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DIMENSIONALITY OF THE CONSUMER PERCEIVED VALUE OF PRODUCT COLOUR

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Writing a thesis is like riding a world-class roller coaster: the ups are the highest of the highs, and the downs are the lowest of the lows. One day, you feel like the queen of the academic universe; the next day, you want to quit and start baking cookies for a living. You may struggle with the same problem for a year, and when you finally experience a revelation, no one understands what you are talking about. You are constantly surrounded by people who are smarter than you, and when you want to feel normal and hang out with your old friends, they do not laugh at your PhD comic jokes.

But there are these moments that make it all worthwhile: like when you wake up in the middle of the night just to realise that the solution to your problem is as simple as it is genius; when people come to congratulate you after a successful conference presentation or when your supervisor tells you 'good job' after you have been biting your nails for two days, waiting for his or her conviction.

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And I did it. I got it done.

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Zürich, 14th of April 2014

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1 INTRODUCTION

- *Do you know how your customers choose new car colours?*
- *No.*
- *Do you discuss colour options with your customers?*
- *No. They choose their own colours; I normally wait until they've reached a decision.*

This is an excerpt of a conversation between a car retailer and me in July 2012. I had the same discussion with two other car retailers and three mobile phone retailers. The discussions revealed that the retailers provided assistance to customers regarding the technical characteristics of products but left them to choose their own colours. The retailers were not aware of how their customers went about choosing product colours; they did not know what customers thought and felt in terms of colour or why customers chose a particular colour instead of another.

Yet, it has been argued that up to 62-90 percent of a consumer's product assessment is based solely on colour (Singh, 2006), and that colour can make or break the success of a product (Trent, 1993). For companies, successful product colours play a major role because they can increase consumer satisfaction, awareness, brand recognition and loyalty (Funk and Ndubisi, 2006). Within marketing, however, colour research is fragmented (Funk and Ndubisi, 2006). Most colour studies provide sporadic information on consumers' immediate reactions to colours – such as purchase intentions (Bellizzi, Crowley and Hasty, 1983; Middlestadt, 1990), attitudes towards advertisements depending on the colours used (Gorn, Chattopadhyay, Yi and Dahl, 1997; Lohse and Rosen, 2001) and meanings that particular colours of packages communicate (Kauppinen-Räisänen and Luomala, 2010). Arguably, however, to fully understand the impact of colour on consumers, it is not sufficient to learn that there *is* an impact; we also need an understanding of *how* the effect of colour is formed in the minds of consumers. Although there are many studies on colour in different fields, scholars have pointed out that colour is understudied within marketing research (Delamare and Guineau, 2000; Labrecque, Patrick and Milne, 2013), one reason being that no underlying theory of colour has been developed (Funk and Ndubisi, 2006; Grossman and Wisenblit, 1999).

There are many important studies on, for example, consumers' colour preferences (e.g. Eysenck, 1941; Hanari and Takahashi, 2013) and the meanings of colour (e.g. Bellizzi and Hite, 1992; Palmer and Schloss, 2010). However, from a marketing perspective, these findings are somewhat inconclusive. For example, learning consumers' overall colour preferences is not sufficient for marketers to decide which colours should be included in their product lines and recommended to customers (Grossman and Wisenblit, 1999) because customers do not always choose the same favourite colour for every purpose (Hanari and Takahashi, 2013). Instead, they often prefer other colours for various products (Grossman and Wisenblit, 1999; Holmes and Buchanan, 1984; Saito, 1983).

Studies on colour meanings, in turn, report contradictory findings because each hue has several different, and sometimes opposing, meanings. Scholars have also suggested associative learning (Crozier, 1999; Grossman and Wisenblit, 1999; Labreque, Patrick,

Milne, 2013) as an explanation of how colour affects consumers; however, associative learning studies typically describe particular forms of associative learning in specific contexts, thus failing to develop a coherent understanding of how consumers make sense of colours in a broader sense.

Moreover, studying consumers' immediate reactions to colours may leave some relevant aspects of colour perception undetected because colour likely exerts an influence beyond instant reactions and affects the consumption experience more profoundly. Colour is found to be an important component when purchasing goods (De Klerk and Lubbe, 2008; Wood and Pierson, 2006), but it is also expected to be important when using them, an aspect that has been neglected in marketing research.

The thesis addresses this research gap with an examination of the consumer perceived value of colour. There are several justifications for choosing to study colour through the lens of perceived value: 1) existing colour studies mainly focus on consumers' immediate reactions to colours whereas the long-term impact of colour (e.g. the use experience) is overlooked; 2) consumers, however, perceive value differently in purchase and use situations (Gardial, Clemons, Woodruff, Schumann and Burns, 1994), which indicates that immediate reactions to colour (e.g. in purchase situations) do not explain how colour is perceived in use. Recently, researchers have pointed to the importance of value-in-use rather than exchange value (e.g. Grönroos, 2006, 2011), thus also emphasising the consumer's use experience; 3) the role of colour in the perceived value has not been extensively examined although colour is one of the dimensions that consumers allude to in their assessments of the perceived value of products (Sweeney and Soutar, 2001). This therefore calls for more in-depth research on this area.

Therefore, this thesis aims to understand how consumers perceive the value of colour in relation to products. That is, this thesis suggests that by studying consumer perceived value of product colour, it is possible to broaden our understanding of the role of colour in marketing beyond focusing on particular hues at a particular point in time. Drawing on the recent perceived value literature (e.g. Grönroos, 2006, 2011; Helkkula, 2011; Helkkula, Kelleher and Pihlström, 2012; Sánchez, Callarisa, Rodríguez and Moliner, 2006; Woodruff and Gardial, 1996), the consumer perceived value approach allows us to widen the time scope from customers' immediate reaction to the colour of a product (cf. value-in-exchange) to using products in everyday life (cf. value-in-use / value-in-experience).

However, the concept of perceived value is often insufficiently understood (Sánchez-Fernández and Iniesta-Bonillo, 2007). The literature provides several definitions of perceived value, for example, a comparison between price and quality, or an evaluation of the benefits that customers derive from brands (Zeithaml, 1988). However, it has been proposed that these definitions do not sufficiently cover how consumers actually experience value because consumers often adopt a *holistic view* of perceived value. (Sánchez et al., 2006). Therefore, this thesis does not pre-position itself to one perceived value definition, instead, it acknowledges that value is idiosyncratic and consumers can experience it at various points in time such as before purchase, in purchase, in use and after use (Sánchez et al., 2006). Moreover, it is acknowledged that perceived value can be based on lived experiences but also on prospective and imaginary experiences (Helkkula, 2011; Helkkula et al., 2012; Hirschman and Holbrook, 1982). Arguably, it is important to be open to how consumers themselves perceive the value of colour rather than trying to fit their experiences with a pre-determined definition from a different context.

In general, there is a paucity of research on the perceived value of product colour, although product colour is deemed an important component in consumer overall perceived value (Barbu, 2011; MacCarthy, Brabazon and Bramham, 2002). Understanding the perceived value of colour is essential because if colour provides value to consumers, it can be expected to affect consumer loyalty and business profitability (Gummerus, Liljander, Pura and Van Riel, 2004; Payne and Holt, 2001; Woodall, 2003).

This thesis contributes to marketing research by providing a conceptualisation of how consumers perceive the value of colour in relation to products. Drawing on the lack of theory building within colour research, this dissertation conducts an inductive study of how consumers perceive the value of product colour by empirically studying the objects of cars and mobile phones. While colour perception can sometimes refer to the physiological aspect of how colour is seen and sensed (see e.g. Lotto and Purves, 2002), in this thesis, *perception* refers to how consumers understand and make sense of the colours of products. Cars and mobile phones are appropriate for the empirical study because both are familiar, everyday products (Alba and Hutchinson, 1987). Additionally, consumers typically own only one or few cars and mobile phones, which makes the colour choice more imperative compared to, for example, clothes, where there is probably more room for experimenting with colours.

Methodologically inductive, this thesis discloses consumers' non-guided perceptions of the value of colour by allowing them to talk about colour in their own words, focus on the aspects they regard as important and categorise colours the way that makes sense to them. Thus, this study differs from past colour studies in several ways. Most colour studies limit consumers' mindsets to particular (1) colours, such as red vs. blue (Bellizzi and Hite, 1992; Mehta and Zhu, 2009); (2) sets of colours, such as a full-colour vs. black and white (Lohse and Rosen, 2001; Meyers-Levy and Peracchio, 1995); or (3) outcomes, such as attitude (Gorn et al., 1997), quality (Chebat and Morrin, 2007; Wheatley and Chiu, 1977), brand personality (Labrecque and Milne, 2012), or purchase intention (Miller and Kahn, 2005). By contrast, this thesis conceptualises how consumers perceive colour in relation to products as they experience them. Its context is more similar to a real-life purchase and consumption situation whereby consumers are not guided to consider particular colours, sets of colours or outcomes. In this study, consumers can freely express their thoughts on colours in relation to the studied products in any context that is meaningful to them.

A conceptualisation of how consumers perceive the value of colour in relation to products is proposed on the basis of findings from two empirical studies. This thesis proposes that consumers perceive the value of product colour on three value dimensions: experiential, symbolic and functional. In each dimension, there is a consumer perceived colour preference scale which consists of desirable, tolerable and unacceptable colours. The colour preference scales of each value dimension may sometimes come in contradiction when consumers prefer different colours in each value dimension, which leads them to make trade-offs between the dimensions. Additionally, an unacceptable colour in any dimension may lead to not making a purchase at all.

This thesis contributes to the perceived value research by demonstrating that product colour is an important but neglected aspect of perceived value. The thesis illustrates the dimensionality of the perceived value of product colour and proposes trade-offs between the value dimensions, a currently understudied area. Furthermore, the thesis shows that some value dimensions which have been considered important in previous

research (e.g. cost/sacrifice value) did not emerge in relation to the perceived value of product colour. The thesis contributes to colour research by studying colour as a larger concept – instead of a combination of hue, value and chroma – and putting forth a conceptual framework that is likely to be adaptable in contexts other than the empirical context of this study. Further, this thesis demonstrates the relevance of the object of evaluation for consumer perceptions of colour. Finally, the thesis shows that consumers' categorisations of product colour go beyond the common colour categories of hue, value and chroma, which is the main focus of the current colour category literature.

Managerially, the findings of this thesis offer recommendations relating to the importance of the colour of consumer products for consumers and how companies benefit from understanding how consumers perceive the value of product colour. The findings will help manufacturers understand how their product colours are categorised by consumers and conduct studies to anticipate how consumers perceive new product colours. The findings will also enable retailers to provide customers with better service expertise and assistance in making wise choices that are likely to increase purchase intentions (Kolesar and Galbraith, 2000) and customer satisfaction (Du, Jiao and Tseng, 2006). Finally, the findings suggest that companies should be open to more holistic and phenomenological approaches when conducting market research because consumers' perceptions of the world may be inaccurate yet personally perceived as the truth (Kahneman, 2011); they do not necessarily distinguish lived experiences from imaginary experiences, yet they make consumption decisions on the basis of those beliefs.

What follows is a description of the research process that led to the purpose of this thesis.

1.1. Research process

This section describes how gaining understanding of the existing literature and empirical findings of a pilot study altered the underlying assumptions of the researcher. While some of the initial assumptions were later rejected, they were important building blocks towards a coherent understanding of the topic, and thus, the end result was rooted in all steps of the process.

1.1.1. Pre-understanding and pilot study

The research process started with an interest in colour studies and studying the literature in order to gain a pre-understanding of what we already know. I divided the existing research on the effect of colour on consumers into five streams: colour preferences, the meanings of colour, the relationship between colour and product perception, the effect of colour on purchase behaviour, and the effect of colour on brand image. Similar categorisations have also been discovered in previous studies (e.g. Kauppinen, 2004). The first stream, *preferences*, studies general colour preferences (Eysenck, 1941), cultural differences in colour preferences (Adams and Osgood, 1973) as well as the role of other factors, such as gender (Funk and Ndubisi, 2006) and sexual orientation (Ellis and Ficek, 2001), in colour preferences. The second stream covers *the meanings of colour*, that is, associations (Grossman and Wisenblit, 1999) and emotions (Valdez and Mehrabian, 1994) that colours provoke. The third stream studies the *effect of colour on product perception*, such as how the colour of a package influences the

perceived product attributes (Kauppinen-Räisänen and Luomala, 2010) and how the colour of a product affects the perceived quality of the product (Heath, 1997). Fourth, scholars have reported how, for example, colours of shop interiors (Bellizzi and Hite, 1992) and website colours (Mandel and Johnson, 2002) a*ffect purchase behaviour*. Finally, the *effect of colour on brand image* has been studied in how logo colours, for example, influence brand value (Bottomley and Doyle, 2006), perceived brand personality, brand likability and familiarity (Labrecque and Milne, 2012).

Based on the advice of one of the pre-examiners, the literature review was then restructured into upstream and downstream effects of colour (see e.g. Brown and Stayman, 1992). Upstream effects (e.g. colour preferences and meanings) are consumers' perceptions of colour, in general, without product-specific contexts while downstream effects (e.g. the effect of colour on product perception and brand image) are consumers' colour perceptions that directly relate to particular products and, therefore, to the perceived value of products. While the upstream effects may not always have a direct impact on the perceived value of products, they may alter consumers' general colour perceptions and thereby prime downstream effects and indirectly affect the perceived value.

While the existing colour studies cover important research areas, the literature review revealed that the relationship between colour and consumption experience remains unexplored. Since colour is an important component in the purchasing of goods (De Klerk and Lubbe, 2008; Wood and Pierson, 2006), it can also be expected to be important in their use. Yet, existing colour studies mainly concentrate on spontaneous and instant reactions after exposure, while an understanding of how colour influences the value that consumers receive from product use remains absent. However, some studies show that consumers perceive value differently (Gardial et al., 1994) and evaluate products differently (Gardial et al., 1994; Oliver, 1977) when making purchase decisions, compared to experiencing the product in or after use, which indicates that studies on purchase behaviour do not necessarily explain the perceived value in use. A few studies link colour to value in terms of aesthetics (Bradford, 1913; Goldman, 1990), quality perceptions (Wheatley and Chiu, 1977; Zeithaml, 1988) or monetary value (Babin, Hardesty and Suter, 2003), but none investigates colour as a potential contributor to the perceived value of products in a broader sense. Though Sweeney and Soutar (2001) report that colour is one of the aspects which consumers mention when asked about the perceived value of products, colour was not explicitly included in the tested multiple item scale. Similarly, Steenkamp and Geyskens (2006) have found that colour is important for customer perceived value of websites, but colour is merely mentioned in the examples.

Importantly, while studying the colour literature, the debate considering consumer value-creation was on-going. Within the debate, scholars argued that marketing research has traditionally focused on companies creating value for customers, in contrast with the contemporary Nordic School view which posits that customers create value for themselves when using goods that companies provide (Grönroos, 2006, 2011; Kowalkowski, 2011; Vargo and Lusch, 2004). According to the Nordic School, consumers do not purchase value in the exchange situation, but value emerges when a product is used in its natural environment (Grönroos, 2006, 2011), thereby shifting the focal point of research from value-in-exchange to value-in-use. This service(-dominant) logic research is mainly conceptual, and scholars have called for more empirical findings (Edvardsson, Ng, Min, Firth and Yi, 2011; Heinonen, Strandvik, Mickelsson, Edvardsson, Sundström and Andersson, 2010; Tokman and Beitelspacher, 2011).

Although this thesis does not adopt the service(-dominant) logic, it considers this research field as important in understanding the consumer's perspective.

The pre-understanding led to the following premises:

1) Colour is understudied in relation to consumption experience

2) Colour studies focus mainly on immediate reactions

3) Consumer perceived value cannot be determined by companies and it does not only pertain to the purchase situation

4) Empirical research is needed to understand how consumers perceive colour as value-in-use.

Consequently, the thesis process started with the preliminary aim to study *how consumers perceived the value-in-use of colour*, as opposed to immediate colour reactions. However, after a pilot study, which consisted of nine face-to-face interviews, it became clear that the value of colour was perceived as an overall experience or a phenomenon, rather than a distinction between the place where value emerged (purchase or use) or by whom it was created (company or consumer). Additionally, the pilot interviewees did not make a distinction between lived and imaginary scenarios (cf. Helkkula et al., 2012; Hirschman and Holbrook, 1982). The findings were supported in the literature as scholars observe that consumers tend to adopt a holistic view of perceived value, in that, they make an overall perceived value evaluation (Sánchez et al., 2006), which can include all consumers' value perceptions, such as experiences before purchase, in purchase, in use and after use (Sánchez et al., 2006) as well as prospective and imaginary experiences (Helkkula, 2011; Helkkula et al., 2012).

While conducting the pilot study, the debate on the service-(dominant) logic accelerated and alternative concepts were introduced. While the service(-dominant) logic emphasises the customer's role in value creation, some scholars argue that it is still too production-oriented and leads to insufficient understanding of what consumers do with goods and services (Heinonen et al., 2010). They, therefore, introduced a customer-dominant logic, which focuses on how goods and services become embedded in consumers' lives – that is, their contexts, activities, practices and experiences (Heinonen et al., 2010). Similar suggestions have emerged with scholars' (Helkkula et al., 2012) suggestion that value is determined phenomenologically (experientially) – as also noted in the discourse on the service-(dominant) logic (Vargo and Lusch, 2008). Helkkula et al. (2012) describe *value in the experience* emerging "from individually determined social contexts" (p. 62) and it can be based on past, present, future and imaginary experiences. Also design studies emphasise the importance of the context of consumption (Crilly, Moultrie and Clarkson, 2004).

The findings of the pilot study and the new research on consumer perceived value lead to three additional pre-understanding premises:

5) Consumers' perception of value is often holistic

6) Consumer perceived value emerges when goods and services are embedded in the lives of consumers

7) Perceived value can be based on past, present, future and imaginary experiences

1.1.2. Purpose of the thesis

Due to the broadened pre-understanding and the findings of the pilot study, the preliminary purpose of the thesis was shifted from studying how consumers perceive the value-in-use of colour to *how consumers perceive the holistic value of colour in relation to products*.

In this thesis, the holistic view means that the thesis does not pre-position itself to any proposed logic (goods, service, customer), nor is it pre-fixed to any particular value determination outcome (such as means-end, price/quality ratio). Additionally, this thesis does not limit the definition of consumer perceived value to purchase or use, but rather, it acknowledges that value can emerge before purchase, in purchase, in use and after use (Sánchez et al., 2006) as well as in lived, prospective and imaginary experiences (Helkkula, 2011; Helkkula et al., 2012; Hirschman and Holbrook, 1982). The holistic view is considered consumer-oriented in that consumers, too, adopt a holistic view of value because they often make an overall perceived value evaluation which does not exclude purchase or use (Sánchez et al., 2006). Thus, this thesis is not limited to immediate colour reactions but explores the effect of colour within a wider time scope, which can include the instant and long-term effects of colour as well as colour perceptions based on lived experiences or imaginary assumptions. Importantly, a holistic view of perceived value is increasingly suggested by scholars (Grönroos and Voima, 2013; Heinonen and Strandvik, 2009; Helkkula et al., 2012; Sánchez et al., 2006).

Further, this thesis studies how *colour* is perceived, not *colours*. That is, this thesis does not treat colour as an assembly of hue (e.g. blue, red, green), value (lightness) and chroma (colour purity), but rather, colour is considered as a larger concept (see Funk and Ndubisi, 2006). The particular colours that consumers use, choose and talk about are not the focus of this thesis. Although consumers may perceive the value of particular hues differently, this study aims at detecting the invariant features of the phenomenon (Jopling, 1996), that is, how the value of product colour is perceived.

Finally, although it is acknowledged that product colour, as a concept, relates to product design, this thesis does not adopt the design perspective. It is noteworthy that the purpose of this thesis is to study how consumers *perceive the holistic value of colour* (in relation to products) instead of studying how consumers perceive the colours of products. Therefore, this thesis draws on (1) the colour literature, mostly in marketing and partly in psychology, and (2) the perceived value literature in marketing. The intended contribution of the thesis is to provide marketing research and marketers with a conceptualisation of how consumers perceive the holistic value of colour in relation to products.

1.1.3. The inductive approach

The pre-understanding demonstrates that there is a lot that we already know about colour in marketing. We know answers to questions, such as which colours consumers prefer in general (Adams and Osgood, 1973; Eyesenck, 1941), which associations (Grossman and Wisenblit, 1999) and emotions (Valdez and Mehrabian, 1994) colours provoke, and whether the colour of a package affects the perceptions of the product inside (Kauppinen-Räisänen and Luomala, 2010). However, the questions that existing studies mainly answer are: (1) whether or not colour has an impact on consumers, and (2) what is the likely impact in a given moment in a particular context. The question

that remains unanswered, and more importantly, unasked, is how consumers perceive the holistic value of colour, including past, present, future and imaginary experiences. The inductive approach is adopted in this thesis because inductive research seeks answers to questions that have not been posed (Gummesson, 2002a). A deductive approach is considered unsuitable because general knowledge of the subject is limited (Morse and Field, 1995). Pre-defined theories do not necessarily represent the real world adequately, whereas in induction, pre-defined theories do not dictate the scope of the findings, which potentially results in new knowledge (Gummesson, 2005). It is not axiomatic that the existing literature covers all aspects of the perceived value of colour, and thus, deductive research carries a risk of key themes being left undetected and invisible (Thomas, 2006), whereas an inductive approach allows the emergence of concepts that are relevant for the studied area (Morse and Field, 1995). The selected approach does not exclude previously unknown aspects which can only be discovered through an inductive study.

In general, marketing research lacks theory construction (Deshpande, 1983) and scholars call for more inductive research in marketing (Gummesson, 1996) to convert the true story of life to marketing theories (Gummesson, 2002b).

Inductive research starts with observations (Spens and Kovács, 2006) and allows findings to emerge from the data (Strauss and Corbin, 1998; Thomas, 2006) with an objective to develop generalisations about the studied phenomenon (Spens and Kovács, 2006) and construct a theory based on observed experiences (Kovács and Spens, 2005; Thomas, 2006). In inductive research, propositions are developed on the basis of the findings of the empirical research rather than before gathering the data (Kovács and Spens, 2005).

The role of the existing literature in induction has many interpretations. A typical misconception is that the researcher should not possess any theoretical knowledge whatsoever before gathering the data (Goulding, 2005), while in fact, scholars agree that it is impossible for a researcher to erase his/her memory (Eisenhardt, 1989; Goulding, 2005). Therefore, it is recommended that the researcher should avoid forming theories or hypotheses prior to data gathering as much as possible (Eisenhardt, 1989), learn how to listen to the data without pre-determined ideas (Gummesson, 2005) and not think about relationships between observations and theories while gathering the data (Eisenhardt, 1989). However, the existing literature can be used to gain initial general knowledge on the subject (Eisenhardt, 1989), for comparison between the findings and existing concepts (Gummesson, 2005), and to exemplify how existing theories support the emergent findings (see Arnould and Price, 1993). In this thesis, the existing literature was first used to gain a pre-understanding of what we already know. Second, the existing literature was compared to the findings of the empirical study and used in the interpretation and discussion of the findings.

