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Exploring the Store with Your Hands

-A quantitative study about tactile marketing for FMCG

Marketers have acknowledged the great importance of touch during consumers' decision-making process. However, no one has ever empirically investigated if this holds true even for products whose material properties are not diagnostic for the product performance, such as packaged FMCG. This is a big gap in the research of tactile marketing, a gap that needs to be filled.

The main purpose of this thesis is to explore if tactile marketing can be utilized in the FMCG environment and how this will affect consumers. This is done by including a tactile element, in this thesis a swatch of velvet, in the package design of two products with different underlying purchase motivations. The potential pitfall when utilizing tactile marketing in the retailing environment – consumer contamination – is also examined to see whether there is a negative effect on consumers' evaluation and action intentions when they know that others have previously touched the products.

A quantitative experiment was conducted in a real life setting, comparing the groups of respondents that were exposed to the manipulated packages with those exposed to the original packages, with or without a cue that other consumers had previously touched the products. A total of 385 responses were collected. The results revealed that by adding a tactile element in the product packaging, consumers developed a higher level of interest towards the brand and product category, developed a higher level of confidence, produced a higher level of conviction and finally, induced a higher intention to act. However, the results also indicated that when consumers received a contamination cue, there might be a negative effect on their evaluations and action intentions. Nevertheless, it has also been proven that the negative effects of consumer contamination do not exceed the positive effects of tactile marketing.

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1 Introduction

"*We live in a tactile deprived society, and shopping is one of our few chances to freely experience the material world firsthand*."

– Underhill, 1999 p.158

1.1 The Unexplored Area of Touch in the FMCG Marketplace

The FMCG market in Sweden is a multibillion-crown market, reaching a sales figure of 221 billion Swedish crowns in 2010 (SCB, 2010). In the store, the customers are faced with numerous products from numerous different brands competing for their attention. In fact, the consumer meets as many as 10 000 different items in a typical grocery store (Nordfält, 2007). But despite this broad assortment and the endless freedom of choice, the consumers only consider a fraction of the available alternatives in-store. In 95% of all occasions, consumers do not make a comparison between different brands, and in-store, consumers only tactually interact with about 1.1 items from each product category. This lack of consideration is not surprising, bearing in mind that the consumer spends an average of 13.16 seconds in each product aisle (Hoyer, 1984). The typical household buys about 50 items in a store visit, meaning that as many as 9 950 items are left unbought (Nordfält, 2007). It is therefore of outermost importance for brand owners all over the world that their brands/products can seize the consumers' attention and interest and be one of the few considered options in-store. It is also crucial that the products are positively evaluated already at the point of purchase to encourage trial and repeat purchases (Silayoi & Speece, 2004). Therefore, marketers are increasingly starting to explore the opportunities of using sensory marketing strategies as a way of communicating in-store.

It is through the five senses; touch, smell, hearing, sight and taste, that we experience the world. This means that the sensory experience is crucial in how companies, products and brands are evaluated at the point of purchase and during consumption. Sensory marketing can help break through the clutter and at the same time help yield positive evaluations and increase brand loyalty (Hultén, Broweus & van Dijk, 2008). Therefore, over 30% of the world's largest brands already have started working with sensory branding strategies in the last few years (Johnson, 2007). Even though vision is seen as the strongest of the five senses (Lindstrom, 2005), there is one sense that has recently started to break new grounds and attract the attention of researchers and marketers all over the world: the sense of touch.

The sense of touch plays an important, but under-acknowledged role in the evaluation of many products (Spence & Gallace, 2011). Take for instance in the clothing and electronics market; the importance for people to feel the quality of a fabric before buying clothes (Citrin, Stem, Spangenberg & Clark, 2003) and the necessity to have tactually examined the mobile phone before deciding on a purchase (Lindstrom, 2005). What these products have in common is that they possess inherent material properties that are diagnostic for the product performance, making the sense of touch an important tool when evaluating the products (Citrin et al., 2003). Research has shown that it is under these circumstances that tactile interaction becomes particularly important (e.g. McCabe & Nowlis, 2003; Grohmann, Spangenberg & Sprott, 2007). But in the marketplace, and in a grocery store in particular, there are a huge number of packaged products that do not offer information via their material properties that is diagnostic for the performance. What about them?

Despite the increase in interest for tactile marketing, the research on tactile marketing for products whose material properties are not diagnostic for the product performance is almost non-existent (Spence & Gallace, 2011). In the FMCG marketplace, where the majority of the products are covered in a protecting package, there is normally no relevant information to be obtained via tactile interaction. So as of today, almost nothing is known regarding the potential impact of tactile marketing in the very large and highly important FMCG market. Therefore, the question arises: Can tactility make a difference even if the product's material properties do not reveal anything about the product performance?

1.2 Background to the Study

1.2.1 The Development of Tactile Marketing

Tactility as a field of study within marketing has been around for decades, but earlier studies of tactile marketing were focused on intra-human tactile interaction. It has been found that people are positively influenced by tactile interaction with another human. For instance, waiters who briefly touch their restaurant visitors receive a larger tip than those who do not touch their visitors (Crusco & Wetzel, 1984; Hornik, 1992; Stephen & Zweigenhaft, 1986). When people are asked for compliant behavior, for instance to sign a petition, they are more prone to participate if being briefly touched when the question is asked (Willis & Hamm, 1980). In another study, visitors of a library evaluated the environmental setting more positively when they had been briefly touched by the librarian at their visit, proving that evaluation is more positive if there is intra-human tactile

interaction (Fisher, Rytting & Heslin, 1976). As these studies show, there are great implications for intra-human touch from a marketing and sales perspective.

Recently, researchers have started to recognize the high importance of touch as a marketing tool in human-product circumstances as well (Spence & Gallace, 2011). For products that offer performance relevant tactile information, tactile interaction helps consumers extract important information (Peck, 2009, in Krishna, 2010), as in the clothing or electronics market. Thus consumers generally consider information obtained tactually as crucial when evaluating these products (e.g. McCabe & Nowlis, 2003; Peck & Childers, 2003a). Tactile interaction with these types of products has been found to increase the consumers' attitudes, purchase intentions and the confidence in their evaluation (Peck & Childers, 2003a). Moreover, in a study by Peck and Childers (2006) it was revealed that by encouraging tactile exploration of products with inherent diagnostic material properties, impulse purchasing was increased. Thus, researchers within the field agree on the high importance of tactile marketing for products offering performance relevant haptic information (e.g. Peck & Childers, 2003a; Citrin et al., 2003; McCabe & Nowlis 2003; Grohmann, Spangenberg & Sprott, 2007).

1.2.2 Tactile Interaction in an FMCG Environment - The Product Packaging

For FMCG it is estimated that the majority of the purchase decisions are made at the point of purchase, which gives the product package a particularly important role (Silayoi & Speece, 2004). The right package can catch a consumer's attention, provide information, communicate value, and reinforce brand equity (Bloch, 1995; Bloch, Brunel & Arnold, 2003). The design of the package can reduce the effect of known brands and increase the likelihood for unknown brands to gain attention and trial (Kwang, Holland, Shackelton, Yun-Yong, Hwang & Melewar, 2008). In fact, the packaging can be such an important brand building tool that it is sometimes referred to as the fifth P, along with product, price, place, and promotion (Keller, Apéria & Georgson, 2008). Hence, many FMCG producers no longer see packaging as merely a way of containing the products for safe shipping. Instead, packaging is seen as the carrier of the commercial message at the point of purchase (Silayoi & Speece, 2004) and the best way to break through the clutter in the noisy retailing environment (Sorensen, 2009).

The focus of packaging design has traditionally been on the visual aspects as the geometric package properties make vision most suitable to gather information (McCabe & Nowlis, 2003). However,

new technology enables changed tactile effects in packaging as well (Spence & Gallace, 2011). Research shows that the tactile aspects of a packaging actually can affect the aesthetic evaluation (Jansson-Boyd & Marlow, 2007) and that tactile interaction entails more focused and undivided attention (Jansson-Boyd, 2011). Therefore, a tactually intriguing package could mean a competitive advantage in the cluttered market place (ibid).

Jansson-Boyd and Marlow (2011) conducted an experiment where they tested whether the sense of vision or touch is most important in evaluating packaged FMCG. Thereby, they were the first to investigate the impact of touch for packages goods. They did so by altering the surface of the back of the package, meaning that the respondents never had the opportunity to visually examine the material alteration. They then let the respondents rate the products, blocking one sense at a time. Unsurprisingly, they came to the conclusion that visual input is more important than tactual inputs under these circumstances (only touch vs. only vision). However, they get ambiguous results indicating that the tactual input can be of some contribution. Thus, the authors leave several unanswered questions regarding the influence of tactile inputs on packaged goods.

Peck and Wiggins (2006) conducted a study focusing on the inclusion of tactile element in a commercial message. They revealed that there are positive effects by encouraging touch as an end in and of itself. By simply attaching a tactile element in a charity pamphlet, both attitudes and the likelihood of becoming a donor increased under certain circumstances[1]. Thereby, the study by Peck and Wiggins (2006) is among the first to reveal that marketers can advantageously encourage tactile interaction with products, even if the tactile elements are not diagnostic for the actual product performance. This opens up a whole new field for tactile marketing – tactile marketing for packaged goods.

1.3 Problematization

In the FMCG market, this multi-billion-crown market where numerous products are offered but where only a fraction of the available choices are considered, there is a constant need for marketers to find new and innovative ways to interact with consumers. Recent technological developments mean that it is no longer as expensive for companies to alter the feel of the package (Spence & Gallace, 2011). In fact, Spence and Gallace (2011) state that the costs of changing the coating of the

[1] The stimuli could not be incongruent or give a negative sensory feedback, as will be discussed in section 1.6.

packaging are nowadays almost at the same level as changing the colors and visual aspects of the packaging. Consequently, the last few years have seen a couple of successful and exciting developments in the tactile aspects of product design. The brand Hovis, for example, treated the packaging of its crust-less bread with a soft-touch lacquer, suggesting the softness of the bread within and fruit juice containers designed by Naoto Fukusawa, a Japanese product designer, were covered in multisensory realistic fruit peels, implying the great juice within (Spence & Gallace, 2011). But despite the rapid development in the manufacturing abilities, very little research has been done within the area. Thus, very little is scientifically known about tactile marketing for packaged goods.

If tactile input helps assessing the product performance, collecting tactile information is only rational. But when tactile input is irrelevant for the product performance on the other hand, tactile information should not make a difference on product evaluation or action intention. However, the consumer is seldom rational (Percy & Elliot, 2009) which has been shown in numerous studies. For instance Krishna and Morrin (2008) showed that the feel of the glass was determinant for how consumers evaluated the drink, and Peck and Shu (2009) revealed that just by holding a cup, consumers prescribed it more value. Therefore, there is reason to believe that marketers advantageously could work with tactile marketing even if the material properties of the product do not provide performance relevant information. As previously mentioned, Peck and Wiggins (2006) gave support for this, when they revealed that including tactile elements in a commercial message had a positive effect on respondents' evaluations and donation behavior. The study of Peck and Wiggins was conducted on the charity market, which is widely different from the FMCG market. Nevertheless, the results inspire further exploration of the opportunity to include tactile elements in products' package designs to encourage tactile interaction because it is fun or interesting.

Despite the many positive aspects of tactile marketing, there is a potential pitfall in encouraging tactile interaction in the retailing environment. It has been shown that consumers can be negatively affected by the fact that others have previously been in contact with the object of their interest, also referred to as *consumer contamination* (Argo, Dahl & Morales, 2006). A simple cue in the retailing environment, indicating that another consumer has previously touched the product, can elicit a negative contamination fear. This has been investigated for clothes, which consumers usually carry close to their bodies and where the tactile aspects are important for product performance. However, there are no studies on whether the consumer contamination effect is also apparent among goods

where the material is not a determining factor of the product performance. For marketers, brand owners and retailers it is crucial to know that tactile marketing in the FMCG marketplace will not entail a negative consumer contamination effect that is stronger than the potentially positive effects of tactile marketing. Thus, it is a crucial aspect to take into account when exploring the opportunities of tactile marketing, but has as of today not been considered within this area.

As the area of tactile marketing for products is still at an early stage, the research on tactile marketing for packaged goods[2] is almost non-existent. Gaining an understanding of how to use tactility in an FMCG environment is an essential task and a crucial step to take in the research of tactile marketing.

1.4 The Purpose of the Study

The main purpose of this thesis is to explore if tactile marketing can be utilized in the FMCG environment and how this will affect consumers. More specifically, this thesis will investigate whether including a tactile element[3] in a product packaging will make a difference on consumers' evaluations and action intentions in the FMCG environment and across products with different purchase motivations – transformational and informational. The sub purpose is to understand whether the notion of consumer contamination will have a negative effect when tactile interaction with the products is encouraged via the package design. Therefore, the main research question of this thesis is; *"Should tactile marketing be utilized for packaged goods whose material properties are not diagnostic for the product performance?"*. This thesis will explore tactile marketing by including a tactile element in the package design. Therefore, in order to answer the main research question, the following research questions will be answered:

1. Will a tactile element in the product packaging have an effect on consumers' brand and product evaluations?
2. Will a tactile element in the product packaging have an effect on consumers' action intention?
3. Will a tactile element in the product packaging have any additional positive effects for retailers?

[2] From here on, packaged goods/products will only include those without performance relevant haptic information
[3] In this thesis, tactile element is referred to as a material that is not incongruent with the commercial message, that provides positive sensory feedback and that provides a tactually intriguing experience that is unexpected for the particular package.

4. Will a consumer contamination cue have a negative effect that will counteract the effects of including a tactile element in the package design?

1.5 Expected Knowledge Contribution

There is a great lack of research and academic studies about the sense of touch from a marketing perspective. Therefore, there is currently a confusion regarding when and how to implement and strategically work with tactile marketing, both from an academic and from a managerial perspective. In addition to this, there is a lack of studies conducted under real life circumstances and in natural environments, which means that the generalizability of the results in previous studies can be questioned. Further, few studies regarding tactile marketing have investigated whether there are any potential pitfalls when encouraging tactile interaction with products.

This study will contribute to the area of tactile marketing in several ways. It is among the first to investigate how marketers can use the sense of touch for packaged goods, products that do not offer any performance relevant information via their material properties. The study will investigate how including a tactile element in the package design can influence consumers' evaluation and action intention. It is conducted in a real life setting, and is thereby among the first studies within the area of tactile marketing to offer results obtained in a natural shopping environment. Finally, the study contributes to the field of tactile marketing by adding the aspect of consumer contamination, which as of today has not been investigated in an FMCG environment and from a tactile marketing perspective.

By reading this thesis, marketing practitioners, package designers, retailers and brand owners will get a deeper understanding regarding tactile marketing for products that are not tactile-diagnostic. This has motivated the authors to reach for new territory and explore an area within sensory marketing that has never been explored before.

1.6 Delimitations and Prerequisites

There are some delimitations within this study due to limited resources in terms of time, money and people. First of all, the focus of this thesis is to explore if and how the sense of touch can have an effect in an FMCG environment, meaning that none of the other senses are investigated. Nevertheless, as the visual aspects of a product packaging are often changed if the material properties are altered, vision is automatically included as a prerequisite for tactile exploration.

Therefore the sense vision will be included in the experimental design, but is excluded from all other parts of this thesis.

Secondly, people are different in their propensity and need for touch (NFT), something that has been investigated in previous literature and has been proven to influence the outcome of tactile marketing (e.g. Peck & Childers, 2003ab; Peck & Shu, 2006; Peck & Wiggins, 2006). Even though this is an interesting aspect to consider, nothing is known regarding the distribution of NFT among the Swedish population. Therefore, including this aspect would possibly require a too big sample to be feasible for a master's thesis, which is why the notion of NFT is excluded from the scope of this thesis. But in order to exclude the notion of NFT from an academic paper discussing tactile marketing, certain requirements have to be fulfilled. Peck and Wiggins (2006) revealed that people with high NFT responded positively to tactile elements in a commercial message, regardless of the type of element. For people with low NFT on the other hand, reactions were negative if the tactile element was incongruent with the commercial message, or if the element provided a negative sensory feedback. Therefore, in order for people low in NFT to remain indifferent to the tactile information, the element used must provide a neutral or positive sensory feedback and cannot be incongruent with the commercial message, which is why these are prerequisites for the element used in this study.

Thirdly, there are some limitation in terms of the stimulus investigated and the sample of respondents. This study is limited to only investigate one type of tactile marketing; including a tactile element in the packaging design. This means that other types of tactile marketing, such as mere touch or tactile marketing in displays etcetera, are excluded from the scope of this thesis. Further, in the study respondents are approached and asked to evaluate the products, which means that spontaneous touch is not investigated. To further delimit the study, only one product representative from each purchase motivation are included i.e. one informational and one transformational product category. As the aim of this study is to explore whether tactile marketing for packaged goods can make a difference on evaluations and action intentions, and not whether different materials entail different responses, the tactile element used and investigated in this thesis is limited to one; velvet. Further, only one contamination cue has been used to investigate the potential influence of consumer contamination. Finally, the respondents in this thesis are limited to people living in, or close to, Stockholm.

1.7 Definitions and Clarifications

The area of tactile marketing is complex and there are many terms and expressions that the reader might not be familiar with. Therefore, the following definitions provide the necessary explanations for the words critical for this thesis. However, the authors expect the reader to be familiar with basic marketing theory, which is why only words specific for the area of tactile marketing are defined below.

Sensory marketing	”Marketing that engages the consumers’ senses and affect their behavior” (Krishna, 2010, p. 3).
Tactile/Haptic	Transmitting information or feelings by the sense of touch (Hultén, Broweus & van Dijk, 2008).
Tactile marketing	Marketing strategies where the human sense of touch is in focus (Hultén, Broweus & van Dijk, 2008).
Tactile-diagnostic products	Products where the material properties are salient characteristics that directly relates to the product performance and thus tactile input is of particular importance for the evaluation of the product (Grohmann, Spangenberg & Sprott, 2007).
Tactile element	In this thesis, tactile element is referred to a stimulus that provides a neutral or positive sensory feedback, that is consistent (not incongruent) with the commercial message and that provides a tactually intriguing experience that is unexpected for the particular package.
Instrumental touch	Using the sense of touch to obtain a certain objective (to purchase, to obtain non-haptic product information, to obtain haptic product information) (Peck, 2009 in Krishna, 2010).
Hedonic touch	Tactile interaction as an end in itself with the focus being the sensory experience of touch (Peck, 2009 in Krishna, 2010).
Hedonic consumption	”Hedonic consumption designates those facets of consumer behavior that relate to the multi sensory, fantasy and emotive aspects of one's experience with products” (Holbrook & Hirschman, 1982, p. 92).

