Scale. *Journal of Consumer Research*, 30(3), 430–443.

Peck, J., & Childers, T. L. (2006). If I touch it I have to have it: Individual and environmental influences on impulse purchasing. *Journal of Business Research*, 59(6), 765–769.

Peck, J., & Johnson, J. W. (2011). Autotelic Need for Touch , Haptics , and Persuasion : The Role of Involvement. *Psychology and Marketing*, 28(3), 222–239.

Peck, J., & Shu, S. B. (2009). The Effect of Mere Touch on Perceived Ownership. *Journal of Consumer Research*, 36(3), 434–447.

Peck, J., & Wiggins, J. (2006). It Just Feels Good : Customers ' Affective Response to Touch and Its Influence on Persuasion. *Journal of Marketing*, 70(4), 56–69.

Perdue, B., & Summers, J. (1986). Checking the success of manipulations in marketing experiments. *Journal of Marketing Research*, 23(4), 317–326.

- Peterson, R. a., Albaum, G., & Beltramini, R. F. (1985). A Meta-Analysis of Effect Sizes in Consumer Behavior Experiments. *Journal of Consumer Research*, 12(1), 97-103.
- Petty, R. E., Briñol, P., & DeMarree, K. G. (2007). The Meta-Cognitive Model (MCM) of Attitudes: Implications for Attitude Measurement, Change, and Strength. *Social Cognition*, 25(5), 657–686.
- Petty, R. E., & Cacioppo, J. T. (1986). The Elaboration Likelihood Model of Persuasion. *Advances in Experimental Social Psychology*, 19, 123–205.
- Petty, R. E., Cacioppo, J. T., & Goldman, R. (1981). Personal involvement as a determinant of argument-based persuasion. *Journal of Personality and Social Psychology*, 41 (5), 847–855.
- Peugh, J. L., & Enders, C. K. (2004). Missing Data in Educational Research : A Review of Reporting Practices and Suggestions for Improvement. *Review of Educational Research*, 74(4), 525–556.
- Pham, M. T. (1998). Representativeness, relevance, and the use of feelings in decision making. *Journal of Consumer Research*, 25(2), 144–159.
- Pham, M. T., & Muthukrishnan, A. V. (2002). Search and Alignment in Judgment Revision: Implications for Brand Positioning. *Journal of Marketing Research*, 39(1), 18–30.
- Piaget, J. (1952). *The origins of intelligence in children*. New York: International University Press.
- Pierce, J., Kostova, T., & Dirks, K. T. (2001). Toward a Theory of Psychological Ownership in Organizations. *Academy of Management Review*, 26(2), 298–310.
- Pierce, J. L., Kostova, T., & Dirks, K. T. (2003). The state of perceived ownership: Integrating and extending a century of research of research. *The Academy of Management Review*, 7(1), 84–107.

- Pierce, J. L., O'Driscoll, M. P., & Coghlan, A.-M. (2004). Work environment structure and psychological ownership: the mediating effects of control. *The Journal of Social Psychology, 144*(5), 507–534.
- Pincus, S., & Waters, L. K. (1975). Product quality ratings as a function of availability of intrinsic product cues and price information. *Journal of Applied Psychology, 60*(2), 280–282.
- Png, I. P. L., & Reitman, D. (1995). Why are some products branded and others not. *Journal of Law and Economics, 38*(1), 207–224.
- Posavac, S., Sanbonmatsu, D. M., Kardes, F. R., & Fitzsimons, G. J. (2004). The Brand Positivity Effect: When Evaluation Confers Preference. *Journal of Consumer Research, 31*(3), 643–651.
- Posavac, S., Sanbonmatsu, D. M., Seo, J., & Iacobucci, D. (2014). How Attitudes Toward Product Categories Drive Individual Brand Attitudes and Choice. *Psychology & Marketing, 31*(10), 843–852.
- Pratt, M. G., & Dutton, J. E. (2000). Owning up or Opting out - The role of emotions and identities in Issue Ownership. In *Emotions in the workplace Research theory and practice* (pp. 104–129).
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers: A Journal of the Psychonomic Society, Inc, 36*(4), 717–731.
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing Moderated Mediation Hypotheses: Theory, Methods, and Prescriptions. *Multivariate Behavioral Research, 42*(1), 185–227.
- Prendergast, G., & Hwa, H. C. (2003). An Asian perspective of offensive advertising on the web. *International Journal of Advertising, 22*(3), 393–411.

- Prescott, P. A., & Soeken, K. . (1989). The potential uses of pilot work. *Nursing Research*, 38 (1) 60–62.
- Raghunathan, R., & Pham, M. (1999). All negative moods are not equal: Motivational influences of anxiety and sadness on decision making. *Organizational Behavior and Human Decision Processes*, 79(1), 56–77.
- Raghunathan, R., Pham, M. T., & Corfman, K. P. (2006). Informational Properties of Anxiety and Sadness, and Displaced Coping. *Journal of Consumer Research*, 32(4), 596–601.
- Raju, P. S. (1977). Product familiarity, brand name, and price influences on product evaluation. *Advances in Consumer Research*, 4(1), 64–71.
- Ramanathan, S., & Menon, G. (2002). *Don't Know Why but I Had This Craving: Goal Dependent Automaticity in Impulsive Decisions. Working paper*New York University. New York.
- Rao, A., & Monroe, K. (1988). The moderating effect of prior knowledge on cue utilization in product evaluations. *Journal of Consumer Research*, 15(2), 253–264.
- Rao, A., & Sieben, W. (1992). The effect of prior knowledge on price acceptability and the type of information examined. *Journal of Consumer Research*, 19(9), 256–270.
- Rapoza, K. (2013). The World's Most Valued Luxury Brands. Retrieved May 7, 2015, from <http://www.forbes.com/sites/kenrapoza/2013/06/07/the-worlds-most-valued-luxury-brands/>
- Remy, N., Catena, M., & Durand-Servoingt, B. (2015). *Digital Inside: Get wired for the ultimate luxury experience*. Retrieved July 2016 from <http://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/digital-inside-get-wired-for-the-ultimate-luxury-experience>

- Resnick, J., & Schwartz, T. (1973). Ethical Standards as an Independent Variable in Psychological Research. *American Psychologist*, 28(2), 134–139.
- Revilla, M. a., Saris, W. E., & Krosnick, J. A. (2014). Choosing the Number of Categories in Agree-Disagree Scales. *Sociological Methods & Research*, 43(1), 73–97.
- Reynolds, N., Simintiras, A., & Diamantopoulos, A. (2003). Theoretical justification of sampling choices in international marketing research: key issues and guidelines for researchers. *Journal of International Business Studies*, 34(1), 80–89.
- Richardson, P. S., Dick, A. S., & Jain, A. K. (1994). Extrinsic and Intrinsic of Store Perceptions Cue Effects on Brand Quality. *Journal of Marketing*, 58(4), 28–36.
- Rindfleisch, A., & Inman, J. J. (1998). Explaining the familiarity-liking relationship: Mere exposure, information availability, or social desirability? *Marketing Letters*, 9(1), 5–19.
- Robinson, J. (1998). *The manipulators: A conspiracy to make us buy*. London: Simon & Schuster Ltd.
- Rochberg-Halton, E. (1980). *Cultural signs and urban adaptation: The meaning of cherished household possessions*. University of Chicago.
- Rosch, E. (1975). Cognitive representations of semantic categories. *Journal of Experimental Psychology*, 104(3), 192–233.
- Rosch, E. (1978). Principles of Categorization. In E. Rosch & B. Lloyd (Eds.), *Cognition and Categorization*. Hillsdale, NJ: Erlbaum.
- Rosch, E., Mervis, C., Gray, W., Johnson, D., & Boyes-Braem, P. (1976). Basic objects in natural categories. *Cognitive Psychology*, 8(3), 382–439.
- Rozin, P., Millman, L., & Nemeroff, C. (1986). Operation of the laws of sympathetic magic in disgust and other domains. *Journal of Personality and Social*

Psychology, 50(4), 703–712.

- Rozin, P., & Nemeroff, C. (1990). The laws of sympathetic magic: A psychological analysis of similarity and contagion. In J. Stigler, R. Shweder, & G. Herdt (Eds.), *Cultural Psychology: Essays on Comparative Human Development* (pp. 205–232). New York: Cambridge University Press.
- Rozin, P., & Nemeroff, C. (2002). Sympathetic magical thinking: The contagion and similarity“ heuristics.” In G. T., G. D., & K. D. (Eds.), *Heuristics and biases: The psychology of intuitive judgment*. (pp. 201--216). New York: Cambridge University Press.
- Rudmin, F., & Berry, J. (1987). Semantics of ownership: A free-recall study of property. *The Psychological Record*, 37(2), 257–268.
- Ruth, J., & Simonin, B. (2003). “Brought to you by Brand A and Brand B” Investigating Multiple Sponsors’ Influence On Consumers’ Attitudes Toward Sponsored Events. *Journal of Advertising*, 32(3), 19–30.
- Rutherford, A. (2001). *Introducing Anova and Ancova: A GLM Approach*. Sage Publications.
- Sacharow, S. (1970). Selling a package through the use of color. *Color Engineering*, 9, 25–27.
- Scent_Marketing_Institute. (2013). Scent Marketing : Deepening Customer Connections. Retrieved from <http://www.scentmarketing.org/trends/>
- Schank, R. C., & Abelson, R. P. (1977). *Scripts, Plans, Goals and Understanding*. Hillsdale, NJ: Erlbaum.
- Schifferstein, H., & Hekkert, P. (2011). Sensory aesthetics in product design. In F. Bacci & D. Melcher (Eds.), *Art and the senses*. Oxford: Oxford University Press.
- Schifferstein, H. N. J. (2006). The perceived importance of sensory modalities in

- product usage: a study of self-reports. *Acta Psychologica*, 121(1), 41–64.
- Schloss, K. B., Strauss, E. D., & Palmer, S. E. (2013). Object color preferences. *Color Research & Application*, 38(6), 393–411.
- Schlosser, A. E., White, T. B., & Lloyd, S. M. (2006). Converting Web Site Visitors into Buyers: How Web Site Investment Increases Consumer Trusting Beliefs and Online Purchase Intentions. *Journal of Marketing*, 70(2), 133–148.
- Sekaran, U. (2000). *Research methods for business: a skill-building approach* (3rd Edition). Wiley.
- Shea, E. (2013). 65pc of luxury buyers want to see, feel products before purchase: Google. Retrieved February 12, 2015 from <https://www.luxurydaily.com/65pc-of-luxury-buyers-want-to-see-feel-products-before-purchase-google/>
- Shopify. (2017). Why Run a Pop-Up? Retrieved April 22, 2017, from <https://www.shopify.co.uk/guides/ultimate-guide-to-pop-up-shops/why-run-a-pop-up>
- Shu, S. B., & Peck, J. (2011). Psychological ownership and affective reaction: Emotional attachment process variables and the endowment effect. *Journal of Consumer Psychology*, 21(4), 439–452.
- Shugan, S. (1980). The cost of thinking. *Journal of Consumer Research*, 7(2), 99–111.
- Siegel, Rudolph, E. (1970). *Galen on Sense Perception*. Basel: Karger.
- Siegrist, M., Gutscher, H., & Earle, T. (2005). Perception of risk: the influence of general trust, and general confidence. *Journal of Risk Research*, 8 (2), 145–156.
- Slama, M., & Tashchian, A. (1985). Selected socioeconomic and demographic characteristics associated with purchasing involvement. *Journal of Marketing*, 49(1), 72–82.
- Smith, D. C., & Park, C. W. (1992). The effects of brand extensions on market share