1.1.4. Empirical process

The empirical process consisted of two separate studies. The purpose of the first study was to inductively study how consumers perceived the value of the colour of products. The studied objects were cars and mobile phones. The first study was conducted by performing 39 face-to-face interviews with heterogeneous convenience, yet purposeful, sampling. Interviews were conducted and analysed without *a priori* assumptions about the end result. After analysing the data, the literature was studied to make connections between the findings of the empirical study and the existing literature (see e.g. Phillips

and McQuarrie, 2010). Conceptual propositions were made based on both the empirical study and the existing literature.

The second study investigated whether similar findings could be found in a larger sample and by using another data collection method. The purpose of the second study was to scrutinise (1) on what basis consumers categorised colours, (2) whether colour categorisations differed between product contexts, and 3) to compare consumers' categorisations of coloured products with categorisations of colours without a product context (control group). The second study was a web-based task which allowed 655 consumers to group the colours of cars and mobile phones into colour categories whichever way they felt made sense. A control group was included whereby respondents categorised colours without a product context. After categorising the colours, consumers were asked to explain the categories in detail through open-ended questions. Also, the data of the second study were analysed inductively without assumptions of whether the findings supported the propositions made on the basis of the first study. Finally, conclusions based on both empirical studies and the existing literature were drawn.

The research process, as a whole, is illustrated in Figure 1.

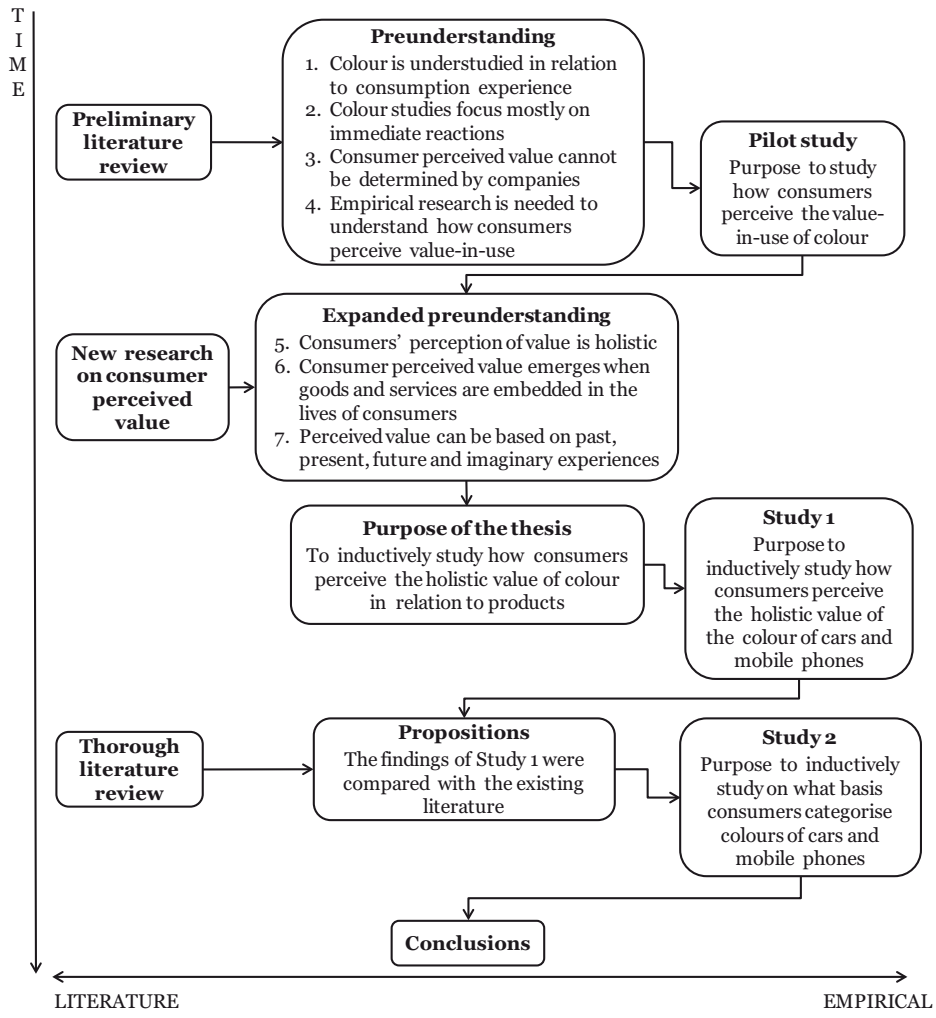


Figure 1 The research process

1.1.5. Research philosophy

This section aims to explain my underlying worldview for the reader to better understand my research. Research paradigms can be seen as a continuum from subjectivist approaches to objectivist approaches (Burrel and Morgan, 1979). At the objectivist end, there is an assumption that the world is a single whole subject to a single set of rules which can be studied (Johnson and Duberley, 2000), whereas at the subjectivist end, there is an underlying belief that "truth" does not exist (Walkerdine, Lucey and Melody, 2002) and the world is only a creation of the minds of the people living in it (Williams and May, 1996).

I believe that every person interprets and experiences the world in his or her own way and calls it reality. I share many characteristics with interpretivists; I believe that it is

more important to *understand* than to *explain* the world, and to distinguish socially shared meanings from individualistic meanings (Little, 1991). To me, the question of whether there is a common reality, and whether I believe in it, is irrelevant. Let us think of a very simple example: a person eats a fruit; the fruit looks like an apple; it also smells like an apple, and it even tastes like an apple. Is the fruit an apple? From my perspective, it does not matter if the fruit is, in fact, not an apple. For the person who eats the fruit, his/her personal and individual reality is that he/she is eating an apple, and that is according to which he/she leads his/her life, consumes products and makes purchase decisions. The "actual reality" is not important.

Although my personal view has similarities with interpretivism, my underlying research approach mirrors the characteristics of phenomenology more. Phenomenology regards the world as "our experience or perception of the world" (Landridge, 2004:277) and phenomenological research emphasises people's perception of the world as it appears to them (Woodruff Smith, 2008). While each individual may experience the world differently, through a repeated interrogation of multiple perceptions, it is possible to come to know something of the shared experience of that particular phenomenon. (Landridge, 2004). Although phenomenology is criticised for not producing generalisable findings, through eidetic reduction phenomenological research leads to eidetic findings which are intrinsically general (Giorgi, 2008). That is, the purpose of phenomenological research is not to describe specifics of particulars, but to take a more general perspective and observe the particular as an example of the general (Giorgi, 2008). In this thesis, the generalisation of the findings is regarded more theoretically than empirically (see Smith and Osborn, 2008).

The methodological choices of this thesis also reflect my phenomenological understanding. The adopted interview technique is phenomenological, which means it adopts free-form characteristics, is consumer driven and emphasises the consumer's perspective rather than that of the researcher (Stern, Thompson and Arnould, 1998). Interviewees were free to steer the interview to any direction they liked (Thompson, Locander and Pollio, 1989) and the researcher formulated further questions as a response to interviewees' reflections (Stern et al., 1998). A phenomenological interview is more of an open-ended dialogue between a researcher and a consumer rather than an interview (Thompson et al., 1989). In phenomenological interviews, interviewees are encouraged to talk about past experiences, current experiences, prospective experiences and imaginary scenarios (Helkkula, 2011; Helkkula et al., 2012). While Thompson et al. (1989) suggest that no pre-determined questions, besides the opening question, should be allowed in a phenomenological interview, others (e.g. Ardley, 2005; Trocchia and Janda, 2000) have used interview guides which help to engage interviewees (Holstein and Gubrium, 1995) and ensure that all important areas are discussed (Patton, 2001), which is how an interview guide was used in this thesis.

Further, in phenomenology it is acknowledged that consumer perception can be true without corresponding to the world (Czarniawska, 2004). In my research, I am interested in consumers' perception of colour, and "the truth" about colour is irrelevant. Therefore, it is noteworthy that in this thesis I do not distinguish consumers' true beliefs from the ones that are untrue. For example, if an interviewee believes that grey is the most common car colour, it is not important whether this is a fact or not because the only thing that is relevant for this study is how the interviewee perceives the phenomenon that is colour. Arguably, it is important for marketers to acknowledge that humans are not always rational and their perceptions of the world may be inaccurate yet personally perceived as "the truth" (Kahneman, 2011).

The analysis of the interviews also adopts a phenomenological approach (Hycner, 1985; Landridge, 2004) but is combined with Spiggle's (1994) qualitative analysis model in order to ensure that the analysis is rigorous enough and that no relevant steps are overlooked. Further details on the analyses are provided in Chapters 4 and 5.

1.2. Structure of the thesis

This dissertation is structured, as illustrated in Figure 2, on the basis of four themes: introduction and pre-understanding, methods of the empirical studies, findings and propositions, and conclusions. Chapters 1 and 2 provide the reader with necessary background knowledge on past research on the subject as well as on the research process. Chapter 3 introduces the methods chosen for the empirical studies, while Chapters 4 and 5 give more detailed information on the method and design of each individual study. Chapters 4 and 5 mainly focus on the findings and the resulting conceptual propositions, which are the core contributions of this thesis. Finally, Chapter 6 concludes the thesis and discusses avenues for future research.

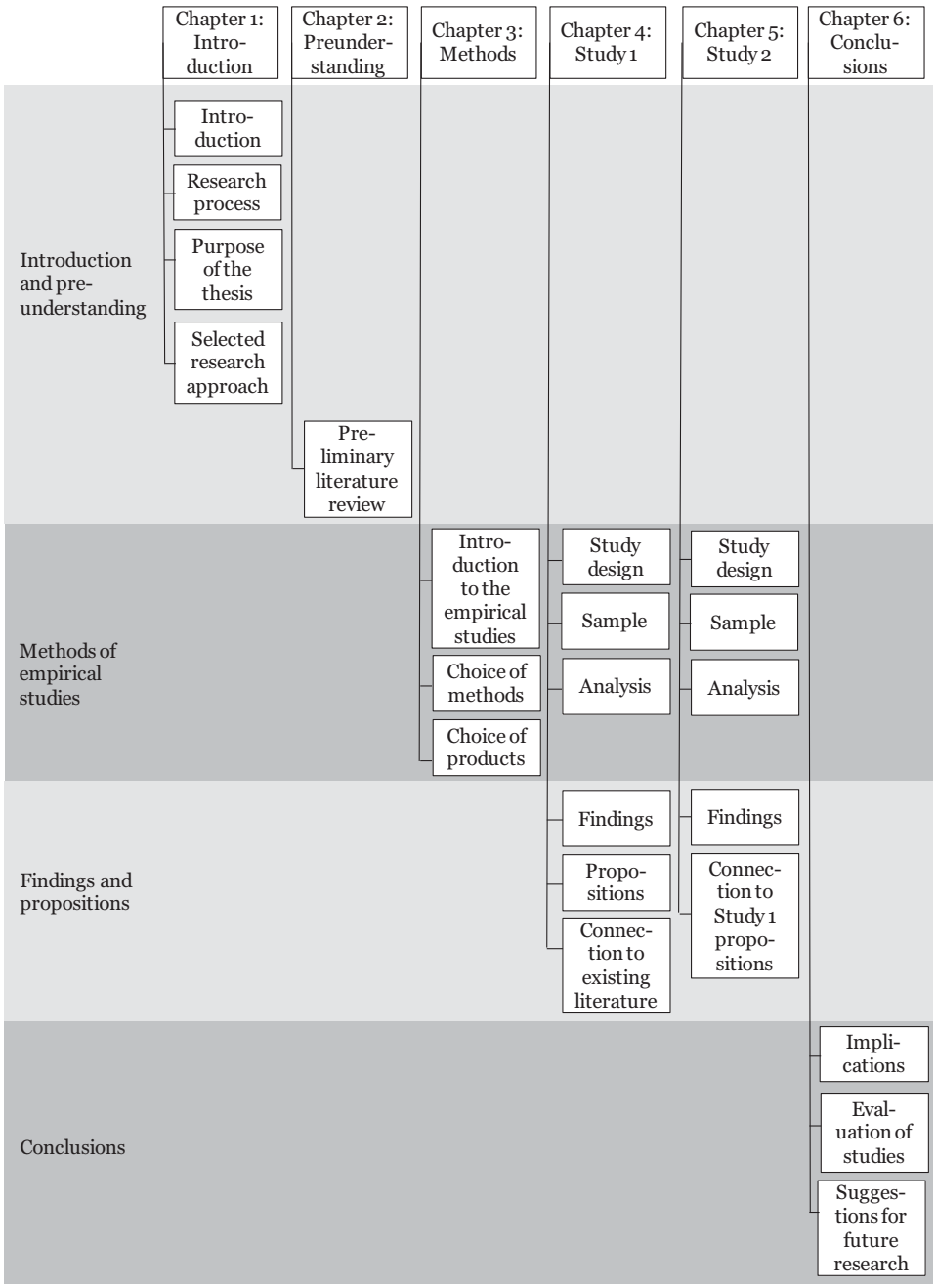


Figure 2 Structure of the thesis

In more detail, the current chapter, *Introduction*, provides an introduction to the subject and an understanding of how the research process started and developed. The purpose of the study is outlined and the selected research approach is introduced. Finally, key concepts are listed and clarified.

Chapter 2, *Gaining pre-understanding: a preliminary literature review*, presents an overview of the related colour literature, consisting of (1) the physiological effects of colour, (2) colour preferences, (3) the meaning of colour, (4) colour in retail environment, (5) colour in advertising, (6) colour in branding, (7) the relationship between colour and product perception, (8) the effect of colour on purchase intentions, finally, (9) an overview of consumer perceived value. The purpose of the preliminary literature review is to map what we know and do not know about colours and perceived value, rather than to provide an in-depth review of past research. Due to the inductive nature of the thesis, the particular findings are related to the existing literature in Chapters 4 and 5.

Chapter 3, *Methods*, introduces the empirical studies and establishes the motivation for (1) the choice of products and (2) the choice of research methods. The study design and methods of analysis of each empirical study are presented in greater detail in chapters 4 and 5.

Chapter 4, *Study 1*, presents the first empirical study. The purpose of the first study was to inductively explore how consumers perceived the value of the colour of products. First, the study design, the sample and the method of analysis are introduced. Following this, the chapter presents the findings and their connections to previous studies. Propositions presented in this chapter are based on the empirical study and the existing literature.

In Chapter 5, *Study 2*, the second empirical study is introduced. The purpose of Study 2 was to scrutinise (1) on what basis consumers categorise colours, (2) whether colour categorisations differ between product contexts, and 3) to compare consumers' categorisation of coloured products with the categorisation of colours without a product context (control group). Also here, the study design, the sample and the method of analysis are clarified, followed by the presentation of the findings of the second empirical study. Finally, the findings of Study 2 are discussed.

Chapter 6, *Conclusions*, summarises the thesis and highlights its contribution to colour research and perceived value research. Theoretical and managerial implications are presented separately. Finally, the trustworthiness of the results and suggestions for future research are discussed.

1.2.1. Clarification of key concepts

The following chapters introduce and discuss the key concepts of this thesis. However, the relevant concepts are shortly clarified here to provide the reader with an easy access to them:

Aesthetics: the word *aesthetics* has different meanings, and thus, it has been related to, for example, emotions (e.g. Bloch, 1995), harmony or congruence (see e.g. Creusen and Schoormans, 2005) and preference (Schloss and Palmer, 2011). In this thesis, aesthetics is a person's sense of beauty (Palmer, Schloss and Sammartino, 2013), an individual opinion on whether an object is pleasurable to look at (Holbrook, 1980). No associations or emotions are included in aesthetics in this thesis. Further, because this thesis acknowledges that consumers may simultaneously prefer different colours in three value dimensions – experiential, symbolical and functional –, a colour being attractive to a consumer (aesthetic colour preference, cf. experiential value) is considered as one of many forms of colour preference.

Colour: this thesis studies colour, not colours in plural. That is, this thesis does not treat colour as an assembly of hue (e.g. blue, red, green), value (lightness) and chroma (colour purity), but rather, colour is considered as a larger concept (see Funk and Ndubisi, 2006). The particular colours that consumers use, choose and talk about are not the focus of this thesis.

Colour preference: in the literature, colour preference typically refers to one's overall preferred colour (Hanari and Takahashi, 2013), also called overall favourite colour (Silver et al., 1988). However, consumers do not always prefer the same favourite colour for every purpose (Hanari and Takahashi, 2013) because they have different colour preferences for various product categories (Grossman and Wisenblit, 1999). Noteworthy, when presenting the findings of the empirical studies, the term *colour preference* is not used to refer to an overall favourite colour but to the most preferred colour in the particular context. Additionally, in colour studies, *colour preference* typically reflects colours that consumers like (e.g. Hanari and Takahashi, 2013; Saito, 1996b). The findings of this thesis indicate, however, that liking a colour is not synonymous with colour preference because consumer prefer colours in three value dimensions, of which *liking* covers only one.

Colour preference scale: the concept of a colour preference scale was originally used to demonstrate the relative rank order of seven colours according to subjects' (overall) colour preferences (Garth, 1922). However, in the findings of this thesis, consumers did not rank colours in linear order. Instead, they clustered colours onto three levels – desirable, tolerable and unacceptable – which resulted in a conceptual framework instead of a weighted rank order of pre-determined hues. Nonetheless, the term colour preference scale is considered appropriate for the framework because the scale demonstrates consumers' colour preferences.

Holistic approach to perceived value: in this thesis, the holistic approach to perceived value means that the thesis does not pre-position itself to any proposed logic (goods, service, customer), nor is it pre-fixed to any particular value determination outcome (such as means-end, price/quality ratio), but allows consumers to determine what constitutes perceived value. Additionally, this thesis does not limit the definition of perceived value to purchase or use, but rather, it acknowledges that value can emerge before purchase, in purchase, in use and after use (Sánchez et al., 2006) as well as in lived, prospective and imaginary experiences (e.g. Helkkula et al., 2012).

Symbol: the word *symbol* can be used when an object (or a colour in this thesis) not only represents itself but also signals something else (Levy, 1959). While some scholars distinguish between colour *meaning*, *emotion*, *association* and *cultural effect*, others use the terms interchangeably (see e.g. Madden, Hewett and Roth, 2000) or group some of them together (see e.g. Aslam, 2006) to refer to a larger phenomenon. This thesis does not separate the concepts of colour meaning, emotion, association and the role of culture but acknowledges that they are examples of the symbolically perceived value of colour.

2 GAINING PRE-UNDERSTANDING: A PRELIMINARY LITERATURE REVIEW

This chapter maps what we know and do not know about colours and perceived value, on a general level. It provides a brief overview of the author's pre-understanding of colour studies in relation to this thesis and highlights the important research gaps from a marketing point of view.

Several search engines were used to find relevant literature. The entries used in the search engines were, for example, "colour, marketing", "colour, consumer", "colour, value", "colour, perceived value" and "colour, advertising". Variations of these entries were also used, such as replacing "colour" with "color" and combining the entries, such as "colour in consumer perceived value". After processing the literature which was provided by the search engines, the reference lists of each article were analysed in order to find new relevant items (Hart, 1998), and this step was repeated with all the relevant articles found in the reference lists. Additionally, suggestions from colleagues and feedback from conferences were used to identify the key studies within the field.

The literature review is organized as follows. It first presents the effects of colour on consumers; thereafter, the perceived value literature is introduced. The colour literature is divided into eight research streams. Drawing on the advertising literature, the colour studies are categorized into upstream and downstream effects (see e.g. Brown and Stayman, 1992). In short, this means that the upstream effects (the physiological effects of colour, colour preferences and colour meanings) do not necessarily affect the consumer perceived value of product colour directly but alter consumers' general colour perceptions, thereby affecting and triggering downstream effects (the effects of colour in the retail environment, advertising, branding, on product perception and on purchase intention). This can be thought of as mediating the general effect of colour on the perceived value of the product. Downstream effects are often mentioned in the advertising (e.g. Bhat, Leigh and Wardlow, 1998; Brown and Stayman, 1992; Kamp and MacInnis, 1995; Orth and Holancova, 2003; Orth, Malkewitz and Bee, 2010; Puzakova, Rocereto and Kwak, 2013), marketing communications (e.g. Hung and Li, 2007; Singh, Dalal, Mishra and Patil, 2005) and consumer behaviour literature (e.g. Liu and Aaker, 2008; Van Kerckhove, Geuens and Vermeir, 2012).

With regard to the perceived value, the review is organized so that it first discusses the general themes of value creation and value outcome determination (see e.g. Gummerus, 2011). Thereafter, the phenomenological and experiential nature of perceived value are discussed, and the adopted holistic view on perceived value is introduced (see e.g. Helkkula et al., 2012; Sánchez et al., 2006; Vargo and Lusch, 2008).

Figure 3 illustrates the conceptual structure of this literature review. It shows that a pre-understanding of the consumer perceived holistic value of product colour can be formed by summarizing the known effects of colour as per colour research on consumers as well as consumer perceived value research. Further, the upstream effects of colour may directly influence the consumer perceived holistic value of product colour, or indirectly through the priming of downstream effects.

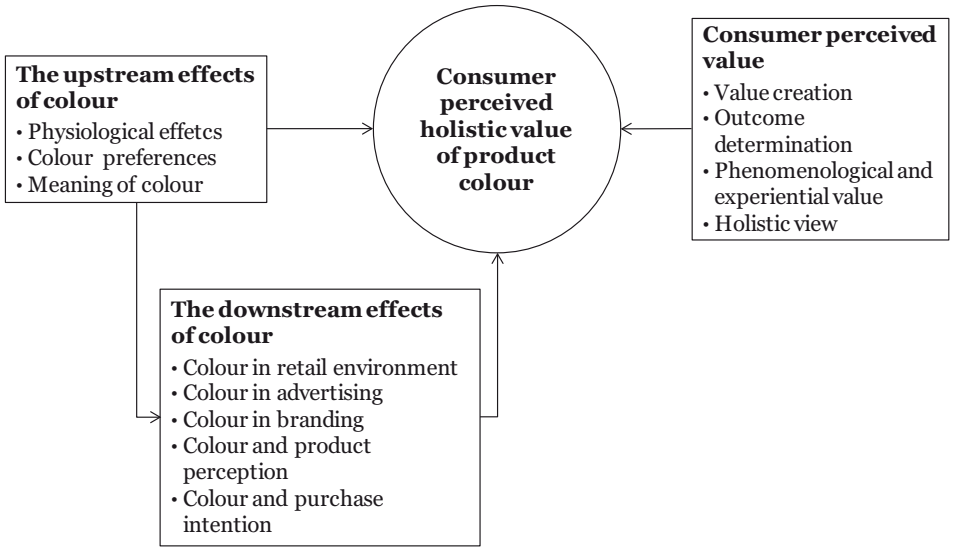


Figure 3 Literature that forms the pre-understanding of consumer perceived holistic value of product colour

The following sections discuss the literature regarding three upstream effects of colour (physiological effects, colour preferences and the meaning of colour) and five downstream effects of colour (colour in the retail environment, colour in advertising, colour in branding, colour and product perception and colour and purchase intention). The aim of this chapter is not to present an exhaustive review of all existing research; rather, it provides an overview of existing research streams with example studies.