Consumer contamination Perceived negative contagion from other people touching the products (Argo, Dahl & Morales, 2006).

Contamination cue Environmental signals that increase the salience that consumer contact has occurred i.e. a cue to the consumer that a product has been touched by someone else (Argo, Dahl & Morales, 2006).

1.8 Thesis Outline

This thesis is divided into five chapters – introduction, theory and hypotheses generation, methodology, results and analysis, and finally discussion. The first chapter, *Introduction,* included a background of the topic as well as a short introduction of the importance of the product packaging in an FMCG environment. The chapter also comprised the reasons for why the research topic gains from exploration and the expected knowledge contribution to the marketing world. Finally, the chapter addressed the delimitations of the study as well as definitions and clarifications, which will be useful in understanding the thesis. Chapter 2, *Theory and Hypotheses Generation,* consists of the theoretical foundation of the thesis and the supporting evidence behind the hypothesis. Chapter 3, *methodology,* will start with a presentation of the scientific approach and research design used to conduct the study. Further, descriptions of the pre-studies, the manipulations and a more in depth explanation of the main-study as well as the data sampling will be presented. The chapter also includes an explanation behind the analytical tools and concludes with an examination of the data quality in terms of validity and reliability. In chapter 4, *Results and Analysis*, the proposed hypotheses are tested and a review of whether or not the hypotheses are supported will be presented. The thesis finishes off with chapter 5, *Discussion*, where an analysis of the result in the context of exiting literature will be presented, followed by the conclusion that answers the research questions. Finally, managerial implications, potential criticism of the study as well as an outlook for future research will be examined.

2 Theory and Hypotheses Generation

This chapter will start with providing an overview of the theoretical foundations that the study is based on, followed by the hypotheses generation. More specifically, in the first part of the chapter, the reader will learn about the sense of touch and will discover what motivates and influences tactual interaction, followed by a review of the potential pitfall of tactile interaction - consumer contamination. Then the hierarchy of effects model will be presented. Finally, based on the theoretical foundations the hypotheses will be generated.

2.1 Using the Sense of Touch to Explore the World

The sense of touch is the first to develop in infants (Miodownik, 2005) and it is the only sense that does not act through another medium; vision, smell and hearing goes via the air and taste via the presence of saliva (Krishna, 2010). In other words, touch is the only sense where people are in direct contact with the stimuli they are experiencing. This makes touch the hardest sense to substitute or manipulate, and the sense that consumers trust the most **(**Spence & Gallace, 2011). Further, it is more difficult to shift the attention from tactile input than from other sensory inputs (Spence, Nicholls & Driver, 2001). The attention paid to tactile inputs is thereby higher, making it more unlikely that a consumer will shift the attention to a competing product or brand once s/he invests in the physical energy needed to reach out and touch the product (Jansson-Boyd, 2011). Thereby, there will be a clear advantage over competitors if products can capture the attention based on tactile input, as consumers pay more and undivided attention to the product they interact with tactually (ibid). Further, tactile interaction with a product can trigger emotional responses, especially when the feeling is pleasant (or painful). Pleasant (and painful) touch activates certain regions of the orbitofrontal cortex in the brain, which in turn relates to the affective response to touch. Thereby, the study proves that engaging in pleasant (or painful) touch has a direct relationship to the development of emotions (Rolls, O'Doherty, Kringelbach, Francis, Bowtell & McGlone, 2003). Thus, there are human biological conditions that make touch an advantageous marketing tool. But why do people decide to engage in touch in the first place?

2.1.1 The Motivation Behind Touch

There are both goal- and experience oriented reasons behind why consumers interact tactually with products. *Instrumental touch* means that consumers touch products in order to obtain a certain goal.

At the simplest level (i), the mere goal of the tactile interaction is ”transportation”, bringing the product from one place to another. At the next level (ii), the consumer uses tactility to obtain non-tactile information. In other words, the consumer uses the sense of touch in order to utilize another sense. In both these levels, the tactile interaction could provide the consumer with important product information, but as this is not the goal the tactile inputs are not actively reflected upon and the information gets overlooked. At the third level of instrumental touch (iii), the consumer uses tactility in order to obtain product information that cannot be obtained through any other sense (Peck, 2009 in Krishna, 2010). Lederman and Klatzky (1987) demonstrated that the sense of touch is crucial in order to experience material properties such as texture, hardness, temperature, or weight. For instance, the weight of a product is often closely associated with the quality, something that Bang & Olufsen leverages on with its heavy remote controls (Lindstrom, 2005).

In contrast to the instrumental motivation to touch, the *hedonic touch* motivation shows that tactile interaction can be an end in and of itself i.e. an experience oriented reason to touch (Peck, 2009 in Krishna, 2010). Holbrook and Hirschman (1982), defines hedonic consumption as the aspects of consumer behavior relating to the multisensory fantasy and emotive aspects of product use. In the context of tactile interaction, hedonic consumption relates to touch as a way to obtain a pleasant sensory experience or general exploration of an unknown or unexpected material (Peck, 2009 in Krishna, 2010). The presence of hedonic touch related motivation is important for marketers as touching for hedonic reasons (because it is fun or interesting), has an increased persuasive effect, particularly when the touch provides neutral or positive sensory feedback (Peck & Wiggins, 2006).

Tactile interaction is not always needed even if products differ in their material properties. Using vision for a quick ”glance” at an object can, if the object is familiar, provide consumers with enough information about the product’s haptic properties, as consumers can then retrieve the haptic information from memory. However, the visual input can also reveal that the material properties are unknown and that haptic exploration is needed. This is referred to as the ”visual preview model” (Klatzky, Lederman & Matula, 1993).

2.1.1.1 Tactile-Diagnostic Products and the Motivation to Touch

When you feel that the bread is soft, you know that it is freshly baked, but what does the feel of the chocolate package tell you? As previously mentioned, products differ in the extent to which they possess intrinsic material properties (Peck & Childers, 2003b). When the material properties are

important for the product performance, and thus touch is needed for evaluation, the product possesses *tactile-diagnostic* material properties. For these products, touch enables discrimination between product qualities and enables more accurate product judgments (Grohmann, Spangenberg & Sprott, 2007; McCabe & Nowlis, 2003). Studies reveal that intrinsic cues, if being diagnostic, actually can have a greater impact on perceived quality than extrinsic cues, such as price and brand name (e.g. Sprott & Shimp, 2004; Wheatley, Chiu & Goldman, 1981). Thus, for product categories that are tactile-diagnostic in nature (e.g. bread, fruit, clothing and electronics) the motivation to touch is higher as it stimulates the third level of instrumental touch described in section 2.1.1 above.

When a product is *not* tactile-diagnostic i.e. when products do *not* vary in material properties that are relevant for product performance (e.g. packaged food, videotape, books), it is normally enough to use vision to assess these products (McCabe & Nowlis, 2003). Since there is no tactile information salient in the product, the motivation to touch is usually limited to level one and two in the instrumental touch motivation. Thus the motivation to touch is lower, which means that these products generally only are touched for a brief period of time (Peck, 2009 in Krishna, 2010).

2.1.2 The Importance of Involvement on Tactile Information Processing

The level of involvement in the purchase decision is determinant for how the attitudes are formed and held towards a brand (Rossiter, Percy & Donovan, 1991). The level of involvement has many different definitions. Some argue that it is manifested in “the complexity or simplicity of attitudes formed and held towards the product or brand” (ibid, p. 13), others define it as is the level of perceived risk in the purchase decision (Percy & Elliott, 2009), while some define it as the personal relevance in the purchase decision (Zaichkowsky, 1986).

The influence of tactile cues in an advertising message differs depending on the level of involvement with the message (Peck & Johnson Wiggins, 2011). Tactile elements are more influential in the case of low-involvement messages than under high-involvement circumstances. High-involvement messages are processed more systematically due to the extensive information search needed before purchase decision and attitude formation, whereas low-involvement messages are more likely to be influenced by simple peripheral cues (Petty, Cacioppo & Schumann, 1983). Tactile information could act as a peripheral cue that influences the decision making process under low-involvement circumstances (Peck & Johnson Wiggins, 2011).

2.1.2.1 The Underlying Purchase Motivation

Rossiter and Percy (1987) present two different potential underlying motivations in a purchase; informational and transformational. *Informational* motives are negatively reinforced purchase motivations also called "relief" purchases. This is the case when consumers find themselves being below equilibrium (a negative state) and the motivation behind the decision is to once again reach equilibrium (Rossiter & Percy, 1987). In this state, consumers search for information about the product/brand before purchase (Rossiter, Percy & Donovan, 1991). *Transformational* motives, also called "reward" purchases, are positively reinforced purchase motives. This is the motivation behind purchases where the goal is to rise above equilibrium and give oneself a treat or reward rather than strive to remove an aversive stimulus. Whether the motivation for purchasing certain products/services is transformational or informational is highly individual and different purchases can have different motivation at different points of time (Rossiter & Percy, 1987). For a summary of the "Rossiter and Percy Grid", see figure 1.

As of today, there are no studies on whether the underlying motivation has an effect on tactile information processing. Therefore it is important for any study on tactile marketing for low-involvement products to include products with both transformational and informational purchase motivations to prevent that any results are tied to a specific purchase motivation.

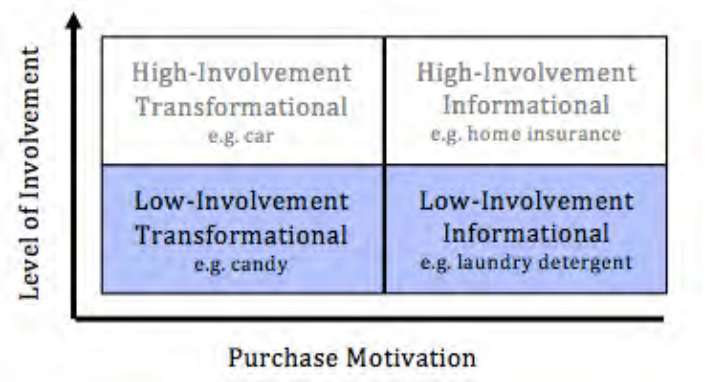

Figure 1. Rossiter and Percy Grid (Rossiter, Percy & Donovan, 1991)

2.1.3 Consumer Contamination

Underhill (1999) notes that consumers often open product packages in-store in order to touch and feel the product prior to purchase. But once the consumer decides to buy the product, s/he tends to put the opened package back on the shelf and take a "new" package to buy. Similarly, many consumers like to flip through a magazine on the rack in-store but then buy the magazine in the back of the rack. This consumer behavior reveals that there is an aversion towards buying products that others might previously have touched (Underhill, 1999). So, even though recent marketing research has found that the sense of touch is positive from a marketing perspective, the research from Argo, Dahl and Morales (2006) reveal that consumers respond negatively when other

consumers have had physical contact with the products (in their study, clothes). The contamination effect can occur even when consumers do not see others tactually interact with the product of their interest, but a simple cue in the retailing environment, such as a shirt being sloppily folded, is enough for the contamination effect to occur (ibid). With their study, Argo, Dahl and Morales (2006) are the first to give empirical evidence for the existence of consumer contamination. They further show that the contamination effect grows stronger the more people the consumer believes have previously touched the product. Hence, the risk of negative contamination could potentially counteract the positive effects of encouraging tactual interaction as both evaluation and purchase intention has proven to be lower when a contamination cue is received (ibid). This means that there is a potential downside to including a tactile element in a product packaging that encourages tactile exploration.

2.2 Taking the Next Step - The Hierarchy of Effects Model

Increasing demands for marketing accountability have created a new sense of urgency for marketers to obtain and analyze relevant metrics in order to demonstrate marketing's value. Mind-set metrics are therefore highly relevant when evaluating new marketing practices and should be given new considerations (Srinivasan, Vanhuele & Pauwels, 2010). These mind-set metrics are the building blocks in the so-called hierarchy of effects models, which describe the hierarchical stages that the consumer goes through when being exposed to a commercial message (Srinivasan, Vanhuele & Pauwels, 2010; Vakratsas & Ambler, 1999). The models are used to understand the effectiveness of attempts to persuade people to use new products or services (Lavidge & Steiner, 1961; Barry, 1987). In this thesis, Hall's (1915, cited in Barry, 1987) hierarchy of effect model is used for assessing the different stages a consumer goes through when being exposed to a new product packaging. Hall proposed that an advertisement must (i) attract attention → (ii) develop interest → (iii) develop confidence → (iv) produce conviction → (v) induce action, in order to be effective. However, in this study, as consumers are approached and asked to evaluate products and thus to take part in an experiment, the first step in the hierarchy of effects model, *attention*, is not relevant. The steps and measures adopted in this thesis are presented in figure 2 below.

The second step; *develop interest*, is in this thesis referred to as whether the product packaging can make consumers interested in the brand and product category. Machleit, Madden and Allen (1993) mean that a strong brand interest encourages consumers to seek additional information about the brand, which could lead to the final decision of purchase and trial. In the competitive FMCG

environment, it is increasingly important for brand owners to make the brand to “stand out” and to achieve brand interest. It is thus very important for marketers to encourage brand interest for low-involvement products such as FMCG, as an increased brand interest can reduce the propensity for consumers to approach a different brand within the category (Machleit, Allen & Madden, 1990). Furthermore, brand interest can be seen as a "pre-attitudinal" construct that, if acted upon, can facilitate attitude development or change (ibid). As for product category interest, this is an important aspect for retailers who want to increase interest and drive sales for the whole category and not only for a specific product or brand. As it has been proven that perceived novelty could impact the interest development, this measure is also included in the model.

The third step in the hierarchy of effects model is to *develop confidence*, which in this thesis is referred to as the development of a positive consumer attitude towards the brand and the product. Consumer attitude can be explained as the consumers’ overall evaluations of a brand or product and is one of the most important aspects of product evaluations, as it forms the basis of the actions of consumers (Keller, Apéria & Georgson, 2008). Moreover, even though a positive attitude does not guarantee that the brand will be purchased, a positive attitude is in most cases a prerequisite in order for the brand to end up in consumers’ consideration sets and thus ultimately to be consumed (Blackwell, Miniard & Engel, 2006).

The fourth step of the model is to *produce conviction* i.e. to make the consumers believe in the product/brand. This step is often excluded in more contemporary hierarchy of effects models (e.g. Dahlén & Lange, 2009). However, in this thesis the step is included as a way of assessing the impact of tactile marketing. In other words, the actual conviction i.e. consumers’ confidence in the previous steps of the model, is not measured. Instead, product claim strength (i.e. consumers’ evaluation of the product benefits) and consumers’ willingness to pay are used as proxies for consumers’ confidence in their evaluations. As the product packaging is the carrier of the commercial message in-store, product claim strength is dependent on what is portrayed via the package design (Silayoi & Speece, 2004). Willingness to pay can be explained by the notion of consumer perceived value. Previous research has namely shown that perceived value is closely connected to purchase intention and willingness to pay (e.g. Dodds, Monroe & Grewald, 1991; Zeithaml, 1988). Therefore the value construction of Sheth, Newman and Gross (1991) is used. The authors state that consumer choice behavior is dependent on five different types of value: social, conditional, functional, epistemic, and emotional value. The first two values i.e. social and

conditional values are assumed *not* to be applicable in this context whereas the latter three potentially can be influenced by tactility, which will be discussed below.

The last step in the hierarchy of effects model is to *induce action*. Consumer action is the ultimate goal of any communication and interaction with consumers (Percy & Elliott, 2009). Two highly relevant consumer action intentions are purchase intention and word-of-mouth (WOM) intentions. The meaning behind *intentions* has been defined in a variety of ways. For example, Söderlund and Öhman (2003) define it as the individual's subjective evaluation of the likelihood that s/he will behave in a certain way in the future. Nevertheless, it should be emphasized that an intention is not the same as the actual behavior, but an individual's expectation of future behavior. Purchase intention is therefore used as a proxy variable for actual purchase (Young, DeSarbo & Morwitz, 1998), with the underlying assumption that intentions have a predictive value for consumers' future behavior (Söderlund, 2001). WOM is defined as the passing of information from one person to another by oral communication. WOM intention is therefore consumers' intention to spread information or to give recommendations to friends and family about a certain product or brand (Söderlund, 2001). Research has shown that WOM communication plays an important role in shaping and influencing the next consumer's attitude and behavior and to have noteworthy implications on future success for a company/brand (Dichter, 1966; Herr, Kardes & Kim, 1991; Murray, 1991). Murray (1991) further states that the power of WOM derives from the fact that people consider information from personal sources to be more trustworthy than other sources.

Consumers' evaluation of the retailing environment will also be examined, as this factor could be of value for retailers in particular. It has been shown that different commercial messages and media vehicles could have an effect on how the surrounding environment is perceived (Dahlén & Rosengren, forthcoming; Lange & Nortfält, 2012). Taking a retailer perspective, it could therefore be of value to measure whether a product packaging, as a carrier of the commercial message in-store, could have an effect on how consumers evaluate and perceive the retailing environment.

As previously explained there is a potential pitfall in encouraging tactile interaction, namely a fear of consumer contamination. Therefore, the potential effect of consumer contamination on the metrics in the hierarchy of effects model will be hypothesized and measured. The hierarchy of effects model and the metrics used are summarized in figure 2 below. In this thesis, the first three steps of the model; develop interest, develop confidence and produce conviction are referred to as

"evaluation metrics" whereas the last step; induce action, is referred to as "action intentions".