- and advertising efficiency. *Journal of Marketing Research (JMR)*, 29(3), 296–313.
- Smith, R. E., & Swinyard, W. R. (1988). Cognitive response to advertising and trial: Belief strength, belief confidence and product curiosity. *Journal of Advertising*, 17(3), 3–14.
- Somekh, B., & Lewin, C. (2006). *Research Methods in the Social Sciences*. London: Sage Publications Ltd.
- Spangenberg, E. R., Crowley, A. E., & Henderson, P. W. (1996). Improving the Store Environment: Do Olfactory Cues Affect Evaluations and Behaviors? *Journal of Marketing*, 60(2), 67–80.
- Spangenberg, E. R., Grohmann, B., & Sprott, D. E. (2005). It's beginning to smell (and sound) a lot like Christmas: The interactive effects of ambient scent and music in a retail setting. *Journal of Business Research*, 58 (11), 1583–1589.
- Spears, N., & Singh, S. N. (2004). Measuring Attitude toward the Brand and Purchase Intentions. *Journal of Current Issues & Research in Advertising*, 26(2), 53–66.
- Spector, P. E. (1992). *Summated rating scale construction: An introduction*. Newbury Park: Sage Publications.
- Spence, C., & Gallace, A. (2011). Multisensory Design: Reaching Out to Touch. *Psychology and Marketing*, 28(3), 267–307.
- Sprott, D. E., & Shimp, T. A. (2004). Using product sampling to augment the perceived quality of store brands. *Journal of Retailing*, 80(4), 305–315.
- Stafford, M., & Day, E. (1995). Retail services advertising: the effects of appeal, medium, and service. *Journal of Advertising*, 24(1), 57–71.
- Stephen, R., & Zweigenhaft, R. (1986). The effect on tipping of a waitress touching male and female customers. *The Journal of Social Psychology*, 126(1), 141-142.

- Stevens, J., & Green, B. (1996). *History of research on touch: Pain and Touch. Pain and Touch*. San Diego: Academic Press.
- Stoltman, J. (1991). Advertising Effectiveness: The Role of Advertising Schemas. In T. L. Childers & S. B. MacKenzie (Eds.), *Marketing Theory and Applications* (pp. 317–318). Chicago: IL: American Marketing Association.
- Streicher, M. C., & Estes, Z. (2015). Touch and Go : Merely Grasping a Product Facilitates Brand Perception and Choice. *Applied Cognitive Psychology*, 29(3), 350-359
- Subhash, J. (2013). *Haptic Information Processing: The Moderating Role of Consumer Knowledge* (Research Paper Series 2012-2171274). Udaipur.
- Sujan, M. (1985). Consumer Knowledge: Effects on Evaluation Strategies Mediating Consumer Judgments. *Journal of Consumer Research*, 12(1), 31–46.
- Sujan, M., & Bettman, J. (1989). The effects of brand positioning strategies on consumers' brand and category perceptions: some insights from schema research. *Journal of Marketing Research*, 26(4), 454–467.
- Sukhdial, A. S., Chakraborty, G., & Steger, E. K. (1995). Measuring Values can Sharpen Segmentation in the Luxury Auto Market. *Journal of Advertising Research*, 35(1), 9–22.
- Sundar, A., & Noseworthy, T. (2016a). Too exciting to fail, too sincere to succeed: The effects of Brand Personality on Sensory Disconfirmation. *Journal of Consumer Research*, 43(1), 44–67.
- Sundar, A., & Noseworthy, T. (2016b). When Sensory Marketing Works and When it Backfires. Retrieved from <https://hbr.org/2016/05/when-sensory-marketing-works-and-when-it-backfires>
- Sundaram, D., & Webster, C. (1999). The role of brand familiarity on the impact of word-of-mouth communication on brand evaluations. In L. M. Scott & E.

- Arnould (Eds.), *Advances in Consumer Research* (Vol. 26, pp. 664–670).
- Sung, Y., Choi, S. M., Ahn, H., & Song, Y. A. (2015). Dimensions of Luxury Brand Personality: Scale Development and Validation. *Psychology and Marketing*, 32(1), 121–132.
- Szybillo, G. J., & Jacoby, J. (1974). Intrinsic versus extrinsic cues as determinants of perceived product quality. *Journal of Applied Psychology*, 59(1), 74–78.
- Tadena, N. (2015). Affluent Shoppers Look for High-End Customer Experience. Retrieved February 20, 2017, from <https://www.wsj.com/articles/affluent-shoppers-look-for-high-end-customer-experience-1448912869>
- Tam, J. L. M. (2008). Brand familiarity: its effects on satisfaction evaluations. *Journal of Services Marketing*, 22(1), 3–12.
- Taylor, S. A., & Baker, T. L. (1994). Assessment of the Relationship Between Service Quality and Customer Satisfaction in the Formation of Consumers Purchase Intentions. *Journal of Retailing*, 70(2), 163–178.
- Teas, R. K., & Agarwal, S. (2000). The effects of extrinsic product cues on consumers' perceptions of quality , sacrifice and value, *Academy of Marketing Science*, 28(2), 278–290.
- Teijlingen, E. van, & Hundley, V. (2002). The importance of pilot studies. *Nursing Standard*, 16(40), 33–36.
- Tesoriero, M., & Rickard, N. S. (2012). Music-enhanced recall: An effect of mood congruence, emotion arousal or emotion function. *Musicae Scientiae*, 16(3), 340–356.
- Thaler, R. (1980). Toward a positive theory of consumer choice. *Journal of Economic Behavior & Organization*, 1(1), 39–60.
- Thaler, R. (1985). Mental Accounting and Consumer Choice. *Marketing Science*, 4(3), 199–214.

- The_Marketer. (2011). Smell Sells: Scent Marketing. Retrieved November 19, 2013, from <http://www.themarketer.co.uk/archives/trends/scent-marketing/>
- Tian, K. T., Bearden, W. O., & Hunter, G. L. (2001). Consumers' need for uniqueness: short-form scale development and cross-cultural validation. *Journal of Consumer Research*, 28(6), 50–66.
- Torn, F., & Dahlen, M. (2007). Effects of brand incongruent advertising in competitive settings. *European Advances in Consumer Research*, 8, 234–239.
- Tsai, S. (2005). Impact of personal orientation on luxury-brand purchase value An international investigation. *International Journal of Market Research*, 47(4), 177–206.
- Tuan, Y. (1984). *Dominance and affection: The making of pets*. New Haven, CT: Yale University Press.
- Turley, L. ., & Milliman, R. E. (2000). Atmospheric Effects on Shopping Behavior. *Journal of Business Research*, 49(2), 193–211.
- Tybout, A., Calder, B., & Sternthal, B. (1981). Using information processing theory to design marketing strategies. *Journal of Marketing Research*, 18(February), 73–79.
- Tynan, C., McKechnie, S., & Chhuon, C. (2009). Co-creating value for luxury brands. *Journal of Business Research*, 63(11), 1156–1163.
- Ubilava, D., Foster, K. A., Lusk, J. L., & Nilsson, T. (2011). Differences in consumer preferences when facing branded versus non-branded choices. *Journal of Consumer Behaviour*, 10(2), 61–70.
- Underhill, P. (1999). *Why We Buy - The Science of Shopping* (Vol. 40). New York.
- Vallois, P. (2015). 10 Top Luxury Brand Experiences. Retrieved on May 2016 from <http://luxurysociety.com/en/articles/2015/06/10-top-luxury-brand-experiences/>
- Van Dyne, L., & Pierce, J. L. (2004). Psychological ownership and feelings of

- possession: Three field studies predicting employee attitudes and organizational citizenship behavior. *Journal of Organizational Behavior*, 25(4), 439–459.
- Vandewalle, D., Van Dyne, L., & Kostova, T. (1995). Psychological Ownership: An Empirical Examination of its Consequences. *Group & Organization Management*, 20(2), 210–226.
- Veblen, T. (1899). *The Theory of the Leisure Class*. Boston: Houghton Mifflin.
- Vickers, J. S., & Renand, F. (2003). The marketing of luxury goods: An exploratory study—three conceptual dimensions. *The Marketing Review*, 3(4), 459–478.
- Vieira, V. A. (2012). An Evaluation of the Need for Touch Scale and Its Relationship with Need for Cognition, Need for Input, and Consumer Response. *Journal of International Consumer Marketing*, 24(1–2), 57–78.
- Vigneron, F., & Johnson, L. (2004). Measuring Perceptions of Brand Luxury. *Journal of Brand Management*, 11(6), 484–506.
- Vigneron, F., & Johnson, L. W. (1999). A Review and a Conceptual Framework of Prestige-Seeking Consumer Behavior. *Academy of Marketing Science*, 1(1), 1–15.
- Voelckner, F. (2006). An empirical comparison of methods for measuring consumers' willingness to pay. *Marketing Letters*, 17(2), 137–149.
- Wagner, S. H., Parker, C. P., & Christiansen, N. D. (2003). Employees that think and act like owners: effects of ownership beliefs and behaviours on organizational effectiveness. *Personnel Psychology*, 56(4), 847–871.
- Wanous, J. P., Reichers, a E., & Hudy, M. J. (1997). Overall job satisfaction: how good are single-item measures? *The Journal of Applied Psychology*, 82(2), 247–252.
- Wansink, B., & Ray, M. L. (1996). Advertising Strategies to Increase Usage Frequency. *Journal of Marketing*, 60(1), 31–46.