2.1. The upstream effects of colour

In this thesis, the physiological effects of colour, colour preferences and the meaning of colour are considered upstream effects, which can have a direct or indirect effect on the perceived value of product colour. Upstream effects are more difficult for firms to manage than downstream effects because they stem from sources that firms cannot control. The upstream effects are presented next.

2.1.1. The physiological effects of colour

Although the purpose of this thesis is not to detect the physiological effects of colour and it does not scrutinise the physiology of colour vision, the physiological effects of colour are nevertheless considered as an important stream within colour research.

Studies show that colour has an impact not only on our thoughts but also on our physique. Scholars have found, for example, that red and green increase physiological arousal (GSR) more than blue (Jacobs and Hustmyer, 1974); red and yellow are found to increase anxiety levels more than blue and green (Jacobs and Suess, 1975); exposures to pink tones tends to inhibit muscle strength, whereas blue colours tend to increase it (Smith, Bell and Fusco, 1986). Dr. R. Beau Lotto also launched an array of

experiments in collaboration with the BBC in filming the programme *Horizon: Do you see what I see?*[1] and found that colour affects the sense of time passing by.

Colour can also affect performance and judgment. Hill and Barton (2005a) find that wearing red enhances sports performance, whereas Greenlees, Eynon and Thelwell (2013) propose the other side of the coin, that seeing red impairs the performance of the opponent. Similar findings are reported by Elliot, Maier, Moller, Friedman and Meinhardt (2007) and Maier, Elliot and Lichtenfeld (2008) who report that seeing red also impairs intellectual performance. Hagemann, Strauss and Leißing (2008), however, suggest that in the context of combat sports red does not actually affect performance but influences how well referees can see players, and thus, how they give points to contestants. Also, Rowe, Harris and Roberts (2005) suggest that visibility is essential in the results of combat sports games. They find that blue sportswear results in winning more often than white sportswear. They assume that the result is due to the contrast between the dark background and the white sportswear, in that, the player who is wearing blue is better able to see the quick movements of the player wearing white. Hill and Barton (2005b) and Attrill, Gresty, Hill and Barton (2008) argue that colour visibility is a less likely explanation and the colour effect is probably due to hormonal influences, and psychological effects such as the meanings associated with colours. The psychological effect of colour has also been predominant in a study by Hurlbert and Ling (2005), who reveal that evaluations of objects' colours under changes in lighting are not consistent with evaluations of colour patches. They conclude that the evaluated objects, and our knowledge of those objects, influence which colours we think we see, which suggests that colour is not perceived only through sensory mechanisms.

While this thesis acknowledges that colour has a physiological influence on consumers, the psychological effects – such as preferences and meanings of colour – are at the centre of this thesis and also the main focus of this chapter. The next section presents studies on consumer colour preferences.

2.1.2. Colour preferences

Colour preference has been widely studied over the past century. It typically refers to one's overall preferred colour (Hanari and Takahashi, 2013) – also called overall favourite colour (Silver et al., 1988) and absolute choice (Birren, 1945) – and is studied by exploring which colours consumers like (e.g. Hanari and Takahashi, 2013; Saito, 1996b). While early studies on colour preference claimed that there were no universally preferred colours, Eysenck (1941) shows a consistent rank order of colour preferences: blue, red, green, purple, orange and yellow. In a study by Silver et al. (1988), nine overall favourite colours were preferred regardless of the gender and race of the participants. Hemphill (1996), in turn, has found that blue was universally preferred. Ou, Luo, Sun, Hu, Chen et al. (2012) have found only mild differences in colour preferences between eight countries, and Saito (2013) has found that while white was commonly preferred in Asia, the more universally preferred blue was also highly preferred in Asian areas.

However, there are other findings that suggest that colour preferences are not universal but can vary between cultures. Choungourian (1968) finds definite cultural differences in preference of eight colours between four countries; Reddy and Bennett (1985)

[1] http://www.lottolab.org/articles/publiccolour.asp (accessed August 5th, 2013, first broadcast in the UK in August 2011 and in Finland in July 2013)

discover that Indians, Nigerians and Americans prefer different sets of colours; Saito (1996a, 1996b) finds both differences and similarities in colour preferences in China, Indonesia and Japan (1996a), as well as in Tokyo, Seoul and Taipei (1996b); Madden et al. (2000) discover that the liking of certain colours was consistent within eight countries, while the preference of other colours varied across the countries; Taylor, Clifford and Franklin (2012) find prominent differences in the colour preferences of the British and a non-industrialised Himba culture in Namibia.

In addition to cultural differences in colour preferences, other factors have also been taken into account in research. For example, scholars have studied the role of gender (Choungourian, 1968; Funk and Ndubisi, 2006; Ling, Hurlbert and Robinson, 2006) age (Adams, 1987; Dittmar, 2001), education (Garth, 1922) and sexual orientation (Ellis and Ficek, 2001) in colour preferences.

While colour preference studies mainly concentrate on the most preferred colour, Hanari and Takahashi (2013) point out that consumers do not always choose the same favourite colour for every purpose, and therefore, they call for further research on the pattern of preference for several colours. In their study, they created individual preference profiles, which illustrated the quantitative degree of preference for twelve basic colours over a thousand subjects. The profiles were then used to identify several colour preference styles. By comparing the colour preference styles, Hanari and Takahashi (2013) were able to distinguish the characteristics of each style, such as clear discrimination of the least favourite colour or selective colour preferences.

The colour studies mentioned thus far have sought to learn consumers' overall colour preferences, although Hanari and Takahashi (2013) acknowledge that studying favourite colours is not sufficient to understand consumer colour perception. What these studies fail to disclose is the relationship between an overall favourite colour and colour preference in relation to products. Consequently, scholars have found that although consumers generally *like* their overall favourite colours across product categories (Holmes and Buchanan, 1984; Saito, 1983), they do not necessarily *prefer* the overall favourites and often prefer other colours (Grossman and Wisenblit, 1999; Holmes and Buchanan, 1984; Saito, 1983). Therefore, from a marketing point of view it is not sufficient to learn consumers' overall favourite colours (Grossman and Wisenblit, 1999).

Additionally, scholars have recently suggested that instead of studying the liking of colours, colour preference research should acknowledge that consumers may prefer colours because of the agreeable associations that the colours evoke (Palmer and Schloss, 2010) or the emotions that are related to colours (Ou, Luo, Woodcock and Wright, 2004). Colour-related associations and emotions are discussed in the next section.

2.1.3. The meaning of colour

Although consumers' responses to colour are not fully understood (Grossman and Wisenblit, 1999), colour meanings are studied to learn which associations (Grossman and Wisenblit, 1999) and emotions (Levy, 1984) colours provoke. It is suggested that consumers prefer colours that create agreeable emotions (Ou et al., 2004) or associations to something pleasant (Palmer and Schloss, 2010).

Studies show that warm colours generally prompt associations and emotions opposite to those provoked by cold colours (Bellizzi and Hite, 1992; Levy, 1984; Middlestadt, 1990). For example, red is typically related to passion (Caivano, 1998), danger (Bradford, 1913; Heath, 1997) and stimulation (Stone and English, 1998), whereas blue is associated with calmness (Manav, 2007), serenity (Crozier, 1999), relaxation and pleasantness (Bellizzi and Hite, 1992). These findings suggest that colour meanings can be universal, a perception shared by ancient oriental and occidental colour theories which argue that the wavelengths of colours affect the human body through specialised energy fields, and therefore, colour perception is objective rather than subjective (Klemm, 2013).

Notwithstanding, several studies reveal that colour associations are not fixed, that instead, a colour may provoke different associations altogether. For example, red does not only evoke associations of danger (Bradford, 1913) or passion (Caivano, 1998); it can also evoke associations of love (Elliot and Maier, 2007) and happiness (Soldat, Sinclair and Mark, 1997), whereas blue, while sometimes referring to calmness (Manav, 2007) and serenity (Crozier, 1999), can imply depression and sadness (Kaya and Epps, 2004). Similarly, green is commonly related to envy, but it also can represent hope and comfort (Kaya and Epps, 2004). Black implies death (Saito, 1996b), grief and fear (Aslam, 2006) but also nobility (Saito, 1996b), wealth (Kaya and Epps, 2004) and power (Aslam, 2006). Whereas yellow is often related to cowardice (Caivano, 1998) and jealousy (Aslam, 2006), it can communicate good cheer as well (Manav, 2007; Wexner, 1954).

An explanation for the inconsistent findings could be found in cultural differences. Although Adams and Osgood (1973) suggest in their cross-cultural study that there are strong similarities in the meanings of colours, Aslam (2006) has found that while the meanings of certain colours are more universal, other colours carry different meanings in various cultures. Furthermore, even the mechanism behind colour meanings can vary across cultures. Taylor, Clifford and Franklin (2012) have found that while the ecological valence theory (Palmer and Schloss, 2010) applies to British consumers – that is, consumers generally like colours which evoke associations of pleasant objects of such colour – a similar colour-association valence has been not found in a non-industrialised Himba culture in Namibia.

However, it is acknowledged that colour associations can vary not only between cultures but between individuals according to their sensitivity to colours and past experiences (Bradford, 1913). Therefore, cultural differences do not provide a coherent explanation for the varying colour meanings.

Associative learning: towards downstream effects

Scholars provide associative learning (Crozier, 1999; Grossman and Wisenblit, 1999) as an explanation for varying colour meanings. Associative learning suggests that consumers learn to relate certain colours to certain contexts. Associative learning can stem from several sources. First, certain colour associations are developed through evolution, such as bright colours of flowers aimed at attracting a pollinating subject (Humphrey, 1976) or the contrast of the colour of edible food against its background (Ling, Hurlbert and Robinson, 2006). Second, some colour associations derive from society's norms, for example, traffic lights have taught us that green means safe, whereas yellow instructs us to be careful, and red signals danger (Caivano 1998). Third, cultures guide colour preferences by setting particular cultural values and symbolic

meanings to colours (Aslam, 2006). Reddy and Bennett (1985) have found that Indians, Nigerians and Americans prefer different elements (lightness, saturation, hue) of colours; both Saito (1983) and Ou, Luo, Sun, Hu, Chen et al. (2012) discovered that cultural background can influence the liking and disliking of colours. Fourth, any sub-culture may develop its own symbolic colour meanings. For example, Koller (2008) has found that the colour pink has a very different symbolic meaning amongst homosexuals in comparison to heterosexuals. Saito (1996b), in turn, discovers that housewives, as a group, have dissimilar colour preferences to those of students. Fifth, a person's individual experiences affect the associations that a colour evokes (Plamer and Schloss, 2010) as well as their colour preferences (Bradford, 1913; Palmer and Schloss, 2010).

While the aforementioned forms of associative learning are categorised here as upstream effects of colour, that is, consumers' general colour perceptions that do not necessarily directly translate to product experience, other forms of associative learning can be interpreted as downstream effects; companies can affect the associations that are formed in the minds of consumers and thus alter their product-specific perceptions of colour. For example, associative learning may stem from marketing efforts when a marketer develops an association between a certain colour and a certain product(-category) through branding and image management, so that consumers relate, for example, red with Coca Cola (Grossman and Wisenblit, 1999). To their advantage, marketers can also relate colours with words that describe them. For instance, in anticipation of a governmental ban against using the word "light" on tobacco packages, tobacco companies started using light colours on packages instead.[2] In the English language, the word "light" can refer either to the value of colours (lightness or brightness) or the lower level of nicotine and tar in cigarettes. Finally, the fashion world is able to suggest which colours are acceptable (Mundell, 1993), and thus, educate consumers to prefer certain colours. Saito (1996b), for example, has found a relationship between consumers' colour preferences and sensitivity towards, and interest in, fashion.

It is important to acknowledge that varying meanings of a colour are not mutually exclusive. Rather, a colour has several meanings not only in the universe but also in the minds of each individual. For many consumers, colours evoke different associations when presented generally, such as on a colour chip, and in a particular context. For example, while red might generally evoke associations of danger, in the context of beverages consumers often associate red with soft drinks in general and with Coke in particular (Grossman and Wisenblit, 1999); in the context of holidays, red is often associated with Christmas (Gorn et al., 1997); and in the context of country of origin, red often evokes associations with China (Grossman and Wisenblit, 1999). The context-related perceptions of colour may also be contradictory, for example, red can signal the long-term success of sports teams (Attrill et al., 2008), but it can also be associated with failure (Moller, Elliot and Maier, 2009).

The inconsistency in the findings suggests that learning what kind of associations colours evoke in general or in particular settings is not sufficient to understand how colour is perceived. What is needed is an understanding of how consumers deal with the varying associations. Arguably, it is unlikely that when exposed to a colour a consumer thinks through all the possible associations and selects one out of many options. The response seems more immediate and automatic. Kahneman (2011) proposes that the human brain functions on two levels: an automatic system (System 1) and an effortful system (System 2). System 1 is responsible for humans' automatic

[2]http://usatoday30.usatoday.com/news/health/2010-06-14-lightcigarettes14_ST_N.htm?csp=usat.me%20[2013,%201/24] (Accessed September 20th, 2013)

behaviour and reactions; it requires very little effort – if any – and it cannot be switched off. System 2, in turn, is activated when an immediate response is not found in System 1. System 2 requires effort and conscious thinking. Kahneman (2011) emphasises that there is a *law of least effort* which means that System 2 will not activate itself unless absolutely necessary, which is why people often rely on the quick answers provided by System 1. Arguably, colour associations can be regarded as intuitive and automatic reactions which are guided by System 1. When asked about colour associations, a consumer's System 2 is unlikely to activate and go through all possible associations, but System 1 quickly lands on the one that fits the context. When context is not given, for example, when a subject is shown a colour chip, the brain may borrow the context from an event that occurred earlier. The so-called priming effect (Collins and Loftus, 1975; Kahneman, 2011) enables System 1 to recall a context from the recent past and apply it to the given task. For example, the alternative associations that the colour red evokes are, among others, fire, berries, sunsets and roses, whose connotations are all very dissimilar (Collins and Loftus, 1975). In its simplest form, the priming effect means that the subject who has seen a fire truck on his way to meet the researcher might respond differently to a red colour chip compared to the subject who walked past a flower shop on his way, or the one who had a berry smoothie for breakfast.

Additionally, in considerations of consumer perceptions, it is important to acknowledge that when exposed to stimuli, the human brain generates imageries, and while some imageries are retrieved from actual events in the past, the human brain can also create fantasy imageries which have not actually taken place but are experienced as mental phenomena (Hirschman and Holbrook, 1982). Therefore, a holistic approach on consumer perceived value of colour is needed to gain a coherent understanding of how consumers perceive colour in relation to products. The consumer perceived value is discussed in greater detail later in this chapter.

To conclude, research, in general, and marketers, in particular, need to acknowledge that (1) colour associations are not universal, (2) colour associations are not only culture-dependent, they are also context-dependent, (3) colour associations are likely to be intuitive and not a result of conscious thought processes, and (4) consumer perceptions are not necessarily rooted in actual events but can be imaginary.

This suggests that the upstream effects of colour alone do not explain the consumer perceived value of product colour. Rather, they likely alter consumers' general colour perceptions and thereby affect and trigger more product-specific downstream effects, such as product colour perception, which mediate the effects on the perceived value of product colour. The downstream effects of colour are discussed next.

2.2. The downstream effects of colour

As illustrated in the previous section, knowing about the upstream effects of colour is not necessarily sufficient to fully understand the full effect of colour on consumers. Upstream effects may or may not affect the perceived value of product colour directly. For example, consumers often prefer other colours besides their overall favourite for a particular product, and a colour may evoke different associations in general and on a particular product because consumers are affected by advertising and fashion.

Unlike upstream effects, companies can, to some extent, control the downstream effects of colour; they can decide on the colours of their store interior, logo and advertisements

although they cannot control how these colours are perceived by consumers. Marketing research has studied the effects of colours on consumers in the context of retail, advertising and branding in order to reveal how particular colours are perceived and how they affect consumer behaviour. However, the findings are typically inconclusive, and findings in one context are not necessarily transferable to other marketing situations. It is difficult to conclude when the research findings are universal and when they are due to, for example, cultural issues, associative learning, product-category specific issues or something else altogether. Because research findings are generally inconclusive, they do not provide a general explanation for which colours should be used in marketing contexts. More importantly, they provide even less information on what consumers value in colour or how they evaluate product colours. Consequently, there have been calls for more research on colour in marketing (Funk and Ndubisi, 2006; Labrecque et al., 2013). As such, this thesis does not study particular hues; it studies colour as a larger concept. To my best knowledge, at the time of this study, there was no literature stream examining how consumers perceived colour as a concept.

First, this section describes findings from colour studies in retailing, advertising and branding. This thesis does not study colour in these particular environments, but since colour has been considered important within these fields, the corresponding research is briefly described. The studies presented in the review do not cover the fields as a whole; they are examples of the kinds of studies that have been conducted. Importantly, they reveal that colour does, in fact, have noticeable impacts on consumers, their perceptions and behaviour. Therefore, it is expected that product colour also has an impact on consumers, precisely the focus of this thesis. The reviews provide background information on how the effect of colour on the retail environment, advertising and branding are addressed in this thesis.

Second, two downstream effects that are considered particularly important for this study are introduced, namely, the relationship between colour and product perception and the effect of colour on purchase intentions.

2.2.1. Colour in the retail environment

The previous section of this chapter showed that colour had important upstream effects on consumers. In addition, marketers use colours to attract consumers. Because designing retail environments in a way that is likely to create a desired effect in customers is a powerful marketing tool (Kotler, 1973-1974), the colour of the interior design is expected to have downstream effects on consumers.

However, in many studies, colour has been included as only one item among many, and the specific effect of colour on consumers cannot be determined. For example, Wakefield and Baker (1998) show that the interior design and décor of malls have a significant impact on consumer perceived excitement (only design had an impact) and desire to stay (only décor had an impact). However, only one of their design and décor constructs (namely "The interior wall and floor color schemes are attractive") included colour explicitly. Other design and décor constructs (such as "This mall is decorated in an attractive fashion" and "The overall design of this mall is interesting") likely capture consumer perceptions of the colours used in the décor and design, but no direct effects of colour can be assumed on excitement and the desire to stay. In other cases, colour is not specified but may be indirectly present in other constructs. For example, Mazursky and Jacoby (1986) reveal that the subjects used a store's interior design as a cue to

evaluate the quality of the merchandise and the pleasantness of shopping, albeit not specifically investigating colour.

Scholars have studied colours in retail environments more specifically and have found that cool colours outperformed warm colours in terms of purchase intentions (Bellizzi et al., 1983; Bellizzi and Hite, 1992; Middlestadt, 1990) and favourable evaluations and excitement (Babin et al., 2003). Some studies have shown the interaction effects of colour and other interior design elements. The findings of Babin et al. (2003) changed when the impact of lighting was considered along with colour; although cool colours outperformed warm colours in terms of favourable environment evaluations and excitement when lighting was held constant, an orange interior combined with soft light produced similar findings as a blue interior and even outperformed the blue interior in terms of perception of fair price. Chebat and Morrin (2007), in turn, have found a cultural difference in consumer reactions to the colours of mall décor; their French-Canadian subjects perceived higher product quality in a cool coloured décor whereas the Anglo-Canadian subjects expressed higher product quality perceptions in a warm coloured décor. The inconsistency of the findings indicates that the effect of colour on the retail environment is yet to be fully understood.

Further examples of colour studies in retail highlight that extreme wavelengths (red and blue) are perceived as active environments and that wavelengths that are closer to blue are found to evoke more positive evaluations than wavelengths that are closer to red (Crowley, 1993); that atypical colour names, such as 'blue haze' or 'Alpine snow' increase consumers' purchase intentions (Miller and Kahn, 2005); that the background colour of a website influences the choice of products that are purchased on this website (Mandel and Johnson, 2002) and that male consumers tend to perceive greater savings when prices are presented in red instead of black (Puccinelli, Chandrashekaran, Grewal and Suri, 2013).

Thus, studies in retail have demonstrated that colours do have an effect on consumers' beliefs and behaviour in that environment although a consensus on which colours retailers should use in their environment design to best persuade customers is yet to be reached. While the retail environment is not the focus of this study, it is acknowledged that consumer perceptions of products and the colour of products may also be affected by the retail environment, including its colour.

2.2.2. Colour in advertising

In advertising, colour is considered to be one of the most important factors in creating an ad (Schiller, 1935) because colours are more easily preserved in memory than words or symbols (Birren, 1945). Indeed, the advertising literature has addressed the role of colour extensively.

Some scholars believe that generally preferred colours (overall favourites) should be used in advertising (e.g. Lee and Barnes, 1989) while others acknowledge that the context affects how colour is perceived. For example, Schiller (1935) has studied which colour combinations consumers find appropriate for certain qualities and commodities in advertising. She has found that, for example, the combination of yellow and green was considered appropriate for qualities, such as economy and cleanliness, and commodities, such as soap and breakfast food; however, colour combinations which included silver were suitable for qualities, such as luxury and dignity, and commodities, such as perfume. She concludes that the appropriateness of the colour combinations

varies according to the use to which they are put, and past experiences extensively influence the perceived appropriateness. The finding supports studies which propose that consumer perception of colour is affected by their past experiences (Bradford, 1913; Palmer and Schloss, 2010), associative learning (Crozier, 1999; Grossman and Wisenblit, 1999) and the priming effect (Collins and Loftus, 1975; Kahneman, 2011). Having said that, Schiller also points out that the intrinsic (un)pleasantness of colours and the harmony of colour combinations affects the perceived appropriateness, implying that some of these (un)pleasing and harmonious perceptions are more universal than others. Gorn et al. (1997), in turn, have studied the hue, value and chroma of colours in advertising and have revealed that a high level of (colour) value increased the likability of the ad, and a high level of chroma evoked greater feelings of excitement, thereby leading to greater likability. Other studies, however, have not found significant differences between colours in terms of the effectiveness of advertising (e.g. Dunlap, 1949).