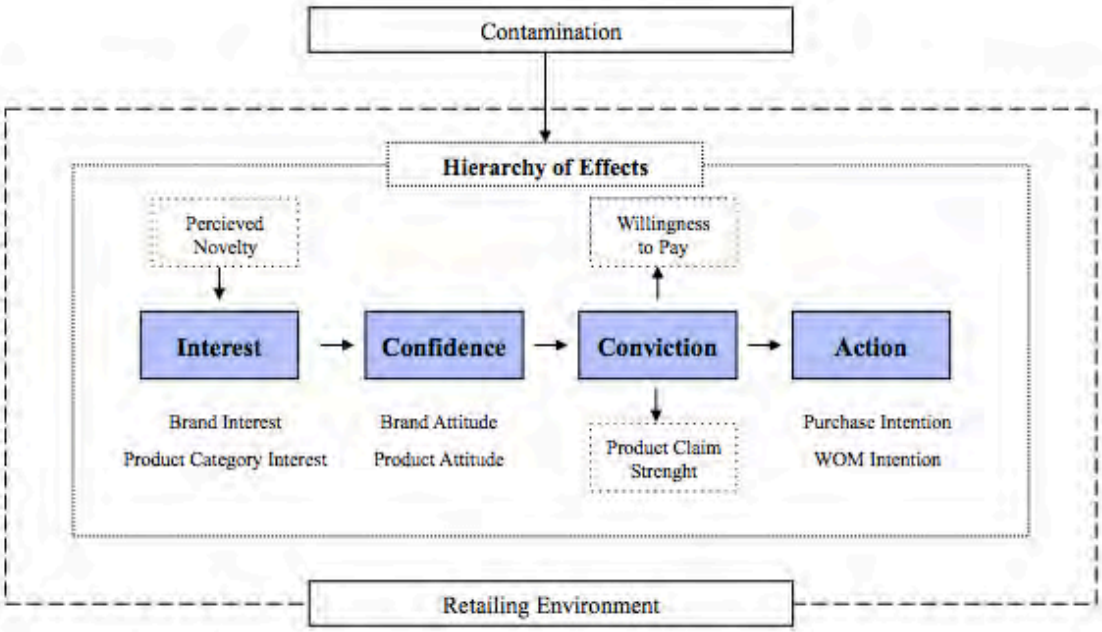

Figure 2. Hierarchy of effects model

2.3 Hypotheses Generation

FMCG are generally considered to be low-involvement products, entailing that there is little perceived risk in most FMCG purchases, that consumers do not engage in extensive information search, and that the barrier of trial is relatively low (Silayoi & Speece, 2004). Consumers are more receptive to peripheral cues under low-involvement circumstances (Petty, Cacioppo & Schumann, 1983), indicating that consumers should be more receptive to peripheral cues when it comes to FMCG. As shown by the research of Peck and Johnson Wiggins (2011), a tactile element could potentially act as such peripheral cue, even though it does not provide any additional information about the product at hand but rather provides a tactually hedonic experience that is not expected under those circumstances. Offering a product packaging, which includes a tactile element that is unexpected in the particular packaging's design, should lead to a hedonically intriguing experience when tactually interacting with the product. This could influence consumers' evaluations and behavior intentions in an FMCG environment in accordance with the research of Peck and Wiggins (2006) and Peck and Johnson Wiggins (2011), which is why the following hypotheses can be generated.

2.3.1 Develop Interest – Perceived Novelty, Brand and Product Category Interest

2.3.1.1 Perceived Novelty

Creative communication has proven to be of high importance for marketers, as creativity sends positive signals about the brand, enhances the perception of brand quality and enhances the perceived marketing efforts (Dahlén, Rosengren & Törn, 2008). It is difficult to find a commonly accepted definition of creativity, however, creativity researchers agree that one aspect of creativity is originality, novelty or newness (Koslow, Sasser & Riordan, 2003).

Despite the fact that the last few years have seen a number of exciting developments in the tactile aspects of product designs, the focus on the tactility of product packaging is still a rather new phenomenon (Spence & Gallace, 2011). Thus, including a tactile element in the product packaging of an FMCG product is still uncommon in the FMCG market place and a package offering a tactile experience should therefore be considered novel. We therefore hypothesize:

H1. Including a tactile element[4] in the product packaging will increase the perceived novelty.

2.3.1.2 Brand Interest and Product Category Interest

A challenge for brands in the competitive FMCG marketplace is to stay interesting in the eyes of the consumers. When marketers manage to stimulate brand interest, consumers are more likely to seek additional information about the brand, buy the brand and speak about it (Machleit, Madden & Allen, 1993).

Skinner and Stephens (2003, cited in Mainwaring & Skinner, 2009) recommend that communicators should use material in their communication that will appeal to an individual's preferred sense in order to engage and maintain that person's interest. In this case, this implies that for people who prefer tactile information, a tactile element in the product packaging ought to increase interest. Therefore, encouraging people to utilize an additional sense should lead to a net increase in the brand interest. Similarly, Peck and Wiggins (2006) reveal that a tactile element in a commercial message creates an affective response, including an increased interest, towards the carrier of the message. Another way to increase brand interest is to constantly renew the brand and

[4] In this thesis, tactile element is referred to as a material that is not incongruent with the commercial message, that provides positive sensory feedback and that is unusual in an FMCG packaging context and thus offers a certain level of novelty or surprise.

challenge expectations i.e. offer consumers novelty (Ludden, Schifferstein & Hekkert, 2008). Research shows that perceived creativity (defined as originality, novelty or newness (Koslow, Sasser & Riordan, 2003)) will have a significant effect on brand interest (Dahlén, Rosengren & Törn, 2008). Thus, a perceived novel packaging should have a positive effect on the brand interest. In sum, by offering a novel package design and encouraging consumers to use the sense of touch and thereby create an affective response towards the carrier of the message, brand interest should increase. Based on the preceding reasoning we hypothesize:

H2a. Including a tactile element in the product packaging will increase brand interest.

Retailers offer products from many different brands within one category and are hence eager to increase sales for the whole category and not only for specific brands. Therefore it is beneficial that the actions of one brand have the ability to increase the interest for the whole category. Nordfält (2007) reasons that individual products have the potential to affect the experience of the whole assortment. This means that each product does not act as an isolated entity, but that consumers get an overall experience of the assortment in-store. Products are categorized and compared to each other, which means that differences in attributes among the products can have an effect on how the whole category is perceived and evaluated. In fact, by displaying one specific product (for instance via in-store promotion) the sales do not only increase for that specific product, but increases for the whole product category (Chevalier, 1975). This interplay between the different products within one product category gives reason to believe that by making one brand more interesting, for instance via altering the package features, the whole category can be seen as more interesting. We therefore hypothesize:

H2b. Including a tactile element in the product packaging will increase product category interest.

2.3.2 Develop Confidence – Brand and Product Attitude

Consumer attitude generally forms the foundation for how consumers behave and relate to a brand, making it one of the most important aspects for marketers to work with. In fact, the attitude towards a brand is often a determining factor when the consumer is about to choose a brand (Keller, 1993) and a prerequisite in order for the brand to end up in consumers' consideration sets ultimately to be

consumed (Blackwell, Miniard & Engel, 2006).

Hultén, Broweus and van Dijk (2011) argue that the material aspect of a product can clarify the brand identity, thus help consumers in their evaluation of the brand. In an FMCG environment it is the product packaging that consumers interact with, thereby the packaging has the ability to express the brand image and reinforce brand attitude (Percy & Elliott, 2009). Similarly, it is the package that communicates and reinforces value to consumers at the point of purchase and it is a critical factor in the decision-making process and attitude formation for FMCG (Silayoi & Speece, 2004). The product packaging is therefore a critical brand building element and a source of brand equity. In fact, one of the strongest associations a consumer has to a brand relates to the design of the packaging (Keller, Apéria & Georgson, 2008). Due to the great importance of the product packaging in the brand attitude development, altering the feel of the package ought to have an effect on brand attitude.

In advertising research it has been revealed that inducing a positive mood in viewers will increase the attitude towards the brand behind the ad (Holbrook & Batra, 1987). As previously mentioned, pleasant touch activates certain regions of the orbitofrontal cortex in the brain, inducing an affective reaction to the touch stimuli (Rolls et al., 2003). So in accordance with the research in advertising, the positive emotions evoked by the touch stimuli can have an affect on how consumers perceive the brand. It can therefore be assumed that a hedonic experience in the product packaging, providing a positive sensory feedback, will have a positive effect on the evaluation of the brand behind the product. Based on the reasoning laid out, we hypothesize:

H3a. Including a tactile element in the product package will have a positive effect on respondents' attitude towards the brand behind the product.

Peck and Wiggins (2006) suggest that tactually interacting with a stimulus that induces a positive affective response will most likely lead to more positive attitude towards the stimuli. This is especially true for low involvement products, as people are more receptive to such peripheral cues under these circumstances (Peck & Wiggins, 2011). This is further supported by Spence and Gallace (2011) emphasizing that changing the feel of the package can change people's attitude towards that product, and Peck and Childers (2003a) who state that the attitude toward a product

may differ depending on whether the consumer has the opportunity to touch the product and experience pleasurable sensory feedback before purchase. Taking this into account, it is most likely that increasing the pleasantness of the feel of a FMCG package would have a positive effect on consumers' overall attitude towards the product. Therefore, we hypothesize

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H3b. Including a tactile element in the product packaging will have a positive effect on respondents' attitude towards the product.

2.3.3 Develop Conviction - Product Claim Strength and Willingness to Pay

2.3.3.1 Product Claim Strength

Product claims are defined as statements or descriptions that marketers make known for public acceptance (Toulmin 1958, cited in Munch, Boller & Swasy, 1993). Boiler, Swasy and Munch (1990) further state that a product claim found in marketing communications generally are descriptions about product features and/or performance consequences presumed to be beneficial for the target audience. Thereby, the product claim sets the expectation of what a product will deliver. In the FMCG environment these expectations are often set via what is communicated on the product packaging (Silayoi & Speece, 2004). The intention to purchase depends on the degree to which consumer expects the product to satisfy their needs (Kupiec & Revell, 2001). So, in order to be successful in attracting the target audience and ultimately to create loyalty and repeat purchases, the product must meet, or rather surpass, the consumer expectations (Keller, Apéria & Georgson, 2008). However, communicating product claims provides no guarantee that the target audience will believe those claims (Boiler, Swasy & Munch, 1990).

Previous research shows that a multisensory experience can have a positive effect on how consumers experience the product and how persuasive a consumer finds a commercial message. Peck and Wiggins (2006) proved that a message including a touch element was perceived as more persuasive than a message without a touch element. Elder and Krishna (2009) showed that multiple sense advertising led to heightened taste perceptions for food products and Krishna and Morrin (2008) showed that the feel of a plastic glass affected how the consumers perceived the taste of the drink within. Further, Krishna, Elder and Caldara (2010) revealed that consumers' tactile perception of a material was significantly impacted by the presence of scents. When the scent was congruent with the tactile properties of the stimuli (paper), the tactile perceptions were more positively rated

than when the smell was not congruent with the tactile properties. These studies all indicate that by including different sensory stimuli, the evaluation of the core product is influenced, particularly when the sensory experience is congruent with the product properties. In accordance with these results, Spence and Gallace (2011) suggest that the hedonic attributes experienced via one sense such as touch, can bias a consumer's perception of the pleasantness or quality of the product derived from other senses into alignment. Thus, one sensory input can influence the multisensory experience, meaning that information obtained tactually could have an effect on how the product benefits are experienced. Based on the reasoning laid out, we hypothesize:

H4. Including a tactile element that is congruent with the product claim will enhance the perceived strength of the product claim.

2.3.3.2 Consumer Willingness to Pay

As mentioned, willingness to pay originates in what value the consumers prescribe the product. Consumer perceived value emphasizes the individual perception of value, derived from consumers' personal preferences and views (Zeithaml, 1988). Tactile marketing is assumed to affect three types of value; functional, epistemic and emotional value (Sheth, Newman & Gross, 1991). *Functional value* is defined as the perceived utility derived from an object's functional, utilitarian or physical performance (ibid). As hypothesized above, the product claim should be perceived as stronger when including a tactile element in the product packaging. If this holds true, the perceived benefit of the product, and in extension the perceived functional value, should increase. *Epistemic value* is defined as the perceived utility, acquired from a product's capacity to create curiosity, provide novelty and/or satisfy a desire for knowledge (ibid). According to this definition, a novel package design in an FMCG environment should increase the epistemic value of a product. *Emotional value* is described by Sheth, Newman and Gross (1991, p.161) as "a perceived utility acquired from an alternative's capacity to arouse feeling or affective states." As previously mentioned, pleasant touch has proven to arouse an affective response. Therefore, it can be assumed that the perceived emotional value can be increased by including a pleasant tactile element in the product packaging. In accordance with this reasoning, Hultén, Broweus and van Dijk (2011) declare that utilizing texture in the marketing communication in a conscious way may increase the consumer perceived value of the product. Based on this, including a tactile element in the package design can be assumed to increase the consumer perceived value and in extension the willingness to pay.

On another note, consumers' attitude towards a brand is often a determining factor when consumers evaluate the price of a product (Keller, 1993). In accordance, other studies have shown that a strong positive attitude towards a brand can affect the consumer's willingness to pay in the same directions as the attitude i.e. positive attitude lead to a higher willingness to pay and a negative attitude lead to a lower willingness to pay (Fazio 1995; Petty, Haugtvedt & Smith, 1995). As previously hypothesized, a tactile element in the package design should lead to a more positive attitude.

In accordance with the reasoning above the willingness to pay ought to increase. We hypothesize:

H5. Including a tactile element in the product packaging will increase the willingness to pay for the product.

2.3.4 Induce Action – Purchase Intention and Word-of-Mouth Intention

2.3.4.1 Purchase Intention

The ultimate goal for most, if not all brand owners are for consumers to act, and particularly to purchase the products, whether it is for trial or a repeat purchase (Percy & Elliott, 2009). Previous research has demonstrated that tactile interaction with products has a positive effect on consumer action behavior. As previously mentioned, Peck and Wiggins (2006) demonstrated that by including a tactile element in a pamphlet, the likelihood of people donating time or money to the organization behind the dispatch increased. Touch is argued to be the most "costly" sense, as it demands more physical energy to reach out and physically examine the product than it does to visually examine it (Jansson-Boyd, 2011). Since consumers have to invest the energy needed to engage in the tactile interaction, the act of touch can help establish a more direct connection with the product ultimately leading to a higher propensity to act (Spence & Gallace, 2011; Jansson-Boyd, 2011). In addition, tactile input is linked to affect, and thereby it is possible to make consumers feel connected to a product on an affective level due to an altered tactile surface (Schifferstein & Hekkert, 2011, cited in Jansson-Boyd, 2011). So when consumers experience a tactually pleasant product, it triggers an emotional response. By making consumers feel emotionally connected to products, there is an increased likelihood of purchase and repeat purchase (Jansson-Boyd, 2011).

On another note, Peck and Childers (2006) studied the influence of the situational based salience of tactile information by placing a sign next to products in a grocery store, encouraging consumers to

tactually interact with the products. The results reveal that by increasing the salience of tactile interaction, the purchasing behavior was positively influenced. The study was conducted on products with diagnostic touch attributes, but the results still give reasons to believe that providing a tactile element, thus increasing the situational based salience of touch and encouraging tactile interaction with the product, could increase the intention to purchase the product. Thus, we set up the following hypothesis:

H6. Including a tactile element in the product packaging will increase the purchase intention.

2.3.4.2 Word-of-Mouth Intention

Reichheld (2003) suggests that the only measure a company needs to assess its success is how likely it is that an existing consumer would recommend the brand to a friend. This is explained by the fact that the more promoters a brand has, the bigger is the growth. People are more likely to listen to a person they know and trust and thereby a message that people talk about has a greater impact than a message that is conveyed via planned market activities (Dichter, 1966; Herr, Kardes & Kim, 1991; Murray, 1991). This shows the great importance of WOM and that consumers actively and voluntarily talk about the brand. WOM can affect diffusion and sales, and consequently consumer conversation can affect a product's success. Thus many companies take the aspect of WOM into account when designing their marketing strategies (Berger & Schwartz, 2011).

There are different ways for brands to stimulate WOM. Direct WOM can be positively affected by offering products that consumers find interesting and WOM is likely to be higher for a product that a consumer likes (Berger & Schwartz, 2011). Further, research has shown that creative advertising can increase WOM (Modig & Lethagen, 2008). As previously hypothesized, including a tactile element in the product packaging ought to increase perceived novelty, brand and product category interest and product attitude, ultimately leading to higher WOM-intentions. We therefore hypothesize:

H7. Including a tactile element in the product packaging will increase the word-of-mouth intention.

2.3.5 Consumers' Evaluation of the Retailing Environment

Retailing is highly competitive and retailers do not only battle competition from other retailing stores, but also from mail-order companies, Internet etcetera. Consequently, retailers become more aware of that customers want to visit stores with an enjoyable environment i.e. where shopping becomes a pleasant experience rather than a simple visit to buy products. Thus, retailers are constantly searching for new ways to improve consumers' evaluation of the retailing environment.

Dahlén and Rosengren (forthcoming) show in their study that differences in advertising content lead to different perceptions of the same editorial content. In other words, they revealed that the articles in the magazines where perceived differently depending on the advertising displayed in the magazine. This means that the individual ads can have an effect on the perception of the media vehicle. In another study, Lange and Nordfält (2012) revealed that the store shelf, or the section of the store where the communication was presented, was perceived differently depending on whether the store used static or moving media. Thus, Lange and Nordfält reveal that the type of media choice affects how retailing environment is evaluated. There is therefore reason to believe that the choice of products' package designs can affect how the consumers evaluate the store in which it is sold. Based on this reasoning, including a tactile element with positive sensory feedback ought to have a positive effect on the evaluation of the retailing environment in accordance with the associations of the chosen material.[5] We hypothesize:

H8a. The retailing environment will be perceived as more nice[6] if a tactile element is included in the product packaging.

H8b. The retailing environment will be perceived as more welcoming[7] if a tactile element is included in the product packaging.

As previously hypothesized, a tactually intriguing product packaging should be perceived as novel. Hence, according to the reasoning above, the perceived product novelty should have a positive effect on the corresponding evaluations of the retailing environment. We therefore hypothesize:

[5] For this study, a prerequisite is to use a touch element that provides a neutral or positive sensory feedback (see section 1.6). As will be shown in section 3.3.2 the chosen element is velvet.
[6] ”Trevlig” in Swedish.
[7] ”Välkomnande” in Swedish.