- Ward, P., Davies, B., & Kooijman, D. (2003). Ambient Smell and the Retail Environment: Relating Olfaction Research to Consumer Behavior. *Journal of Business & Management*, 9(3), 289–302.
- Warlaumont, H. G. (1997). Appropriating Reality: Consumers' Perceptions of Schema-Inconsistent Advertising. *Journalism & Mass Communication Quarterly*, 74(1), 39–54.
- Watson, D. (1992). Correcting for Acquiescent Response Bias in the Absence of a Balanced Scale: An Application to Class Consciousness. *Sociological Methods & Research*, 21(1), 52–88.
- Weatherell, C., Tregear, A., & Allinson, J. (2003). In Search of the Concerned Consumer: UK Public Perceptions of Food, Farming and Buying Local. *Journal of Rural Studies*, 19(2), 233–244.
- Webb, A., & Peck, J. (2015). Individual differences in interpersonal touch: On the development, validation, and use of the “comfort with interpersonal touch” (CIT) scale. *Journal of Consumer Psychology*, 25(1), 60–77.
- Weijters, B., Cabooter, E., & Schillewaert, N. (2010). The effect of rating scale format on response styles: The number of response categories and response category labels. *Journal of Research in Marketing*, 27(3), 236–247.
- Wertenbroch, K., & Skiera, B. (2002). Measuring Consumers' Willingness to Pay at the Point of Purchase. *Journal of Marketing Research*, 39(2), 228–241.
- Wetzel, C. G. (1977). Manipulation Checks: A Reply to Kidd. *Representative Research in Social Psychology*, 8(2), 88–93.
- Wheatley, J., Chiu, J., & Goldman, A. (1981). Physical quality, price, and perceptions of product quality-implications for retailers. *Journal of Retailing*, 57(2), 100–116.
- Wilcox, K., Kim, H. M., & Sen, S. (2009). Why Do Consumers Buy Counterfeit

- Luxury Brands? *Journal of Marketing Research*, 46(2), 247–259.
- Wilkinson, L. (1999). Statistical Methods in Psychology Journals: Guidelines and Explanations. *American Psychologist*, 54(8), 594–604.
- Williams, L., & Bargh, J. (2008). Experiencing physical warmth promotes interpersonal warmth. *Science*, 322(5901), 606–607.
- Williams, L., Huang, J., & Bargh, J. (2009). The scaffolded mind: Higher mental processes are grounded in early experience of the physical world. *European Journal of Social Psychology*, 39(7), 1257–1267.
- Wilpert, B. (1991). Property, Ownership and Participation: On the Growing Contradictions between Legal and Psychological Concepts. In R. Russell, & V. Rus (Eds.), *International handbook of participation in organizations: For the study of organizational democracy, co-operation, and self management* (Vol. 2, pp. 149–164). New York: Oxford University Press.
- Wilson, A. (2003). *Marketing Research* (3rd Edition). London: Pearson Education Limited.
- Yalch, R. F., & Spangenberg, E. (1990). Using Store Music for Retail Zoning : A Field Experiment. *Advances in Consumer Research*, 20 (1), 632–636.
- Yazdanparast, A., & Spears, N. (2013). Can Consumers Forgo the Need to Touch Products ? An Investigation of Nonhaptic Situational Factors in an Online Context. *Psychology and Marketing*, 30(1), 46–61.
- Zaichkowsky, J. L. (1985). Measuring the Involvement Construct. *Journal of Consumer Research*, 12(3), 341–352.
- Zaichkowsky, J. L. (1994). The Personal Involvement Inventory: Reduction, Revision, and Application to Advertising. *Journal of Advertising*, 23(4), 59–70.
- Zajonc, R. (1968). Attitudinal effects of mere exposure. *Journal of Personality and Social Psychology*, 9(2), 1-27.

- Zajonc, R. B. (1980). Feeling and thinking: Preferences need no inferences. *American Psychologist*, 35(2), 151–175.
- Zeithaml, V. A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing*, 52(3), 2–22.
- Zwebner, Y., Lee, L., & Goldenberg, J. (2014). The temperature premium: Warm temperatures increase product valuation. *Journal of Consumer Psychology*, 24(2), 251–259.

APPENDIX 1: BRAND SELECTION PRETEST QUESTIONNAIRE

SECTION A: BRAND FAMILIARITY

Please indicate your level of agreement with each of the statements for each of the brands listed in the table below, by ticking the appropriate box (on a scale of 1 to 7, 1= Strongly Disagree to 7 = Strongly Agree).

QSTN NO.	QUESTIONS	Strongly Disagree 1	2	3	4	5	6	Strongly Agree 7
LOUIS VUITTON								
Q1.	I am familiar with the Louis Vuitton brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q2	I know a great deal about the Louis Vuitton brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q3.	I have no knowledge about the Louis Vuitton Brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PRIMARK								
Q4.	I am familiar with the Primark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q5.	I know a great deal about the Primark brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q6.	I have no knowledge about the Primark Brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MATALAN								
Q7.	I am familiar with the Matalan brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q8.	I know a great deal about the Matalan brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q9.	I have no knowledge about the Matalan brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RALPH LAUREN								
Q10	I am familiar with the Ralph Lauren brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q11	I know a great deal about the Ralph Lauren brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q12	I have no knowledge about the Ralph Lauren Brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WOOLWORTHS								
Q13	I am familiar with the Woolworths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q14	I know a great deal about the Woolworths brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q15	I have no knowledge about the Woolworths Brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CHANEL								
Q16	I am familiar with the Chanel brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q17	I know a great deal about the Chanel brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q18	I have no knowledge about	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QSTN NO.	QUESTIONS	Strongly Disagree 1	2	3	4	5	6	Strongly Agree 7
.	the Chanel Brand							
.	H&M							
Q19	I am familiar with the H&M brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q20	I know a great deal about the H&M brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q21	I have no knowledge about the H&M brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.	TRUWORTHS							
Q22	I am familiar with the Truworths brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q23	I know a great deal about the Truworths brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q24	I have no knowledge about the Truworths brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.	BURBERRY							
Q25	I am familiar with the Burberry brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q26	I know a great deal about the Burberry brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q27	I have no knowledge about the Burberry brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.	PRADA							
Q28	I am familiar with the Prada brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q29	I know a great deal about the Prada brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q30	I have no knowledge about the Prada brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.	NEW LOOK							
Q31	I am familiar with the New Look brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q32	I know a great deal about the New Look brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q33	I have no knowledge about the New Look brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.	MR. PRICE							
Q34	I am familiar with the Mr. Price brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q35	I know a great deal about the Mr. Price brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q36	I have no knowledge about the Mr. Price brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.	4U2							
Q37	I am familiar with the 4U2 brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q38	I know a great deal about the 4U2 brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q39	I have no knowledge about the 4U2 Brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.	TOPSHOP							
Q40	I am familiar with the Topshop brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QSTN NO.	QUESTIONS	Strongly Disagree						Strongly Agree
		1	2	3	4	5	6	7
Q41	I know a great deal about the Topshop brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q42	I have no knowledge about the Topshop Brand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION B: ATTITUDE TOWARDS THE BRAND

On a scale of 1 to 7, what is your attitude towards the brands in the table below, by ticking the appropriate box.

QSTN			1	2	3	4	5	6	7	
Q1	LOUIS VUITTON	Unappealing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appealing
Q2		Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good
Q3		Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
Q4		Unfavourable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Favourable
Q5		Unlikable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Likable
Q11	PRIMARK	Unappealing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appealing
Q12		Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good
Q13		Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
Q14		Unfavourable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Favourable
Q15		Unlikable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Likable
Q16	4U2	Unappealing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appealing
Q17		Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good
Q18		Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
Q19		Unfavourable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Favourable
Q20		Unlikable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Likable
Q21	MATALAN	Unappealing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appealing
Q22		Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good
Q23		Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
Q24		Unfavourable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Favourable
Q25		Unlikable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Likable
Q26	RALPH LAUREN	Unappealing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appealing
Q27		Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good
Q28		Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
Q29		Unfavourable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Favourable
Q30		Unlikable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Likable
Q31	WOOLWORTHS	Unappealing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appealing
Q32		Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good
Q33		Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
Q34		Unfavourable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Favourable
Q35		Unlikable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Likable
Q36	CHANEL	Unappealing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appealing
Q37		Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good
Q38		Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
Q39		Unfavourable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Favourable
Q40		Unlikable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Likable
Q41	H&M	Unappealing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appealing
Q42		Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good
Q43		Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
Q44		Unfavourable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Favourable
Q45		Unlikable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Likable
Q46	TRUWORTHS	Unappealing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appealing
Q47		Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good
Q48		Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
Q49		Unfavourable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Favourable
Q50		Unlikable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Likable
Q51	BURBERRY	Unappealing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appealing
Q52		Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good
Q53		Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
Q54		Unfavourable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Favourable
Q55		Unlikable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Likable
Q56	PRADA	Unappealing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appealing
Q57		Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good
Q58		Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant

QSTN			1	2	3	4	5	6	7	
Q59		Unfavourable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Favourable
Q60		Unlikable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Likable
Q61	NEW LOOK	Unappealing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appealing
Q62		Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good
Q63		Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
Q64		Unfavourable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Favourable
Q65		Unlikable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Likable
Q66	MR. PRICE	Unappealing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appealing
Q67		Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good
Q68		Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
Q69		Unfavourable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Favourable
Q70		Unlikable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Likable
Q71	TOPSHOP	Unappealing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appealing
Q72		Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good
Q73		Unpleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pleasant
Q74		Unfavourable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Favourable
Q75		Unlikable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Likable

SECTION C: DEMOGRAPHICS

Kindly answer each of the questions below.

Q1. What gender are you?

Male

Female

Q2. How old are you?

Below 18 years

18-24 years

25-31 years

32-38 years

39-44 years

45-51 years

52 and above years

Q3.	Are you British?	Yes
		No
		If No, what is your nationality?

APPENDIX 2: RESEARCH ETHICAL APPROVAL EMAIL

Dear

Re: KBS REAG Decision

KBSE No: 120

Project Title: The effect of touch on consumer decision making

Date Application Received: 07/04/15

I am pleased to advise the above mentioned research project has been granted ethical approval.

May I take this opportunity to remind you that any significant change in the question, design or conduct over the course of the research should be notified to myself and may require a new application for ethics approval.

Kind regards



University of
Kent



Dr Joana Vassilopoulou | KBS Ethics REAG Chair

Kent Business School | University of Kent

+44 (0)1227 823769 | KBSEthicsChecklist@kent.ac.uk

This email is confidential to the intended recipient. If you have received it in error, please notify the sender and delete it from your computer.

APPENDIX 3: PILOT STUDY RECRUITMENT EMAIL

Good afternoon,

I'm a PhD student currently recruiting participants for some studies I'm running at the Business School **NEXT WEEK**. Your participation is purely **VOLUNTARY**, but will be **GREATLY APPRECIATED**. As a small gesture and token of appreciation for your participation, free chocolate bars will be administered.

During the experiments you will be required to examine products and fill out a questionnaire.

A number of time slots are available to choose from (see table below), each only **30 minutes long**. These are allocated on a first come first serve basis and only **3 participants per session** are required. You can only participate/sign up to **ONE** slot.

DAY	START TIME (30 min session)	LOCATION
Monday 26th October, 2015	9.30am, 10.15 am, 11.00 am, 11.45 am, 12.30 pm, 1.15 pm, 2.00 pm, 2.45 pm, 3.30 pm, 4.15 pm	KBSXBB Meeting Room (At the KBSX Building next to the R&D Building)
Tuesday 27th October, 2015	Same slots as above	KBSXBB Meeting Room
Wednesday 28th October, 2015	Same slots as above	KBSXBB Meeting Room
Thursday 29th October, 2015	Same slots as above	KBSXBB Meeting Room

To BOOK A SLOT, select a date and time, and email me at swk5@kent.ac.uk.