In addition to comparing colours with each other, several studies have compared coloured print advertisements with black-and-white advertisements. Coloured ads were found to outperform black-and-white ads in terms of maintaining familiar brands' reputation for quality (Warner and Franzen, 1946), ad likability and the attractiveness of the advertising company and the advertised product (Gardner and Cohen, 1964), increasing sales (Sparkman and Austin, 1980), evoking an emotional response to the advertised product (Percy and Rossiter, 1983) and enhancing consumer attitudes towards the advertisement and the advertiser as well as perceptions of quality and credibility (Lohse and Rosen, 2001). However, coloured ads were not superior in creating an association between the advertised product and the trade name when promoting a new brand (Warner and Franzen, 1946), in adding to the prestige of the advertising company (Guest, 1966) or in affecting consumer attitudes when product familiarity was high (Jain, Roy and Pant, 2013). The effect of colour on the persuasiveness of advertisements was found to depend on the viewer's engagement and available resources (Meyers-Levy and Peracchio, 1995).

Taken together, it can be concluded that ad colour does have an impact on consumers, but no general conclusion regarding how it affects the value of products, or the value of product colour, can be drawn from these studies. Like in retailing, the context can also be deemed important in advertising for consumers' perception of colour.

While this thesis does not study the colours that are used in car and mobile phone advertising, it is acknowledged that those colours may affect consumer perceptions of colour in relation to these products. For example, the cyan colour is used extensively in Nokia's mobile phone advertising. Although the focus of this thesis is not on colours in advertising, they are not ignored if they emerge in the findings. It is acknowledged that the colours used in advertising may have an impact on consumer perceptions and thereby on consumer perceived value of product colour.

2.2.3. Colour in branding

Research shows that brand colours help consumers identify brands (Abril, Olazábal and Cava, 2009), influence consumer brand perceptions (Labrecque and Milne, 2012), and enable marketing efforts to perform in an intended way when colour has a distinct purpose in supporting a company's strategy (Geboy, 1996). Additionally, consumers find it appropriate to match logo colours with the attempted positioning of the brand (Bottomley and Doyle, 2006). However, the findings are inconclusive and mostly

provide information on particular items (specific colours, brands and product categories), yet it seems that there is no coherent understanding of the relationship between colour and branding. For example, scholars have revealed that logo colours can help some international brands communicate their brand identity, but not necessarily others (Grimes and Doole, 1998); Differentiating a brand colour from product category norms may be beneficial in some product categories but not in others (Labrecque and Milne, 2013); The hue of a logo, its value and chroma affect consumers' perceptions of brand personality, in that, for example, a combination of purple hue, low saturation and high value in the context of condoms is considered more sophisticated than a combination of red hue, high saturation and low value (Labrecque and Milne, 2012); Consumers find it appropriate to combine functional colours with functional products and social-sensory colours with social-sensory products, in that, a blue logo, for example, is considered more appropriate for brands whose desired image is to be functional (Bottomley and Doyle, 2006).

While logo colours of car and mobile phone companies are not expected to affect the findings of this study, it is acknowledged that certain brand colours may appear in the findings. That is, it is likely that the subjects of the empirical studies are aware of, for example, Ferrari's red, Lamborghini's yellow, Volkswagen Beetle's funky colours, Apple's white and Lumia's cyan. This thesis does not focus on brand colours, but does not ignore them either should they emerge in the findings. Rather, this thesis acknowledges that brand colours may influence consumer perceptions.

2.2.4. The relationship between colour and product perception

Besides brand image, colour can affect consumers' perceptions of the product's features. Bottomley and Doyle (2005) have shown that consumers find it more appropriate to combine colours which are regarded as functional (as opposed to sensory-social) with products that are also considered functional (as opposed to sensory-social), while sensory-social colours are more appropriate for sensory-social products. Kauppinen-Räisänen and Luomala (2010), in turn, discovered that in the context of medicine, the colour of a package influences consumer perceptions of the product inside, its taste and its effects. In a 1950s study on Cheer detergent, consumers were allowed to test detergents of different colours. Consumers assessed the blue detergent as appropriate for cleaning clothes, the yellow was said to leave stains and the red was claimed to damage clothes, although the three detergents were identical apart from the colour (Heath, 1997).

To my best knowledge, the colour of cars and mobile phones does not communicate actual features of the products, unlike food colour, for example, which is often used to identify flavours (Garber et al., 2000). However, because of the strong effect of colour on product perception, it is acknowledged in this thesis that colour could have an influence on consumers' perceptions of the products' features if, for example, a person perceives red cars as faster than others, whether true or not.

Although it is evident that colour affects product perception, colour chips are often used in colour research even though they do not necessarily sufficiently replicate a desired context. To have a practical implication in marketing, consumer colour perception typically needs to have interpretive significance, and thus, colour perception cannot be asked independently of the object but rather, colour perception is a function of the determined object (Holmes and Buchanan, 1984). Colour chips are, for example, generally assessed as more beautiful, elegant and discreet compared with the same

colour on an object (Taft, 1997). Similarly, while consumers often pick an overall favourite colour from colour chips, the overall favourite does not necessarily translate into various product categories (Holmes and Buchanan, 1984), and consumers do select different colours for different products (Grossman and Wisenblit, 1999; Holmes and Buchanan, 1984; Saito, 1983), which indicates that colour chips are not necessarily appropriate when studying colour in relation to products.

2.2.5. The effect of colour on purchase intentions

Overall, colour is a powerful tool for marketers, and its effects should not be underestimated. Importantly, colour can guide consumers' purchase behaviour. The previous sections showed, for example, that consumers are more likely to make a purchase in stores with cool-coloured interiors as opposed to warm-coloured stores (Bellizzi et al., 1983; Bellizzi and Hite, 1992; Middlestadt, 1990); that atypical colour names increase consumers' purchase intentions (Miller and Kahn, 2005); and that coloured ads increase sales more than black-and-white ads (Sparkman and Austin, 1980).

Nevertheless, it is noteworthy that consumers perceive value and evaluate products differently when making purchase decisions compared to experiencing the product during or after use (Woodruff, 1997; Oliver, 1977). For example, in Oliver's (1977) study, consumers evaluated an automobile before using the vehicle and a second time after a test drive. The findings show that a level of expectations caused changes in post-exposure judgments when other factors were held constant. Similarly, Gardial et al. (1994) have studied both positive and negative evaluations of cars and shoes before and during or after use, and have found essential differences between respondents' pre-purchase and post-purchase evaluation criteria. Landwehr, Wentzel and Herrmann (2013), in turn, studied consumer preference of typical and atypical product designs and found that longer exposure to products changed the likeability of the product designs. Therefore, it is not sufficient to study consumers' purchase behaviour or to ask them to evaluate colours before or in purchase because their perception of colour may change when they use the products. Cars and mobile phones, in particular, need to be studied in a way that does not exclude either the purchase or the usage situation because consumers tend to use these products for years, if not decades.

As was proposed in the beginning of this chapter, the consumer perceived holistic value of product colour is conceptually positioned in the intersection of colour literature and the perceived value literature. While this section introduced colour's downstream effects, that is, how colour is used by firms to persuade customers and what we know of these persuasion effects, the next section presents the perceived value literature, first in general focusing on value creation and value outcome determination, after which the contextual nature of value is highlighted in the holistic view on value, which emphasizes the phenomenological and experiential nature of perceived value.

2.3. Consumer perceived value

This thesis studies product colour through the lens of consumer perceived value and suggests that by studying consumer perceived value of product colour, it is possible to gain a deeper understanding of colour's importance for marketing, beyond focusing on particular hues. The purpose of this thesis is to inductively study how consumers perceive the value of colour in relation to products, and thus, no pre-fixed perspective

on perceived value is adopted. Rather, this compact literature review, which considers perceived value, acts as background information to help the reader understand the scope in which this thesis is positioned. Additionally, in Chapter 4 the findings of the first empirical study are analysed in connection with the existing value literature.

The concept of consumer perceived value is often insufficiently defined (Sánchez-Fernández and Iniesta-Bonillo, 2007), and several suggestions have been made by scholars. In her literature review, Gummerus (2011) categorises value research into two streams: creation process and outcome determination (for a full review, see Gummerus, 2011). The creation process refers to who creates value (company, customer or both), while the outcome determination summarises several suggestions of how consumers determine and evaluate the end result of value creation.

According to the traditional marketing view (goods-dominant logic), companies create value for customers, and thereby achieve competitive advantage (Gummerus, 2011), as suggested, for example, in Porter's competitive advantage framework (Porter, 1985), the resource-based approach (see e.g. Barney, 1991), and resource advantage theory (Hunt and Morgan, 1995, 1996). However, a new stream of research has since challenged the traditional company-oriented perspective and has proposed a service(-dominant) logic view on value (hereafter, S-D logic) (Grönroos, 2006, 2011; Normann and Ramirez, 1993; Vargo and Lusch, 2004, 2008). The S-D logic suggests that as opposed to viewing value as an embedded attribute that is exchanged in a purchase situation, value is being created through the interactions between customers and companies (Kowalkowski, 2011). Yet, a third research stream argues that the S-D logic fails to understand what customers do with goods and is thus insufficiently customer-oriented. This stream proposes an alternative concept, the customer-dominant logic (hereafter, C-D logic) (Heinonen et al., 2010). Through the C-D logic approach, it is possible to understand how value emerges for customers and how customers construct their experiences through sense-making processes (Heinonen et al., 2010).

Outcome determination of perceived value is traditionally seen as a cognitive trade-off (Sánchez-Fernández and Iniesta-Bonillo, 2007; Zeithaml, 1988), in that, consumers weigh the benefits of purchasing a product against sacrifices that they have to make (Gummerus, 2011). Sacrifice can be viewed in monetary terms, as in price-based studies (see e.g. Cravens, Holland, Lamb and Moncrief III, 1988; Dodds and Monroe, 1985; Monroe and Chapman, 1987), but it can also be non-monetary (Woodall, 2003). Another stream of value outcome determination is consumers' tendency to evaluate outcomes on several abstraction levels. According to this means-end theory, consumers perceive value by usually starting from a product attribute (simple level) and end up with a practical benefit (more complex level) or emotional payoff (the most complex level) (Zeithaml, 1988). The underlying assumption of the means-end theory is that consumers are goal-directed and use products as means to achieve the desired end state (Sánchez-Fernández and Iniesta-Bonillo; 2007). In their literature review, Sánchez-Fernández and Iniesta-Bonillo (2007) and Sánchez-Fernández, Iniesta-Bonillo and Holbrook (2009) describe price-based studies and means-end theory as a uni-dimensional research approach which highlights consumers' utilitarian perception of value. Although the uni-dimensional perception is acknowledged for providing a simplified understanding of value, thus playing an important part in perceived value research (Sánchez-Fernández and Iniesta-Bonillo, 2007), it has been criticised for being too narrow (Mathwick, Malhorta and Rigdon, 2001; Sweeney and Soutar, 2001) and ignoring the multidimensional nature of value (de Ruyter, Wetzels, Lemmink and Mattsson, 1997).

Consequently, scholars suggest that value is not only based on reason but also on emotion (Hirschman and Holbrook, 1982). Several value dimensions have been proposed, including, for example, hedonic and utilitarian (Babin, Darden and Griffin, 1994; Hirschman and Holbrook, 1982), and hedonic and functional (Batra and Ahtola, 1990), which refer to consumers partly as rational decision-makers and partly as emotional creatures whose behaviour is guided by their feelings and desires.

More complex constructs include multiple dimensions, such as experiential, symbolic and functional value (Berthon, Pitt, Parent and Berthon, 2009; Park, Jaworski and MacInnis, 1986), where *experiential value* refers to consumers' hedonic and sensory desires; *symbolic value* refers to the need for group-membership and ego-identification in a social collective; and *functional value* refers to the usability and functional superiority of products. Another framework addresses the dimensions of emotional, social, price/value for money, and performance/quality (Sweeney and Soutar, 2001). In that framework, the emotional aspect of consumption is divided into two dimensions, one referring to consumers' feelings and affective states (emotional) and the other referring to an enhancing social self-concept (social). The rational aspect of consumption is divided into two dimensions: *price/value for money* and *performance/quality*. Furthermore, Holbrook (2006) proposes a typology of customer value that includes four dimensions – economic value, hedonic value, social value and altruistic value. The typology highlights a means-end type of consumption (economic value), pleasure of consumption (hedonic value), status-enhancing and esteem-building consumption (social value) and considerations of how one's behaviour affects others when viewed as an end in itself, such as ethical or spiritual consumption (altruistic value). Holbrook's typology was further developed by Sánchez-Fernández et al. (2009) into a six-dimensional model of efficiency, quality, social value, play, aesthetics and altruistic value. In that framework, *efficiency* refers to the cost-benefit aspect of consumption; *quality* captures objects' ability to perform a desired function; *social value* refers to making an impression on others and the prestige that is associated with possessions; *play* refers to consumption as an intrinsically fun activity; *aesthetics* covers the beauty of objects that brings pleasure to consumers; and *altruistic value* refers to ethical and spiritual consumer behaviour.

Taken together, these studies show that consumer perceived value has been treated as a complex concept that may consist of different dimensions that vary in number depending on the point of view of the observer. Most empirical studies have simplified the task of measuring value by delimiting it to two dimensions, usually in variations of hedonic and functional.

Recently, scholars have been voicing their concerns about many traditionally perceived value measures that fit after-use evaluations and fail to include a more holistic view of perceived value (Helkkula et al., 2012). They suggest that value should be regarded as phenomenological, in that, it emerges in a life-context when a consumer experiences something (Gummerus, 2011). The phenomenological perspective acknowledges that value perceptions extend beyond any individual context, such as a purchase or usage situation, and both past and future experiences are incorporated in the value perception (Helkkula et al., 2012). The phenomenological nature of value has been addressed within the S-D logic as value-in-context (Chandler and Vargo, 2011), which means that "value is uniquely and phenomenologically determined by the beneficiary" (Vargo, Maglio and Akaka, 2008: 149).

The phenomenological and experiential nature of perceived value

The distinction between the words *phenomenological* and *experiential* in relation to perceived value is not clear. Holbrook and Hirschman (1982) emphasise consumers' fantasies, feelings and fun, and call this an experiential view of consumption which is phenomenological in nature. Vargo and Lusch (2008), in turn, argue that *experience* does not only refer to these "Disneyland events" (p. 9) but carries other meanings as well. They choose to use the word *phenomenological* in order to avoid misunderstandings but point out that they could easily use the words *phenomenological* and *experiential* interchangeably. Consequently, according to the S-D logic perceived value is said to be phenomenologically determined (Vargo et al., 2008), yet it is described as experiential in nature (Vargo, 2009). Helkkula et al. (2012) build upon the S-D logic and agree that value is determined "phenomenologically (experientially)", and introduce *value in the experience*, which does not only include past lived experiences but also future and imaginary experiences. The C-D logic, in turn, emphasises the experiential nature of perceived value without explicitly highlighting its phenomenological nature. Nevertheless, the C-D logic does state that its focus lies in understanding how service is incorporated in the lives (i.e. contexts, activities, practices and experiences) of customers (Heinonen et al., 2010), thereby sharing similarities with the phenomenological approach in which the *lifeworld* of consumers – that is, everyday lived experiences – is included in the *value in the experience* (Helkkula et al., 2012).

An attempt to distinguish the *phenomenological* and *experiential* nature of value has been proposed by Gummerus (2011). She draws on suggestions by Holbrook and Hirschman (1982) who study customers, on one hand, as logical and rational decision-makers, and on the other hand, as irrational and emotional consumers. Therefore, Gummerus (pp. 170-171) uses *value as an experience* to refer to the frameworks that emphasise the dimensionality of perceived value (e.g. Holbrook, 2006; Park et al., 1986; Sánchez-Fernández et al., 2009; Sheth, Newman and Gross, 1991). In contrast, by *value as phenomenological* Gummerus (2011:173) refers to metaphors provided by Thompson et al. (1989) – which are used to describe existential-phenomenology as an alternative paradigm for consumer experience studies – and to the S-D logic which describes value as phenomenologically determined (e.g. Vargo et al. 2008). However, a clear distinction between *phenomenological* and *experiential* remains undetected, because most of the studies to which Gummerus (2011) refers use the two concepts simultaneously and interchangeably (see e.g. Holbrook and Hirschman, 1982; Thompson et al., 1989; Vargo and Lusch, 2008).

Holistic view on perceived value

Due to the lack of a clear distinction between *phenomenological* and *experiential*, this thesis adopts the view shared by many scholars; the two concepts can be used interchangeably. In this thesis, this view is called the *holistic view*. The holistic view acknowledges the multidimensional nature of perceived value which can include rational and emotional (Holbrook and Hirschman, 1982) as well as affective and experiential (Helkkula et al., 2012) aspects. The holistic view is considered consumer-oriented in that consumers, too, adopt a holistic view on value because they often make an overall perceived value evaluation which does not exclude purchase or use (Sánchez et al., 2006). Instead, according to the holistic view, consumer perceived value can include all consumers' value perceptions, such as experiences before purchase, in

purchase, in use and after use (Sánchez et al., 2006) as well as prospective experiences and imaginary experiences (Helkkula, 2011; Helkkula et al., 2012).

That said, it is noteworthy that the perceived value detected in interviews and surveys is always a crosscut in a particular moment rather than an all-encompassing entity. Thus, the holistic view in this thesis means that the empirical study did not concentrate on any particular aspect of perceived value (such as purchase intention); consumers were allowed to choose whichever perspective they found important. For example, while one consumer may perceive value as a trade-off between costs and benefits, another may consider the emotional dimension more important; while one consumer bases his or her value perception on the purchase situation, another may find the use situation more crucial; while one consumer's perceived value may stem from the most recent consumption experience, another's may be influenced by series of events over a long period of time. The purpose of adopting the holistic view is that no aspect is excluded from the study; this thesis disclosed how consumers, as a group, perceived the value of product colour as they experienced it.

2.4. Summary of the preliminary literature review

The literature review first discussed the upstream and downstream effects of colour, followed by a survey of the perceived value literature. This thesis proposes that the consumer perceived holistic value should be conceptually positioned at the intersection between the perceived value literature and colour literature because it draws upon both fields of research. Most past studies have investigated the effects of specific colours on customers with the aim of finding colours that have the most positive effects on customer experience, inducing them to positive action from the company's point of view. Currently, however, there are no studies on how consumers perceive the value of product colour.

The literature shows that colour is an important aspect in consumers' lives. Studies report on the physiological effects of colour, consumers' colour preferences, the meanings of colour, colour's role in retail environment, branding and advertising. While the studies examined have covered important areas, they mostly concentrate on consumers' immediate reactions to colour, thus providing sporadic information on particular colours in a given moment. However, colour likely exerts an influence beyond these instant reactions and affects the consumption experience more profoundly, and therefore, it is important to treat colour as a larger concept when studying consumer perceptions.

While this thesis does not focus on the physiological effects of colour, it is worth acknowledging that such effects exist, and more importantly, these effects are sometimes difficult to distinguish from psychological effects (see e.g. Attrill et al., 2008; Hill and Barton, 2005b; Hurlbert and Ling, 2005).

Research has revealed large amounts of information on the psychological effects of colour on consumers. Scholars have studied, for example, consumers' overall colour preferences and have found both similarities and differences between cultures. Nevertheless, research shows that overall colour preferences alone are not sufficient to understand consumers' perceptions of colour in relation to products because consumers often choose colours besides their overall favourite. (Grossman and Wisenblit, 1999; Holmes and Buchanan, 1984; Saito, 1983).

Colour meanings are studied widely, but so far, the findings are inconclusive. That is, while some colour meanings are found to be more or less universal, others are highly culture-specific and context-specific. Also, each colour is reported to evoke contradictory associations. Associative learning (Crozier, 1999; Grossman and Wisenblit, 1999) is suggested as an explanation for variable colour meanings. That is, consumers learn to prefer certain colours in particular contexts. But each colour still carries several meanings not only in the universal sense but also in the minds of consumers. The current literature does not provide an explanation for how consumers deal with these varying associations.

Arguably, the human brain functions in such a way that it does not go through all possible colour associations to select one out of many options, but that it automatically lands on the one that best fits the context. When the context is not given, such as when respondents are presented with colour chips, the priming effect (Collins and Loftus, 1975; Kahneman, 2011) enables the brain to borrow a context from recent experience and apply it to the given task. It is important to acknowledge that experiences which shape consumer perceptions can sometimes be primed (Collins and Loftus, 1975; Kahneman, 2011), or they have not actually taken place at all but are experienced as mental phenomena (Hirschman and Holbrook, 1982).

Therefore, this thesis proposes that the upstream effects of colour alone do not explain the consumer perceived value of product colour. There are also studies that examine the downstream effects of colour as being affected and primed by the upstream effects, thereby further influencing the perceived value of product colour. The literature review introduced studies examining the effect of colour in the retail environment (e.g. Bellizzi et al., 1983; Bellizzi and Hite, 1992; Middlestadt, 1990), advertising (e.g. Jain et al., 2013; Lohse and Rosen, 2001; Meyers-Levy and Peracchio, 1995; Schiller, 1935) and branding (e.g. Bottomley and Doyle, 2006; Grimes and Doole, 1998; Labrecque and Milne, 2012, 2013). It was concluded that the research findings are inconclusive and that they do not provide a general explanation for which colours should be used when to best persuade customers. These studies provided even less information about what consumers actually value in colour or how they evaluate product colour, thus calling for further research. Instead of studying particular colours or the outcomes of immediate exposures to colour, research should focus on consumers' holistic value perceptions.

Further, colour has been reported to have an influence on product perception (e.g. Bottomley and Doyle, 2005; Kauppinen-Räisänen and Luomala, 2010). Yet, colour chips are often used in colour research, although studies reveal that colour perception cannot be regarded as independent of the object, but that colour perception is a function of the determined object (Holmes and Buchanan, 1984). Colour chips do not act as a sufficient surrogate for coloured objects in research because they are typically evaluated differently from coloured objects (Taft, 1997).

Moreover, research shows that colour affects consumers' purchase intentions (e.g. Bellizzi et al., 1983; Middlestadt, 1990), but it must be acknowledged that these studies reveal consumers' perceptions only in purchase situations, excluding other considerations. Yet, studies show that consumers perceive value and evaluate products differently when making purchase decisions compared to experiencing the product during or after use (Oliver, 1977; Woodruff, 1997). Thus, it is not sufficient to study consumers' purchase behaviour in order to coherently understand consumer perceived value of colour because the perception of colour may change with usage.

This thesis studies product colour from perceived value perspective in order to understand colour as a larger concept instead of particular hues in specific contexts. Consumer perceived value, in general, has been widely studied but is still insufficiently understood (Sánchez-Fernández and Iniesta-Bonillo, 2007). This thesis does not pre-position itself in any stream within value research (such as value creation or outcome determination) but adopts a holistic view on perceived value. The holistic view acknowledges that value perceptions extend beyond any individual context, such as a purchase or usage situation (Sánchez et al., 2006), and both past and future experiences are incorporated in the value perception (Helkkula et al., 2012).