H8c. The retailing environment will be perceived as more innovative[8] if a tactile element is included in the product packaging.

H8d. The retailing environment will be perceived as more exciting[9] if a tactile element is included in the product packaging.

2.3.6 The Effect of Consumer Contamination

As previously discussed, there is a potential pitfall in encouraging tactile interaction with products, as people might see a "disgust-factor" in others tactually interacting with the product of their interest. This perceived consumer contamination, has proven to have a negative effect on both evaluation and purchase intention (Argo, Dahl & Morales, 2006).

When a tactile element is included in the product packaging, another level of motivation of touch is potentially added; the hedonic touch motivation (Peck, 2009 in Krishna, 2010). Without a tactile element, the motivation to tactually interact with packaged goods should be limited to level one and two of instrumental touch motivation (as a means of transportation and/or using touch to utilize another sense, see section 2.1.1). As previously mentioned, tactile information could be extracted even when touch occurs with these motivations, however, the information is overlooked. But when tactile interaction is motivated by hedonic exploration, tactility is seen as an end in and of itself (Peck, 2009, in Krishna, 2010). It can thus be assumed that with a hedonic touch motivation the focus is more on the material properties of the product i.e. the focus is on the sense of touch, as in the case of clothing (which was the object of study for Argo, Dahl & Morales, 2006). Thus, it is more likely that consumers will be exposed and receptive to a contamination cue when a tactile element is incorporated in the product design. So in accordance with Argo, Dahl and Morales (2006), it can be assumed that receiving a contamination cue will have a negative effect on all metrics in the hierarchy of effects model. Thus we hypothesize:

H9. Consumers' evaluations and action intentions will be lower for a package including a tactile element when a contamination cue is received.

[8] "Nytänkande" in Swedish.
[9] "Spännande" in Swedish.

2.4 Summary of Hypotheses

The hypotheses are designed to answer the research questions. Below, the hypotheses are summarized in their relation to the research questions.

Research Question	Hypothesis
Should tactile marketing be utilized for packaged goods whose material properties are not diagnostic for the product performance?	
Will a tactile element in the product packaging have an effect on consumers' brand and product evaluations?	**H1.** Including a tactile element in the product packaging will increase the *perceived novelty*. **H2a**. Including a tactile element in the product packaging will increase *brand interest*. **H3a**. Including a tactile element in the product packaging will have a positive effect on respondents' overall *attitude towards the brand* behind the product. **H3b.** Including a tactile element in the product packaging will have a positive effect on respondents' overall *attitude towards the product.* **H4.** Including a tactile element that is congruent with the product claim will enhance the *perceived strength of the product claim*. **H5.** Including a tactile element in the product packaging will increase customer's willingness to pay for the product.
Will a tactile element in the product packaging have an effect on consumers' action intetions?	**H6.** Including a tactile element in the product packaging will increase the *purchase intentions*. **H7.** Including a tactile element in the product packaging will increase the *word-of-mouth intentions*.
Will a tactile element in the product packaging have any additional positive effects for retailers?	**H2b.** Including a tactile element in the product packaging will increase *product category interest*. **H8a.** The retailing environment will be perceived as more nice if a tactile element is included in the product packaging. **H8b.** The retailing environment will be perceived as more welcoming if a tactile element is included in the product packaging. **H8c.** The retailing environment will be perceived as more innovative if a tactile element is included in the product packaging. **H8d.** The retailing environment will be perceived as more exciting if a tactile element is included in the product packaging.
Will a consumer contamination cue have a negative effect that will counteract the effects including a tactile element is in the package design?	**H9.** Consumers' evaluations and action intentions will be lower for a package including a tactile element when a contamination cue is received.

Figure 3. Summary of hypotheses

3 Methodology

In this chapter an explanation of the research methods used in this thesis will be provided. The chapter includes the research design and scientific approach, method of the study including pre-studies, the selection of variables and measures and ends with a discussion of the validity and reliability of the study.

3.1 Initial Work

The interest in sensory marketing among practitioners is growing and more and more companies are working with innovative marketing designed to stimulate their consumers' five senses. Today over 30% of the world's largest brands are already working with sensory branding strategies (Johnson, 2007). Accordingly, the last couple of years have seen a growth in interest in sensory marketing from an academic and theoretical viewpoint as well. However, having carefully searched libraries and databases we realized that the theory and research concerning the sense of *touch* is to some extent developed, but very limited. Especially regarding tactile marketing for products that are not tactile-diagnostic, such as FMCG, there is a lack in academic research. In other words, tactile marketing is slowly but steadily starting to be recognized as a prominent marketing tool in the market, but research lags behind. This is an important gap to fill and therefore start-up discussions concerning the choice of topic were held with professor Magnus Söderlund and assistant professor Fredrik Lange, both operating at the marketing and strategy department at Stockholm School of Economics. Further, email conversations were held with Bianca Grohmann, associate professor at Concordia University and Joann Peck, associate professor at Wisconsin School of Business, both of which are focusing on sensory aspects of marketing. Dr. Grohmann and Dr. Peck confirmed the lack of research in tactile marketing for products that are not tactile-diagnostic. This led us to focus on the problematic and interesting link between tactile stimulation in packaging and marketing objectives such as attitudes, interests and purchase and WOM intentions etcetera.

As the area of interest is not developed in academic research, we continued to review adjacent theory by reading books and articles. We also held an interview with Johan Swahn, Ph.D. student at Örebro University focusing on sensory marketing and now working at ICA. After this widespread literature overview and various interviews, the problem area and the purpose of the thesis were decided.

3.2 Scientific Approach and Overall Research Design

A deductive research approach has been adopted in this study as the hypotheses are developed based on existing theory and knowledge, and are tested in an authentic environment (Bryman & Bell, 2007). Furthermore, as we want to examine relationships between touch and customer evaluation and action intention i.e. a cause-and-effect relationship, the research design is of a casual nature (Ghauri & Grønhaug, 2005).

Due to the nature of the research area and the fact that respondents needed to interact tactually with the chosen FMCG, an experimental research design was chosen. An experiment could, according to Bryman and Bell, (2007) be explained as the deliberate manipulation of independent variable(s), which is done in order to determine whether it has an effect or influence on the dependent variable i.e. if a casual relationship can be found. Webster and Sell (2007) state that the greatest benefit of an experimental design is that it offers an opportunity to include the independent variables of interest while excluding irrelevant or confounding factors. This increases the likelihood that the relationships between independent and dependent variables are "accurate". Furthermore, Churchill and Iacobucci (2005, p. 128) emphasize that "an experiment can provide more convincing evidence of causal relationships than exploratory or descriptive design", why this research design was chosen.

Most research on the influence of nonverbal communication, such as touch, tends to be laboratory studies in contrived situations. More recently, there has been a growing concern for the fact that laboratory studies and the results they produce may have little to say about how touch actually influences behavior in natural settings (Hornik, 1992). As of today, almost no research regarding tactile marketing has been done in a real life setting outside the laboratory. Therefore it was decided that the chosen FMCG would be evaluated in an actual grocery store. Thus, the many disturbing factors that are present in a real life retailing environment and that might influence the evaluation and decision-making process of consumers are already in place, meaning that the potential results generated in this study can be assumed to be more generalizable to a real life setting, compared to experiments in a lab-setting.

According to Bryman and Bell (2007) quantitative research is recommended and even necessary when the aim is to generate generalizations through statistical analysis. Since the ambition with this study is to achieve generalizable conclusions, a quantitative approach was chosen (n>30 per group).

The quantitative approach made it possible to answer the hypotheses based on significant results. However, using this method also entailed that the respondents were aware of that they were participating in a study.

3.3 Preparatory Work

The preparatory work needed for the main study was carried out in five steps. (i) Selection of appropriate product categories; one with an informational and one with a transformational purchase motivation, (ii) Selection of a material/stimuli that is perceived to give a positive sensory feedback, (iii) Confirmation of the congruency between the product category, the chosen stimuli and the product claim, and an examination of what contamination cue to include in the study, (iv) Examination of the final manipulated products, (v) Pilot-study to ensure the quality of the questionnaire. All steps had to be done consecutively.

3.3.1 Pre-study 1: Selection of Informational and Transformational Products

The objective of the first pre-study was to select one product category with an informational- and one product category with a transformational purchase motivation. Based on relevant literature, three informational and three transformational product categories were chosen for the first pre-test (Rossiter & Percy, 1987; Rossiter, Percy & Donovan, 1991; Percy, Hansen & Randrup, 2004). Laundry detergent, shower gel and cough drops were chosen to represent the informational product category and chocolate, coffee and cookies were chosen to represent the transformational product category. Using the online survey software, Qualtrics, a questionnaire consisting of six questions was created; three questions measuring the informational purchase motivation and three questions measuring the transformational purchase motivation. The informational motivation were measured using three statements concerning negative motives and the transformational motivation were measured using three statements concerning positive motives, formulated in accordance with Puto and Wells (1984). To increase the reliability of the pre-study the statements regarding both the informational and transformational purchase motivation were chosen to have similar measurements. Further, only structured questions were used, as unstructured questions are not appropriate for online surveys (Malhotra, 2004). The respondents judged the six statements on a Likert scale ranging from 1 to 7 with numerically equal distances and with bipolar labels; “strongly agree” vs. “strongly disagree” (Malhotra, 2004). As recommended by Söderlund (2005) the response “strongly disagree” was placed to the left in the scale and was represented by number (1), and “strongly agree” was placed to the right and was represented by number (7) in the interval scale.

The questionnaire was e-mailed to a convenience sample of 40 people and a total of 32 responses were received. The three statements for each purchase motivation were tested for internal consistency by performing a Cronbach's alpha. This reliability analysis showed an alpha of 0.831 for the informational measurements and 0.811 for the transformational, indicating a high internal consistency. The three statements for each motivation could therefore be indexed together and the means could be calculated (see table 1 below). Based on the results, chocolate was chosen to represent the transformational product category and laundry detergent as the representative from the informational product category.

	Transformational					Informational			
	N	Min	Max	Mean	St. Dev	Min	Max	Mean	St.Dev
Chocolate	32	3	7	5.78	1.39	1	5	1.89	1.85
Coffee	32	1	7	4.66	2.38	1	7	3.07	2.14
Cookies	32	1	6.33	4.10	1.92	1	4.33	1.68	1.08
Cough drops	32	1	3.67	2.34	1.14	1.67	7	4.91	1.67
Shower gel	32	1	4	2.16	1.23	3.67	7	5.99	1.25
Laundry detergent	32	1	2.33	1.26	0.62	4	7	6.53	1.1

Table 1. Results of pre-study 1 - transformational and informational product categories

3.3.2 Pre-study 2: Selection of Stimuli

The purpose of the second pre-study was to select the right material/stimuli to be included in the product packaging. As mentioned, a prerequisite for the material choice is that it provides a neutral/positive sensory feedback that is not incongruent with the commercial message (see section 1.6). Based on this, five different materials were chosen for the pre-test; a piece of vanished wood, a swatch of velvet, a piece of aluminium, a swatch of corduroy fabric, and a piece of smooth leather. All of these materials were assumed to give a positive sensory feedback. For example, natural materials, such as cloth, leather and wood are generally perceived as warm and soft and can be used to make people feel relaxed and in harmony with nature (Hultén, Broweus & van Dijk, 2011).

In consultation with our tutor, it was decided to conduct this pre-study qualitatively. This method was chosen since respondents had to touch the material in order to evaluate it. Therefore, interviews were held with ten respondents as this was seen as an appropriate number for a pre-study.

During the interviews the respondents were asked to touch the different materials, one at a time, and to think out loud explaining the feeling when touching the material. Some spontaneous reactions when touching velvet were: "I like this material; it is soft and cosy to touch", "Oh, this is nice", and

"It looks good and it is pleasant to touch". The respondents were then asked to rank the materials from 1 to 5, where number 1 was explained to be the material that gave the respondent the most positive feeling when touching it and number 5 the least positive feeling. Eight out of the ten respondents ranked velvet as number one, and the other two respondents ranked velvet as the second and third material to give them the most positive sensory feedback. Thus, according to the ranking, velvet was evaluated most positively and consequently velvet was chosen as the tactile element in the study. This pre-study also gave an indication of what adjectives to use as a product claim in order to obtain a perceived congruence between the stimuli and the chosen product categories such as smooth, soft, velvety, pleasant[10] etcetera.

3.3.3 Pre-study 3: Testing the Congruence - Product, Stimuli and Product Claim

The third pre-study was conducted in order to (i) examine if chocolate could be communicated as having a "soft" or "pleasant" taste and if newly washed laundry could be communicated as being "soft" or "pleasant". This was done in order to study the potential congruence between the chosen material and the product categories. (ii) To test what contamination cue to use in the main study.

A questionnaire was created with two questions concerning the product claim of chocolate and two questions concerning the product claim for the laundry detergent. The questions were formulated as following; "How likely is it that [product] would be described as soft?" and "How likely is it that [product] would be described as pleasant?[11]". The questions were measured on a Likert scale ranging from 1-7 where 1 corresponded to "Not likely at all" and 7 to "Very likely" (Söderlund, 2005). Regarding the contamination cue, the respondents were asked to imagine that they are looking to buy a packaged product (such as chocolate or laundry detergent) and to evaluate the three scenarios presented to them; "You are told that you are the 60th person to hold the package of your interest", "You see that another, average looking, person is holding the product of your interest", and "You see that the person holding the product you want has dirty hands". The respondents judged the scenarios using bipolar labels "fresh" vs. "unfresh", "positive vs. negative" and "appealing" vs. "repulsive" on a Likert scale from 1 to 7 were 1 corresponded to the negative labels and 7 to the positive labels (Malhotra & Birks, 2007; Söderlund, 2005).

[10] The interviews were conducted in Swedish and the Swedish words used were "len", "mjuk", "sammetslen" "behaglig" etcetera.
[11] The questionnaire was conducted in Swedish and the Swedish word used for "soft" is "len" and the Swedish word "pleasant" is "mjuk".

The questionnaire was handed out to 33 respondents at Stockholm School of Economics and thus a convenience sample was used. The means for the five questions were calculated as shown in table 2 and 3 below. Furthermore, to secure the reliability of the multiple measurements used for the contamination cues, the internal consistency was tested for by running a Cronbach's alpha, which was above 0.7 for all contamination cues, indicating a high internal consistency (see table 3).

PRODUCT CLAIM		Chocolate				Laundry Detergent			
	N	Min	Max	Mean	St. Dev	Min	Max	Mean	St.Dev
Soft	33	2	7	5.12	1.29	2	7	5.09	1.61
Pleasant	33	1	7	4.76	1.41	3	7	6.27	1.25

Table 2. Results from pre-study 2 - Product claim

CONTAMINATION						
	N	Min	Max	Mean	St. Dev	Cronbach's α
Touched by 60 others	33	1	3.33	2.29	0.98	0.742
Held by another	33	2	5	3.90	1.08	0.882
Dirty hands	33	1	3.33	1.60	0.79	0.847

Table 3. Results from pre-study 3 - Contamination cue

Based on the outcome, it could be concluded that the taste of chocolate and newly washed laundry could be described as being "soft" and "pleasant", indicating that the description of the product claims was not incongruent, but instead perceived as congruent.

The scenario "touched by 60 others" was chosen as the contamination cue, even though "dirty hands" showed a lower mean. With "dirty hands" there was a risk that the ability to randomize the study would be impaired. So as both scenarios showed a low mean, indicating that respondents perceive them both as repulsive, the decision of using "touched by 60 others" was taken.

3.3.4 Pre-study 4: Testing the Final Manipulated Products

The fourth pre-study was carried out to test if the final manipulated products were perceived as "good enough" to be used in the experiment i.e. that the manipulated products did not look unsightly or homemade. The pre-study was conducted qualitatively and eleven respondents were interviewed and asked to evaluate the two products one after the other. While handing over the products a short description including the product claim was presented. The respondents were asked to first explain their spontaneous reactions to the product and then to assess how likely it is that the product would be sold in-store.

The *chocolate* was covered in brown velvet with its original label still intact. The majority of the responses were positive to the package and there was no indication that the product looked homemade or that it would be unlikely to be found in-store. As an indication of the unexpectedness of the material choice, some respondents noted that they had never seen a similar product packaging (covered in velvet) in-store, but that they did not find it unlikely that it could be found in-store. One respondent raised a concern regarding the health aspect of such a packaging i.e. that the material would not keep bacteria's out. Nevertheless, as most of the responses were positive, the decision was taken to use this product in the experiment.

The *laundry detergent* was partly covered in white velvet on the front, and totally covered on the back. The responses to the laundry detergent differed, and some respondents declared that the stimuli felt slightly unfresh, indicating a potentially uncontrolled contamination effect. Furthermore, some respondents stated that they thought it would be unlikely that the product would be sold in-store, as it was too much velvet on the back of the package. Some respondents also spontaneously mentioned that they did not believe that a laundry detergent could make the laundry soft, but that it is rather the job of a softener. As it was important to find a congruency between the stimuli and the product and to exclude any uncontrolled contamination effect, the decision was taken to switch product category from laundry detergent to laundry softener. Thus, an additional pre-study had to be conducted in order to assure that buying a softener entails an informational purchase motivation. As in pre-study 1, an online questionnaire was created consisting of the same six statements; three measuring the informational motivation and three measuring the transformational motivation (see section 3.3.1). The questionnaire was e-mailed to a convenience sample of 33 people who had not previously participated in any pre-study and a total of 32 responses were received. The reliability analysis showed a Cronbach's alpha of 0.734, indicating an internal consistency. The values where indexed together and the means could be calculated (see table 4).