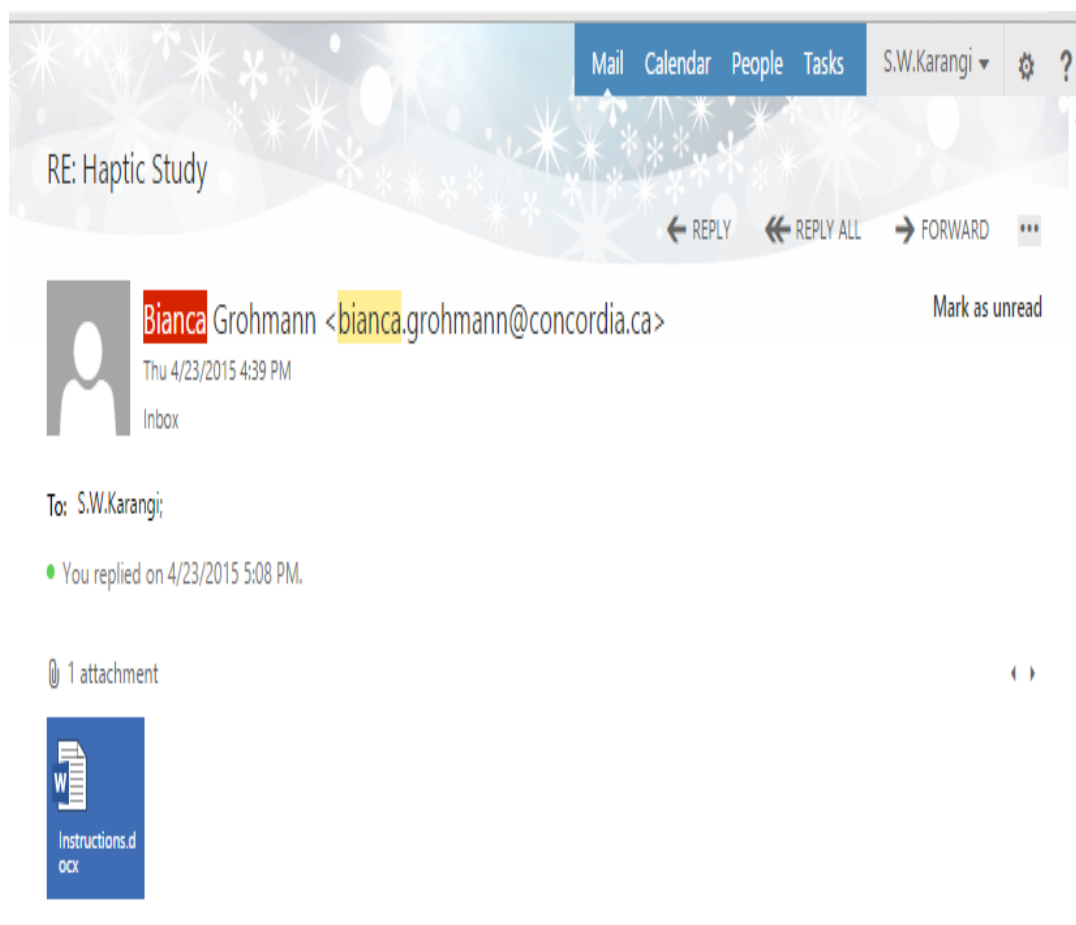
I look forward to hearing from you.

Kind regards,

Sheena.

APPENDIX 4a: EMAIL CORRESPONDENCE

WITH PROF. BIANCA GROHMANN (for touch and no touch instructions)



Hello Sheena,

attached please find the instructions used for the touch and no touch conditions.
I wish you good luck with your research.

Kind regards,

Bianca Grohmann, MBA, PhD
Associate Professor
Concordia University Research Chair in Consumer Research

Department of Marketing / Département Marketing
John Molson School of Business / École de Gestion John Molson
Concordia University / Université Concordia
Tel. / Tél. 514.848.2424 extension 4845



APPENDIX 4b: TOUCH AND NO TOUCH INSTRUCTIONS

This academic study is part of a doctoral research project that aims at achieving a better understanding of consumer purchase behaviour. As such, you are presented with three products belonging to the **(BRAND)** you are invited to visually evaluate (OR ‘physically evaluate’ in the touch condition).

If you are comfortable with participating in this study, kindly read and sign the consent statement below.

APPENDIX 5: PILOT STUDY QUESTIONNAIRE

(Touch and Brand familiarity study)

University of Kent,
Kent Business School,
CT2 7NZ,
Canterbury, Kent.
Email: swk5@kent.ac.uk



STUDY PURPOSE

This academic study is part of a doctoral research project that aims at achieving a better understanding of consumer purchase behaviour. As such, you are presented with three products belonging to the **brand**, which you are invited to evaluate.

If you are comfortable with participating in this study, kindly read and sign the consent statement below.

CONSENT

By signing this form I agree to take part in this academic study on consumer purchase behaviour. I am aware that I have the freedom to leave the study at any time. I also understand that the researcher, for the purpose of the PhD, will use the data from the study. I understand that the data will be treated as **confidential** and responses **anonymized**, with no way of connecting the data to the identity of a particular participant.

I have carefully read and understood all the terms in the brief letter, confirm that I'm of legal age (over 18 years old) and voluntarily agree to participate in this study. I also understand the purpose of the study and what is expected from me.

Participant signature: _____ **Date:** _____



A STUDY ON CONSUMER PURCHASE BEHAVIOUR QUESTIONNAIRE

PROCEDURE

You are invited to evaluate three products **ONE** at a time, located at one of three stations (Station A, B and C).

PICK UP the products during evaluation.

After you are done with this examination, fill out the questionnaire provided.

Move to the next station as instructed.

QUESTIONNAIRE INSTRUCTIONS

ALL QUESTIONS require a response so kindly ensure that they have all been answered.

Kindly **TICK** the box ☐ and/or write in the appropriate response space provided.

There is no right or wrong answer.

Are there any questions?

Kindly wait for verbal instruction on when to begin.

Product: SWEATER

1. What is your level of agreement with each of the following statements? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I like this sweater							
I feel positive toward the sweater							
The sweater is good							

2. Please tick one appropriate box in response to each question below (1= Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I would definitely purchase this sweater							
I definitely intend to buy this sweater							
I have a high purchase interest in this sweater							
I definitely buy this sweater							
I probably buy this sweater							

3. How much would you be willing to pay for the sweater? Kindly state an amount between £1 to £250.

4. On a scale of 1 to 7, how confident are you with your evaluation of the sweater?

	1	2	3	4	5	6	7	
Not very confident								Very confident
Not very sure								Very sure

5. How knowledgeable are you about sweaters? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I feel very knowledgeable about sweaters							
If a friend asked me about sweaters, I could give them advice about different brands of sweaters							
If I had to purchase a sweater today, I would need to gather very little information in order to make a wise decision							
I feel very confident about my ability to tell the difference in quality among different brands of sweaters							

You have reached the end of this section.

Proceed to the next Station and examine the product provided.

When you have done so, kindly fill out the questionnaire provided.

Product: PILLOWCASE

6. What is your level of agreement with each of the following statements? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I like this pillowcase								
I feel positive toward the pillowcase								
The pillowcase is good								

7. Please tick one appropriate box in response to each question below (1= Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I would definitely purchase this pillowcase								
I definitely intend to buy this pillowcase								
I have a high purchase interest in this pillowcase								
I definitely buy this pillowcase								
I probably buy this pillowcase								

8. How much would you be willing to pay for the pillowcase? Kindly state an amount between £1 to £250.

9. On a scale of 1 to 7, how confident are you with your evaluation of the pillowcase?

	1	2	3	4	5	6	7	
Not very confident								Very confident
Not very sure								Very sure

10. How knowledgeable are you about pillowcases? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I feel very knowledgeable about pillowcases								
If a friend asked me about pillowcases, I could give them advice about different brands of pillowcases								
If I had to purchase a pillowcase today, I would need to gather very little information in order to make a wise decision								
I feel very confident about my ability to tell the difference in quality among different brands of pillowcases								

You have reached the end of this section.

Proceed to the next Station and examine the product provided.

When you have done so, kindly fill out the questionnaire provided.

Product: BATH TOWEL

11. What is your level of agreement with each of the following statements? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I like this bath towel								
I feel positive toward the bath towel								
The bath towel is good								

12. Please tick one appropriate box in response to each question below (1= Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I would definitely purchase this bath towel								
I definitely intend to buy this bath towel								
I have a high purchase interest in this bath towel								
I definitely buy this bath towel								
I probably buy this bath towel								

13. How much would you be willing to pay for the bath towel? Kindly state an amount between £1 to £250.

14. On a scale of 1 to 7, how confident are you with your evaluation of the bath towel?

	1	2	3	4	5	6	7	
Not very confident								Very confident
Not very sure								Very sure

15. How knowledgeable are you about bath towels? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I feel very knowledgeable about bath towels								
If a friend asked me about bath towels, I could give them advice about different brands of bath towels								
If I had to purchase a bath towel today, I would need to gather very little information in order to make a wise decision								
I feel very confident about my ability to tell the difference in quality among different brands of bath towels								

You have reached the end of this section.

Raise your hand and the experimenter will give you the last section to fill out.

16. On a scale of 1 to 7, what is your attitude towards the brand

	1	2	3	4	5	6	7	
Unappealing								Appealing
Bad								Good
Unpleasant								Pleasant
Unfavourable								Favourable
Unlikable								Likable

17. Please indicate your level of agreement with each of the statements about the brand (1= Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I am familiar with the brand								
I know a great deal about the brand								
I have no knowledge about the brand								

18. Please indicate your level of agreement with each of the statements below (1 = Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
When walking through stores, I can't help touching all kinds of products								
Touching products can be fun								
When browsing in stores, it is important for me to handle all kinds of products								
I like to touch products even if I have no intention of buying them								
When browsing in stores, I like to touch lots of products								
I find myself touching all kinds of products in stores								
I place more trust in products that can be touched before purchase								
I feel more comfortable purchasing a product after physically examining it								
If I can't touch a product in the store, I am reluctant to purchase the product								
I feel more confident making a purchase after touching a product								
The only way to make sure a product is worth buying is to actually touch it								
I would only buy a product if I could handle it before purchase								

19. What gender are you?

Male
Female

20. How old are you?

Below 18 years
18-24 years
25-30 years
31-36 years
37-42 years
45-50 years

51 and above years

21. Are you British?

Yes
No

If No, what is your nationality?

22. In your opinion, what is the purpose of this study?

END OF QUESTIONNAIRE

THANK YOU FOR YOUR TIME.

**RAISE YOUR HAND AND THE EXPERIMENTER WILL COLLECT YOUR COMPLETED
QUESTIONNAIRE.**

APPENDIX 6: STUDY 1 (Touch and Brand Familiarity)

University of Kent,
Kent Business School,
CT2 7NZ,
Canterbury, Kent.
Email: swk5@kent.ac.uk



STUDY PURPOSE

This academic study is part of a doctoral research project that aims at achieving a better understanding of consumer purchase behaviour. As such, you are presented with three products belonging to the **brand**, which you are invited to evaluate.