Appendix 1 presents a summary table of the most important studies that contributed to the gaining of pre-understanding.

3 METHODS

The empirical component of the research consisted of two studies. The first is a qualitative study whose purpose was to inductively disclose how consumers perceived the value of the colour of their cars and mobile phones when they were allowed to talk about it in their own words and focus on aspects that they liked. In the first study, 39 consumers were interviewed on the colours of their cars and mobile phones. The study resulted in a new conceptualisation of consumer colour perceptions in relation to perceived value of product colour and proposes that the perceived value of colour consists of three value dimensions: experiential, symbolic and functional. In each dimension, there is a consumer perceived colour preference scale which consists of desirable, tolerable and unacceptable colours. The colour preference scales of the value dimensions may sometimes contradict when consumers prefer different colours in each value dimension. This leads consumers to make trade-offs between the dimensions. Additionally, an unacceptable colour in any dimension may lead to not making a purchase at all.

The purpose of the second study was to investigate whether the propositions from the first study could be supported in a larger sample by using another data collection method. In the second study, 655 respondents were asked to group colours of cars and mobile phones into colour categories whichever way they felt made sense. A control group was included whereby respondents categorised colours without a product context.

The main language in both empirical studies was Finnish because the subjects were Finns and/or were living in Finland. A few interviews were conducted in Swedish and one in English due to requests from these interviewees. The quotes presented in this thesis are direct quotes translated to English.

Following a general presentation and motivation for the choice of products and research methods, each study will be presented in more detail in Chapters 4 and 5.

3.1. Choice of products

Cars and mobile phones serve as the explored product categories for two reasons. First, both product categories represent familiar, everyday products which a large part of individuals own. In 2012, there were approximately 3,400,000 cars and vans[3], and 4,300,000 adults[4] (≤18 years old) in Finland. This means that, on average, for each adult consumer there were 0.8 cars. In June of 2013, there were 9.3 million mobile phone subscriptions in Finland,[5] which averaged more than two subscriptions per adult consumer. Alba and Hutchinson (1987) reveal that product familiarity increases consumers' ability to complete more complex tasks in relation to that product. Accordingly, car colours appear as objects in several previous studies in varying fields (Bench-Capon and Malcolm, 1999; Poole, 2003; Slater and Muir, 1999). Second, consumers typically own only one or few cars and mobile phones. Therefore, the

[3] http://www.trafi.fi/filebank/a/1358426527/b5ab87f61a95849dda3bd834f61c3817/11064-Rekisterissa_olevat_maakunnittain_31_12_2012.pdf (accessed on November 7th, 2013)
[4] http://www.tilastokeskus.fi/til/vaerak/tau.html (accessed on November 7th, 2013)
[5] https://www.viestintavirasto.fi/tietoatoimialasta/katsauksetjaartikkelit/internetjapuhelin/matkapuhelinpalvelujenkasvupysahtyi.html (accessed on November 7th, 2013)

perception of product colour is important in that consumers cannot choose a car or mobile phone colour in the morning depending on the mood, as is possible with clothes, for example. Instead, the same cars and mobile phones are used typically all day every day regardless of the agenda of the day. Admittedly, mobile phone cases are easy to switch whenever consumers feel like it, but according to my interviews and discussions with mobile phone retailers, not many consumers own several of mobile phone cases and change them on a daily basis.

Further, studies show that car colour preferences do not correlate with overall favourite colours (Saito, 1983), which justifies the usage of car colour as the explored product category: the holistic perception of the value of colour is more likely to be revealed when the product category does not encourage consumers to focus on their overall favourite colours, which carries the risk of overemphasizing the importance of the overall favourite. I have not found any studies on the corresponding relationship between overall favourite colours and mobile phone colour preferences. However, research does propose that colour is a crucial element of consumers' overall perceptions of phones (Han, Kim, Yun, Hong and Kim, 2004), and that while an optimal combination of form and colour could communicate a desired product image, colour shapes the image more than form (Lai, Lin, Yeh and Wei, 2006), thereby encouraging more in-depth research on consumer perceptions of mobile phone colours.

Finally, the automobile industry has traditionally relied on consumer research to predict which colours consumers are likely to purchase (Triplett, 1995), but studies show that consumers are actually poor predictors of their future feelings (Wilson and Gilbert, 2003, 2005) and behaviour (Sherman, 1980; Wilson and LaFleur, 1995). To the best of my knowledge, there are no publicly available predictions of consumer preferences in terms of mobile phone colours. However, recent consumer colour preference data by Consumer Intelligence Research Partners (CIRP) reveals that one of the four new iPhone colours (yellow) is only preferred by a marginal group of consumers.[6] This implies that it is imperative to find new ways of understanding how consumers perceive the colour of cars and mobile phones.

3.2. Choice of research methods

The first of two empirical studies is a qualitative study. Due to the lack of previous insight into the perceived value of colour, conceptualisation through a qualitative study is justified: Qualitative methods are suitable for addressing complex phenomena and conducting preliminary studies to develop theories (Soafer, 1999), and they can be used to study non-tangible aspects such as feelings, thought processes, and emotions (Strauss and Corbin, 1998). Quantitative techniques were considered an unsuitable starting point because they include pre-determined variables, fail to pay attention to persona (Gummesson, 2006) and can lead to vague results in the early stages of theory development (Parkhe, 1993). Thus, the qualitative approach was considered suitable for studying an understudied phenomenon that features intangible elements. Learning how consumers perceive the value of colour requires learning about their previous, current and future perceptions, which can be best obtained through a qualitative study. Moreover, due to the lack of existing theory about how consumers perceive the value of product colour, it is reasonable to conduct a qualitative study to ensure that there are no new aspects which are not currently discussed in the marketing literature.

[6] http://www.macrumors.com/2013/10/30/space-gray-iphone-5s-most-popular-amid-supply-constraints-blue-leads-for-iphone-5c/ (accessed on November 7th, 2013)

Study 1 in brief

The first study consists of 39 phenomenological interviews. Interviews were chosen because they disclose consumers' insights and opinions (Parkhe, 1993) and "important and often hidden facets" (Qu and Dumay, 2011: 246) of consumer behaviour. Because perceptions of colour are highly complex, interviews with consumers are likely to reveal the ways they perceive colour. Interviews have also been used in prior colour studies (e.g. Kauppinen-Räisänen and Luomala, 2010; Laney, 1991). Phenomenological interviews, in particular, are suitable because they allow interviewees to steer the conversation (Stern et al., 1998) and acknowledge the past, current, prospective and imaginary experiences (Helkkula, 2011; Helkkula et al., 2012), which suit the purpose of this thesis.

Existing colour studies have mostly been experiments limited to exploring a few specific elements of the influence of colour on consumers. For instance, Bellizzi and Hite (1992) studied the differential effects of red and blue hues on retail outcomes (simulated purchase, purchase postponement, inclination to shop and browse); Mehta and Zhu (2009) studied red and blue hues in the context of detail-oriented task performance; Lohse and Rosen (2001) explored how coloured and non-coloured advertisements affected consumers' attitudes and quality perceptions; Mayers-Levy and Peracchio (1995) studied the persuasiveness of full-coloured advertisements, black-and-white advertisements and colour-highlighted advertisements; Gorn et al. (1997) studied how colours' hue, chroma and value affected consumers' feelings and attitudes; Chebat and Morrin (2007) and Wheatley and Chiu (1977) explored the effect of colour on quality perception; Labrecque and Milne (2012) studied how the hue, chroma and value of colour affected perceived brand personality; Miller and Kahn (2005) explored how the names of colours influenced purchase intentions. Conclusively, existing colour studies tend to focus on particular (1) colours, such as red and blue (Bellizzi and Hite, 1992; Mehta and Zhu, 2009); (2) sets of colours, such as full-colour and black-and-white (Lohse and Rosen, 2001; Meyers-Levy and Peracchio, 1995), warm and cool colours (Chebat and Morrin, 2007), dark and light shades (Wheatley and Chiu, 1977); (3) outcomes, such as attitude (Gorn et al., 1997; Lohse and Rosen, 2001), quality perceptions (Chebat and Morrin, 2007; Lohse and Rosen, 2001; Wheatley and Chiu, 1977), brand personality (Labrecque and Milne, 2012), or purchase intent (Bellizzi and Hite, 1992; Miller and Kahn, 2005). Table 1 exemplifies different areas of colour research and the used methods. The table shows that many previous studies have used experiments as the main method, but recently also interviews are used.

Table 1 Examples of colour research and methods

Author(s)	Research area	Independent variables	Dependent Variables	Methods
Garth (1922, 1924)	Colour preference	Particular colours (red, blue, violet, green, orange, yellow)	Colour preference	Experiment
Jacobs and Hustmyer (1974)	Physiological effects of colour	Particular colours (red, yellow, green and blue)	GSR, heart rate, respiration	Experiment
Wheatley and Chiu (1977)	Perceived quality	Sets of colours (dark and light shades)	Perceived quality	Experiments, questionnaire
Bellizzi et al. (1983)	Store environment	Particular colours (red, yellow, blue, green, white)	Approach orientation, physical attraction, consumer perceptions of the store environment and merchandise	Experiment, questionnaire
Bellizzi and Hite (1992)	Store environment	Particular colours (blue and red)	Simulated purchases, purchase postponement, inclination to shop and browse	Experiments, questionnaire
Meyers-Levy and Peracchio (1995)	Advertising	Sets of colours (full-coloured, black-and-white and colour-highlighted ad photos)	Persuasiveness of advertisements	Experiments, questionnaire
Gorn et al. (1997)	Advertising	Particular colours (blue and red in varying value and chroma)	Consumers' feelings and attitudes	Experiment, questionnaire
Lohse and Rosen (2001)	Advertising	Sets of colours (full-colour and black-and-white)	Attitudes towards advertisements, advertiser, quality and credibility	Experiments, questionnaire
Hill and Barton (2005a)	Physiological effects of colour	Particular colours (red and blue)	Performance in combat sports	Analysis of the 2004 Olympics Games winners in four combat sports
Miller and Kahn (2005)	Consumer choice	Particular colours (common and unexpected colour names)	Product choice	Experiment

Table 1 continued

Author(s)	Research area	Independent variables	Dependent Variables	Methods
Bottomley and Doyle (2006)	Branding	Particular colours (coloured logos)	Colour-product congruity, colour-brand congruity	Experiment, questionnaire
Funk and Ndubisi (2006)	Product choice	Colour as a concept	Colour significance, attitude towards colour, colour attractiveness, normative colour, colour preference	Questionnaire
Chebat and Morrin (2007)	Shopping mall décor	Sets of colours (cool and warm colours)	Perceived quality	Experiments, questionnaire
Kauppinen-Räisänen and Luomala (2010)	Packages	Particular colours (yellow, red, blue, and green)	Meaning of colour, product attribute abstraction	Interviews
Palmer and Schloss (2010)	Colour preference, colour association	Particular colours (32 colours of varying hue, value and chroma)	Colour preference, colour association, degree of similarity between colour and association	Experiment, computer-aided tasks
Lotto (2011)	Physiological effects of colour	Particular colours (a variety)	Sense of time passing by	Experiment
Labrecque and Milne (2012)	Consumer perception	Particular colours (coloured logos, coloured packages)	Perceived brand personality, likability and familiarity of the brand	Experiment, questionnaire
Ou, Luo, Sun, Hu, Chen (2012)	Colour emotion	Sets of colours (190 colour pairs)	Colour emotion scales (warm/cool, heavy/light, active/passive, like, dislike)	Experiment, computer-aided tasks
Saito (2013)	Colour preference	Particular colours (77 colours of varying hue, value and chroma)	Colour preference	Interviews

This thesis, in turn, avoids limitations to particular aspects, and instead – similar to the study by Funk and Ndubisi (2006) – studies how consumers perceive colour in relation to products as they experience them. Arguably, this context is more similar to a real-life purchase and consumption situation where consumers are not guided to think of particular hues, sets of colours or outcomes but are free to focus on whichever aspects they find important.

Additionally, interviewees were not shown colour chips or coloured objects but were encouraged to talk freely about colours. Colour hues and colour names are found to evoke equivalent connotations (Williams and Foley, 1968), and therefore, the spoken language was expected to yield similar findings as visual stimuli. Hanari and Takahashi (2013) adopt a fairly similar approach, as they only presented the names of colours to their subjects, leaving the interpretation of what the colour actually looked like for subjects to determine. Admittedly, this approach excluded the possibility for the researcher to know exactly which colour interviewees had in mind, but given that the purpose of this thesis was to study how consumers perceived the holistic value of colour in relation to products, and not to map perceptions of individual hues, the limitation of this approach was not expected to affect the findings of the study.

Study 2 in brief

The second empirical study investigated whether the propositions based on the first study could be supported in a larger sample and by another method. The purpose of Study 2 was to scrutinise (1) the basis on which consumers categorised colours, (2) whether colour categorisations differed between product contexts and 3) to compare consumers' categorisations of coloured products with categorisations of colours without a product context (control group). Perceiving colours in categories is natural for humans (Franklin and Davies, 2004) and it helps to distinguish colours from each other (Franklin, Clifford, Williamson and Davies, 2005). The most typical way to categorise colours is to distinguish colours that cross a common category boundary (e.g. blue, red, green, yellow) from each other (Franklin et al., 2005). However, a recent experiment suggested that consumers categorise colours also in other ways[7]. The focal study aims to detect how consumers categorise *product colours* because it is likely to reveal how they perceive in their minds the value of colour in relation to products.

The second study included 655 consumers recruited from a reputable market research agency's panel members. Respondents completed an on-line task in which they were asked to group coloured products (cars or mobiles) into categories and explain the categorisation through several open-ended questions. A control group was not given a product context, but it was instructed to group colours from a colour palette into categories.

The Internet was chosen as a mediating channel because response rates tend to be higher in on-line surveys compared to traditional off-line surveys (Bachman, Elfrink and Vazzana, 1999; Jackson and DeCormier, 1999; Kehoe and Pitkow, 1996). Additionally, on-line surveys are able to reach larger numbers of respondents in varying geographical regions quickly and cost-efficiently (Mann and Stewart, 2004; Scholl, Mulders and Drent, 2002). Finally, computer-aided categorisations were considered an easy way for respondents to conduct the task, and because the study was conducted on-line, the categorisations and descriptions by the respondents were saved

[7] http://www.lottolab.org/articles/publiccolour.asp (accessed on August 5th, 2013, first broadcasted in the UK in August 2011 and in Finland in July 2013)

and stored immediately, and thus, the risk of losing valuable information due to non-functioning documentation (Gruber, Szmigin, Reppel and Voss, 2008) decreased. An obvious restriction in on-line surveys is transcription bias (Mann and Stewart, 2004) which means that a researcher is not able to interpret non-verbal communication, such as gestures, expressions and tones. In this thesis, transcription bias was avoided as effectively as possible by asking respondents several questions about the colour categories that they formed based on the presented hued pictures of cars and mobile phones, such as how they categorised the colours, why certain colours belonged to a particular category and how the categories differed from each other. Respondents were encouraged to explain the categorisation in detail. Additionally, the on-line survey was scrutinised by web-survey professionals at a leading market research company in Finland. Corrections to the survey were made according to their suggestions.

Also the second study adopted the inductive approach. However, it may be argued that the findings of the first empirical study affected the analysis of the second study. Therefore, the approach of this thesis resembles an abductive study to some extent. Typically, abductive process starts with real life experiences which leads to hypotheses or propositions (Spens and Kovács, 2006), and continues by moving between theoretical and empirical reasoning (Dubois and Gadde, 2002). In the end of the process, generalisation is obtained by applying the hypothesis/propositions in further empirical studies (Spens and Kovács, 2006). Having said that, this study cannot be characterised entirely as abductive because the propositions from the first study were not applied to the second empirical study nor was there any testing of hypotheses involved. The second study was inductive in that the respondents were only instructed to categorise the colours whichever way they felt made sense, an approach similar to the inductive experiment by Dr. Beau Lotto[8], and the analysis was conducted with as little pre-understanding as possible. Thus, the empirical part of this thesis consists of two independent inductive studies. Notwithstanding, I acknowledge that, despite my best efforts, there is a possibility of the propositions from the first study affecting the analysis of the second study. The so-called pink elephant paradox (Morse and Mitcham, 2002) is used to describe that when actively trying not to think about something – the pink elephant – one ends up thinking of exactly that. However, Morse and Mitcham (2002) point out that the pink elephant paradox is avoidable by collecting multiple examples of the phenomena in different contexts and by being aware of alternative explanations. In this thesis, the pink elephant paradox was avoided through a large sample (multiple examples of the phenomenon) that categorised coloured cars, coloured mobile phones and colours on a palette (several contexts). Additionally, alternative explanations were sought, and indeed, the analysis resulted in a category that was not found in the first empirical study.

The second study includes both qualitative and quantitative characteristics. Using mixed methods in a phenomenological study should not be considered problematic because epistemology does not determine the methods (Johnson and Onwuegbuzie, 2004; Silverman, 2005), and a phenomenological study can adopt mixed methods when the research question so requires (Onwuegbuzie and Leech, 2006). The respondents answered to open-ended questions, which resulted in a qualitative data. After a qualitative analysis, the qualitative data were quantified and statistical tests were conducted between the groups in order to compare whether colour categorisations differed depending on product context and in comparison with a control group that categorised colour without a product context, as advised in the literature (Onwuegbuzie

[8] http://www.lottolab.org/articles/publiccolour.asp (accessed on August 5th, 2013, first broadcasted in the UK in August 2011 and in Finland in July 2013)

and Leech, 2006; Creswell, Plano Clark, Gutmann and Hanson, 2003). The analysis of the second study is presented in more detail in Chapter 5.

What follows is a more detailed presentation of the first empirical study.

4 STUDY 1

The aim of the first of the two studies was to inductively explore how consumers perceived the value of the colour of cars and mobile phones when they were not given detailed instructions on how they should approach the subject or on what they should reflect. The study was inductive, in that, it did not aim to test or confirm theoretical suggestions, but rather, it allowed interviewees to decide which aspects they found important in order to build a coherent, holistic view on consumer perceived value of product colour.

This chapter first introduces the study design, the sample and the analysis of the data. Next, the findings of the study are presented and propositions are introduced. Finally, this chapter summarises the findings of the empirical study.

4.1. Study design

The first study included 39 phenomenological interviews. During the interviews, interviewees first described their relationships with their cars and mobile phones. Following some probing, they revealed perceptions of the products' colours. They were: (1) asked to describe past experiences, for example, how they chose the colours of their cars and mobile phones, and how they felt and thought about the colours before purchase and during purchase; (2) asked to describe current experiences; how they perceived the colour currently as they were no longer in a purchase situation but used the products on a daily basis. They described their relationship with the colours and possible changes in perception over time; (3) presented with imaginary scenarios where it was possible to choose any colour for their cars and mobile phones. The purpose of the imaginary scenarios was to have the interviewees step outside of the pre-fixed assumptions of available colours, such as iPhones only coming in black and white at the time of the study. Some interviewees also described prospective experiences as they were planning to purchase new cars and mobile phones, and they were asked to reflect their thoughts on those future experiences.

The interview technique adopted free-form characteristics and consumer driven phenomenological interviews which emphasised consumers' perspective (Stern et al., 1998) and allowed interviewees to steer the interview in any directions they liked (Thompson et al., 1989), while the researcher formulated further questions as a response to interviewees' reflections (Stern et al., 1998). An interview guide was mainly used to ensure that all important areas, such as imaginary scenarios, were discussed (Patton, 2001). All interviews were recorded.

4.2. Sample

The 39 interviewees (Table 2) were selected through a convenience, yet purposeful, sampling (see e.g. Groger, Mayberry and Straker, 1999; Marshall, 1996) in order to learn from information-rich individuals and understand the phenomenon in depth (Patton, 2002). During the process of selecting the interviewees, much attention was paid to selecting a diversity of people from different backgrounds and educational attainments. I knew thirteen of the recruited interviewees personally. Facebook was used to seek unacquainted interviewees since virtual sampling is likely to increase the representativeness of the sample as well as its size (Baltar and Brunet, 2012).

Snowballing (see e.g. Biernacki and Waldorf, 1981) was then used to recruit interviewees to ensure that consumers who had access to, or who were active on, Facebook were not overrepresented in the sample. Gaining access to the off-line contacts of those who were recruited via Facebook decreased problems with selection bias and representation (Baltar and Brunet, 2012). Thirteen interviewees were recruited through Facebook and thirteen through snowballing. Although this thesis did not specifically compare whether the findings differed according to the sampling method, the findings seemed to apply to the entire sample.

Table 2 Interviewees

Name	Gender	Age	Occupation	Car and/or mobile phone
Alpo	Male	67	Electronics Engineer, retired	Both
Anita	Female	30	Researcher	Mobile phone
Anne	Female	36	Assistant Underwriter	Mobile phone
Anssi	Male	31	Warehouse Manager	Both
Anton	Male	37	Quality Manager	Both
Berit	Female	35	Traffic Planner	Both
Caj	Male	29	Strategic Purchaser	Both
Daniel	Male	28	Purchasing Process Developer	Both
Eija	Female	64	Commercial agent	Both
Emilia	Female	29	Credit Officer	Both
Erika	Female	30	High School Teacher	Both
Essi	Female	30	Consultant	Both
Eva	Female	58	Marketing Manager	Both
Harri	Male	34	Project Manager	Both
Heidi	Female	27	Sales Clerk	Mobile phone
Iina	Female	30	Student	Mobile phone
Jaakko	Male	33	M.Sc. Tech.	Both
Jack	Male	26	Doctoral student	Mobile phone
Janne	Male	32	Manager of Hot Parts and Tools	Both
Jenni	Female	37	Teacher	Both
Jussi	Male	67	Fireman, retired	Both
Kirsi	Female	40	Senior Trust Relationship Manager	Both
Lauri	Male	29	Structural Analysis Engineer	Both
Lisa	Female	52	Professor	Both
Mari	Female	25	Student	Mobile phone
Marja	Female	53	Physiotherapist	Both
Miia	Female	28	Assistant Accountant	Both
Mikael	Male	37	Project Manager	Both
Niklas	Male	38	Senior Expert Design to Cost	Both
Pentti	Male	55	General Manager	Both
Pirkko	Female	53	Insurance Claim Officer	Both
Samuli	Male	29	Risk Analyst	Both
Seija	Female	55	Cleaner	Both
Sonja	Female	35	Head of Data	Both
Stina	Female	41	Product Development Expert	Both
Susanna	Female	38	Post Doc Researcher	Both
Tom	Male	29	Manager of Marketing Application Development	Both
Tuukka	Male	28	Project Manager	Both
Virpi	Female	45	Homeopath	Both

The sample included 22 women and 17 men, aged between 25 and 67 years. The average length of an interview was 23 minutes, the shortest being ten minutes and the longest 47 minutes. Six of the interviewees owned only a mobile phone, while 33 owned both a car and a mobile phone. Interviewees and their background information are listed in Table 2. The names of the interviewees were changed to guarantee anonymity

4.3. Analysis

The data analysis was a combination of interpretative phenomenological analysis (Hycner, 1985; Landridge, 2004) and the qualitative analysis model advanced by Spiggle (1994) (for Spiggle, see also Jacoby et al., 1998; Karpova, Nelson-Hodges and Tullar, 2007; Saraneva and Sääksjärvi, 2008). The purpose of combining two methods of analysis was to ensure that the analysis was rigorous enough and all relevant steps were taken and alternative possibilities were considered.