	Transformational					Informational			
	N	Min	Max	Mean	St. Dev	Min	Max	Mean	St.Dev
Laundry Softener	32	1	3.67	1.96	1.39	2.67	7	5.96	1.54

Table 4. Results extra pre-study - Softener

From this pre-study it could be concluded that a softener is generally seen as an informational product. The final manipulated package, a softener with a swatch of pink velvet attached to the front, was examined by ten respondents to assure that it did not look home-made and that it could

potentially be found in-store. The reactions towards the product were positive and it was therefore seen as adequate for the experiment. Most respondents noted and reacted positively towards the tactile element attached to the package, which indicates that they are not used to a softener package design including velvet, which in turn indicates a certain level of novelty or surprise in the design. For a more thorough description of the manipulations, see section 3.4.1

3.3.5 Pilot study: Testing the Questionnaire

To secure the quality of the questionnaire and to rule out any potential misunderstandings or misinterpretations, a pilot study testing the questionnaire was conducted prior to the main experiment. The pilot questionnaire was distributed to ten people in varying age and gender. The respondents got instructions to think out loud to ensure that we got their spontaneous reactions to the questions. Valuable feedback was given and minor errors were corrected for. The errors were mainly caused by ambiguous wordings that arose due to the need of translating the original questions from English to Swedish. As the main experiment was to be conducted in ICA-stores the translation into Swedish felt necessary, mainly to reduce misunderstandings due to language problems. The final version of the questionnaire was then tested on two more people and no further misunderstandings or misinterpretations were found.

3.4 Objects of Study

3.4.1 The Products

As previously mentioned, two different FMCG categories with different buying motives were chosen; one chocolate and one softener. ICA's private label was chosen for both products. ICA is a strong and well-known brand, which potentially could have an effect on the results. Nevertheless, it was in agreement with our mentor decided that it is more advantageous to use the same brand for both products than to use different but unknown brands, thus requiring a brand with a wide product span such as a private label. More precisely the chocolate used was a 100gr Fair-trade 74% chocolate from the ICA Selection line and the laundry softener was a one-litre environmentally friendly softener with lavender scent from the ICA Skona line.

Due to the nature of the experiment it was of outermost importance that the manipulated products did not look repulsive or homemade. Thus, the stimuli had to be included into the packaging in a natural and non-protruding way. Taking these criteria into account, discussions were held with Identity Works, which is a brand development agency focusing on packaging design. However, due

to time limitations, Identity Works could not help us develop the manipulated packaging. Nevertheless, they gave us valuable insights and recommendations on how to design the packages. So, highly motivated by the positive response towards our research area we continued the process ourselves. As stated, an important requirement was a natural integration of the stimuli into the packaging. Cialdini (2007) brings up the concept of perceptual contrast, meaning that it is easier for consumers to distinguish stimuli that differs from the environment, such as deviating colours, shapes, sizes etcetera. Therefore we found it important for the original and the manipulated packages to be as similar as possible, in order to minimize the impact that the altered visual aspects could have on the results. Taking these facts into account the manipulated product packages were developed. The chocolate was covered in brown velvet and no information that could be found on the original packaging was excluded on the manipulated packaging. However, as it was somewhat more difficult to include the stimuli at the softener packaging in a natural and non-protruding way, a smaller patch of pink velvet was attached on the front of the package.

As the pre-studies showed, the chosen material was perceived as providing a positive sensory feedback, thus a hedonic experience that was congruent with the commercial message. Further, the pre-studies indicated that the material and choice of design for the particular products are rarely seen in-store and thus provide a certain level of unexpectedness or novelty, but is still not unlikely to be found in a real retailing environment. Thus, both the manipulated packages were seen as good enough to be used in the main experiment. The dependent variable “novelty” in the main study is used to further check of whether the design and way of including the tactual element can be seen as unexpected. Usually, all manipulation checks are conducted in the pre-study (Perdue & Summers, 1986). However, the indications given in the pre-study, together with the general knowledge of the common designs in-store and academic research stressing that tactually intriguing packaging is rarely seen in package designs (Spence & Gallace, 2011) were seen as adequate to assess that the chosen material and design fulfilled the prerequisites. But to acquire reassurance the manipulation should be checked in the same environment as the main experiment (Perdue & Summers, 1986). Thus the decision was taken to see the dependent variable “novelty” as an additional manipulation check that the tactual experience in the package design was not expected (as will later be shown, the packages with a tactile element were seen as novel). Further, to avoid any uncontrolled contamination due to the velvet becoming soiled after having several respondents tactually interact with the products, five packages of chocolate and four versions of the softener package were constructed (see appendix I).

3.4.2 The Consumer Contamination Effect

As explained in section 2.1.3 consumer contamination could be a potential pitfall when encouraging tactile interaction in a retailing environment. Including this variable meant including four more groups in the research design. The potential contamination effect was examined by telling respondents "you are the 60th person to hold and evaluate this particular chocolate/softener". To make the cue even more apparent for the respondents, the number 60 was written at the first page of the questionnaire. However, as several people were evaluating products and filling out the questionnaire at the same time, numbers ranging from 60 to 75 were used.

3.5 The Main Study

A total of eight groups were needed in order to answer the research questions; two control groups (1,2) (one for each product category) and two experimental groups (3,4) i.e. respondents that were exposed to the manipulated products, along with four groups exposed to the contamination cue, two control groups (5,6) and two experimental groups (7,8). Group 5-8 were exposed to the exact same procedure and stimulus as the previous group, with the addition of the contamination cue.

The experiment was carried out during four days (21-24 March) in two ICA Maxi supermarkets located in or close to Stockholm. More specifically, the experiment was carried out during two days at ICA Maxi Lindhagen and two days at ICA Maxi Nacka. As a payday occurred March 23, it was important that the experiment days were equally divided before and after the 23rd, in case of any changes in consumers' habits or mood. With this set-up any potential differences due to the payday should be evened out.

A demonstration table was borrowed and used in both stores to facilitate for the respondents. Passing-by customers were asked if they wanted to participate in the study and when the response was positive, the product was handed over to her/him. The respondent was given a short explanation of what s/he was suppose to do, followed by a short description of the product including the product claim. To minimize any effects on the results due to other product claims such as the softener being environmentally friendly and the chocolate being Fair-trade, we had to make sure that *all* respondents registered them. Therefore, these adjectives were included in the description. The respondent was then asked to evaluate the product, brand and retailing environment by filling out a questionnaire. This means that all respondent were given the same information before filling out the questionnaire; "*This is a Fairtrade/environmentally friendly*

[product] and the taste/laundry is/gets extra soft and pleasant. Based on how you perceive the packaging you are now asked to evaluate the product and brand". For the experiment groups it was important that the respondents actually felt and touched the soft material, meaning that those respondents were observed and that their responses were ruled out if they did not come in contact with the tactile element. This was done out of precaution to make sure that a possible result was due to tactile aspects, even though previous studies reveal that people via visual inputs can retain haptic information from memory (Klatzky, Lederman & Matula, 1993). Worth noting is that any interaction with the tactile element was spontaneous, as the tactility in the product design was never commented on to respondents.

3.5.1 Quantitative Data Sampling

Since the data was supposed to be analysed using the statistical computer program PASW, the sample size had to be large enough to correlate with the central limit theorem in order to allow for a normal distribution curve (Rice, 1995). To obtain generalizable results the statistical rule of thumb states that it is necessary to collect a sample size of a minimum 30 respondents in each group. A total of 385 responses were collected, ranging from 42 to 54 in each group (see appendix II). A total of 39 responses were ruled out of the sample. The reason for the high number of excluded responses is that there were many requirements that had to be fulfilled to be included in the study. First of all, no one under the age of 21[12] was included in the sample, since young respondents still living at home can be assumed to not take part in the decision to buy laundry softener or dark chocolate, thus are not appropriate for this study. Further, some respondents had difficulties in reading and fulfilling the questionnaire themselves and were assisted in completing the questionnaire. The decision was taken to exclude these responses, as someone who did not fill in the questionnaire her/himself might not feel anonymous and is thus not as comfortable in responding truthfully. Finally, incomplete questionnaires or responses from respondents who did not tactually interact with the product were excluded from the sample.

A systematic random sample was used and every third person was asked to participate in the study. In case a person turned down the request, the next person was asked. As the research design included eight groups, a decision was taken to change group every 45 minutes, nevertheless, the orders of the groups was randomized between the days. The gender distribution in the sample is 42.6% men and 57.4% women and the ages are ranging from 21-85 years with a mean of 42.36

[12] The average age of moving out of home in Sweden 2008 (SCB, 2008).

years, indicating a relatively heterogeneous sample. As a systematic random sample was used, age and gender distributions were similar between the groups.

As an incentive to participate in the study and to answer the questionnaire properly, the respondents were informed that 5 SEK per response would be donated to a charity organization of their choice. As a further sign of gratitude, candy was given to the participants.

3.6 Questionnaire

The respondents were asked to answer a total of 31 questions, divided into evaluation measurements, action intention measurements, control questions and demographic questions (see appendix III for an example of a complete questionnaire).

According to Kaltcheva and Weitz (2006) most people see the time in a grocery store as a must and would therefore like to spend as short time as possible in-store without any major distractions. So with the aim to increase the number of respondents while minimizing the respondent fatigue and the risk of response bias, much effort was put on keeping the questionnaire short and understandable (Söderlund, 2005). Further, as the experiment was conducted in-store and as the target group of the study speaks Swedish, the decision was taken to have the questionnaire in Swedish. Specialist terminology and ambiguous words were avoided with the aim to minimize misunderstandings.

As recommended by Malhotra and Birks (2007) structured questions including dichotomous and scale questions were mainly used in the questionnaire. These types of questions specify a set of response alternatives and formats that facilitate the analysis of the data (Malhotra & Birks, 2007). In order to provide a consistent and clear direction, the main part of the questionnaire evaluated the responses on a Likert scale ranging from 1 to 7 with numerically equal distances (Esaiasson, Gilljam, Oscarsson & Wängnerud, 2002; Malhotra, 2004). Thus, the seven-point scale was bounded at each end by one of two bipolar adjectives, such as “positive” vs. “negative”. As recommended by Söderlund (2005) the low value in the interval scale (1) were placed to the left and represented a low degree e.g. “negative” or “disagree”, and the high value (7) where placed to the right and represented a high degree e.g. “positive” or “agree”. The majority of variables were measured using multi-item scales in order to achieve a high internal consistency and thereby increase the reliability (Söderlund, 2005). For these measurements the suitable reliability test was performed to verify internal consistency. For the two-response alternatives, dichotomous questions were used. Finally,

two open-ended questions were used to be able to measure respondents' willingness to pay and to keep track of the age span.

To investigate whether a tactile element on a packaging has an effect on consumers' evaluation and action intention, the questionnaire was designed to measure: (i) perceived novelty, brand and product category interest (ii) brand and product attitude (iii) product claim strength, (iv) willingness to pay, (v) retailing environment evaluation and (vi) purchase and WOM intentions.

Perceived Novelty. The perceived novelty was measured by the question: "How do you perceive this packaging in comparison to other chocolate packages?" Respondents answered via three bipolar responses; "novel" vs. "foreseeable", "unexpected" vs. "expected" and "original" vs. "ordinary" (Stone, Besser & Lewis, 2000). An index of the novelty battery was created with a Cronbach's alpha of 0.951.

Brand and Product Category Interest. The brand interest measurement was adapted from Machleit, Allen and Madden (1993) and three propositions were used: "I am interested in Brand X", "I would like to know more about Brand X", "I am intrigued by Brand X", with bipolar labels "strongly agree" vs. "strongly disagree". An index was created with a Cronbach's alpha of 0.946. The same measures were used for product category interest and a Cronbach's alpha was calculated showing an internal consistency of 0.928.

Brand and Product Attitude. To measure product and brand attitude respondents were asked; "How do you perceive the brand *ICA Selection*/the product?". A well-established multi-item scale with three bipolar responses was used; "like" vs. "dislike", "good" vs. "bad" and "positive impression" vs. "negative impression" (Malhotra & Birks, 2007; Söderlund, 2005). Indexes were created with a Cronbach's alpha of 0.941 for the product attitude and 0.959 for brand attitude.

Product Claim Strength. The question measuring the brand strength was formulated together with our mentor. The question for the softener was formulated as "How do you think your laundry will feel after you have used this laundry softener?" and for the chocolate "What do you think the chocolate tastes like?". The respondents evaluated this through bipolar labels – "strongly agree" vs. "strongly disagree" – for the two adjectives "soft" and "pleasant". Pearson correlation revealed a value of was calculated to 0.911.

Willingness to Pay. To be able to study respondents' willingness to pay a question was formulated together with our mentor asking; "How much would you be willing to pay for *this* [product]?". The respondents had to state what they were willing to pay for the product without any price reference.

Purchase Intention. Two standard questions were used to measure the purchase intention; "I could see myself buying *this* [product]" and "It is likely that I will buy *this* [product] in the future" (Söderlund & Öhman, 2003) with bipolar labels "strongly agree" vs. "strongly disagree". The purchase intention index showed a Pearson coefficient of 0.859.

Word-of-Mouth Intention. WOM intention was measured by using two questions; "I would like to talk to others about *this* [product]", and "It is likely that I will recommend *this* [product] to others" (Reicheld, 2003) with bipolar labels "strongly agree" vs. "strongly disagree". By calculating a Pearson correlation of 0.817 the internal consistency was proven.

Retailing Environment. To measure consumers emotional responses and feelings towards the ICA-store a question was formulated together with our mentor asking; "To what extent do you agree with the following descriptions of *this ICA-store*?". The feelings towards the retailing environment were measured using four adjectives; "nice", "welcoming", "innovative", and "exciting" with bipolar labels "strongly agree" vs. "strongly disagree".

3.7 Analytical Tools

As the experiment was conducted in-store, questionnaires were manually handed out to the respondents and had to be plotted in to a Microsoft Excel document. While plotting the responses, the data was screened for errors and response sets. The data was then imported to and analysed through the statistical computer program PASW.

Cronbach's alpha was used to measure the internal consistency for measurements with three items and the Pearson coefficient for measurements with two items. The internal consistency of these multi-item measures was accepted if the Cronbach's alpha exceeded 0.7 and if the Pearson's coefficient exceeded 0.5 (Bearden, Netemeyer & Haws 2011). As all measures exceeded the demand of internal consistency, an index could be calculated for each variable. By indexing these

items, stronger support for the results could be obtained, as the questions measuring the same variable did not have to be individually analysed.

After indexing the variables with multi-item scales, an understanding of the differences between the groups had to be obtained. After discussions with our mentor it was decided that the main effects should be analysed by comparing the means through independent samples t-tests. This was done between the control group and the experiment group for each product. The hypotheses were only accepted if the difference is significant for both products on a 1% significance level. As for the contamination variable, independent sample t-test was calculated to see whether there is a significant difference between the experiment group and the experiment group exposed to a contamination cue for each product. A 10% significance level was accepted for the contamination variable. This variable is a potential pitfall when working with tactile marketing. Thus, the authors found it important to be particularly precautious regarding the contamination effect, which is why the higher significance level was decided so that any negative tendency among the respondents would be noticed.

3.8 Data Quality

Bryman and Bell (2007) highlight the importance of proper data quality in research projects and state that validity and reliability are the two most important variables to consider. Reliability refers "to the extent to which a rating scale produces consistent or stable results" (Wilson, 2006, p.418), which means that a high reliability indicates that the potential measurement failure is very small. Validity refers to the issue of "whether or not an indicator that is devised to gauge a concept really measures that concept" (Bryman & Bell, 2007, p. 165). Furthermore, Bryman and Bell (2007) argue that validity and reliability are related as validity presumes reliability. This implies that the measures need to be reliable in order to be valid, which has been taken into account in this study.

3.8.1 Reliability

Reliability can be discussed in terms of primary and secondary sources. The secondary sources used in this thesis are to a large extent from peer-reviewed and well-cited journal articles and books. Nevertheless, as it is a rather unexplored research area, information from other sources such as interviews, articles from less known authors etcetera have been exploited. However, in total the reliability of this part is seen as rather high.

As reliability is of particular importance in connection to quantitative research (Bryman & Bell, 2007), the primary sources were carefully evaluated with regards to internal reliability and stability. *Internal reliability* applies to multiple-indicator measures and refers to whether or not respondents' answers correlate properly across various questions (Bryman & Bell, 2007). To secure this, an extensive review in books and articles was performed with the intention to find previously tested questions that investigate the variables included in our questionnaire. When several options were available the ones most appropriate for the purpose of this thesis were chosen. Thus, as recommended by Söderlund (2005) internal reliability was secured by using well-established and tested multi-item measurements. To further test and control the internal reliability, Cronbach's alpha and Pearson coefficient were calculated (Malhotra, 2004). In our study Cronbach's alpha ranged from 0.928 to 0.959, and Pearson coefficient 0.817 to 0.911 in the main study indicating strong internal consistency and thus high reliability.

Stability refers to "whether or not a measure is stable over time" (Bryman & Bell, 2007, p. 163) and was in this thesis proven by testing the questionnaire in a pilot-study. With the pilot-study it was tested whether respondents understood the questions used in the questionnaire in the way they were intended to, thereby increasing the probability of getting the same results if the study is re-conducted. However, to be truly certain about the stability, the only accurate measurement is to redo the study in the future to secure that the results is constant over time, which is outside the scope of this thesis.

3.8.2 Validity

According to Malhotra and Birks (2007) there are two main goals when conducting an experiment; to create an experimental design that has both high internal and external validity.

Internal validity refers to "whether the manipulations of the independent variables actually cause the effects on the dependent variables" (Malhotra & Birks, 2007 p.307). In this study, internal validity concerns and measures the degree to which the results actually are caused by the tactile element on the packages and not by other external factors. The internal validity of the thesis is supported by the complete pre-study, securing that the element gives a positive sensory feedback and is congruent with the products and their product claims. Furthermore, the contamination cue was pre-tested to make sure that people perceived it as unfresh to be the 60th person to touch the package. According to Bryman and Bell (2007) the use of multi-item measurements in the

questionnaire also increases the internal validity. To further ensure the internal validity the experiment was conducted in a real life setting in two ICA Maxi stores i.e. stores that were as similar as possible with each other, with similar range of brands, prices etcetera. A systematic randomization was used and respondents were also given the exact same information about the study and the products and told that they should only take the product they just held into account when filling out the questionnaire. Lastly, Bryman and Bell (2007) state that true experiments tend to be very strong in terms of internal validity, further indicating a good internal validity of the study. However, we want the reader to understand that it is impossible to control for all external factors when carrying out an experiment in an authentic environment.