If you are comfortable with participating in this study, kindly read and sign the consent statement below.

CONSENT

By signing this form I agree to take part in this academic study on consumer purchase behaviour. I am aware that I have the freedom to leave the study at any time. I also understand that the researcher, for the purpose of the PhD, will use the data from the study. I understand that the data will be treated as **confidential** and responses **anonymized**, with no way of connecting the data to the identity of a particular participant.

I have carefully read and understood all the terms in the brief letter, confirm that I'm of legal age (over 18 years old) and voluntarily agree to participate in this study. I also understand the purpose of the study and what is expected from me.

Participant signature: _____ **Date:** _____



A STUDY ON CONSUMER PURCHASE BEHAVIOUR QUESTIONNAIRE

PROCEDURE

You are invited to evaluate three products **ONE** at a time, located at one of three stations (Station A, B and C).

PICK UP the products during evaluation.

After you are done with this examination, fill out the questionnaire provided.

Move to the next station as instructed.

QUESTIONNAIRE INSTRUCTIONS

ALL QUESTIONS require a response so kindly ensure that they have all been answered.

Kindly **TICK** the box ☐ and/or write in the appropriate response space provided.

There is no right or wrong answer.

Are there any questions?

Kindly wait for verbal instruction on when to begin.

Product: SWEATER

1. What is your level of agreement with each of the following statements? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I like this sweater							
I feel positive toward the sweater							
The sweater is good							

2. Please tick one appropriate box in response to each question below (1= Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I would definitely purchase this sweater							
I definitely intend to buy this sweater							
I have a high purchase interest in this sweater							
I definitely buy this sweater							
I probably buy this sweater							

3. How much would you be willing to pay for the sweater? Kindly state an amount between £1 to £250.

4. On a scale of 1 to 7, how confident are you with your evaluation of the sweater?

	1	2	3	4	5	6	7	
Not very confident								Very confident
Not very sure								Very sure

5. Here is a list of emotional reactions you may have experienced. On a scale of 1 to 7 (1= Not at all to 7= A lot) indicate how much you felt each of these emotional reactions when you were evaluating the sweater.

	Not at all					A lot	
	1	2	3	4	5	6	7
Interested							
Moved							
Captivated							
Delighted							
Enthusiastic							
Appealed							
Amused							

6. Please indicate your level of agreement with each of the statements below (1 = Strongly Disagree to 7= Strongly Agree).

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7

I feel like this is my sweater							
I feel a very high degree of personal ownership for this sweater							
I feel like I own this sweater							

7. How knowledgeable are you about sweaters? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I feel very knowledgeable about sweaters							
If a friend asked me about sweaters, I could give them advice about different brands of sweaters							
If I had to purchase a sweater today, I would need to gather very little information in order to make a wise decision							
I feel very confident about my ability to tell the difference in quality among different brands of sweaters							

You have reached the end of this section.

Proceed to the next Station and examine the product provided.

When you have done so, kindly fill out the questionnaire provided.

Product: PILLOWCASE

8. What is your level of agreement with each of the following statements? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I like this pillowcase							
I feel positive toward the pillowcase							
The pillowcase is good							

9. Please tick one appropriate box in response to each question below (1= Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I would definitely purchase this pillowcase							
I definitely intend to buy this pillowcase							
I have a high purchase interest in this pillowcase							
I definitely buy this pillowcase							
I probably buy this pillowcase							

10. How much would you be willing to pay for the pillowcase? Kindly state an amount between £1 to £250.

--

11. On a scale of 1 to 7, how confident are you with your evaluation of the pillowcase?

	1	2	3	4	5	6	7	
Not very confident								Very confident
Not very sure								Very sure

12. Please indicate your level of agreement with each of the statements below (1 = Strongly Disagree to 7= Strongly Agree).

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I feel like this is my pillowcase								
I feel a very high degree of personal ownership for this pillowcase								
I feel like I own this pillowcase								

13. How knowledgeable are you about pillowcases? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I feel very knowledgeable about pillowcases								
If a friend asked me about pillowcases, I could give them advice about different brands of pillowcases								
If I had to purchase a pillowcase today, I would need to gather very little information in order to make a wise decision								
I feel very confident about my ability to tell the difference in quality among different brands of pillowcases								

You have reached the end of this section.

Proceed to the next Station and examine the product provided.

When you have done so, kindly fill out the questionnaire provided.

Product: BATH TOWEL

14. What is your level of agreement with each of the following statements? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I like this bath towel								
I feel positive toward the bath towel								
The bath towel is good								

15. Please tick one appropriate box in response to each question below (1= Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I would definitely purchase this bath towel								
I definitely intend to buy this bath towel								
I have a high purchase interest in this bath towel								
I definitely buy this bath towel								
I probably buy this bath towel								

16. How much would you be willing to pay for the bath towel? Kindly state an amount between £1 to £250.

17. On a scale of 1 to 7, how confident are you with your evaluation of the bath towel?

	1	2	3	4	5	6	7	
Not very confident								Very confident
Not very sure								Very sure

18. Please indicate your level of agreement with each of the statements below (1 = Strongly Disagree to 7= Strongly Agree).

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I feel like this is my bath towel								
I feel a very high degree of personal ownership for this bath towel								
I feel like I own this bath towel								

19. How knowledgeable are you about bath towels? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I feel very knowledgeable about bath towels								
If a friend asked me about bath towels, I could give them advice about different brands of bath towels								
If I had to purchase a bath towel today, I would need to gather very little information in order to make a wise decision								
I feel very confident about my ability to tell the difference in quality among different brands of bath towels								

You have reached the end of this section.

Raise your hand and the experimenter will give you the last section to fill out.

20. On a scale of 1 to 7, what is your attitude towards the brand

	1	2	3	4	5	6	7	
Unappealing								Appealing
Bad								Good
Unpleasant								Pleasant
Unfavourable								Favourable
Unlikable								Likable

21. Please indicate your level of agreement with each of the statements about the **brand** (1= Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I am familiar with the brand								
I know a great deal about the brand								
I have no knowledge about the brand								

22. Please indicate your level of agreement with each of the statements below (1 = Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
When walking through stores, I can't help touching all kinds of products								
Touching products can be fun								
When browsing in stores, it is important for me to handle all kinds of products								
I like to touch products even if I have no intention of buying them								
When browsing in stores, I like to touch lots of products								
I find myself touching all kinds of products in stores								
I place more trust in products that can be touched before purchase								
I feel more comfortable purchasing a product after physically examining it								
If I can't touch a product in the store, I am reluctant to purchase the product								
I feel more confident making a purchase after touching a product								
The only way to make sure a product is worth buying is to actually touch it								
I would only buy a product if I could handle it before purchase								

23. What gender are you?

Male
Female

24. How old are you?

Below 18 years
18-24 years

25-30 years
 31-36 years
 37-42 years
 45-50 years
 51 and above
 years

25. Are you British?

Yes
 No
 If No, what is your nationality?

26. In your opinion, what is the purpose of this study?

END OF QUESTIONNAIRE

THANK YOU FOR YOUR TIME.

**RAISE YOUR HAND AND THE EXPERIMENTER WILL COLLECT YOUR
 COMPLETED QUESTIONNAIRE.**

APPENDIX 7: STUDY 2 (Touch and Brand Status)

University of Kent,
Kent Business School,
CT2 7NZ,
Canterbury, Kent.
Email: swk5@kent.ac.uk



STUDY PURPOSE

This academic study is part of a doctoral research project that aims at achieving a better understanding of consumer purchase behaviour. As such, you are presented with three products belonging to the **luxury brand CHANEL** you are invited to visually evaluate (OR 'physically evaluate' in the touch condition).

If you are comfortable with participating in this study, kindly read and sign the consent statement below.

CONSENT

By signing this form I agree to take part in this academic study on consumer purchase behaviour. I am aware that I have the freedom to leave the study at any time. I also understand that the researcher, for the purpose of the PhD, will use the data from the study. I understand that the data will be treated as **confidential** and responses **anonymized**, with no way of connecting the data to the identity of a particular participant.

I have carefully read and understood all the terms in the brief letter, confirm that I'm of legal age (over 18 years old) and voluntarily agree to participate in this study. I also understand the purpose of the study and what is expected from me.

Participant signature: _____ **Date:** _____



A STUDY ON CONSUMER PURCHASE BEHAVIOUR QUESTIONNAIRE

PROCEDURE

You are invited to **ONLY VISUALLY** (or 'physically' in the touch condition) evaluate three products **ONE** at a time, located at one of three stations (Station A, B and C).

DO NOT pick up ('pick up' in the touch condition) the products during evaluation.

After you are done with this visual examination ('physical examination' in the touch condition), fill out the questionnaire provided. Move to the next station as instructed.

QUESTIONNAIRE INSTRUCTIONS

ALL QUESTIONS require a response so kindly ensure that they have all been answered. Kindly **TICK** the box ☐ and/or write in the appropriate response space provided.

There is no right or wrong answer.

Are there any questions?

Kindly wait for verbal instruction on when to begin.

Product: SWEATER

1. What is your level of agreement with each of the following statements? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I like this sweater							
I feel positive toward the sweater							
The sweater is good							

2. Please tick one appropriate box in response to each question below (1= Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I would definitely purchase this sweater							
I definitely intend to buy this sweater							
I have a high purchase interest in this sweater							
I definitely buy this sweater							
I probably buy this sweater							

3. How much would you be willing to pay for the sweater? Kindly state an amount between £1 to £250.

4. On a scale of 1 to 7, how confident are you with your evaluation of the sweater?

	1	2	3	4	5	6	7	
Not very confident								Very confident
Not very sure								Very sure

5. Please tick one appropriate box in response to each question below (1= Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
Sweaters are important to me							
I perceive sweaters as exciting products							
Sweaters are interesting products							
I care about the sweaters I buy							

6. How important is it to touch a sweater when making a purchase decision?

	1	2	3	4	5	6	7	
Not very important								Very important

7. Here is a list of emotional reactions you may have experienced. On a scale of 1 to 7 (1= Not at all to 7= A lot) indicate how much you felt each of these when you were evaluating the sweater.

	Not at all						A lot
	1	2	3	4	5	6	7
Interested							
Moved							
Captivated							
Delighted							
Enthusiastic							
Appealed							
Amused							

8. Please indicate your level of agreement with each of the statements below (1 = Strongly Disagree to 7= Strongly Agree).

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I feel like this is my sweater							
I feel a very high degree of personal ownership for this sweater							
I feel like I own this sweater							
I feel like this is my sweater							

9. How knowledgeable are you about sweaters? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I feel very knowledgeable about sweaters							
If a friend asked me about sweaters, I could give them advice about different brands of sweaters							
If I had to purchase a sweater today, I would need to gather very little information in order to make a wise decision							
I feel very confident about my ability to tell the difference in quality among different brands of sweaters							

You have reached the end of this section.