The analysis started by bracketing my own personal preconceptions in order to better focus on the data and enter into the world of the interviewees (Hycner, 1985; Landridge, 2004), transcribing the interviews (Hycner, 1985; Spiggle, 1994) and forming an overall meaning of each interview (Hycner, 1985; Landridge, 2004). Keywords were not analysed as it became clear early on that interviewees used very different words to talk about the same theme.

Following this, themes of meanings were inductively identified (Landridge, 2004); quotes that reflected a similar theme were grouped together and scrutinized to reveal underlying meanings. The quote groups were named according to the main meaning, and the data were coded (Spiggle, 1994) according to the themes that the interviewees used to describe the colours. For example, the interviewees talked much about colours that they liked and disliked on cars and mobile phones. They also explained that their (dis)likes were not constant and that they might change when a context (such as their life situation or product category) changed. Thus, the initial codes included themes (a) likes and dislikes and (b) change in preferences. Besides liked and disliked colours, the interviewees talked a lot about neutral colours, that is, colours that they neither liked nor disliked. They typically categorized colours in their minds as desirable (liked colours), tolerable (neutral colours) and unacceptable (disliked colours). Therefore, the analysis led to the formation of a *colour preference scale* which included three levels of colour preference – desirable, tolerable and unacceptable colours – which can change according to the context.

A closer analysis of the themes revealed that when the interviewees said that they desired a colour, they either meant that they valued it aesthetically – for its intrinsic attractiveness – or they valued it because of some other articulated reason. Also, they explained that the concept of a desirable colour depended on their perspective, that is, whether they thought the desirable colour was aesthetically pleasing or a colour that they would actually choose for their cars and mobile phones since they often chose other colours besides the most attractive. Therefore, the initial codes evolved into new codes: (a) finding colours desirable, tolerable and unacceptable aesthetically, (b) other reasons for finding colours desirable, tolerable and unacceptable and (c) finds one colour attractive but chooses another.

Next, the analysis focused on the theme “other reasons for finding colours desirable, tolerable and unacceptable” and revealed that the main reasons can be divided into two categories. The first category consisted of reasons which highlighted the symbolic value

of colours; the interviewees explained that some colours portrayed cars and mobile phones as representations of other phenomena/items. For example, some interviewees interpreted a black car as a signal of power or a green car as an expression of environmentally friendly values. The second category focused on the functional value of colour; the interviewees said that some colours were, for example, easier to keep clean or scratch-free than others. Therefore, the code "other reasons for finding colours desirable, tolerable and unacceptable" was divided into two separate codes: "colour's symbolic value" and "colour's functional value". To sum up, it was concluded that consumers perceived the value of product colour in three value dimensions: aesthetical, symbolic and functional.

Further, an in-depth analysis of the code "finds one colour attractive but chooses another" revealed that the interviewees might find different colours desirable aesthetically, symbolically and functionally. This led to them making trade-offs between the value dimensions when they were not able to fulfil their desires in each dimension simultaneously.

Later, the themes were structured (Landridge, 2004) and clustered (Hycner, 1985) in order to create more abstract themes that better described the phenomenon (Spiggle, 1994), and a summary table of the themes was drawn (Landridge, 2004). The developed themes were discussed with several (>15) colleagues, and as suggested in the literature (Hycner, 1985), alterations to the themes and the structure were made on the basis of these discussions. Specifically, the interrelationships between the themes were re-analysed in order to better distinguish their characteristics; the themes were compared with each other in order to confirm that they were internally homogenous and externally heterogeneous and that each, in fact, represented an independent category (Spiggle, 1994).

The findings were then compared to those of the existing literature, and similarities were found. These similarities are discussed in greater detail in the following sections. The comparison with the existing literature resulted in the re-naming of the inductively found "aesthetical value dimension" to "experiential value dimension" (see e.g. Park et al., 1986). Thus, the final themes were (a) experiential value dimension, (b) symbolic value dimension, (c) functional value dimension, (d) colour preference scale within each value dimension and (e) trade-offs between the value dimensions. The process of dimensionalisation (Spiggle, 1994) involved investigating whether interviewees reported positive, negative or neutral comments on colours, whether they were satisfied or dissatisfied with the choices they made and whether their perception of colour was positive, neutral or negative. Following this, the relationships between the categories were identified (Spiggle, 1994) – for example, the trade-offs were analysed in relation to each value dimension – and the structure was finalised. Finally, negative cases (Spiggle, 1994) were sorted and analysed to form a more coherent general view of the subject. Throughout the process, each transcription was re-read, on average, six times (minimum 4, maximum 8).

Discriminant validity was not ascertained by, for example, external jurors and by calculating reliability statistics. The categorisation was performed by the author alone and was based on the sentences and the interviews as a whole as well as an interpretation of them in relation to existing studies. When existing concepts were found to fit the emerging concepts in the data, the existing concept names were used. Much thought was given to appropriately naming the concepts that best described the data. It is acknowledged that the analysis is subjective and that individual sentences

may be categorized differently by other researchers. Nevertheless, several steps were taken in order to construct valid conceptualizations from the data.

After conducting the analysis, it was sent to all interviewees to double-check for validity (Hycner, 1985) and accuracy (Lincoln and Guba, 1985). As is common in member checks, not all respondents were willing to read an academic analysis as a favour for the researcher (Wallendorf and Belk, 1989), and in this thesis, seven out of 39 interviewees responded to the mail and confirmed the analysis. Of the seven respondents, two wanted to discuss the analysis in more detail, and small details were clarified based on these discussions. It remains unclear whether the 32 non-respondents agreed with the analysis, but it is assumed that they would have communicated had they disagreed.

The next section looks at the findings of the study, which are structured according to the propositions resulting from the study.

4.4. Findings from Study 1

In this section, propositions formed on the basis of the findings in Study 1 are presented and supported with evidence in the form of citations from the data. This thesis proposes that (1) consumers' colour preferences can be demonstrated as a colour preference scale (CPS) which includes three preference levels: desirable, tolerable and unacceptable colours; and (2) consumers perceive the colour of a product in three value dimensions: experiential, symbolic and functional, each including a colour preference scale. In practice this means that, for example, the experiential value of specific colours in relation to a product can be perceived as desirable, tolerable, or unacceptable, according to consumer preferences. Additionally, consumers sometimes prefer different colours on each value dimension, which forces them to make trade-offs between the value dimensions.

This section is structured as follows: first, it presents Proposition 1: Colour preference scale (CPS). The presentation is divided into the colour preference scale's relation to existing models, and empirical findings on the characteristics of the colour preference scale, such as variation within the scale.

Following this, this section introduces Proposition 2: Dimensionality of the perceived value of the product. Proposition 2 builds upon Proposition 1. This section presents empirical findings on the three value dimensions (experiential, symbolic and functional) and their relation to the existing literature.

The findings and their connections to the existing literature are presented simultaneously (see e.g. Phillips and McQuarrie, 2010) to demonstrate their relationship with and contribution to the existing literature. Finally, a summary of the findings is presented.

4.4.1. Proposition 1: Colour preference scale (CPS)

This section presents the proposition of a *colour preference scale* and its relation to existing models, after which, the characteristics of the scale are scrutinised in more detail.

This thesis proposes that consumer colour preferences can be demonstrated as a *colour preference scale* (CPS), as illustrated in Figure 4. The scale, which consists of desirable, tolerable and unacceptable colours, emerged from the findings. As discussed later in the text, particular consideration was given to the naming of the dimension 'unacceptable' in view of previous research. At the time of the discovery of the colour preference scale in the minds of consumers, the author was not aware of the existence of the related literature.

Based on the findings from this study, the scale typically included a few desirable colours, a vast range of tolerable colours and some unacceptable colours. The colours included on each level had a weak-to-strong impact on the consumer perceived value of a product. The impact was strongest when the colours were desirable or unacceptable whereas the impact was mild for tolerable colours.

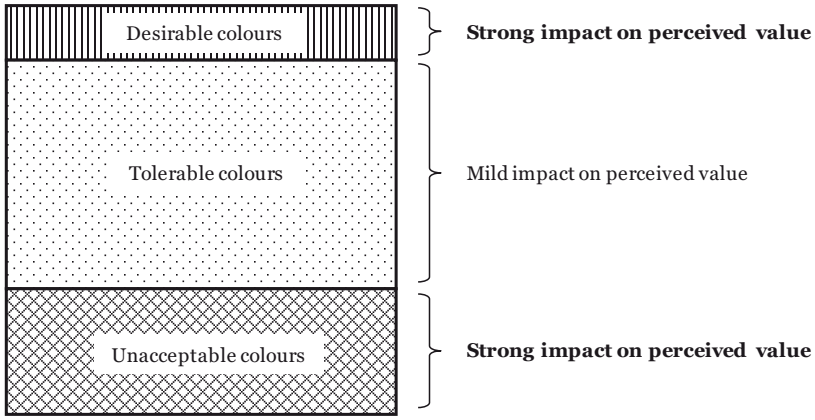


Figure 4 Proposition 1: Colour preference scale (CPS) and its impact on the perceived value of a product

The colour preference scale is an illustration of how consumers structure colours in their minds. That is, the colour preference scale does not demonstrate value per se, but rather, it shows consumers' tendency to cluster colours into groups. This chapter will later show that consumers perceive the value of product colour in three value dimensions, and all include a colour preference scale (Proposition 2). Desirable, tolerable and unacceptable colours have an impact on the perceived value in each value dimension.

This thesis adopts the holistic view of value which acknowledges that value perceptions can extend beyond any individual context, such as a purchase or usage situation (Sánchez et al., 2006), and both past and future experiences are incorporated in the value perception (Helkkula et al., 2012). Thus, exactly how colour impacts on the perceived value of the product varies depending on the consumer's frame of reference, importance of the product, and whether it is considered in relation to a purchase, ownership, imaginary ownership, or something else.

The colour preference scale is product category specific, in that, consumers typically find different colours desirable, tolerable and unacceptable when a product category changes. In the literature, colour preference typically refers to one's overall preferred colour (Hanari and Takahashi, 2013), also called overall favourite colour (Silver et al., 1988), although consumers do not always prefer the same favourite colour for every

purpose (Hanari and Takahashi, 2013) and they have different colour preferences for various product categories (Grossman and Wisenblit, 1999). Thus, it is important to note that in this study, the term *colour preference* is not used to refer to the overall favourite colour but to colour preference in a particular context.

4.4.1.1. Colour preference scale in relation to existing models

The concept of a colour preference scale was used in the 1920s to demonstrate the relative rank order of seven colours according to subjects' colour preferences (Garth, 1922, 1924; Gesche, 1927). Garth (1922) developed a judgment scale for seven colours based on the colour preferences of 559 Native Americans. The colour preference scale took white as arbitrary zero and demonstrated the relative frequency of how often each colour was preferred to the other six colours, and produced a rank order: red, blue, violet, green, orange, yellow. Garth (1924) replicated the study amongst European-American children and found the rank order: blue, green, red, violet, orange, yellow. Gesche (1927), in turn, took yellow as arbitrary zero and found that the rank order for Mexican children was: red, green, blue, violet, orange, white. This thesis draws on these previous studies because the findings revealed consumers' tendency to mentally rank colours. However, the findings of this study differ from previous studies, in that: (1) interviewees did not rank colours in a linear order. Instead, they clustered colours onto three levels: desirable, tolerable and unacceptable colours; (2) the purpose of this study was not to calculate relative preferences of colours, and therefore, the findings resulted in a conceptual framework instead of a weighted rank order of pre-determined hues. Nonetheless, the term *colour preference scale* is considered appropriate for the framework because the scale demonstrates consumers' colour preferences. More recently, Ou, Luo, Sun, Hu and Chen (2012) and Ou, Luo, Sun, Hu, Chen et al. (2012) have used the term *colour preference scale* to refer to a liking/disliking scale of colour. However, in this thesis the liking/disliking of colour and colour preference are not considered synonymous. Proposition 2 will show in more detail that *liking* colours is only one dimension of the consumer perceived value of colour, and consumers may also *prefer* colours in two other dimensions.

In this thesis, the colour preference scale (CPS) aligns with similar models from service research related to consumers' tolerance for variations in service quality delivery. In the seminal service quality model, illustrated in Figure 5, by Parasuraman, Berry and Zeithaml (1991), there is a desired and an adequate level of service quality. The desired level is what consumers hope to receive in an ideal situation, whereas the adequate level represents what consumers find acceptable. Anything below the adequate level is unacceptable. In their framework, Parasuraman et al., (1991) call the difference between the adequate and the desired level, a *zone of tolerance*. In the CPS, desirable colours are equivalent to the desired service quality: what consumers would like to receive. The outcome state of desired service quality (desirable colours, in this study) is delight in the form of positive disconfirmation (Johnston, 1995). The range of tolerable colours, in turn, corresponds to the zone of tolerance, that is, what is acceptable though not desirable. In the service quality literature, the minimum tolerable level of quality is described as the least acceptable level (Liljander, 1995). The outcome state of adequate service quality (tolerable colours, in this study) is satisfaction in the form of confirmation (Johnston, 1995). Unacceptable colours in the CPS are equivalent to service quality below the adequate level. The outcome state of poor service quality (unacceptable colours, in this study) is dissatisfaction in the form of negative disconfirmation (Johnston, 1995). In short, the zone of tolerance is an illustration of consumers' tendency to assess service quality on two levels; desired and adequate

(Parasuraman et al., 1991). Similarly, the CPS is an illustration of consumers' tendency to assess colours on three preference levels; desirable, tolerable and unacceptable. Like the CPS, the zone of tolerance is also described as varying between individuals and contexts (Parasuraman et al., 1991). The zone of tolerance has been previously applied to studying perceived value in terms of willingness to pay (Liljander and Strandvik, 1993) and customer complaint behaviour (Tronvoll, 2007). This thesis suggests that the underlying logic of the zone of tolerance also applies to the colours of products. However, the zone of tolerance model by Parasuraman et al. (1991) did not fully fit the current data. Taking consumers own sentences into account, the best names for the levels were in this case found to be desirable, tolerable, and unacceptable.

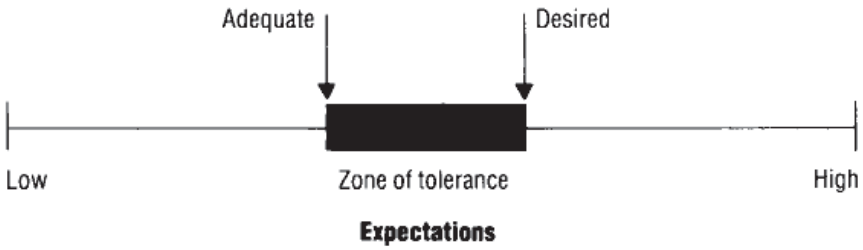


Figure 5 Service level expectations (Parasuraman, Berry and Zeithaml, 1991: 42)

Hanari and Takahashi (2013) find colour preference profiles in their study on colour preferences. While the CPS shares some characteristics with colour preference profiles as advanced by Hanari and Takahashi, the two models differ, in that, (1) the CPS is a person's subjective and abstract perception of his/her colour preferences, whereas the colour preference profiles reveal numerical degrees of preference for particular hues; (2) the CPS is context-specific, in that, it is expected to change, within the same individual, when the context – such as the product category – changes, whereas the colour preference profiles are illustrations of individuals' overall colour preferences without a context; and (3) the colours in the CPS are determined by consumers themselves, whereas the colour preference profiles include twelve hues which are determined by the researchers and given to the subjects.

Finally, similar to the brand consideration literature (e.g. Narayana and Markin, 1975), the CPS does not include all colours, but when performed on an individual level, it features those colours that each consumer perceives as possible alternatives for a certain product. If a consumer is aware of all available colours of a product, his or her CPS should consist of all these colours, assigned to the three levels (desirable, tolerable, unacceptable). However, if the person is only aware of the colours offered by a local retailer, the CPS can consist only of those specific colours. Finally, if a consumer believes that a product is available in certain colours, whether or not this is the case, his or her CPS will include even those currently unavailable colours. It is acknowledged that consumers regard their perception as true, even when it does not correspond with reality (Czarniawska, 2004).

The subsequent sections investigate the CPS in greater detail and example quotes from the interviews are provided. The purpose of the following sections is to exemplify consumers' tendency to structure colours in their minds onto the three preference levels (desirable, tolerable and unacceptable) while Proposition 2 will distinguish between the three value dimensions (experiential, symbolic and functional) to which consumers apply the colour preference scale. Therefore, the example quotes in the

following sections do not make a distinction between the three value dimensions but merely demonstrate the characteristics of the CPS, variations within the CPS, shifts from one level to another and empty levels.

4.4.1.2. Characteristics of the colour preference scale

Interviewees tended to have an idea of a few favourite colours that they would choose for their cars and mobile phones (desirable colours). They also expressed their views on hideous colours very strongly, explaining that such colours would not be an option (unacceptable colours). However, a vast range of colours seemed to be acceptable, yet not desirable, interpreted here as tolerable colours: something that consumers were ready to accept if the desirable colours were not available. Table 3 contains some sample quotes from respondents that demonstrate the colour levels.

Table 3 Example quotes describing the colour preference scale

Interviewee	Example quotes
Pentti	If I could choose whichever colour I wanted [for my car], it would be white or silver. ... But there are many acceptable alternatives. Black is something that I would exclude.
Susanna	It's like... as long as the colour [of a car] is within tolerable boundaries [it's okay]... but if the colour is hideous [I would not want it]... I mean, I do have my limits.
Anita	I used to have this amazing pink phone, but it was stolen. ... This new one is black.... and it's okay. ... The options were black and white, and I really didn't want a white phone. ... Nor would I ever want anything in pastel.

The CPS is closely related to purchasing or using products. That is, consumers did not talk about colours of cars and mobile phones in general, but they reflected on colours in relation to their own purchase and/or use experiences.

As is demonstrated in Table 4, the colour of a product had only a mild impact on consumer perceived value when the colour stayed within the range of tolerable colours, whereas colours outside the tolerable range exerted strong influences on perceived value, whether positively (desirable colours) or negatively (unacceptable colours).

Table 4 Example quotes on the impact of colour on perceived value

Interviewee	Example quotes
Example quotes on the strong impact of desirable colours	
Berit	When I bought the car, the feeling when I saw it! A white, new, shining car. I got this strong wow feeling. … And now I have it in this garage, and every time I go there and see the car, and it's all pretty and white, I go "aaah". The feeling is still nearly as strong as it was when I bought it.
Eva	I like it when the colour of my phone makes me feel good every time I look at it.
Essi	When I am passionate about a colour, it's like "Uuuh, this is gorgeous!". It's like, for both car and mobile phone, there is more emotion involved when the colour is right.
Example quotes on the mild impact of tolerable colours	
Essi	If I'm not passionate about a colour, it's like blaah, it's just a colour.
Jenni	Grey is not my favourite colour [for a mobile phone]. But it's fine. I mean I like colours, but the phone was grey when I bought it and that's it.
Jussi	As long as it's a normal, neutral colour, I'll drive anything.
Example quotes on the strong impact of unacceptable colours	
Lauri	If the car was otherwise better than the neutrally coloured alternatives, I probably still wouldn't choose a loud colour. I think it [the colour] is an eliminating factor.
Essi	I just simply couldn't live with a wrong colour. I know it sounds horrible, but I just couldn't live with it. … I'd have to change it.
Tom	I'd say that colour is not that important to me. It's more about the features that I want to have [in my car]… But I don't like neon colours. For example, if I found a car that met my requirements but is neon green, I would be very sceptical about buying it.

In general, while the impact of both desirable and unacceptable colours was strong, interviewees expressed the impact of unacceptable colours on the perceived value more often and more strongly than the impact of desirable colours. Similar findings appear in research from other contexts. For example, Strandvik (1994) finds that when perceived service quality is less than adequate, the impact on a customer is stronger than the impact of service quality that exceeds a customer's expectations. In general, this is called the negativity effect (Kanouse and Hanson, 1972:58). The negativity effect manifests that when making decisions, consumers typically weigh the potential losses more heavily than the potential gains, and when conducting overall evaluations, consumers tend to weigh negative information more heavily than positive information (Kanouse and Hanson, 1972; Peeters and Czapinski, 1990). Also the prospect theory (Kahneman and Tversky, 1979) emphasises the stronger effect of the negative and suggests that when making economic decisions under risk, losses have a stronger influence on the decision than gains. The findings of this study indicate that the negativity effect also applies to colours of cars and mobile phones.

Although diminishing or negative value has been studied in various research areas, including business relationships (Ford and McDowell, 1999), retailing (Cachon and Swinney, 2009) and service innovations (Constantiou, 2009), the perceived value discussion has not sufficiently addressed this issue, although it is acknowledged that the value outcome can be negative (Grönroos, 2011). Woodruff and Flint (2006) acknowledge the possibility of diminishing co-created value through a devaluation of products and express the need to explore this topic further. Plé and Cáceres (2010) introduce the term, value co-destruction, to describe value destruction through

unsuccessful interactions between two or more service systems. The concept of value co-destruction differs from the findings of this study, in that, in Plé and Cáceres' study, value co-destruction occurs mainly because of active misuse or neglect by one or more actors in the service system. Instead, in this study value diminished through individual value perceptions, therefore, value-diminishment does not necessitate misuse or neglect of any kind.

4.4.1.3. Variation within the colour preference scale

Interviewees mainly had a very clear vision of the CPS in their minds, but that vision was not constant. They reported variation in the CPS (1) across product categories, (2) over time, and (3) in other contexts.

Variation across product categories

It appeared that consumers' colour preferences varied across product categories, which is in line with previous colour studies (Grossman and Wisenblit, 1999; Holmes and Buchanan, 1984). Interviewees explained that they might desire a specific colour in one product category but perhaps not in another product category, as demonstrated in Table 5.