External validity "refers to whether the cause-and-effect relationship found in the experiment can be generalized beyond the experimental situation" (Malhotra & Birks, 2007, p.308). Since this study was carried out in-store i.e. in a real environment, the external validity should be higher than if doing a laboratory experiment in a temporary set-up room. A fairly wide sample was acquired with respondents ranging from 21-85 years and with a gender distribution of 42.6% men and 57.4% women. Nevertheless, the sample size as well as the geographical spread of the respondents could be extended to ensure an even higher external validity.

4 Results and Analysis

In this chapter, the results and analysis of the independent t-testing of the hypotheses will be presented. First, the results relating to the consumer evaluations will be presented, followed by the results regarding the consumer action intention. Then the results concerning the evaluation of the retailing environment will be discussed and finally, the results relating to the notion of consumer contamination will be examined.

4.1 The Hierarchy of Effects Model

The results and analysis are presented in accordance with the hierarchy of effects model, which has been discussed in the theoretical chapter (see section 2.2).

4.1.1 Develop Interest – Perceived Novelty, Brand and Product Category Interest

4.1.1.1 Perceived Novelty

Hypothesis 1 states that a package offering a tactile experience is perceived as more novel than a package without any tactile element included in the design. For chocolate, the mean difference between the experiment group (mean = 5.95) and the control group (mean = 3.53) reached a level of 2.42, and for the softener, the difference between the control group (mean = 2.55) and the experiment group (mean = 5.33) was as high as 2.78. The high differences in the mean values for both products give a result that is significant on a 1% significance level. The analysis thus reveals that a packaging including a tactile element is perceived as more novel than a packaging without a tactile element in the design, regardless of the motivation behind the purchase.

H1. Including a tactile element in the product packaging will increase the perceived novelty.

SUPPORTED

4.1.1.2 Brand and Product Category Interest

Hypotheses 2a and 2b relates to whether the interest for the brand and the product category will be higher for those exposed to a packaging offering a tactile element.

The brand interest regarding the chocolate is higher for the experiment group (mean = 4.91) than for the control group (mean = 2.82) with a mean difference of 2.09. The same holds true for the respondents exposed to the softener, where the mean difference between the experiment group (mean = 4.72) and the control group (mean = 2.74) reaches a level of 1.98. The results show that a product packaging including a tactile element increases the brand interest on a 1% significance level.

H2a. Including a tactile element in the product packaging will increase brand interest.

SUPPORTED

The product category interest is hypothesized to be higher for those exposed to a packaging including a tactile element than for respondents faced with a packaging without a tactile element. For the respondents evaluating the chocolate package, the experiment group experienced stronger product category interest (mean = 5.47) than the control group (mean = 3.57). This entails a mean difference of 1.90. The same is true for the respondents evaluating the softener, where the difference between the product category interest of the experiment group (mean = 4.11) and the control group (mean = 2.44) reached a level of 1.67. The high differences in means entails that the hypothesis is supported on a 1% significance level. Thus, the product category interest of those exposed to a package with a tactile element is significantly higher than that of those experiencing a packaging without a tactile element, regardless of purchase motivation.

H2b. Including a tactile element in the product packaging will increase product category interest.

SUPPORTED

Metrics	CC	CX			SC	SX		
	Mean	Mean	Diff.	Sig.	Mean	Mean	Diff.	Sig.
Perceived novelty	3.53	5.95	2.42	0.000	2.55	5.33	2.78	0.000
Brand interest	2.82	4.91	2.09	0.000	2.74	4.72	1.98	0.000
Product category interest	3.57	5.47	1.90	0.000	2.44	4.11	1.67	0.000

Table 5. Results - Develop interest

Explanations:
CC = Chocolate control
CX = Chocolate experiment
SC = Softener control
SX = Softener experiment

4.1.2 Develop Confidence – Product and Brand Attitude

Hypotheses 3a and 3b regard the consumer confidence, in this thesis referred to as consumer brand- and product attitude.

Hypothesis 3a states that consumers will have a more positive attitude towards the brand behind the product if the package includes a tactile element. The results reveals that the attitude towards the brand is more positive for respondents exposed to the package including a tactile element than for respondents exposed to the original packaging without a tactile element, regardless of purchase motivation. The mean difference between the experiment group for chocolate (mean = 5.71) and the control group for chocolate (mean = 3.63) reaches a value of 2.08. For the softener, the difference in the means between the experiment group (mean = 5.84) and the control group (mean = 3.73) reaches a level of 2.11. Thus, hypothesis 3a is supported at a 1% significance level, indicating that a tactile element in the product packaging has a positive effect on the consumer brand attitude.

H3a. Including a tactile element in the product packaging will have a positive effect on respondents' overall attitude towards the brand behind the product.

SUPPORTED

Hypothesis 3b concerns the product attitude, and states that the product attitude will be more positive if a tactile element is embedded in the package design. This is confirmed by the analysis revealing that consumers have a more positive attitude towards the product when a tactile element is offered in the product packaging, regardless of purchase motivation. The analysis shows a great difference between the mean value of the experiment group for chocolate (mean = 6.01) and the control group for chocolate (mean = 3.70) with a mean difference of 2.31. There is also a great difference between the experiment group for softener (mean = 5.70) and the control group for softener (mean = 3.51) reaching a mean difference of 2.19. This means that hypothesis 3b is supported on 1% significance level.

H3b. Including a tactile element in the product packaging will have a positive effect on respondents' overall attitude towards the product.

SUPPORTED

Metrics	CC	CX			SC	SX		
	Mean	Mean	Diff.	Sig.	Mean	Mean	Diff.	Sig.
Brand attitude	3.63	5.71	2.08	0.000	3.73	5.84	2.11	0.000
Product attitude	3.70	6.01	2.31	0.000	3.51	5.70	2.19	0.000

Table 6. Results - Develop confidence

Explanations:
CC = Chocolate control
CX = Chocolate experiment
SC = Softener control
SX = Softener experiment

4.1.3 Develop Conviction – Product Claim Strength and Willingness to Pay

4.1.3.1 Product Claim Strength

Hypothesis 4 concerns the perceived product claim strength, i.e. perceived strength of the persuasive message conveyed to the consumer. For the chocolate, where the product claim was that the chocolate tasted extra soft and pleasant, the experiment group perceived the product claim as stronger (mean = 5.19) than the control group (mean = 3.54) This gives a mean difference of 1.65 between the control group and the experiment group. The softener had the claim that the product would make the laundry extra soft and pleasant. Also for these respondents there was a high difference in means between those exposed to the packaging including a tactile element (mean = 5.76) and those exposed the original packaging (mean = 4.08), reaching a level of 1.68. As both groups experienced a difference significant at a 1% significance level, the hypothesis is supported at a 1% significance level.

H4. Including a tactile element that is congruent with the product claim will enhance the perceived strength of the product claim.

SUPPORTED

4.1.3.2 Consumer Willingness to Pay

Hypothesis 5 assumes that the willingness to pay will be higher if a tactile element is included in the product packaging. The analysis reveals that people are willing to pay a significantly higher price for products with a packaging offering a tactile experience. For a package of chocolate with a tactile element, consumers are willing to pay a price of 29.28 SEK, compared to the 19.40 SEK that one is willing to pay for the same chocolate but without a tactile element. This means that people are willing to pay 9.88 SEK more for having a tactile element included in the product packaging. As

for the softener, consumers are willing to pay 29.73 SEK for a product with a package where a tactile element is included, whereas consumers evaluating a packaging without a tactile element are willing to pay a price of 23.48 SEK. This entails a difference of 6.25 SEK. As the willingness to pay is significantly higher for the consumers evaluating the packaging including a tactile element, H5 is supported on a 1% significance level.

H5. Including a tactile element in the product packaging will increase the willingness to pay for the product.

SUPPORTED

Metrics	CC	CX			SC	SX		
	Mean	Mean	Diff.	Sig.	Mean	Mean	Diff.	Sig.
Product claim strength	3.54	5.19	1.65	0.000	4.08	5.76	1.68	0.000
Willingness to pay	19.40	29.28	9.88	0.000	23.48	29.73	6.25	0.000

Table 7. Results - Produce conviction

Explanations:
CC = Chocolate control **SC** = Softener control
CX = Chocolate experiment **SX** = Softener experiment

4.1.4 Induce Action – Purchase Intention and Word-of-Mouth Intention

4.1.4.1 Purchase Intention

Hypothesis 6 concerns consumers' intention to purchase the product that they evaluate. The hypothesis suggests that consumers will have a higher intention to purchase the product if the package includes a tactile element.

For the chocolate package, the purchase intention was higher for the experiment group (mean = 5.44) compared to the control group (mean = 3.53). The groups experienced a mean difference of 1.91, giving a significant result on a 1% significance level. The softener generated similar results as the experiment group showed higher purchase intention (mean = 5.40) compared to the control group (mean = 3.50), providing a mean difference of 1.90, which is a significant difference on a 1% significance level. Thus the hypothesis is supported on a 1% significance level.

H6. Including a tactile element in the product packaging will increase the purchase intention.

SUPPORTED

4.1.4.2 Word-of-Mouth Intention

Hypothesis 7 suggests that consumers have a higher intention to talk about the product if the packaging offers a tactile experience. The analysis reveals that people in fact are more willing to talk about a chocolate packaging including a tactile element (mean = 4.38) compared to the consumers in the control group (mean = 2.34). There is thus a mean difference of 2.04 between the two groups. Also for the consumers evaluating the softener, consumers had a higher intention to talk about the package including a tactile element (mean = 4.32) compared to the group evaluating the package lacking a tactile element (mean = 2.22). This entails a mean difference of 2.10.

As there is a significant result for both products on a 1 % significance level, the hypothesis is supported on a 1% significance level.

H7. Including a tactile element in the product packaging will increase the word-of-mouth intention.

SUPPORTED

Metrics	CC	CX			SC	SX		
	Mean	Mean	Diff.	Sig.	Mean	Mean	Diff.	Sig.
Purchase intention	3.53	5.44	1.91	0.000	3.50	5.40	1.90	0.000
WOM intention	2.34	4.38	2.04	0.000	2.22	4.32	2.10	0.000

Table 8. Results - Induce action

Explanations:
CC = Chocolate control
CX = Chocolate experiment
SC = Softener control
SX = Softener experiment

4.2 Consumers' Evaluation of the Retailing Environment

Hypotheses 8a – 8d suggest that the respondents will evaluate the retailing environment in accordance with the tactile element in the product packaging. The analysis shows that this holds true for the chocolate as the respondents evaluate the product including a tactile element as more nice (mean = 6.05) and welcoming (mean = 5.77) compared to the control group (nice mean = 5.00 and welcoming = 4.67). This gives a mean difference of 1.05 for nice and 1.10 for welcoming.

The results for softener show similar patterns, as the respondents exposed to the softener with a tactile element in the package design, rated the retailing environment as more nice (mean = 6.32) and welcoming (mean = 6.17) compared to the control group (nice mean = 5.31 and welcoming = 4.89). This entails a mean difference of 1.01 for nice and 1.31 for welcoming between the control

and experiment group for softener. As the evaluations were significantly higher for the experiment groups compared to the control groups the hypotheses are supported on a 1% significance level.

H8a. The retailing environment will be perceived as more nice if a tactile element is included in the product packaging.

SUPPORTED

H8b. The retailing environment will be perceived as more welcoming if including a tactile element in the product packaging.

SUPPORTED

The respondent evaluating the chocolate package also rated the retailing environment as more innovative (mean = 5.09) and exciting (mean = 5.14) when exposed to a chocolate package including a tactile element, compared to the group evaluating the chocolate packaging without a tactile element (innovative mean = 4.15, exciting mean = 3.75). This gives a mean difference of 0.94 for innovative and 1.39 for exciting.

The groups evaluating the softener show similar results. The respondents in the experiment group evaluated the environment as more innovative (mean = 5.51) and exciting (mean = 5.53) compared to the group exposed to a softener without a tactile element (innovative mean = 3.63, exciting mean = 3.35), with a mean difference of 1.88 for innovative and 2.18 for exciting. Hypotheses 8c and 8d are therefore supported on a 1% significance level.

H8c. The retailing environment will be perceived as more innovative if a tactile element is included in the product packaging.

SUPPORTED

H8d. The retailing environment will be perceived as more exciting if a tactile element is included in the product packaging.

SUPPORTED

Metrics	CC	CX			SC	SX		
	Mean	Mean	Diff.	Sig.	Mean	Mean	Diff.	Sig.
Retailing environment: Nice	5.00	6.05	1.05	0.000	5.31	6.32	1.01	0.000
Retailing environment: Welcoming	4.67	5.77	1.10	0.000	4.89	6.17	1.28	0.000
Retailing environment: Innovative	4.15	5.09	0.94	0.000	3.63	5.51	1.88	0.000
Retailing environment: Exciting	3.75	5.14	1.39	0.000	3.35	5.53	2.18	0.000

Table 9. Results - Evaluation of retailing environment

Explanations:
CC = Chocolate control **SC** = Softener control
CX = Chocolate experiment **SX** = Softener experiment

4.3 The Effect of Consumer Contamination

Hypothesis 9 states that the consumers' evaluations and action intention measures will be lower for a package including a tactile element when a contamination cue is received. Thus, the analysis should compare the means of the experiment groups that did not receive a contamination cue and the experiment groups that did receive a cue that others had previously been in contact with the product. The hypothesis will, as previously explained be accepted on a 10% significant level to increase the cautiousness with regards to the risk of negative consumer contamination. The groups not receiving a cue that others have previously touched the product will be called *experiment group* whereas the groups receiving a cue that others have previously been in physical contact with the product will be referred to as the *contamination experiment group.* The results will be summarized below, but for exact numbers, see table 10.

Comparing the means of the experiment group and the contamination experiment group evaluating the chocolate package, it can be found that the contamination cue has a negative effect throughout the hierarchy of effects. In fact, the only results that could *not* be accepted on a 10% significance level were perceived novelty and WOM intention. For brand interest there was a mean difference of 0.42 between the experiment group (mean = 4.91) and the contamination experiment group (mean = 4.49), and for product category interest the difference reached a level of 0.38 between the experiment group (mean = 5.47) and the contamination experiment group (mean = 5.09). Regarding brand attitude, there was a mean difference of 0.54 between the experiment group (mean = 5.71) and the contamination experiment group (mean = 5.17), and for product attitude there was a difference of 0.32 between the experiment group (mean = 6.01) and the contamination experiment group (mean = 5.69). The difference in product claim strength reached a level of 0.50 (experiment group mean = 5.19, contamination experiment group = 4.69) and the willingness to pay entailed a

difference of 3.54 SEK (experiment group mean = 29.28, contamination experiment group mean = 25.74). Finally the purchase intention differed with 0.63 between the experiment group (mean = 5.44) and the contamination experiment group (mean = 4.81). This means that apart from perceived novelty and the WOM intention, all metrics within the hierarchy of effects model were significantly lower when the respondents were exposed to a contamination cue.

Regarding the softener package, there was no significant difference on a 10% level between the experiment group and the contamination experiment group. Since the analysis shows that the chocolate is rated significantly lower in all steps of the hierarchy of effects, whereas the softener does not yield significant outcomes as a result of the contamination cue the hypothesis that consumers evaluations and action intentions would be negatively affected as a result of the contamination effect, is partly supported.

H9. The consumer evaluations and effectiveness measures will be lower for a package including a tactile element when a contamination cue is received.

PARTLY SUPPORTED

Metrics	CX	CXC			SX	SXC		
	Mean	Mean	Diff.	Sig.	Mean	Mean	Diff.	Sig.
Perceived novelty	5.95	5.79	0.16	0.216	5.33	4.97	0.36	0.104
Brand interest	4.91	4.49	0.42	0.080	4.72	4.58	0.14	0.319
Product category interest	5.47	5.09	0.38	0.074	4.11	4.22	-0.11	0.365
Brand attitude	5.71	5.17	0.54	0.020	5.84	5.61	0.23	0.157
Product attitude	6.01	5.69	0.32	0.066	5.70	5.42	0.28	0.105
Product claim strength	5.19	4.69	0.50	0.043	5.76	5.65	0.11	0.296
Willingness to pay	29.28	25.74	3.54	0.044	29.73	31.56	-1.83	0.163
Purchase intention	5.44	4.81	0.63	0.042	5.40	5.41	-0.01	0.494
WOM intention	4.38	4.04	0.34	0.135	4.32	4.16	0.16	0.299

Table 10. Results - Consumer contamination

Explanations:
CX = Chocolate experiment
CXC = Chocolate experiment contamination
SX = Softener experiment
SXC = Softener experiment contamination

4.4 Summary of Hypotheses

Research Question	Hypothesis
Should tactile marketing be utilized for packaged goods whose material properties are not diagnostic for the product performance?	
Will a tactile element in the product packaging have an effect on consumers' brand and product evaluations?	**H1.** Including a tactile element in the product packaging will increase the *perceived novelty*. SUPPORTED **H2a**. Including a tactile element in the product packaging will increase *brand interest*. SUPPORTED **H3a**. Including a tactile element in the product packaging will have a positive effect on respondents' overall *attitude towards the brand* behind the product. SUPPORTED **H3b.** Including a tactile element in the product packaging will have a positive effect on respondents' overall *attitude towards the product.* SUPPORTED **H4.** Including a tactile element that is congruent with the product claim will enhance the *perceived strength of the product claim*. SUPPORTED **H5.** Including a tactile element in the product packaging will increase customer's willingness to pay for the product. SUPPORTED
Will a tactile element in the product packaging have an effect on consumers' action intentions?	**H6.** Including a tactile element in the product packaging will increase the *purchase intentions*. SUPPORTED **H7.** Including a tactile element in the product packaging will increase the *word-of-mouth intentions.* SUPPORTED
Will a tactile element in the product packaging have any additional positive effects for retailers?	**H2b.** Including a tactile element in the product packaging will increase *product category interest.* SUPPORTED **H8a.** The retailing environment will be perceived as more nice if a tactile element is included in the product packaging. SUPPORTED **H8b.** The retailing environment will be perceived as more welcoming if a tactile element is included in the product packaging. SUPPORTED **H8c.** The retailing environment will be perceived as more innovative if a tactile element is included in the product packaging. SUPPORTED **H8d.** The retailing environment will be perceived as more exciting if a tactile element is included in the product packaging. SUPPORTED
Will a consumer contamination cue have a negative effect that will counteract the effects of including a tactile element in the package design?	**H9.** Consumers' evaluations and action intentions will be lower for a package including a tactile element when a contamination cue is received. PARTLY SUPPORTED

Figure 4. Summary of results

5 Discussion

This chapter will start by discussing the results obtained in this study. This is followed by the conclusion in which the research questions that have guided this thesis will be answered. Then potential criticism towards the study and managerial implications will be presented. Finally, offering opportunities for future research will conclude the chapter and the thesis.