Proceed to the next Station and visually ('physically' in the touch condition) examine the product provided. When you have done so, kindly fill out the questionnaire provided

Product: MUG

10. What is your level of agreement with each of the following statements? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I like this mug							
I feel positive toward the mug							
The mug is good							

11. Please tick one appropriate box in response to each question below (1= Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I would definitely purchase this mug								
I definitely intend to buy this mug								
I have a high purchase interest in this mug								
I definitely buy this mug								
I probably buy this mug								

12. How much would you be willing to pay for the mug? Kindly state an amount between £1 to £250.

13. On a scale of 1 to 7, how confident are you with your evaluation of the mug?

	1	2	3	4	5	6	7	
Not very confident								Very confident
Not very sure								Very sure

14. Please tick one appropriate box in response to each question below (1= Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
Mugs are important to me								
I perceive mugs as exciting products								
Mugs are interesting products								
I care about the mug I buy								

15. How important is it to touch a mug when making a purchase decision?

	1	2	3	4	5	6	7	
Not very important								Very important

16. Here is a list of emotional reactions you may have experienced. On a scale of 1 to 7 (1= Not at all to 7= A lot) indicate how much you felt each of these when you were evaluating the mug.

	Not at all						A lot	
	1	2	3	4	5	6	7	
Interested								
Moved								
Captivated								
Delighted								
Enthusiastic								
Appealed								
Amused								

17. Please indicate your level of agreement with each of the statements below (1 = Strongly Disagree to 7= Strongly Agree).

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	

I feel like this is my mug							
I feel a very high degree of personal ownership for this mug							
I feel like I own this mug							
I feel like this is my mug							

18. How knowledgeable are you about mugs? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree						Strongly Agree
	1	2	3	4	5	6	7
I feel very knowledgeable about mugs							
If a friend asked me about mugs, I could give them advice about different brands of mugs							
If I had to purchase a mugs today, I would need to gather very little information in order to make a wise decision							
I feel very confident about my ability to tell the difference in quality among different brands of mugs							

You have reached the end of this section.

Proceed to the next Station and visually ('physically' in the touch condition) examine the product provided. When you have done so, kindly fill out the questionnaire provided.

Product: BATH TOWEL

19. What is your level of agreement with each of the following statements? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree						Strongly Agree
	1	2	3	4	5	6	7
I like this bath towel							
I feel positive toward the bath towel							
The bath towel is good							

20. Please tick one appropriate box in response to each question below (1= Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree						Strongly Agree
	1	2	3	4	5	6	7
I would definitely purchase this bath towel							
I definitely intend to buy this bath towel							
I have a high purchase interest in this bath towel							
I definitely buy this bath towel							
I probably buy this bath towel							

21. How much would you be willing to pay for the bath towel? Kindly state an amount between £1 to £250.

--

22. On a scale of 1 to 7, how confident are you with your evaluation of the bath towel?

	1	2	3	4	5	6	7	
Not very confident								Very confident
Not very sure								Very sure

23. Please tick one appropriate box in response to each question below (1= Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
Bath towels are important to me								
I perceive bath towels as exciting products								
Bath towels are interesting products								
I care about the bath towel I buy								

24. How important is it to touch a bath towel when making a purchase decision?

	1	2	3	4	5	6	7	
Not very important								Very important

25. Here is a list of emotional reactions you may have experienced. On a scale of 1 to 7 (1= Not at all to 7= A lot) indicate how much you felt each of these when you were evaluating the bath towel.

	Not at all						A lot	
	1	2	3	4	5	6	7	
Interested								
Moved								
Captivated								
Delighted								
Enthusiastic								
Appealed								
Amused								

26. Please indicate your level of agreement with each of the statements below (1 = Strongly Disagree to 7= Strongly Agree).

	Strongly Disagree						Strongly Agree	
	1	2	3	4	5	6	7	
I feel like this is my bath towel								
I feel a very high degree of personal ownership for this bath towel								
I feel like I own this bath towel								
I feel like this is my bath towel								

27. How knowledgeable are you about bath towels? (1 = Strongly Disagree to 7 = Strongly Agree)

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I feel very knowledgeable about bath towels							
If a friend asked me about bath towels, I could give them advice about different brands of bath towels							
If I had to purchase a bath towel today, I would need to gather very little information in order to make a wise decision							
I feel very confident about my ability to tell the difference in quality among different brands of bath towels							

You have reached the end of this section.

Raise your hand and the experimenter will give you the last section to fill out.

28. Please indicate your level of agreement with each of the statements below (1 = Strongly Disagree to 7 = Strongly Agree).

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
When walking through stores, I can't help touching all kinds of products							
Touching products can be fun							
When browsing in stores, it is important for me to handle all kinds of products							
I like to touch products even if I have no intention of buying them							
When browsing in stores, I like to touch lots of products							
I find myself touching all kinds of products in stores							
I place more trust in products that can be touched before purchase							
I feel more comfortable purchasing a product after physically examining it							
If I can't touch a product in the store, I am reluctant to purchase the product							
I feel more confident making a purchase after touching a product							
The only way to make sure a product is worth buying is to actually touch it							
I would only buy a product if I could handle it before purchase							

29. What gender are you?

Male Female

30. How old are you?

Below 18 years 18-24 years 25-30 years 31-36 years 37-42 years 45-50 years

51 and above years

31. Are you British?

Yes
No

If No, what is your nationality?

32. In your opinion, what is the purpose of this study?

END OF QUESTIONNAIRE

THANK YOU FOR YOUR TIME.

**RAISE YOUR HAND AND THE EXPERIMENTER WILL COLLECT YOUR COMPLETED
QUESTIONNAIRE.**

APPENDIX 8: CONSENT FORM

University of Kent,
Kent Business School,
CT2 7NZ,
Canterbury, Kent.
Email: swk5@kent.ac.uk



STUDY PURPOSE

This academic study is part of a doctoral research project that aims at achieving a better understanding of consumer purchase behaviour. As such, you are presented with three products belonging to the **brand** you are invited to visually evaluate (OR 'physically evaluate' in the touch condition).

If you are comfortable with participating in this study, kindly read and sign the consent statement below.

CONSENT

By signing this form I agree to take part in this academic study on consumer purchase behaviour. I am aware that I have the freedom to leave the study at any time. I also understand that the researcher, for the purpose of the PhD, will use the data from the study. I understand that the data will be treated as **confidential** and responses **anonymized**, with no way of connecting the data to the identity of a particular participant.

I have carefully read and understood all the terms in the brief letter, confirm that I'm of legal age (over 18 years old) and voluntarily agree to participate in this study. I also understand the purpose of the study and what is expected from me.

Participant signature: _____ **Date:** _____

APPENDIX 9: PARTICIPANT RECRUITMENT POSTER

**PARTICIPATE IN A
CONSUMER BEHAVIOUR EXPERIMENT**

WHERE: KENT BUSINESS SCHOOL (KBSX Room 1.27)

DURATION: 30 minutes only!

DATES: - Monday 26th October 2015

Tuesday 27th October 2015

Wednesday 28th October 2015

Thursday 29th October 2015

**AVAILABLE SLOTS: 9.30am, 10.15 am, 11.00 am, 11.45
am, 12.30 pm, 1.15 pm, 2.00 pm, 2.45 pm, 3.30 pm, 4.15 pm**

(PICK ONE SLOT)

WHAT YOU'LL GET: FREE CHOCOLATE!

Sign up today!

Email swk5@kent.ac.uk to book your slot

APPENDIX 10: NEED FOR TOUCH SCALE

Instrumental Dimension Questions

1. I place more trust in products that can be touched before purchase.
2. I feel more comfortable purchasing a product after physically examining it.
3. If I can't touch a product in the store, I am reluctant to purchase the product.
4. I feel more confident making a purchase after touching a product.
5. The only way to make sure a product is worth buying is to actually touch it.
6. There are many products that I would only buy if I could handle them before purchase.

Autotelic Dimension Questions

7. When walking through stores, I can't help touching all kinds of products.
8. Touching products can be fun.
9. When browsing in stores, it is important for me to handle all kinds of products.
10. I like to touch products even if I have no intention of buying them.
11. When browsing in stores, I like to touch lots of products.
12. I find myself touching all kinds of products in stores.

APPENDIX 11: Brand Selection Pre-test results

Table 28 Pre-test brand familiarity results

BRANDS	N		Min.	Max	Mean	Median	Std. Deviation	Skewness		Kurtosis	
	Valid	Missing						Statistic	Std. Error	Statistic	Std. Error
Louis Vuitton	22	0	1	7	4.48	4.50	1.332	-.507	.491	.136	.953
Primark*	22	0	4	7	5.86	6.00	.979	-.386	.491	-.974	.953
4U2*	22	0	1	5	1.65	1.00	1.266	2.017	.491	3.333	.953
Matalan	21	1	1	7	4.02	4.67	2.040	-.555	.501	-1.233	.972
Ralph Lauren	21	1	1	7	4.59	5.00	1.531	-.923	.501	.358	.972
Woolworths	21	1	1	7	4.70	5.00	2.183	-.901	.501	-.666	.972
Chanel*	21	1	1	7	5.17	5.67	1.566	-1.287	.501	1.527	.972
H&M	22	0	1	7	5.71	6.00	1.354	-2.087	.491	6.304	.953
Truworths	22	1	1	6	2.14	1.00	1.753	1.271	.491	.188	.972
Burberry	21	1	1	7	4.84	5.00	1.340	-.895	.501	2.314	.972
Prada	21	1	1	7	4.84	5.00	1.467	-.779	.501	1.025	.972
New Look	21	1	1	7	5.13	5.67	1.775	-1.421	.501	1.417	.972
Mr Price	21	1	1	7	2.14	1.00	1.948	1.611	.501	1.281	.972
Topshop	21	1	1	7	5.56	6.00	1.447	-1.648	.501	3.739	.972
* Brands selected											

APPENDIX 12: STUDY 1 (H1a, H1b, H2a, H2b and H2c Descriptives)