Table 5 Example quotes on how CPS is product category dependent

Interviewee	Example quotes
Erika	I wouldn't drive a red car. … Weird actually because I like red in general. Today I just found the perfect red couch!
Susanna	*Susanna*: I would never want a black car. *Interviewer*: But you bought a black mobile phone…? *Susanna*: Yeah, but that's totally different!
Jack	Red has been my favourite crayon since childhood. … But it doesn't translate to a mobile phone. I can't see the colour red on a phone. It somehow doesn't match. But I have different favourite colours: I like red flowers. … I like red dresses and stuff; but not a red phone.
Jussi	I have a red car and I like it. … But I wouldn't want a red phone. A phone has to be more traditional looking. More unnoticeable.

In addition, whereas some interviewees considered car colours more importantly than mobile phone colours, others asserted the opposite, as presented in the example quotes in Table 6. When colour was an important feature, the range of the unacceptable colours was typically wider, with fewer desirable and tolerable colours. Therefore, several interviewees indicated a wider range of unacceptable colours for cars, but others expressed a broader range of unacceptable colours for mobile phones. Thus, not only did the colours in the CPS appear product category dependent, so too did the size of the levels (number of colours on levels).

Table 6 also demonstrates that the CPS can vary within product categories, that is, between car makes or models, which supports findings from previous studies that some colours are more suitable for certain forms and shapes than others (Lai et al., 2006); colours influence consumer brand perceptions (Labrecque and Milne, 2012) and

consumers find it appropriate to match brand colours with the attempted positioning of the brand (Bottomley and Doyle, 2006).

Table 6 Example quotes on how the importance of colour varies between product categories, makes and models

Interviewee	Example quotes
Example quotes on how the importance of colour varies between product categories	
Iina	The colour of the car is more important than the colour of the mobile phone. I would dedicate significantly more time and effort in choosing a perfect car colour than a mobile phone colour.
Samuli	The colour of a car is not as important because I don't see it when I drive. In turn, I look at the mobile phone all the time, so the colour is very important.
Miia	The colour of a car [is more important]. My mobile phone is [visible] only to me, whereas everyone can, like, see my car.
Example quotes on how the importance of colour varies between makes and models	
Erika	There are differences between car brands. For example, the new Beetle is a fun car and the colour should express that. ... Generally I prefer conventional car colours ... but if I had the Beetle, it would have to be of some striking colour.
Janne	I like electric-blue, it looks good on certain car models.
Stina	I like pink in general, but I wouldn't buy a pink car unless it was a Fiat 500.

Variation over time

Variation in the CPS can also occur over time, which is in line with the findings of Dittmar (2001) who has found that colour preferences not only change from childhood to adulthood but also during adult life. Many interviewees reported incidents in which their perception of a colour had changed since a purchase. Perception can shift to both positive and negative, as demonstrated in Table 7.

Table 7 Example quotes on how the CPS can vary over time

Interviewee	Example quotes
Example quotes on shift in perception towards positive	
Samuli	When I was buying this white car, everyone told me not to because it gets so dirty. And I was a little iffy about the colour. But actually, I notice that it's equally dirty as the other coloured cars, you can just see the dirt on white, which actually makes me wash the car more often, which, in turn, is good for the car. You know, these other cars can be dirty for years and no one cares to wash them.
Sonja	At first, I was a little afraid of white [on my car]. Like, if you have white trousers you are really afraid of dirt and stains. … So, in that sense I was afraid that it would be difficult to keep clean. But it actually works very well.
Example quotes on shift in perception towards negative	
Lisa	I saw the car and I did not like the colour at all. … But I thought, okay, I will get used to it. … But I don't like the colour. I think about it all the time; it disturbs me. And my intention was to drive it [the car] until the end… but now I am not sure at all because the colour disturbs me. … And that's why I have to fix this little scratch. It wouldn't bother me, but if I am selling the car, it has to be fixed.
Iina	The alternatives [for mobile phones] were black and red, and I thought that I always have such boring phones so this time I'd chose the red one. But now,… I really should have picked the black one. … Whenever I put this red one on a table, it's like an exclamation mark, you know, look at me, I have a red mobile phone!
Caj	I chose the white one [mobile phone] because everyone else had black phones. But if I could choose again, I would take the black one. I have regretted a little bit choosing this white. … The black looks more stylish. I mean, this [white] also looks nice, but… it looks more like a toy. Black is more professional, more business-like.

Although the perception of a colour can shift towards both positive and negative, more interviewees reported post-decision regrets than unexpected satisfaction. Such regret may be more prominent in this setting because the two product categories are relatively high involvement products. Experiencing colour-evoked post-decision regret with a high involvement product (e.g. car) rarely leads to a new purchase, whereas for a low-involvement product (e.g. key chain), it is easy and inexpensive for consumers to replace their disliked colour by purchasing a second key chain. With high involvement products, consumers must live with their regret, instead of eliminating it through additional purchases. However, it could also be argued that low involvement products attract more post-decision regrets because consumers fail to undertake sufficient consideration in their purchase decisions. Further, when it comes to mobile phones, it is generally considered relatively easy to purchase a coloured phone case in the case of an unfortunate colour selection.

The role of colour in post-decision regret has been noted in other studies, although it has not been studied in depth. Svenson (1992) describes differentiation techniques that use colour as one aspect that could affect decision-making and post-decision regret. Similarly, Shamoun (2004) describes post-decision processes and alludes to colour as an influence, though without further investigation. Ranyard, Crozier and Svenson (1997) argue that when making a purchase decision, consumers may consider their future feelings and opinions such as whether a piece of clothing will match their other clothes.

Variation in other contexts

There are also other contexts in which the CPS can vary, as can be concluded from the example quotes in Table 8. For instance, Samuli felt that the location where he lived affected his colour perception because having his own yard where he parked his car explicitly signalled to others that the car was his. Anssi, in turn, explained that after having a child, he was willing to tolerate more colours than before. While these views were not communicated by other interviewees, they serve as examples of other reasons beyond product categories and time which can cause variation in the CPS.

Table 8 Example quotes on other reasons for variation in the CPS

Interviewee	Example quotes
Samuli	In the suburbs, you park the car in your own yard and everyone knows that the car is yours. It's very important what the car looks like. In the city, the car is parked on the road and no one knows it's your car, so it [the colour] doesn't really matter that much.
Anssi	Now that I have a child, colour doesn't seem to matter as much as before. I mean, if it [the car] serves the needs of the family, I don't take the colour that seriously. Like, I could think of having a yellow car, which I wouldn't have considered before.

In general, context is essential to consumer experiences because the usage situation is a critical element of consumers' evaluations of their experiences; a change to this situation can affect how consumers perceive the value of the product in terms of evaluated attributes and consequences, as well as their individual goals and purposes (Woodruff, 1997).

While these situational characteristics, presented in Table 8, were reported by only a few interviewees, they demonstrate that it is important to understand that the CPS is not static but can vary over the most unexpected events in life. This supports the suggestion to adopt a holistic view of perceived value in marketing research (Grönroos and Voima, 2013; Heinonen and Strandvik, 2009; Helkkula et al., 2012; Sánchez et al., 2006).

Summary of the variation in the CPS

In conclusion, the CPS varies in two ways. First, the colours on each level can differ completely in two contexts, such as product categories, as illustrated in the hypothetical CPS in Figure 6. A person might prefer, tolerate and dislike different colours for cars and mobile phones; one interviewee, for example, liked black mobile phones but not black cars. Although the purpose of this study was not to map each individual's CPS, these hypothetical CPSs reflect data from the interviews.

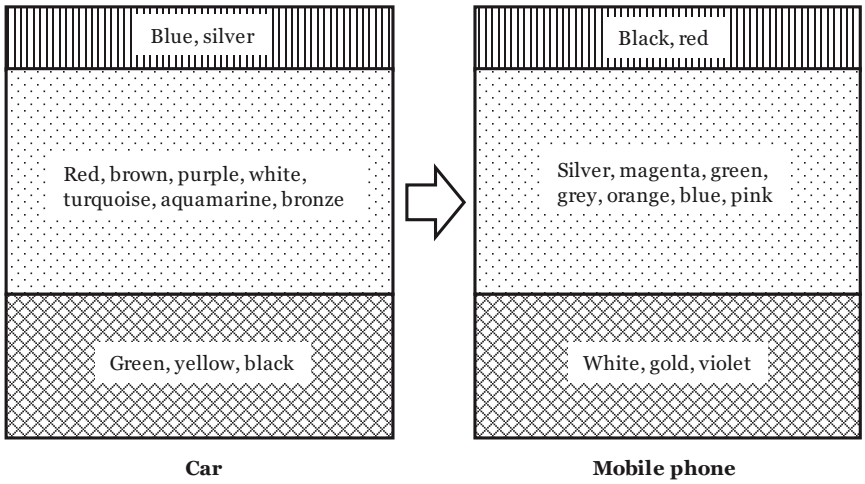


Figure 6 Variation in the CPS: Desirable, tolerable and unacceptable colours in two different contexts

Second, the CPS can vary with the width of the levels (number of colours on the levels), as represented in the hypothetical CPS in Figure 7. The colours on each level are mainly the same across two situations, but the size of the tolerable and unacceptable levels changes when unacceptable colours in one context become tolerable in another. For example, one interviewee tolerated less car colours before he had a child, but now felt that some previously unacceptable colours have become tolerable. Although he desired and disliked roughly the same colours in both situations, his range of tolerable colours widened (and the range of unacceptable colours narrowed), as some of the unacceptable colours in the first situation became tolerable in the second situation. Some unacceptable colours thus shifted to the tolerable level when he had a child.

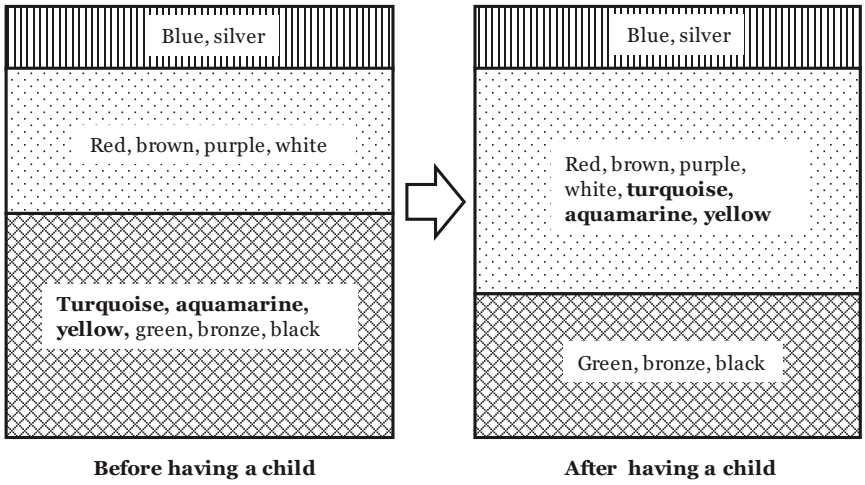


Figure 7 Variation in the CPS according to the width of the levels

4.4.1.4. Shifts from one level to another

In general, interviewees talked little about what could make a colour shift from one preference level to another. They often mentioned time as a changing factor and gave some examples of other situations, as presented in the previous section. However, interviewees often did not provide a clear explanation for changes in the CPS other than a vague "change in life".

Having said that, the findings indicate that there may be individual differences in how easily a colour can shift from one level to another. While the impact of desirable and unacceptable colours on consumer perceived value generally tends to be strong – compared with tolerable colours – the strength of the impact varies across individuals. The findings indicate that some consumers are influenced more by desirable and unacceptable colours than others, as exemplified in the ways the interviewees talked about colours. Some expressed their views very firmly and passionately, at high volumes and with words such as "love", "always," "never" or "not in a million years." Others were far more careful and less enthusiastic. For the first group, colour seemed to be a more important factor than it was for the latter group, regardless of which or how many colours the informants desired, tolerated and disliked for cars and mobile phones.

Arguably, it is possible that the strength of the impact of colour plays a role in shifting a colour from one level to another. That is, when consumers feel very strongly about desirable or unacceptable colours, it is unlikely that such colours could shift, whereas consumers who are less affected by colour could more often face a situation where a colour moves from one level to another. Figure 8 illustrates these assumptions using a hypothetical CPS of two consumers. The number of desirable, tolerable and unacceptable colours (the width of the preference levels) was the same in both cases, but the strength of the impact of colour differed noticeably. That is, both customers desired, tolerated and disliked the same colours, but Customer A was more indifferent than Customer B regarding desirable and unacceptable colours. Customer A preferred desirable colours and disliked unacceptable colours much like Customer B, but this impact was not as profound, whereas Customer B's desirable and unacceptable colours had a stronger impact on his/her perceived value. Presumably, for Customer B the larger thresholds between the levels hindered the colours from shifting from one level to another more than the smaller thresholds in the case of Customer A.

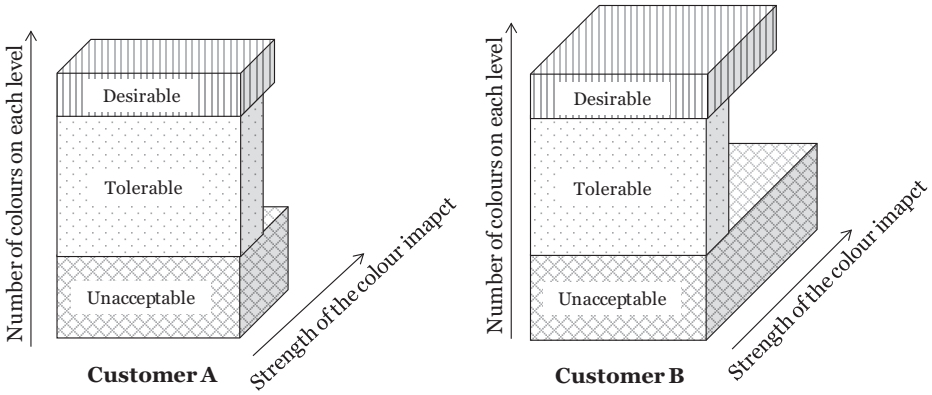


Figure 8 Variation in the CPS according to the strength of the colour impact

4.4.1.5. Empty levels

Most interviewees perceived the value of product colour on three levels. However, for some consumers – in certain contexts – the number of colours on one level can be zero, making it empty. In the 23rd interview, Tom revealed that there were no unacceptable mobile phone colours. He explained that colour was not such an important factor that would prohibit him from using a mobile phone.

The only case which recorded three empty preference levels was the 24th interview. In this case, Anton was completely indifferent regarding his mobile phone colour. Both interviewees who expressed empty levels were male. The example quotes on the empty levels are presented in Table 9.

Table 9 Example quotes on empty levels

Interviewee	Example quotes
Tom	I like dark colours. … Phones usually come in good colours such as black and grey. And if there was a phone in 70 different colours, I would still choose black or grey or another dark colour. … But I wouldn't mind having a bright purple phone, it doesn't matter to me.
Anton	*Interviewer*: Do you have a favourite mobile phone colour? *Anton*: Not really. It doesn't matter *Interviewer*: Are there colours that you would not choose for your phone? *Anton*: No, I just have these typical colours. *Interviewer*: You said that you don't like your car colour to stand out. Do you feel the same way about your phone? *Anton*: No, it doesn't matter. A phone is not visible. You know, you keep it in your pocket. *Interviewer*: So you don't mind the colour? *Anton*: Absolutely not. Not at all.

It is worth noticing that both of these interviewees expressed empty levels regarding their mobile phones, whereas the preference levels for their cars were not empty, indicating that context (product category) played a role in their colour perceptions.

As this section discussed the CPS without specifying the perceived value that the preference levels affect, the next section will show that consumers perceived the value of product colour in three value dimensions (experiential, symbolic and functional), and they apply the CPS in each value dimension. That is, consumers cluster colours onto the three preference levels (desirable, tolerable, unacceptable) in three value dimensions (experiential, symbolic, functional).

4.4.2. Proposition 2: Dimensionality of the consumer perceived value of product colour

The second proposition of this thesis, based on the findings of Study 1, is that consumers perceive the value of product colour in three dimensions: experiential, symbolic and functional. Drawing on Proposition 1, there is a consumer perceived colour preference scale (CPS) included in each value dimension. The CPSs of each value dimension may sometimes contradict when consumers prefer different colours in each value dimension, which leads to trade-offs between the value dimensions. Additionally, an unacceptable colour in any value dimension may lead a consumer to decide against making a purchase. The dimensionality of the perceived value of product colour is illustrated in Figure 9.

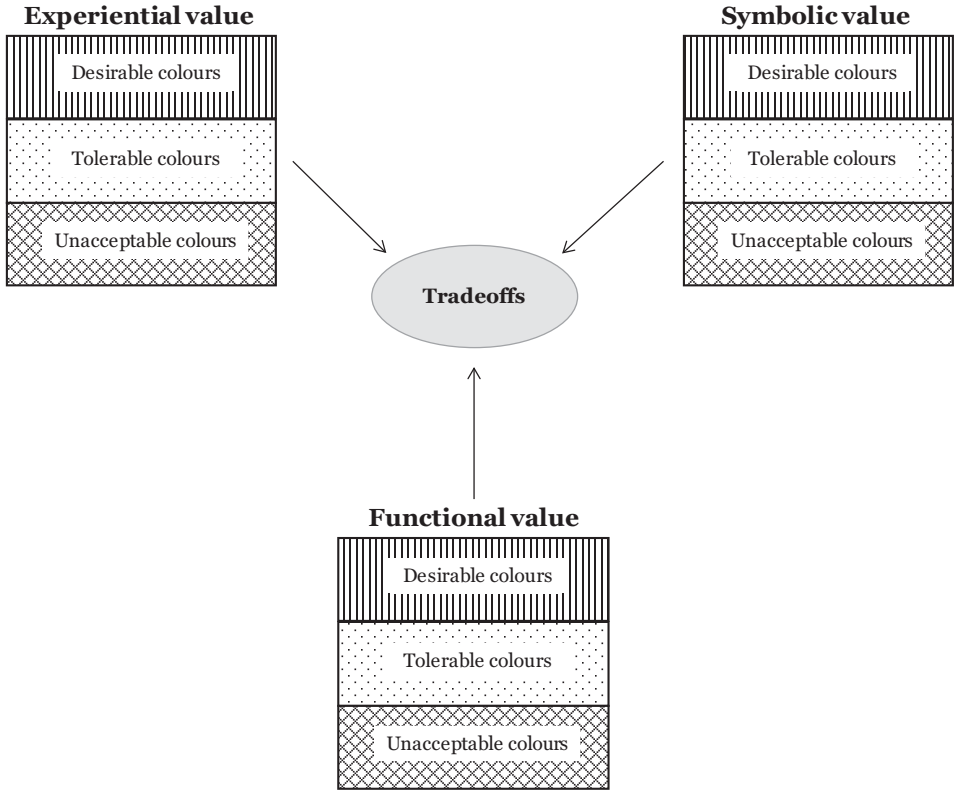


Figure 9 Proposition 2 - Dimensionality of the consumer perceived value of product colour

The terminology of this framework is adapted from Park et al. (1986). In comparing the value themes that emerged from the data with different conceptualisations in the literature and exemplifying how existing theories support the emergent findings (see Arnould and Price, 1993), the themes fit extremely well with the three dimensions suggested by Park et al. (1986) although, as explained below, these were not originally proposed as value dimensions. It can be said that the themes inductively emerged from the data because I did not deductively content analyse the data for the presence of various dimensions as presented in the literature review. The inductive analysis started to resemble an abductive type of analysis when existing concepts were found to fit the inductive groupings of the data; I studied the literature further to gain a better understanding of the dimensions and their previous definitions. This helped in the further analysis of the data, for example, to delineate the differences between the value dimensions.

In their conceptual paper, Park et al. (1986) introduce a normative framework for managing brand image. They point out that when selecting a brand concept, companies need to understand consumer needs. These needs they divide into three categories: functional needs, symbolic needs and experiential needs. I recognised the analogy between the three inductively found value dimensions and the consumer needs by Park et al. Other frameworks that describe the consumer perceived value were not considered suitable. Although some of their dimensions fit Proposition 2, others did not. It was to be expected that one would find some examples in the data that fit various dimensions from the literature. For example, the perceived value typology by Sánchez-Fernández et al. (2009) included dimensions that can be adapted to Proposition 2 (quality, social value and aesthetics) but other dimensions (efficiency, play and altruistic value) were not applicable. After a thorough analysis of the data and comparison of it with the literature, it was concluded that the terms experiential, symbolic and functional fit the data, and that were not forced on the data. Therefore, this thesis adopts the terminology of Park et al. to describe the value dimensions of the perceived value of colour. This terminology has been adopted in other studies, for example, to dimensionalise luxury brands (Berthon et al., 2009) and conceptualise customer value (Smith and Colgate, 2007).

To the best of my knowledge, there has been only one attempt previously to conceptualise colour's effect on consumers. Funk and Ndubisi (2006) studied colour's influence on consumers' product choices. Based on a literature review, they propose that colour's influence on consumers consists of five components: colour significance, attitude towards colour, colour attractiveness, normative colour and colour preference. Nevertheless, a distinction between the components in their proposed framework is difficult to make. For example, colour significance is described to be based on colour associations, individual taste, cultural differences and colour preferences; Colour attitude has its roots in colour preferences and colour associations; Colour preference, in turn, is based on colour associations and is affected by cultural conventions. Thus, it is unclear how these components can be defined and distinguished from each other in an empirical study. Their study must, however, be regarded as pioneering in studying colour as a larger concept rather than as particular hues. The propositions of this thesis differ from those of Funk and Ndubisi in that this framework (1) proposes a colour preference scale within each value dimension; (2) acknowledges the interrelationships of the dimensions and proposes tradeoffs between the value dimensions; (3) is based on an inductive empirical study.

The following sections scrutinise each value dimension as well as the trade-offs that emerged in the empirical study in more detail. Findings of the empirical study and reflections on the existing literature are presented.

4.4.2.1. The experiential value dimension

Experiential value represents the individual's subjective value perception (Berthon et al., 2009). Consumers' personal tastes and hedonic desires determine the level of experiential value; what consumers like and dislike (Berthon et al., 2009; Yu and Fang, 2009). In the experiential dimension, subjectivity is essential; what might create a high level of value for one consumer may be dull or even repulsive to another (Berthon et al., 2009). Experiential value is self-oriented (Holbrook, 2006), in that, consumers value items or experiences for their own sake regardless of other people around them. Those consumer needs which the experiential value fulfils are sensory pleasure, variety and/or cognitive stimulation (Park et al., 1986), and sensations are essential in the experiential dimension (Berthon et al., 2009). Noteworthy, experiential value does not necessarily involve consumption experience as such or any sub-dimensions, such as environmental aspects or service quality, but is purely an individual's personal opinion, like or dislike of an object (Berthon et al., 2009).

Although existing studies on experiential value do not relate value to colours, experiential value is characterised by sensory pleasure (Berthon et al., 2009) and aesthetics (Smith and Colgate, 2007), and therefore, this thesis suggests that experiential value covers the individually and personally experienced attractiveness of colour. Colour attractiveness is a combination of a colour's lightness, saturation and hue which a particular individual finds attractive to his or her eye (Funk and Ndubisi, 2006).