Previous studies have raised the question of whether the positive aspects of touch holds true even for non-tactile diagnostic products. Consequently, as an extension of existing academic research on tactile marketing for tactile diagnostic products, this study has explored the opportunity to use tactility as a marketing tool for packaged goods. The study is thereby among the first to investigate tactile marketing for non-tactile diagnostic products.

5.1 Tactile Marketing - Positive All Through the Hierarchy

The packages with a tactile element induced positive results compared to the packages without a tactile element throughout the whole hierarchy of effects model. This means that by adding a tactile element in the product packaging, thereby encouraging tactile interaction with a hedonic touch motivation, consumers developed a higher level of interest and a higher level of confidence, produced a higher level of conviction and finally, induced higher intention to act.

5.1.1 Tactile Marketing Developes Interest

The strongest difference in means for all metrics can be found in the perceived novelty. The focus on tactile marketing in an FMCG context is still in an early stage and an intruiging feel of the package is still rarely seen in-store (Spence & Gallace, 2011). The perceived novelty of the tactually intruiging packages was not only revealed in the numbers, but also in the spontaneous comment expressed in-store. For instance, a woman age 56 expressed the following regarding the chocolate: “Is this product available in store yet? I would really like to try it, it is so different and exciting”. Another woman aged 42 said regarding the chocolate package: “It is so very innovative and nice, I love it!”. The importance of a novel and distinctive product packaging is frequently mentioned in academic literature as a differentiating and novel design can make competitors seem obsolete and make future versions appear to be shallow copies (Midgley, 1977, cited in Bloch, 1995).

The brand interest was significantly higher when the package offered a tactile experience. With its original packaging, evaluations were low (under 3 on the 7-point Likert scale) for both products, but with the tactile element included in the design the brand interest increased to a mean value closer to 5. Prior research has shown that novelty can increase brand interest (Dahlén, Rosengren & Törn, 2008). Thus, the significant increase in brand interest is expected, considering the strong outcome of the perceived novelty. Further, researchers have encouraged marketers to appeal to consumers' preferred sense (Skinner & Stephens, 2003, cited in Mainwaring & Skinner 2009). This means that by including a tactile element, thereby satisfying the people who prefer tactile interaction, a net increase in interest should occur in accordance with the results. A strong brand interest is vital and could benefit brand owners and retailers as it encourages consumers to seek additional information about the brand, which could lead to the final decision of purchase and trial.

Softener as a product category was seen as rather uninteresting, or even boring, with a mean value of 2.44. Including a tactile element however, raised the product category interest to 4.11. On a similar note, the product category interest for chocolate was raised from 3.57 to 5.47 on the 7-point Likert scale. Thus the results indicate that if a brand uses tactile marketing it does not only increase the interest for the specific brand, but for the whole product category. The results go in line with Nordfält's (2007) reasoning that individual products can affect the experience of the whole assortment and the study of Chevalier (1975) revealing that promotional activities for specific products can influence the sales of the whole category. The increased product category interest is highly beneficial for retailers and brand owners alike. For retailers, who sell different brands within one product category, it is positive that one specific product can increase the interest of the whole product category, ultimately ecouraging cross-brand sales. For the brands owners, the fact that the brand category interest increases is important in their relationship with the retailers. It is difficult to get new merchendise into the retailing store as the space is limited and the retailers are highly selective in what is accepted in the shelves. By being able to proove that their product can increase the interest of the *whole* category, the chances for brand owners to get their products into the store shelf should increase.

5.1.2 Tactile Marketing Developes Confidence

In accordance with expectations, the analysis revealed that tactile marketing had a positive effect on brand attitude for both ICA Skona and ICA Selection. This can be explained by the fact that a tactile element that provides a positive sensory feedback induces a positive feeling, which

according to advertising research has shown to have a positive affect on the brand attitude (Holbrook & Batra, 1987). Another reason for the strong results might be that consumers considered the chosen element to enhance the associations towards the brand. Sonneveld and Schifferstein (2008, in Schifferstein & Hekkert, 2008) argue that people transfer the perceived tactual qualities to a brand's personality. This means that a warm object is perceived as having a warm personality etcetera. In this study the element was deliberately chosen to provide a positive sensory feedback, thus people might prescribe these positive aspects to the brand personality. When a consumer values these personality traits, the attitude towards the brand ought to increase.

The results further revealed that a tactile element in the product packaging had a positive effect on product attitude. This goes in line with previous research on tactile marketing revealing that a tactile element, which gives an affective response, has a positive effect on the attitude towards the stimuli (Peck & Wiggins, 2006). Therefore, the positive effect on product attitude was expected.

5.1.3 Tactile Marketing Produces Conviction

Consumers found the persuasive message of the products i.e. the product claims, to be more convincing when the packaging offered a tactile experience that was congruent with the product claim. This goes in line with previous studies and the reasoning of Spence and Gallace (2011) suggesting that the hedonic attributes experienced via one sence can bias the multisensory experience into alignment. The tendency to purchase the product depends on the level to which consumers expect the product to satisfy their needs when being consumed (Kupiec & Revell, 2001). Therefore, the results further strengthen the critical role of the package at the point of purchase. It shows that the exterior appearance of the product is crucial as a way of communicating information to the consumer, further strengthening the role of the package as the fifth P (Keller, Apéria & Georgson, 2008). This study has in accordance with the reasoning above revealed that by altering the feel of the package in accordance with the product claim, the conviction is stronger.

Another measure used as a proxy under the conviction stage in the hierarchy of effects model is consumers willingness to pay. The consumers showed a significantly higher willingness to pay for products whose package included a tactile element. The consumers were willing to pay 29.28 SEK for the chocolate in a tactually intruiging package, a price increase of 51%. For the softener with a tactile element, people were willing to pay a price of 29.73 SEK, which is a price 27% higher than with the original packaging. As previously discussed, the goal of retailers and brand owners is to

maximize profits, and therefore the significant increase in the willingness to pay is positive for both parties. However, one could assume that a tactually intriguing package entails a higher production cost and therefore might not always lead to higher margins. Nevertheless, Spence and Gallace (2011) propose that the prices of altering the feel of packaging is constantly dropping due to developments in coating technologies. Thus, depending on the material choice etcetera the increased willingness to pay might surpass the additional costs of the package design, thus increase margins and ultimately profits.

It is difficult to isolate why the willingness to pay increased so drastically. As previously discussed, the increased willingness to pay can originate in an increased consumer perceived value. A stronger perceived product claim should entail a higher perceived utility, thus higher functional value. Further, a perceived novel packaging entails epistemic value, and the affective response to a pleasant touch can increase the emotional value. All in all, the higher perceived value should lead to higher willingness to pay (Zeithaml, 1988). This reasoning seems to hold true as both perceived novelty and product claim strength were significantly higher for the products including a tactile element, as revealed in the analysis. Further, the high positive increase in attitude can also be a determining factor for the increased willingness to pay in accordance with Keller (1993).

There is another plausible reason as to why consumer willingness to pay is significantly higher when the feel of the package is altered, which has not yet been discussed. One reason for the significant increase in willingness to pay could be that the consumers perceived the quality of the products including a tactile element to be higher. The perceived product quality has proved to be highly important for how much consumers are willing to pay for a product (Kupiec & Revell, 2001) and quality judgements are to a large extent influenced by product attributes reflected in the packaging (Silayoi & Speece, 2004). However, there are also potential downsides with a higher perceived quality and in extension a higher willingness to pay. High quality might signal a high price, which might lead to avoidance for price sensitive consumers. Further, a high perceived quality along with expected high price, might not be in line with the brand image and might thus cause confusion as an effect of the tactile marketing efforts. So despite the high increase in the willingness to pay, one must also consider the potential negative consequenses when implementing tactile marketing via including a tactile element in a package design.

5.1.4 Tactile Marketing Induces Action Intentions

The analysis revealed that the intention to purchase significantly increased by including a tactile element in the package design, regardless of the motivation behind the purchase. This was not only indicated in numbers, but also in the reactions at the point of purchase. Some spontaneous reactions were; “That’s a nice chocolate package. Where can I buy it? I want to try it” (male, age 63) and “When I saw the chocolate package I thought; that’s a chocolate I want to try” (female, age 28).

The high purchase intention is expected considering the strong results at earlier stages in the hierarchy of effects model (Blackwell, Miniard & Engel, 2006). Further, as packaging is one of the most important factors in the purchase decision made at the point of purchase for low-involvement products (Prendergast & Pitt, 1996, cited in Silayoi & Speece, 2004), a positively perceived package ought to increase the intention to purchase the product. In accordance with the analysis of this study, previous research on tactile marketing has showed that the inclusion of a tactile element induces action (Peck & Wiggins, 2006; Peck & Johnson Wiggins, 2011). Thus, this study has provided additional support that tactile marketing increases purchase intention.

People are significantly more inclined to talk about the product including a tactile element in the product design as revealed by the analysis. The significant increase was in line with expectations as people are more prone to spread a message about products that they find interesting and like (Berger & Schwartz, 2011) and that they perceive as creative (Modig & Lethagen, 2008). The increased WOM can be argued to be extra beneficial to a private label who sell their products in their own retailing channel. Thus, by spreading the message consumers promote the actual product/brand but also encourage people to visit the store in which it is sold.

5.1.5 The Material Reflects the Store

Retailers work in an extremely competitive environment where it is crucial to lure consumers into the store. Therefore it is important for retailers to understand how the products they carry influence the evaluations of their store envionment. Earlier research has revealed that the media vehicle can be evaluated in accordance with individual ads (Rosengren & Dahlén, forthcoming) and that the retailing environment can be evaluated differently depending on the choice of media in-store (Lange & Nordfält, 2012). In accordance with previous findings, the analysis in this study revealed that the consumers evaluated the retailing environment differently if they were exposed to a product packaging including a tactile element. A possible explanation is that there is a rub-off effect of the

positive affective response that the pleasant touch element entailes (Rolls et al., 2003) on the retailing environment. This means that the positive responses towards the brand and products set people in a positive mood, which is reflected in how they evaluate the store. So, just as evaluations of the product and brand were more positive as an effect of tactile marketing, the store was perceived as more nice, welcoming, innovative and exciting. The positive evaluations of the retailing environment ought to increase the number of visitors and ultimately customer loyalty, which is crucial for retailers.

5.1.6 Consumer Contamination Effect – A Note of Caution

Overall, the results revealed that the presence of a contamination cue had a negative effect on the evaluation of the chocolate including a tactile element, as the group exposed to a contamination cue rated the chocolate significantly lower than those not exposed to a contamination cue. As opposite from the chocolate, the contamination cue did not yield any significant results for the softener. This means that people rated the softener including a tactile element equally high, regardless of whether they were aware of the fact that around 60 others had previously touched the product. There are many possible explanation of this. Firstly, transformational products are used for indulgence and self-treating, which means that they are more affected by emotional arguments (Rossiter, Percy & Donovan, 1991). Evaluating the softener, being an informational product category, people are more appealed by rational arguments (ibid). It might be that people due to these differences react more subconsciously and emotionally when evaluating a product with a transformational purchase motivation, which might be why the chocolate was more affected by the contamination cue. Secondly, the chocolate is edible, which further could explain why the contamination cue yielded significant results. People might perceive it more disgusting that others have been in physical contact with a product that is consumed orally, even if it is presented in a protecting packaging. Thirdly, the tactile element in the chocolate packaging was related to the actual product i.e. the taste of the chocolate, whereas the tactile element in the softener was related to the outcome of the product i.e. the softness of the clothes after using the product. In a previous study it was revealed that people evaluate products more negatively when they had been in physical contact with “disgusting” products. This was true when the packages were transparent, as consumers could imagine the products actually touching each other. However when the packages were opaque, this affect did not occur (Morales & Fitzsimons, 2007). In this study the tactile element in the chocolate packaging might “reduce the opaqueness” of the packaging in the eyes of the consumers as it relates directly to the product, which was not true for the softener. Another possible reason for the

contamination cue having a significant effect on the chocolate but not the softener can be related to the design of the packages and the difference in how the tactile elements were implemented. Due to the design of the manipulated products, the consumers automatically interacted tactually with the velvet in the chocolate package whereas it was a conscious choice in the softener design. This might have an effect on how the contamination cue is received. Finally, in extension to the previous reasoning, the difference might depend on the amount of fabric that was included in the manipulated packages as a much smaller swatch of fabric was included in the softener's package design compared to the chocolate package.

Looking individually at the measures, the analysis revealed that there were no significant differences between the chocolate experiment group and the contamination experiment group regarding perceived novelty and WOM-intention. This means that consumers evaluated the chocolate package as equally novel despite tactile interaction by other consumers and that the "news-value" is not attenuated due to the fact that around 60 other have tactually examined the package. This might be the reason behind the insignificant difference in WOM-intention, as previous studies have revealed that creativity can influence the intention to spread the message (Modig & Lethagen, 2008).

As the analysis revealed that the evaluations and action intentions were significantly lower if consumers received a cue that others had touched the chocolate package, an analysis of whether the negative consumer contamination effect transcends the positive effect of tactile marketing was conducted. Therefore an additional independent sample t-test was calculated comparing the means of the control group exposed to a contamination cue and the experiment group exposed to the contamination cue (chocolate)[13]. The results reveal a significant difference on all measures between the control- and the experiment groups. This means that the negative consumer contamination effect does not exceed the positive effect of tactile marketing (see appendix IV). Thus the results indicate that marketers advantageously can work with tactile marketing by including tactile elements in the product design regardless of the presence of contamination cues. Nevertheless, consumer contamination cues may have negative effects under certain circumstances, which is something that marketers and retailers need to be aware of and cautious about.

[13] As there were no significant results with regards to the softener, no additional calculations were needed for this product category.

5.1.7 Tactile Marketing - Regardless of Purchase Motivation

As previously explained, there is a difference in how people receive and process information depending on the level of involvement in the purchase. For low involvement products, people are more receptive to peripheral cues, such as a tactile element (Petty, Cacioppo & Schuman, 1983). However, no previous research has taken the purchase motivation into account within the context of tactile marketing. It was therefore important for the generalizability of this study to include low-involvement products with different purchase motivation, to hedge the risk of the results being tied to a specific purchase motivation. As the informational purchase motivation entails problem solving and hence requires information before purchase (Rossiter & Percy, 1987), it could be questioned whether a tactile element that is not diagnostic for the product performance would make a difference for products bought with this motivation. Nevertheless, as results were significant for both the softener, a product with an informational purchase motivation, and the chocolate, a product with a transformational purchase motivation, it can be concluded that tactile marketing is effective under low-involvement circumstances regardless of purchase motivation. This study therefore strengthen the existing study by Peck and Johnson Wiggins (2011) revealing that tactile marketing is an effective marketing tool under low-involvement circumstances.

In this thesis, the definition of a tactile element included being unusual in an FMCG packaging context and thus offering a certain level of novelty or surprise. Therefore, the discussion can be raised whether tactile marketing is just a matter of novelty, rather than a long-term strategic tool. However, even though a novel material choice might lead to hedonic haptic exploration, the haptic information can be retained from memory even if the consumer never tactually interacts with the material, in accordance with the visual preview model. This means that even if the product design looses its novelty, and thus might not evoke exploratory touch to the same extent, the positive effects can still occur via retention from memory. Further, by strategically including tactile elements in the product package design, tactile marketing can be utilized for long-term brand building, entailing that the material properties are not only associated with the particular product, but with the brands itself.

5.2 Conclusion

5.2.1 Will a Tactile Element in the Product Packaging have an Effect on Consumers' Brand and Product Evaluations?

This study has proven that including a tactile element in the package design has significantly positive effects on both product and brand evaluations. Both perceived novelty, brand interest, brand and product attitude, product claim strength and willingness to pay were rated significantly higher when a tactile element was included in the package design, regardless of purchase motivation. Therefore, as hypothesized, it can be concluded that consumer brand and product evaluations are significantly more positive as an effect of tactile marketing.

5.2.2 Will a Tactile Element in the Product Packaging have an Effect on Consumers' Action Intentions?

Consumers have a higher intention to purchase the product and are more prone to talk about it when they are offered a tactile experience, regardless of motivation behind the purchase. As these are the metrics used to measure consumer action intentions, one can via this study conclude that tactile marketing has a positive effect on consumer action intentions.

5.2.3 Will a Tactile Element in the Product Packaging have any Additional Positive Effects for Retailers?

For retailers it is important that not only the specific product and brand is evaluated positively and lead to positive consumer actions, but also that the interest of the whole category and the evaluation of the retailing environment is positively affected. A tactile element in the product design did not only yield a higher interest of the brand behind the product, but also a higher interest of the whole product category, regardless of the specific product category (transformational or informational purchase motivation). Further, when consumers interacted with a product whose package included a tactile element they perceived the retailing environment as more nice, welcoming, innovative, and exciting. Therefore, one can based on this study conclude that tactile marketing has positive effects for retailers.

5.2.4 Will a Consumer Contamination Cue have a Negative Effect that will Counteract the Effects of Including a Tactile Element in the Package Design?

When people receive a cue that others have previously been in physical contact with the product, there might be a negative effect on evaluations and action intention. In this study, the negative consumer contamination effect was apparent for the chocolate, a product with a transformational purchase motivation, but not for the softener, a product with an informational purchase motivation.

Therefore, it cannot be concluded that consumer contamination will have a negative effect for all products in the retailing environment, but that some products might be affected by the presence of consumer contamination cues. Nevertheless, it has also been proven that the negative effect of consumer contamination does not exceed the positive effects of tactile marketing. Therefore, the notion of consumer contamination should act as a note of caution for retailers and brand owners when working with tactile marketing, but it should not inhibit the usage of tactile marketing for FMCG.