DEPENDENT VARIABLE	TOUCH CONDITION	BRAND FAMILIARITY	NEED FOR TOUCH	MEAN	STD. DEVIATION	N
PE Sweater	Touch	Familiar	Low Need for Touch	4.06	1.325	18
			High Need for Touch	4.47	1.443	13
			Total	4.23	1.368	31
		Unfamiliar	Low Need for Touch	4.38	1.391	15
			High Need for Touch	5.23	.972	16
			Total	4.82	1.250	31
		Total	Low Need for Touch	4.20	1.344	33
			High Need for Touch	4.89	1.243	29
			Total	4.52	1.333	62
	No Touch	Familiar	Low Need for Touch	4.31	1.553	12
			High Need for Touch	4.53	.958	15
			Total	4.43	1.236	27
		Unfamiliar	Low Need for Touch	4.27	1.083	16
			High Need for Touch	4.81	1.092	14
			Total	4.52	1.103	30
		Total	Low Need for Touch	4.29	1.279	28
			High Need for Touch	4.67	1.016	29
			Total	4.48	1.158	57
	Total	Familiar	Low Need for Touch	4.16	1.400	30
			High Need for Touch	4.51	1.184	28
			Total	4.32	1.301	58
		Unfamiliar	Low Need for Touch	4.32	1.222	31
			High Need for Touch	5.03	1.033	30
			Total	4.67	1.179	61
		Total	Low Need for Touch	4.24	1.304	61
			High Need for Touch	4.78	1.131	58
			Total	4.50	1.247	119
PE Pillowcase	Touch	Familiar	Low Need for Touch	3.96	1.455	18
			High Need for Touch	4.46	1.596	13
			Total	4.17	1.510	31
		Unfamiliar	Low Need for Touch	3.89	1.462	15
			High Need for Touch	4.79	1.310	16
			Total	4.35	1.437	31
		Total	Low Need for Touch	3.93	1.436	33
			High Need for Touch	4.64	1.428	29
			Total	4.26	1.465	62
	No Touch	Familiar	Low Need for Touch	4.03	1.123	12
			High Need for Touch	3.18	1.447	15
			Total	3.56	1.359	27
		Unfamiliar	Low Need for Touch	3.56	1.365	16
			High Need for Touch	3.67	1.426	14
			Total	3.61	1.370	30
		Total	Low Need for Touch	3.76	1.266	28
			High Need for Touch	3.41	1.433	29
			Total	3.58	1.353	57
	Total	Familiar	Low Need for Touch	3.99	1.312	30
			High Need for Touch	3.77	1.626	28
			Total	3.89	1.462	58
		Unfamiliar	Low Need for Touch	3.72	1.399	31
			High Need for Touch	4.27	1.458	30
			Total	3.99	1.443	61
		Total	Low Need for Touch	3.85	1.352	61
			High Need for Touch	4.03	1.548	58
			Total	3.94	1.447	119
PE Bath Towel	Touch	Familiar	Low Need for Touch	5.04	1.060	18
			High Need for Touch	5.23	1.818	13
			Total	5.12	1.403	31
		Unfamiliar	Low Need for Touch	5.04	1.272	15
			High Need for Touch	5.56	1.166	16
			Total	5.56	1.166	16

DEPENDENT VARIABLE	TOUCH CONDITION	BRAND FAMILIARITY	NEED FOR TOUCH	MEAN	STD. DEVIATION	N
		Total	Total	5.31	1.226	31
			Low Need for Touch	5.04	1.142	33
			High Need for Touch	5.41	1.474	29
		Familiar	Total	5.22	1.310	62
			Low Need for Touch	5.50	.937	12
			High Need for Touch	4.78	1.541	15
		Unfamiliar	Total	5.10	1.336	27
			Low Need for Touch	5.18	1.032	16
			High Need for Touch	5.32	1.030	14
	No Touch	Familiar	Total	5.25	1.016	30
			Low Need for Touch	5.32	.988	28
			High Need for Touch	5.04	1.326	29
		Unfamiliar	Total	5.18	1.170	57
			Low Need for Touch	5.22	1.022	30
			High Need for Touch	4.99	1.659	28
		Total	Total	5.11	1.360	58
			Low Need for Touch	5.11	1.136	31
			High Need for Touch	5.45	1.092	30
PI Sweater	Touch	Familiar	Total	5.28	1.119	61
			Low Need for Touch	5.17	1.074	61
			High Need for Touch	5.23	1.402	58
		Unfamiliar	Total	5.20	1.240	119
			Low Need for Touch	2.70	1.426	18
			High Need for Touch	3.10	1.833	13
		Total	Total	2.87	1.593	31
			Low Need for Touch	2.79	1.548	15
			High Need for Touch	2.91	1.421	16
	No Touch	Familiar	Total	2.85	1.460	31
			Low Need for Touch	2.74	1.460	33
			High Need for Touch	3.00	1.591	29
		Unfamiliar	Total	2.86	1.515	62
			Low Need for Touch	3.00	1.561	12
			High Need for Touch	2.99	1.368	15
		Total	Total	2.99	1.428	27
			Low Need for Touch	2.63	1.260	16
			High Need for Touch	3.42	1.440	14
PI Pillowcase	Touch	Familiar	Total	3.00	1.384	30
			Low Need for Touch	2.79	1.382	28
			High Need for Touch	3.20	1.395	29
		Unfamiliar	Total	3.00	1.392	57
			Low Need for Touch	2.82	1.462	30
			High Need for Touch	3.04	1.571	28
		Total	Total	2.93	1.506	58
			Low Need for Touch	2.70	1.386	31
			High Need for Touch	3.15	1.429	30
	No Touch	Familiar	Total	2.92	1.413	61
			Low Need for Touch	2.76	1.413	61
			High Need for Touch	3.10	1.487	58
		Unfamiliar	Total	2.92	1.453	119
			Low Need for Touch	2.89	1.447	18
			High Need for Touch	3.52	1.727	13
		Total	Total	3.15	1.575	31
			Low Need for Touch	2.68	1.302	15
			High Need for Touch	3.04	1.572	16
	Touch	Familiar	Total	2.86	1.435	31
			Low Need for Touch	2.79	1.366	33
			High Need for Touch	3.26	1.632	29
		Unfamiliar	Total	3.01	1.502	62
			Low Need for Touch	2.83	1.364	12
			High Need for Touch	2.72	1.369	15
		Total	Total	2.77	1.341	27
			Low Need for Touch	2.28	1.012	16
			High Need for Touch	2.66	1.556	14

DEPENDENT VARIABLE	TOUCH CONDITION	BRAND FAMILIARITY	NEED FOR TOUCH	MEAN	STD. DEVIATION	N
		Total	Total	2.45	1.285	30
			Low Need for Touch	2.51	1.186	28
			High Need for Touch	2.69	1.436	29
		Total	Total	2.60	1.310	57
			Low Need for Touch	2.87	1.391	30
			High Need for Touch	3.09	1.570	28
		Familiar	Total	2.98	1.471	58
			Low Need for Touch	2.47	1.160	31
			High Need for Touch	2.86	1.549	30
		Unfamiliar	Total	2.66	1.368	61
			Low Need for Touch	2.67	1.284	61
			High Need for Touch	2.97	1.550	58
		Total	Total	2.82	1.422	119
			Low Need for Touch	3.38	1.235	18
			High Need for Touch	4.05	2.079	13
PI Bath Towel	Touch	Familiar	Total	3.66	1.645	31
			Low Need for Touch	3.56	1.486	15
			High Need for Touch	4.09	1.211	16
		Unfamiliar	Total	3.83	1.355	31
			Low Need for Touch	3.46	1.336	33
			High Need for Touch	4.07	1.624	29
		Total	Total	3.75	1.497	62
			Low Need for Touch	3.87	1.792	12
			High Need for Touch	3.43	1.513	15
	No Touch	Familiar	Total	3.62	1.625	27
			Low Need for Touch	3.42	1.187	16
			High Need for Touch	4.23	1.200	14
		Unfamiliar	Total	3.80	1.242	30
			Low Need for Touch	3.61	1.463	28
			High Need for Touch	3.81	1.407	29
		Total	Total	3.71	1.426	57
			Low Need for Touch	3.57	1.473	30
			High Need for Touch	3.71	1.791	28
	Total	Familiar	Total	3.64	1.621	58
			Low Need for Touch	3.49	1.319	31
			High Need for Touch	4.15	1.187	30
		Unfamiliar	Total	3.82	1.290	61
			Low Need for Touch	3.53	1.386	61
			High Need for Touch	3.94	1.512	58
		Total	Total	3.73	1.457	119
CIJ Sweater	Touch	Familiar	Low Need for Touch	5.06	1.403	18
			High Need for Touch	5.50	.839	13
			Total	5.25	1.203	31
		Unfamiliar	Low Need for Touch	5.17	1.332	15
			High Need for Touch	5.34	1.351	16
			Total	5.26	1.322	31
		Total	Low Need for Touch	5.11	1.351	33
			High Need for Touch	5.42	1.134	29
			Total	5.25	1.253	62
	No Touch	Familiar	Low Need for Touch	5.26	1.251	12
			High Need for Touch	4.40	1.692	15
			Total	4.78	1.547	27
		Unfamiliar	Low Need for Touch	4.63	1.361	16
			High Need for Touch	5.14	1.486	14
			Total	4.87	1.420	30
		Total	Low Need for Touch	4.90	1.329	28
			High Need for Touch	4.76	1.613	29
			Total	4.83	1.469	57
	Total	Familiar	Low Need for Touch	5.14	1.325	30
			High Need for Touch	4.91	1.453	28
			Total	5.03	1.381	58
		Unfamiliar	Low Need for Touch	4.89	1.352	31
			High Need for Touch	5.25	1.394	30

DEPENDENT VARIABLE	TOUCH CONDITION	BRAND FAMILIARITY	NEED FOR TOUCH	MEAN	STD. DEVIATION	N
CIJ Pillowcase	Touch	Familiar	Total	5.07	1.374	61
			Low Need for Touch	5.01	1.334	61
			High Need for Touch	5.09	1.421	58
		Unfamiliar	Total	5.05	1.372	119
			Low Need for Touch	4.58	1.638	18
			High Need for Touch	5.21	1.368	13
		Total	Total	4.85	1.539	31
			Low Need for Touch	4.47	1.470	15
			High Need for Touch	5.34	1.300	16
		Total	Total	4.92	1.432	31
			Low Need for Touch	4.53	1.541	33
			High Need for Touch	5.29	1.308	29
CIJ Bath Towel	No Touch	Familiar	Total	4.88	1.475	62
			Low Need for Touch	4.69	1.710	12
			High Need for Touch	4.40	1.834	15
		Unfamiliar	Total	4.53	1.752	27
			Low Need for Touch	4.67	1.640	16
			High Need for Touch	5.04	1.474	14
		Total	Total	4.84	1.549	30
			Low Need for Touch	4.68	1.639	28
			High Need for Touch	4.71	1.672	29
		Total	Total	4.69	1.641	57
			Low Need for Touch	4.63	1.639	30
			High Need for Touch	4.78	1.657	28
		Unfamiliar	Total	4.70	1.635	58
			Low Need for Touch	4.57	1.537	31
			High Need for Touch	5.20	1.368	30
		Total	Total	4.88	1.479	61
			Low Need for Touch	4.60	1.575	61
			High Need for Touch	5.00	1.516	58
		Total	Total	4.79	1.553	119
			Low Need for Touch	4.86	1.246	18
			High Need for Touch	5.46	1.330	13
		Unfamiliar	Total	5.11	1.296	31
			Low Need for Touch	5.11	.910	15
			High Need for Touch	5.53	.884	16
		Total	Total	5.33	.907	31
			Low Need for Touch	4.97	1.097	33
			High Need for Touch	5.50	1.086	29
		Total	Total	5.22	1.114	62
			Low Need for Touch	5.68	1.296	12
			High Need for Touch	4.80	1.730	15
		Unfamiliar	Total	5.19	1.588	27
			Low Need for Touch	4.69	1.424	16
			High Need for Touch	5.36	1.336	14
		Total	Total	5.00	1.402	30
			Low Need for Touch	5.11	1.436	28
			High Need for Touch	5.07	1.551	29
		Total	Total	5.09	1.482	57
			Low Need for Touch	5.19	1.309	30
			High Need for Touch	5.11	1.566	28
		Unfamiliar	Total	5.15	1.426	58
			Low Need for Touch	4.89	1.203	31
			High Need for Touch	5.45	1.101	30
		Total	Total	5.17	1.179	61
			Low Need for Touch	5.04	1.255	61
			High Need for Touch	5.28	1.345	58
		Total	Total	5.16	1.300	119
WTP Sweater	Touch	Familiar	Low Need for Touch	11.1667	9.09589	18
			High Need for Touch	12.6154	7.21732	13
			Total	11.7742	8.26119	31
		Unfamiliar	Low Need for Touch	15.6000	6.79075	15
			High Need for Touch	23.8119	18.42237	16
			Total			