5.2.5 Should Tactile Marketing be Utilized for Packaged Goods whose Material Properties are not Diagnostic for the Product Performance?

So finally, should tactile marketing be utilized for packaged goods whose material properties are not diagnostic for the product performance? The results presented in the analysis provide strong evidence that the answer to the question is; Yes, tactile marketing is a beneficial tool to utilize even when the goods are non tactile diagnostic.

This study has revealed the opportunity of tactile marketing for products that are non-tactile diagnostic and has thereby opened up opportunities for further research, interest and exploration. It has proven that it is beneficial for brand owners, retailers and marketing practitioners to include a tactile element in the package design, thereby encouraging hedonic touch in the FMCG environment despite the risk of consumer contamination. Thus, this study is the first to prove that tactile marketing is beneficial for packaged goods whose material properties are not diagnostic for the product performance.

5.3 Managerial Implications

The findings in this study give valuable insights and practical implications for actors in consumer product industries, such as brand owners, retailers as well as marketing practitioners. The findings have the potential of guiding and inspiring managers and marketers in using tactile marketing as a new and effective way of communicating with consumers in the FMCG marketplace.

5.3.1 Brand Owners

Brand owners put enormous amounts of money on marketing communication every year, to build their brand and induce sales (Dahlén & Lange, 2009). Tactile marketing has in this study proven to be an effective means to increase interest, build strong attitudes, increase the willingness to pay, stimulate purchase and WOM intention, indicating that money spent on tactile marketing is well

invested. The results of this study should therefore encourage brand owners to work more actively with the sense of touch.

As tactile marketing in an FMCG environment is a new phenomenon, brand owners can gain from being among the first with the implementation, giving them a “first-mover-advantage”. A tactually intriguing packaging is perceived as more novel, and brand owners who are early in adopting and implementing a tactually intriguing packaging can therefore make their product stand out in the crowded marketplace, thus posing as a potential competitive advantage. Apart from including a tactile element in the product packaging, touch can be incorporated into marketing messages in various ways e.g. on outdoor posters, point of purchase signs etcetera, demonstrating the broad range of opportunities when working with tactile marketing.

Brands must be able to offer consumers value, but in order to be prioritized they should be able to offer value that exceed what the competitors can offer. By utilizing tactile marketing the product claim strength was increased i.e. the benefit that the product communicates to consumers was perceived as more strong. For consumers valuing these benefits, the product ought to be the preferred choice in the market. Therefore, brand owners are encouraged to work with tactile marketing that is congruent with the product claim, to strengthen the perceived value that the product can offer. However, it is not only important for brands to be able to offer value, but in order to get satisfied and loyal customers, the value proposal must be fulfilled. Therefore, it is crucial for brand owners to consider what value the product can offer, before strengthening the claim using tactile marketing.

The notion of tactile brand building was out of scope in this thesis. However, it is worth noting that the tactile marketing strategies must be in line with the overall branding strategy in order to avoid confusion and brand dilution in the market. As a last note, brand owners can use the positive effects for retailers as a sales argument to get their products into the limited shelf space in-store.

5.3.2 Retailers

The findings demonstrate a number of positive effects for retailers as well. As retailers power over brand owners continuous to increase (Percy & Elliot, 2009), retailers, should use their power to encourage, or even pressure, brand owners to work with tactile marketing. They should further prioritize and carry brands that offer a tactually intriguing product packaging. The positive results of including a tactile element in the package design also imply that retailers could advantageously

work with tactile marketing in-store. Further, the growth of private labels means that retailers could benefit from working with tactile marketing in the same way as brand owners.

For retailers today, competition is not merely limited to other stores but internet as a retailing channel is constantly increasing in popularity. In fact, the most popular christmas gift of 2011 was a food subscribtion with online players such as Mathem, Linas Matkasse or Middagsfrid (HUI Research, 2011). McCabe and Nowlis (2003) reveal that for products with geometric product properties, there is no difference in preference between offline and online shopping, which might be part of the reason behind the increase of online shopping for FMCG. Therefore, offering consumers a hedonic shopping experience where they are encouraged to tactually interact with the products could act as a motivation to shop in an offline environment, thus posing as an advantage for offline retailers.

As most contamination cues emerge in a retailing environment, retailers must be aware of and be cautious about the risk of consumer contamination. In this study only one consumer contamination cue has been examined; however there are a number of cues that can emerge under real life circumstances that potentially could lead to a contamination effect. Dishevelled displays, damaged packages or products put in the wrong place could be cues strong enough to raise consumers' contamination fears and negatively affect consumer evaluations. This indicates that retailers should make an effort to minimize the presence of potential contamination cues in-store.

5.4 Criticism of the Study

This study has opened up for new and exciting areas of research within the field of tactile marketing. However, some critique can be raised towards the study. Below a reasoning concerning potential weaknesses and shortcomings regarding the manipulations, the sample and the execution of the experiment will be presented.

The chosen manipulations can be challenged in two ways. First, despite the efforts put on constructing the manipulated product packages, the visual aspects of the packages had to be somewhat altered. This means that the manipulated product looked somewhat different from the original packaging, which could have had an impact on the results. A commonly used experiment design to avoid this problem is to isolate one sense at the time and thereby ensure that only one sense can influence the results. But since this study was conducted in a real life setting that

experiment design was not applicable. Further, that experiment design could be criticized for being too disconnected from reality. So due to the construction of the manipulated products in combination with the experiment design, the effects of tactual interaction could not be completely isolated. However, as the authors made the products as visually similar as possible and made sure that all respondents tactually interacted with the packages, the visual impact on the results was minimalized. Further, the risk of including a visual effect in the result was conscious as the authors, in accordance with previous researchers, found it more important to expose the respondents to the stimuli in the most authentic way as possible, and isolating senses is seldom the way to interact with products in real life (Balaji, Raghavan & Jha, 2011). Second, it could be discussed whether the contamination cue i.e. that respondents were told that "you are the 60th person to hold and evaluate this particular chocolate/softener" is realistic and would be applicable to a real life setting. However, as this is an unexplored area of research and a variable of caution, the decision was taken to use a strong and apparent contamination cue as well as a 10% significance level.

Critique can also be raised regarding the sample as it consists of respondents living in the Stockholm area and visiting a certain type of grocery store. It could thus be questioned whether the sample is a representative group from the Swedish population and whether the responses actually reflect the habits of the average consumer in Sweden. Nevertheless, consumers worldwide are believed to have roughly the same responses to many FMCG, meaning that the raised critique may not be of importance for this study (The Nation, 2002 cited in Silayoi & Speece, 2004). Furthermore, due to the scope of the thesis and the fact that an experiment was carried out in an authentic environment, the sample was perceived to be adequate.

Finally, some concerns regarding the execution of the experiment needs to be raised. Even though the authors have tried to control for all factors that potentially could have an effect on the outcome of the experiment, the fact remains that the experiment was carried out by the authors themselves. The interaction between the authors and the study participants involves the possibility that the data collected becomes biased by the presense of the authors. If these biases are systematic in their occurrence, the results may be compromised (Miyazaki & Taylor, 2008). However, aware of this, the authors avoided excessive interaction with respondents and only answered study related questions once the questionnaire was finalized. Furthermore, all respondents that had required help in filling out the questionnaire were excluded from the sample.

5.5 Future Research

This study is among the first to investigate tactile marketing for non-tactile diagnostic products and has brought up a number of interesting and important aspects. However, the study of tactile marketing is still at an early stage and there are great opportunities for future researchers to look into new areas, or delve deeper into aspects brought up in this study.

In this thesis the respondents were approached and asked to evaluate the product, meaning that the notion of spontaneous touch has not been investigated. Under "natural" circumstances it is important that the product can act as the "sales person of the shelf" (Silayoi & Speece, 2004), making it important for the product to stand out to induce spontaneous tactile interaction. Some indications were given in this study that altering the material properties of a product would lead to spontaneous tactile interaction, in accordance with the visual preview model. For example, a young child (approximately 2 years) reached out to touch the softener while her mother was filling out the questionnaire, and a woman (32 years) expressed that if she saw the chocolate package in the shelf she would want to touch it. Therefore future research could investigate whether altering the material properties of the product can in fact evoke spontaneous touch. Nevertheless, according to the visual preview model, tactile interaction might not even be necessary as people can retain tactile information from memory. Therefore, future research could also delve deeper into how tactile and visual information interacts when the feel of a product is altered.

People judge products depending on their appearance. Therefore products made of material that is not perceived as appealing can be judged negatively even though the product claim is unknown (Hultén, Broweus & van Dijk, 2008). One interesting aspect for future research to investigate is therefore what materals that can advantageously be incorporated in the package design of an FMCG. Further, to extend the research of tactile marketing as a means of communicating to the consumers, which has been the focus in this thesis, tactile marketing as a brand building tool should be investigated. What associations will different material choices bring about and how will this affect the brand image are questions that could be explored in the future.

This study has just investigated one form of tactile marketing – including a tactile element in the packaging design. It is thus left for future researchers to explore other forms of tactile marketing. For instance future researchers could enable consumers to touch the actual product (for instance,

sample muesli to let consumers touch and feel the big bits of fruit), and see whether this has an effect on evaluation. They could explore the effect of mere touch in an FMCG environment (for instance, to let some consumers hold the package while others only are aloud to watch) to see whether there is a difference in attachment and evaluation. It is also up to future researchers to investigate the effect of tactile marketing via point of purchase displays (for instance by letting consumers touch and feel the washed laundry instead of a tactile element in the package design).

Further, this study has investigated the influence of tactile marketing at the point of purchase. This means that the consumers never had the chance to evaluate the products after consumption, but instead the product claim strength was used as a proxy of actual product performance evaluation. An interesting area of future research is to explore whether tactile information has an effect on actual product performance evaluation. On a similar note, consumers are often in physical contact with the product long after the decision to purchase is taken as the consumption situation often takes place outside the walls of the store. Think about the laundry softener for instance; every time the softener is used, the consumer tactually interacts with it. This means that the product and its packaging could help build the brand throughout the product's whole life span (Hultén, Broweus & van Dijk, 2008). Therefore, future researchers are encouraged to investigate how tactile marketing, and specifically a tactual product design, affects the consumer evaluations and their action under a more long-term perspective.

Finally, this study has just scratched the surface regarding the unexplored area of consumer contamination. It has merely revealed that consumer contamination can have a negative effect and that marketers and retailers need to be cautious about this when working with tactile marketing. However, it can be questioned whether the chosen cue is likely to occur under real life circumstances, as discussed in section 5.4. Therefore, future research is encouraged to explore the notion of consumer contamination further and to investigate under what circumstances the effect occurs in the FMCG marketplace and for other non-tactile diagnostic goods.

This study is among the first to investigate tactile marketing in the FMCG market and has therefore put the first piece of the puzzle. However, the area of research is still at its infancy and there is still much to discover and explore…

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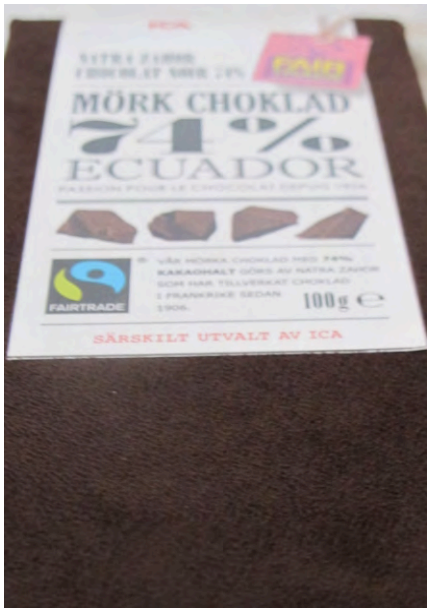
Appendix I

Original package/Manipulated package

Manipulated package

Manipulated package/Original package



Manipulated package

Appendix II

Group	ICA Maxi Lindhagen Wednesday	ICA Maxi Nacka Thursday	ICA Maxi Lindhagen Friday	ICA Maxi Nacka Saturday	Totalt
1) Chocolate – Control group	n= 14	n= 15	n=10	n= 9	48
2) Chocolate - Experiment	n=10	n= 12	n=9	n= 12	43
3) Softener - Control group	n=15	n= 17	n=11	n= 11	54
4) Softener - Experiment	n= 11	n= 13	n= 8	n= 15	47
Contamination					
5) Chocolate – Control group	n=14	n= 12	n= 11	n= 17	54
6) Chocolate - Experiment	n=10	n= 7	n= 11	n= 14	42
7) Softener - Control group	n= 14	n= 15	n= 16	n= 8	53
8) Softener - Experiment	n= 8	n= 12	n= 11	n= 13	44

The division of respondents; Groups/Days/Stores

Appendix III

This is a Fairtrade chocolate with a taste that is extra soft and pleasant. Based on how you perceive the packaging you are now asked to evaluate the product and the brand.

Please answer the following questions by marking the number (from 1 to 7) that reflects your opinion the best.

1. How do you perceive this chocolate?

Negative	1	2	3	4	5	6	7	Positive
Not appealing	1	2	3	4	5	6	7	Appealing
Not interesting	1	2	3	4	5	6	7	Interesting

2. How do you perceive the brand *ICA Selection*?

Negative	1	2	3	4	5	6	7	Positive
Not appealing	1	2	3	4	5	6	7	Appealing
Not interesting	1	2	3	4	5	6	7	Interesting

3. How do you perceive this packaging in comparison to other chocolate packages?

Foreseeable	1	2	3	4	5	6	7	Innovative
Expected	1	2	3	4	5	6	7	Unexpected
Ordinary	1	2	3	4	5	6	7	Original

To what extent do you agree with the following statements?

4. I would like to learn more about the product category; chocolate

Disagree	1	2	3	4	5	6	7	Agree

5. I believe that chocolate is an exciting product category

Disagree	1	2	3	4	5	6	7	Agree

6. I am curious in chocolate as a product category

Disagree	1	2	3	4	5	6	7	Agree

7. I would like to learn more about the brand *ICA Selection*

Disagree	1	2	3	4	5	6	7	Agree

8. I believe that *ICA Selection* is an exciting brand

Disagree	1	2	3	4	5	6	7	Agree

9. I am curious in the brand *ICA Selection*

Disagree	1	2	3	4	5	6	7	Agree

10. I would like to talk to others about this chocolate

Disagree 1 2 3 4 5 6 7 Agree

11. It is likely that I will recommend this chocolate to others

Disagree 1 2 3 4 5 6 7 Agree

12. I would like to buy this chocolate

Disagree 1 2 3 4 5 6 7 Agree

13. It is likely that I will buy this chocolate in the future

Disagree 1 2 3 4 5 6 7 Agree

14. How much would you be willing to pay for this chocolate? _____ SEK

Please answer the following questions by marking the number (from 1 to 7) that reflects your opinion the best.

15. To what extent do the following descriptions reflect your opinion regarding *this ICA-store:*

	Disagree						Agree
Nice:	1	2	3	4	5	6	7
Welcoming:	1	2	3	4	5	6	7
Novel:	1	2	3	4	5	6	7
Exciting:	1	2	3	4	5	6	7

16. How do you think the chocolate tastes?

	Disagree						Agree
Soft:	1	2	3	4	5	6	7
Pleasant:	1	2	3	4	5	6	7

To what extent do you agree with the following statements?

17. I consume chocolate since it solves a problem

Disagree 1 2 3 4 5 6 7 Agree

18. Chocolate fulfills a certain function

Disagree 1 2 3 4 5 6 7 Agree

19. Consuming chocolate makes me happy

Disagree 1 2 3 4 5 6 7 Agree

20. I consume chocolate when I want to indulge

Disagree 1 2 3 4 5 6 7 Agree

21. I put a lot of thought into the brand choice when I buy chocolate
Disagree 1 2 3 4 5 6 7 Agree

22. I think that the brand of the chocolate is highly important
Disagree 1 2 3 4 5 6 7 Agree

Below are some statements regarding how you behave in retailing environments (e.g. in clothing stores, electronics stores etcetera). To what extent do you agree with the following statements?

23. When walking through stores, I cannot help touching all kinds of products
Disagree 1 2 3 4 5 6 7 Agree

24. I like to touch products even if I have no intention of buying them
Disagree 1 2 3 4 5 6 7 Agree

25. Touching products can be fun
Disagree 1 2 3 4 5 6 7 Agree

Please answer the following questions by marking the answer that best describes you and your behavior.

26. Did you feel a soft material on the product packaging?
□ Yes □ No

27. Have you ever bought chocolate from *ICA Selection*?
□ Yes □ No

28. Do you usually buy chocolate from *ICA Selection*?
□ Yes □ No

29. How many do you think have touched this chocolate before you did?_____

30. Gender?
□ Man □ Woman

31. Age? _____ year

Thank you for your participation!

Best regards,
Emelie och Jeanette

Appendix IV

Metrics	CCC	CXC			SCC	SXC		
	Mean	Mean	Diff.	Sig.	Mean	Mean	Diff.	Sig.
Perceived novelty	3.59	5.79	2.20	0.000	2.79	4.97	2.18	0.000
Brand interest	3.02	4.49	1.47	0.000	2.13	4.58	2.45	0.000
Product category interest	3.62	5.09	1.47	0.000	1.82	4.22	2.40	0.000
Brand attitude	3.72	5.17	1.45	0.000	3.42	5.13	1.71	0.000
Product attitude	3.49	5.69	2.20	0.000	3.38	5.42	2.04	0.000
Product claim strength	3.49	4.69	1.20	0.000	4.08	5.65	1.57	0.000
Willingness to pay	18.71	25.74	7.03	0.000	22.23	31.56	9.33	0.000
Purchase intention	3.10	4.81	1.71	0.000	2.76	5.41	2.65	0.000
WOM intention	2.36	4.04	1.68	0.000	1.86	4.16	2.30	0.000

Results – The contamination effect vs. tactile marketing effect

Explanations:
CCC = Chocolate control contamination
CXC = Chocolate experiment contamination
SCC = Softener control contamination
SXC = Softener experiment contamination