DEPENDENT VARIABLE	TOUCH CONDITION	BRAND FAMILIARITY	NEED FOR TOUCH	MEAN	STD. DEVIATION	N
		Total	Total	19.8384	14.44349	31
			Low Need for Touch	13.1818	8.31585	33
			High Need for Touch	18.7928	15.37040	29
		Total	Total	15.8063	12.35661	62
			Low Need for Touch	9.9583	7.08538	12
			High Need for Touch	10.6000	5.05046	15
		Total	Total	10.3148	5.92282	27
			Low Need for Touch	14.6400	9.32948	16
			High Need for Touch	26.3571	18.51655	14
	No Touch	Familiar	Total	20.1080	15.29921	30
			Low Need for Touch	12.6336	8.62407	28
			High Need for Touch	18.2069	15.36724	29
		Unfamiliar	Total	15.4691	12.72151	57
			Low Need for Touch	10.6833	8.24044	30
			High Need for Touch	11.5357	6.11757	28
		Total	Total	11.0948	7.24294	58
			Low Need for Touch	15.1045	8.07945	31
			High Need for Touch	24.9997	18.19088	30
WTP Pillowcase	Touch	Familiar	Total	19.9710	14.74644	61
			Low Need for Touch	12.9302	8.39204	61
			High Need for Touch	18.4998	15.23627	58
		Unfamiliar	Total	15.6448	12.48052	119
			Low Need for Touch	5.6661	4.67492	18
			High Need for Touch	7.1538	5.14532	13
		Total	Total	6.2900	4.85089	31
			Low Need for Touch	6.0667	4.01278	15
			High Need for Touch	9.8744	9.35125	16
	No Touch	Familiar	Total	8.0319	7.41478	31
			Low Need for Touch	5.8482	4.32391	33
			High Need for Touch	8.6548	7.75165	29
		Unfamiliar	Total	7.1610	6.27555	62
			Low Need for Touch	3.6742	1.39232	12
			High Need for Touch	3.3335	2.24935	15
		Total	Total	3.4849	1.89058	27
			Low Need for Touch	6.3281	4.25119	16
			High Need for Touch	9.6786	7.46687	14
WTP Bath Towel	Touch	Familiar	Total	7.8917	6.10175	30
			Low Need for Touch	5.1907	3.55232	28
			High Need for Touch	6.3966	6.23119	29
		Unfamiliar	Total	5.8042	5.08606	57
			Low Need for Touch	4.8693	3.81208	30
			High Need for Touch	5.1072	4.26081	28
		Total	Total	4.9842	4.00092	58
			Low Need for Touch	6.2016	4.07043	31
			High Need for Touch	9.7830	8.38056	30
	No Touch	Familiar	Total	7.9630	6.74460	61
			Low Need for Touch	5.5464	3.96976	61
			High Need for Touch	7.5257	7.06311	58
		Unfamiliar	Total	6.5111	5.75312	119
			Low Need for Touch	7.6111	2.47669	18
			High Need for Touch	10.4615	6.83880	13
		Total	Total	8.8065	4.92219	31
			Low Need for Touch	11.3000	4.43927	15
			High Need for Touch	15.2494	7.95406	16
	Touch	Familiar	Total	13.3384	6.69741	31
			Low Need for Touch	9.2879	3.91916	33
			High Need for Touch	13.1031	7.73363	29
		Unfamiliar	Total	11.0724	6.26053	62
			Low Need for Touch	8.9992	4.65149	12
			High Need for Touch	7.0660	3.47352	15
		Total	Total	7.9252	4.07539	27
			Low Need for Touch	10.7806	4.80625	16
			High Need for Touch	15.0714	8.11896	14

DEPENDENT VARIABLE	TOUCH CONDITION	BRAND FAMILIARITY	NEED FOR TOUCH	MEAN	STD. DEVIATION	N
		Total	Total	12.7830	6.79984	30
			Low Need for Touch	10.0171	4.73858	28
			High Need for Touch	10.9307	7.29462	29
			Total	10.4819	6.13548	57
	Total	Familiar	Low Need for Touch	8.1663	3.50443	30
			High Need for Touch	8.6425	5.47872	28
			Total	8.3962	4.53036	58
		Unfamiliar	Low Need for Touch	11.0319	4.56249	31
			High Need for Touch	15.1663	7.89188	30
			Total	13.0652	6.69734	61
		Total	Low Need for Touch	9.6226	4.29308	61
			High Need for Touch	12.0169	7.53123	58
			Total	10.7896	6.18176	119

APPENDIX 13: STUDY 2 (H4a and H4b Descriptives)

DEPENDENT VARIABLE	PRODUCT	TOUCH CONDITION	NEED FOR TOUCH	MEAN	STD. DEV.	N
PRODUCT EVALUATION	Sweater	Touch	Low Need for Touch	5.06	1.345	17
			High Need for Touch	4.62	1.477	13
			Total	4.87	1.397	30
		No Touch	Low Need for Touch	4.27	1.634	15
			High Need for Touch	4.02	1.670	20
			Total	4.12	1.635	35
		Total	Low Need for Touch	4.69	1.517	32
			High Need for Touch	4.25	1.601	33
			Total	4.47	1.563	65
	Mug	Touch	Low Need for Touch	4.25	1.283	17
			High Need for Touch	5.23	1.505	13
			Total	4.68	1.445	30
		No Touch	Low Need for Touch	3.91	1.716	15
			High Need for Touch	4.45	1.339	20
			Total	4.22	1.512	35
		Total	Low Need for Touch	4.09	1.486	32
			High Need for Touch	4.76	1.437	33
			Total	4.43	1.488	65
	Bath Towel	Touch	Low Need for Touch	5.43	.743	17
			High Need for Touch	5.26	1.073	13
			Total	5.36	.888	30
		No Touch	Low Need for Touch	5.02	1.472	15
			High Need for Touch	5.15	1.062	20
			Total	5.10	1.236	35
		Total	Low Need for Touch	5.24	1.143	32
			High Need for Touch	5.19	1.051	33
			Total	5.22	1.089	65
PURCHASE INTENTION	Sweater	Touch	Low Need for Touch	3.15	1.632	17
			High Need for Touch	2.66	1.520	13
			Total	2.94	1.577	30
		No Touch	Low Need for Touch	2.80	1.575	15
			High Need for Touch	2.72	1.725	20
			Total	2.75	1.639	35
		Total	Low Need for Touch	2.99	1.589	32
			High Need for Touch	2.70	1.623	33
			Total	2.84	1.600	65
	Mug	Touch	Low Need for Touch	2.39	1.222	17
			High Need for Touch	3.34	1.628	13
			Total	2.80	1.466	30
		No Touch	Low Need for Touch	2.76	1.657	15
			High Need for Touch	3.26	1.366	20
			Total	3.05	1.495	35
		Total	Low Need for Touch	2.56	1.430	32
			High Need for Touch	3.29	1.450	33
			Total	2.93	1.475	65
	Bath Towel	Touch	Low Need for Touch	3.73	1.386	17
			High Need for Touch	3.62	1.427	13
			Total	3.68	1.380	30
		No Touch	Low Need for Touch	3.47	1.420	15
			High Need for Touch	3.95	1.311	19
			Total	3.74	1.361	34
		Total	Low Need for Touch	3.61	1.385	32
			High Need for Touch	3.81	1.347	32
			Total	3.71	1.359	64
CONFIDENCE IN JUDGMENT	Sweater	Touch	Low Need for Touch	5.09	1.864	17
			High Need for Touch	4.96	1.216	13
			Total	5.03	1.592	30
		No Touch	Low Need for Touch	5.40	1.168	15
			High Need for Touch	4.65	1.514	20
			Total	4.97	1.409	35
		Total	Low Need for Touch	5.23	1.561	32

			High Need for Touch	4.77	1.392	33
			Total	5.00	1.484	65
	Mug	Touch	Low Need for Touch	5.35	1.400	17
			High Need for Touch	5.19	1.422	13
			Total	5.28	1.388	30
		No Touch	Low Need for Touch	5.00	1.690	15
			High Need for Touch	4.65	1.702	20
			Total	4.80	1.681	35
		Total	Low Need for Touch	5.19	1.528	32
			High Need for Touch	4.86	1.597	33
			Total	5.02	1.560	65
	Bath Towel	Touch	Low Need for Touch	5.62	1.596	17
			High Need for Touch	5.27	1.394	13
			Total	5.47	1.497	30
		No Touch	Low Need for Touch	5.47	1.141	15
			High Need for Touch	4.80	1.551	20
			Total	5.09	1.412	35
		Total	Low Need for Touch	5.55	1.382	32
			High Need for Touch	4.98	1.487	33
			Total	5.26	1.453	65
WILLINGNESS TO PAY	Sweater	Touch	Low Need for Touch	30.47	25.89	17
			High Need for Touch	22.84	15.71	13
			Total	27.16	22.06	30
		No Touch	Low Need for Touch	36.26	43.91	15
			High Need for Touch	38.15	56.08	20
			Total	37.34	50.525	35
		Total	Low Need for Touch	33.18	35.018	32
			High Need for Touch	32.12	44.92	33
			Total	32.64	40.03	65
	Mug	Touch	Low Need for Touch	7.70	10.56	17
			High Need for Touch	6.11	2.81	13
			Total	7.01	8.08	30
		No Touch	Low Need for Touch	8.26	9.95	15
			High Need for Touch	17.19	27.53	20
			Total	13.37	22.01	35
		Total	Low Need for Touch	7.96	10.11	32
			High Need for Touch	12.83	21.98	33
			Total	10.43	17.24	65
	Bath Towel	Touch	Low Need for Touch	15.29	17.09	17
			High Need for Touch	15.84	10.09	13
			Total	15.53	14.26	30
		No Touch	Low Need for Touch	20.60	20.39	15
			High Need for Touch	20.99	22.85	20
			Total	20.82	21.52	35
		Total	Low Need for Touch	17.78	18.60	32
			High Need for Touch	18.96	18.83	33
			Total	18.38	18.58	65