In colour studies, the term *colour preference* typically refers to colours that consumers like (e.g. Hanari and Takahashi, 2013; Saito, 1996b). The findings of this thesis indicate, however, that liking a colour is an example of desiring a colour in the experiential value dimension, yet consumers can also prefer colours in the symbolic and functional value dimensions. Some existing studies suggest that consumers prefer colours because of the pleasant associations that they evoke (Palmer and Schloss, 2010) or the emotions that are related to them (Ou et al., 2004), which, in this thesis, refer to desiring colours in a symbolic value dimension. This thesis, however, proposes that colour preference cannot be pinpointed within any one dimension because consumers simultaneously process colours on three value dimensions and develop a colour preference scale within each dimension.

When talking about experiential value, interviewees expressed their likes and dislikes (Berthon et al., 2009; Yu and Fang, 2009). For example, in Table 10, we see that Miia, Alpo, Janne and Jenni did not express specific reasons for desiring colours or finding them unacceptable, but rather, they expressed their individual and subjective taste (Berthon et al., 2009) and described colours which fulfilled (experientially desired colours)or did not fulfil (experientially unacceptable colours) their need for sensory pleasure (Park et al., 1986).

Table 10 Example quotes on likes and dislikes

Interviewee	Example quotes
Miia	I just liked the bronze colour on my phone.
Alpo	Black. My phone has to be black. I don't know why.
Janne	I like electric-blue cars, it would be my favourite colour…. It just looks agreeable.
Jenni	Colours like mustard or poison green are simply ugly.

Further, most interviewees did not describe their overall favourite colour in relation to the experientially desired colours of their cars and mobile phones, but instead, they seemed to have a certain favourite colour for cars, another one for mobile phones and a third for other objects. For example, in Table 11 Jack said that his favourite overall colour was red but his favourite mobile phone colour was white, while Tom revealed that his favourite car colours were dark, but he could easily purchase a neon green bicycle. This finding supports the suggestion of Holmes and Buchanan (1984) who propose that colour preference cannot be examined independently, and rather, the object in question determines the preference. However, Anne, in turn, confirmed that she liked apple green in general, and that she would also like to have this colour on her mobile phone or phone case, indicating that for some consumers, a favourite overall colour translates into objects and creates experiential value, which means that colour's upstream effects can have a direct impact on consumer perceived value of product colour.

Table 11 Example quotes on favourite colours and product specific experiential value

Interviewee	Example quotes
Jack	I really like Apple's white. … Red has been my favourite crayon since childhood. … But, it doesn't translate to a mobile phone.
Tom	Personally, I just like dark colours [on cars]. Black, dark grey, dark green, dark blue… I just find them attractive. I don't really have a reason for it…. I could easily have a neon green bicycle but not a neon green car.
Anne	My favourite colour is apple green. I would like an apple green phone or phone case.

When talking about experientially unacceptable colours, interviewees, in turn, more often described colours that they generally disliked (Table 12). Sonja disliked autumnal colours in general and would not like her car or mobile phone to be in these colours. Similarly, Jussi found all loud colours unattractive and would not accept them for his cars or mobile phones; Eija did not want a green or turquoise mobile phone because she found these colours generally unattractive. Similar findings have been reported by Saito (1983) who has found that while consumers do not necessarily prefer their overall favourite colours on cars, they do not choose generally disliked colours either. This indicates that overall colour preferences (an upstream effect) seems to affect the perceived value directly when the effect is negative (generally disliked colour) more often than when the effect is positive (overall favourite colour).

Table 12 Example quotes on overall disliked colours and experiential value

Interviewee	Example quotes
Sonja	I don't find the so-called autumn colours attractive. I couldn't have a phone or a car in such colours.
Jussi	Loud colours, I wouldn't buy; they are not nice to look at.
Eija	I would never have a green or turquoise phone. I don't like these colours.

It is important to distinguish self-oriented (Holbrook, 2006), experiential value from other-oriented (Holbrook, 2006), symbolic value. Experiential value is personally and individually experienced, whereas symbolic value stems from the social context and the social collective (Berthon et al, 2009). As an example, in Table 13, Lisa spoke of her car colour. Lisa's perception of her car colour was self-oriented (Holbrook, 2006) and experiential because she explained that other people liked the colour, but that she was not affected by other people's opinion.

Table 13 Example quote on the self-oriented nature of experiential value

Interviewee	Example quotes
Lisa	I don't like the colour [on my car]. And I feel a bit bad because other people like it, but it is not my colour. It's not right.

The experiential value dimension in the existing literature

The experiential value dimension has also been proposed in previous studies. Berthon et al. (2009) distinguish an experiential value dimension in the context of luxury brands; Park et al. (1986) propose that consumers have experiential needs, such as needs for sensory pleasure; Smith and Colgate (2007), in turn, have found a value dimension called 'experiential/hedonic value', which includes sensory value, such as aesthetics, which means that consumers find an item pleasurable to look at without regarding the utility of the item (Holbrook, 1980). Aesthetics is also one of the perceived value dimensions proposed by Sánchez-Fernández et al. (2009). Bloch (1995) points out that while aesthetics is typically related to positive responses, it is also important to acknowledge the possibility of aesthetically negative responses (c.f. experientially unacceptable colours). Creusen and Schoormans (2005) study several product appearance roles and distinguish 'aesthetic' as one dimension. The aesthetic dimension is also found in the context of product design, where it has to do with a product's ability to delight consumers on a sensory level (Desmet and Hekkert, 2007) and products' (un)attractiveness (e.g. Crilly et al., 2004). Batra and Ahtola (1990), in turn, acknowledge a hedonic consumption dimension, which means that consumers find an item intrinsically pleasant. Labrecque et al. (2013) point out that some consumer reactions to colours are 'biological responses' which carry similar characteristics as the experiential dimension, in that, the biological response is an intrinsic aesthetic stimulus which is not learned (Labrecque et al. 2013), as opposed to learned associations. However, Labrecque et al. (2013) emphasise humans' physiological mechanisms in explaining biological responses, which in this thesis are not highlighted but incorporated in the experiential dimension along with individual taste, likes and dislikes. Although Labrecque et al. (2013) suggest that some of these physiological mechanisms evolve from nature and are thus more or less universal, it

can be argued that even physiological responses vary across individuals (Bradford, 1913).

Aesthetics

In the literature, aesthetics is related to experiential value (e.g. Smith and Colgate, 2007), consumer value (Sánchez-Fernández et al., 2009) and the liking of colours (e.g. Garth, 1922). However, it is worth noticing that the word *aesthetics* has different meanings. Aesthetics is sometimes said to evoke emotions in consumers (Bamossy, Scammon and Johnston, 1983; Bloch, 1995), while another view is that aesthetics means that an item is simply pleasurable to look at (Holbrook, 1980). Some scholars do not make a distinction between *aesthetic* and *harmony* or *congruence* (see e.g. Bloch, 1995, Creusen and Schoormans, 2005), and when separated, their inter-correlation is often presented as given, assuming that harmony is pleasing to look at (Burchett, 2002; Judd and Wyszecki, 1975; Ou and Luo, 2006). The words *preference* and *harmony* have also been used interchangeably in the past (Schloss and Palmer, 2011). In order to clarify the concepts, Ou et al. (2004) compared subjects' colour pair preferences and perceptions of colour pair harmonies, and found that although there was a correlation between preference and harmony, colour preferences were not always considered harmonious and harmonious colours were not always preferred. Schloss and Palmer (2011) suggest that aesthetics is divided into preference and harmony, preference referring to personal likes and dislikes, harmony meaning how well colours go together. They emphasise that preference and harmony are not necessarily correlated, but instead, a person can easily like colours that are not harmonious and dislike colours which are harmonious (Schloss and Palmer, 2011).

By *aesthetics,* this thesis refers to what Schloss and Palmer (2011) call aesthetic preference, and does not study colour harmony. Aesthetics, in this thesis, is a person's sense of beauty (Palmer et al., 2013) and an individual opinion on whether an object is pleasurable to look at (Holbrook, 1980), and therefore, aesthetics belong to the experiential value dimension. No associations or emotions are included in this dimension because arguably, when an object signals something else besides itself, it can be called a symbol (Levy, 1959), and therefore, belongs to the symbolic value dimension in this thesis.

However, this thesis does make a distinction between *aesthetic preference* and *colour preference*. Studies show that, in relation to products, consumers do not necessarily prefer colours which are aesthetically the most desirable (e.g. Crilly et al., 2004), and this thesis acknowledges that consumers may prefer different colours experientially (aesthetic preference), symbolically and functionally. Therefore, in this thesis, aesthetic preference (experiential preference) is considered as one of many forms of colour preference.

4.4.2.2. The symbolic value dimension

The symbolic dimension highlights the social context and the social collective (Berthon et al., 2009), that is, value perception is affected by the surroundings and cultures in which consumers live and consume. Symbolic meaning "signifies a constructed and evolved narrative" (Berthon et al., 2009: 48), that is, each culture and society values certain types of consumption, and products and their characteristics have particular meanings in each culture. Consumers have symbolic needs, such as needs for self-

enhancement, role position, group membership and ego-identification, and these needs are fulfilled by desiring and purchasing products which fulfil symbolic needs (Park et al., 1986). Symbolic value is often other-oriented (Holbrook, 2006), in that, consumers symbolically value items or experiences for the sake of others, that is, how others respond to such items or how these items influence others.

The symbolic element has often been acknowledged in relation to colour perception (Aslam, 2006), typically in the form of colour meanings and associations (e.g. Adams and Osgood , 1973; Bellizzi and Hite, 1992; Elliot and Maier, 2007; Levy, 1984; Manav, 2007; Middlestadt, 1990; Saito, 1996a, 1996b).

In considerations of symbolic value, interviewees explained why they desired certain colours and why they found other colours unacceptable. A coding distinction was made between interviewees desiring colours for functional reasons (functional dimension) and those desiring colours for symbolic reasons (symbolic dimension). Symbolic reasons mirror meanings, associations, cultural elements (Aslam, 2006) as well as needs for group membership and ego-identification (Park et al., 1986), and emphasise the social collective (Berthon et al., 2009).

At its simplest, symbolic value stems from colours evoking associations of something pleasant or unpleasant (symbolically desirable or unacceptable colours), as demonstrated in Kirsi's, Janne's and Erika's quotes in Table 14. This finding supports the ecological valence theory (Palmer and Schloss, 2010) according to which consumers tend to like colours which they associate with something pleasant, and similarly, dislike colours which provoke associations of something unpleasant. This explains why the ecological valence theory (Palmer and Schloss, 2010) corresponded to the CPS in the symbolic value dimension whereas it was not found to pertain to the CPSs in the experiential and functional dimensions.

Table 14 Example quotes on symbolic colour associations

Interviewee	Example quotes
Kirsi	I had a turquoise phone until it broke. Turquoise reminds me of the ocean and vacation. And sunshine. I always get this summery feeling, holiday feeling, when I see turquoise. That's why I like it.
Janne	I don't like green cars. I associate them with old military vehicles.
Erika	A red car always reminds me of boring family life [which is not for me].

In Table 14, Kirsi's quote can be interpreted as an upstream effect as she talked about general colour associations which were neither product-specific nor subject to marketing efforts. The quote is an example of occasions in which the perceived value stemmed directly from the upstream effects of colour in terms of general colour associations.

Janne's and Erika's quotes in Table 14 demonstrate how important the consumer-oriented perspective is in understanding the perceived value. For Janne and Erika, value was not created by companies (cf. the goods-dominant logic) or co-created (cf. service-dominant logic, see e.g. Vargo and Lusch, 2004); for them, it emerged from their past experiences and sense-making processes (cf. the customer-dominant logic, see e.g. Heinonen et al., 2010). Similar findings emerged throughout the data; the interviewees perceived value as an overall phenomenon rather than a distinction between where value emerges (purchase or use) or by whom it is created (company or

consumer) (cf. Sánchez et al., 2006). Additionally, they did not appear to distinguish between lived and imaginary scenarios (cf. Helkkula et al., 2012; Hirschman and Holbrook, 1982) or true and false beliefs (cf. Helkkula et al., 2012).

Symbolic value also reflects how consumers want to be perceived by others (Table 15). For example, Anita and Samuli desired certain colours because the colours signalled features that they had or would like to have. Jenni and Susanna, in turn, found particular colours unacceptable because they gave the wrong impression of their personalities.

Table 15 Example quotes on symbolic value reflecting how consumers want to be perceived

Interviewee	Example quotes
Anita	Like, in a meeting, for example, a subtle colour [on a mobile phone] gives a more professional impression.
Samuli	I want people to see that I am self-confident enough to drive a strikingly coloured [red] car … that I don't need to blend in the mass.
Jenni	Light pastel colours, are too girly for me. I don't want to give an overly girly impression.
Susanna	A black car is so pompous. I really don't feel that I need a pompous car, or want others to believe that I need a pompous car.

Similar findings have been presented in the past as scholars have found that consumers tend to use and enjoy products which reinforce or add to their self-image (Levy, 1959) and match product-image to either their self-image or ideal self-image (Landon, 1974). Moreover, consumers tend to evaluate other consumers' "selves" accordingly (Mittal, 2006). In this study, interviewees did not only associate colour with their own personality, but also, made judgments about assumed users of products, based on colour, as demonstrated in Table 16.

Table 16 Example quotes on how symbolic value is used to evaluate product users

Interviewee	Example quotes
Lauri	The shape and the white colour [on a mobile phone] create a perception of a toy. Like I'm buying a phone for a child.
Daniel	All loud colours, … in certain models they [loud colours] make them look like teenagers' cars.
Anssi	All bright colours [on mobile phones]… they always make me think that a person cannot be taken seriously.
Jack	I like red cars. I somehow have the perception that people who drive red cars are faster. …like smarter or I don't know… Someone with an attitude, if you have a red car.

As suggested in the literature, associative learning (Crozier, 1999; Grossman and Wisenblit, 1999) is a source for many symbolic value perceptions, as Table 17 demonstrates.

Table 17 Example quotes on associative learning

Interviewee	Example quotes
Virpi	I would like to have a green car because it [green] represents my values: green values.
Caj	It's not generally appropriate for a man to be seen driving a pink car.
Heidi	I would like a red phone. ... I am a Tibetan Buddhist and I want to become a nun, so I like red, as it represents what I do.
Berit	I do lots of sports and it's important to me that my image is sporty. A white Audi is something you see a lot amongst sportspeople. Once I was driving behind this very famous Alpine ski racer and she also had a white Audi [like me]. I actually got in the VIP-area without any badge just because I was driving a white Audi behind her! Her coach was driving behind me with a black BMW and he actually didn't get in.
Jack	It [the mobile phone colour] was important in this case because I wanted to have the specific brand colour, which the brand is known for.

In Table 17, Virpi revealed that she would like a green car because green represented her life values. In Western culture, it is socially determined that green, both the word and the colour, are associated with eco-friendliness and sustainability. Previous studies also acknowledge that product colour can be used to represent values that a particular target group finds desirable (Caivano, 1998). In the study, Caj felt that it was not socially acceptable for a man to drive a pink car, which also represents our cultural norms, as socially, pink is often associated with femininity. Symbolic value can also be sub-culturally determined (Koller, 2008), as Heidi maintained that she wanted a red phone because red was associated with her being a Tibetan Buddhist. Similarly, Berit felt that a white Audi reinforced her sporty image within that sub-culture. While Heidi's and Berit's associations were clear in relation to particular sub-cultures, non-members of these sub-cultures would probably perceive associated colours dissimilarly. An example of marketing-based associative learning (Grossman and Wisenblit, 1999) was Jack's quote that he wanted to have a specific brand colour on his mobile phone for which the brand is well known.

The symbolic value dimension in the existing literature

The symbolic value dimension is also examined in other studies. For instance, Park et al. (1986) distinguish consumers' symbolic needs; Berthon et al. (2009) have found a symbolic value dimension in the context of luxury brands; Smith and Colgate (2007), in turn, have found a symbolic/expressive value dimension, which emphasises the psychological meanings that consumers attach to products; Sánchez-Fernández et al. (2009) propose the other-oriented social value which involves status and esteem; Symbolic associations are also distinguished in product design literature (e.g. Crilly et al., 2004) referring to emotions, associations and socio-culturally determined meanings that design evokes. Creusen and Schoorman (2005) suggest that a product appearance role could be 'symbolic', referring to messages – such as playfulness, modernity or unusuality (Blijlevens, Creusen and Schoormans, 2009) – that product appearance carries as well as to consumers' tendency to use products to enhance their self-image, which supports similar findings by Belk (1988) and Solomon (1983). Another product appearance role, suggested by Creusen and Schoormans (2005), is 'gaining attention', which relates closely to symbolic value. Creusen and Schoormans (2005) mainly relate the role of gaining attention to the purchase probability, that is, by gaining attention on the basis of appearance, a product catches a consumer's eye.

However, in this thesis the attention gaining dimension is incorporated in both the experiential dimension and the symbolic dimension, in that, a colour may either gain attention by attracting a consumer's personal taste (cf. experiential value) or be used to gain other people's attention when a consumer uses the product (cf. symbolic value). Hirschman and Holbrook (1982) have found a hedonic consumption dimension, which emphasises the associations that consumption creates. Also, Batra and Ahtola (1990) propose a hedonic consumption dimension which arguably refers to symbolic value because – besides meaning that consumers find an item intrinsically pleasant – hedonic consumption means that a product creates agreeable associations for the consumer. In a study by Labraque et al. (2013) on consumers' reactions to colours, they distinguish 'learned associations', which is a creation of consumers' semantic associations for meaningful messages, concepts, objects and experiences. Further, Funk and Ndubisi (2006) distinguish the normative nature of product colour, which refers to consumers' choices being affected by peer groups, families and friends.

Meaning, emotion, association and the role of culture

By colour meanings, scholars typically refer to associations (Grossman and Wisenblit, 1999) and emotions (Levy, 1984) that colours evoke. However, these concepts are often poorly defined (e.g. Kleinginna and Kleinginna, 1981; Greenwald, Nosek, Banaji and Klauer, 2005) which may lead to misunderstandings (Greenwald et al., 2005). Scholars also sometimes use these concepts interchangeably (see e.g. Madden et al., 2000). How the concepts are related to each other also varies, for example, in the context of product design, Desmet and Hekkert (2007) separate associations and emotion and find product experience dimensions called 'experience of meaning' and 'emotional experience'. The experience of meaning refers to a product's ability to reflect personality or other characteristics and symbolic significance, while the emotional experience refers to what is typically considered "emotional" in emotion psychology and everyday language, such as love and anger. Aslam (2006), in turn, groups colour meanings and associations into one concept, psychological elements, and makes a distinction between psychological elements (colour meanings and associations) and cultural elements (ethnicity, language, age, gender, etc). In contrast, Bloch (1995) states that culture shapes how meanings are extracted from products. In general, scholars disagree on the degree to which culture affects colour meanings. For instance, Aslam (2006) shows that most colours represent different meanings in different cultures, while Jacobs et al. (1991) propose that only particular colours are cross-culturally inconsistent.

This thesis does not separate the concepts of meaning, emotion, association and culture. Rather, it adopts Levy's (1959) suggestion that it is sufficient to use the term *symbol* to refer to all occurrences where experience is mediated instead of being direct; where an object (or a colour in this thesis) not only represents itself but also signals something else. Therefore, the symbolic value dimension includes colour meanings, associations, emotions, and culturally determined colour perceptions.

4.4.2.3. The functional value dimension

In the functional dimension, the purpose for which the object is designed is the focus. It captures the essence of the object's functionality – what the object does rather than what it represents – and value is experienced through superior functionality (Berthon et al., 2009). Consumers' functional needs drive them towards products that solve or

prevent consumption-related problems (Park et al., 1986). The functional value dimension has not been thoroughly explored in relation to colour, but Mundell (1993) describes how economic insecurity motivates consumers to choose safe and neutral colours for their house décor because they do not know when they can afford to renew it. Similarly, Creusen and Schoormans (2005) distinguish between preferring colours on the basis of aesthetics or practicality.

Here, interviewees spoke about the functional value of colour by describing how well colours were able to perform functionally (Smith and Colgate, 2007) and by explaining that perceived value stemmed from superior functionality (Berthon et al., 2009). Many of the functional reasons for desiring colours were associated with maintaining the appearance of a product. Table 18 demonstrates how colours were described, for example, easy/difficult to keep clean or scratch-free (functionally desirable and unacceptable colours). Additionally, Caj pointed out that particular, functionally unacceptable, colours were affected by sunlight.

Table 18 Example quotes on functionality stemming from maintaining product appearance

Interviewee	Example quotes
Kirsi	I've been very satisfied with grey [on my car]. I don't have to wash it all the time. ... You can't really tell if it's dirty or not.
Tuukka	Light colours on cars always look dirty.
Jussi	Black [on a car] would be my last choice. It makes the dirt very apparent.
Jaakko	I will never buy a white phone again because white amplifies every little scratch.
Caj	Red [on a car] fades very quickly under sunlight.

Some interviewees, such as Sonja and Jussi, for example, were not worried about scratching their cars, per se, and chose colours which were easy to fix should a scratch occur (Table 19). For interviewees, easy-fix colours applied only to cars as no one talked about fixing the surface of their mobile phones.

Table 19 Example quotes on colour repair

Interviewee	Example quotes
Sonja	As a hobby, we scuba dive. ... That's why we have a white car. ... White is easy to fix if we scratch it. I mean... The scuba diving equipment is very heavy and I load it on and off my car... It would be difficult to find the exact shade of grey or red, but white car paint is easy to find.
Jussi	Red is a good colour [for a car]. I have loads of red paint in my garage so I can fix it [a scratched paint] easily.

Another functional value aspect of the colour of a car is safety, as exemplified in Table 20.

Table 20 Example quotes on traffic safety

Interviewee	Example quotes
Marja	I think that if all car colours were loud, there would be much less traffic accidents. ... I mean, a black car with no lights on, it's really difficult to notice. ... I am convinced that with colours, we could diminish the number of accidents.
Berit	Red is a safe colour for cars because it's so visible in traffic.

Additional, rarely mentioned, sources for functional value are presented in Table 21. For example, Janne had the desire to match his car colour with that of the interior and rims. This implies that some consumers incorporate the colours of other elements of cars, besides the hull, which involves colour harmony, that is, how well two or more colours go together (Ou et al., 2004; Schloss and Palmer, 2011). Colour harmonies could be expected to be relevant in some product categories, such as clothing because when purchasing clothes, consumers tend to evaluate whether a piece of clothing will match their other clothes (Ranyard et al., 1997). Arguably, such colour harmony could be interpreted also as experiential value, if the purpose of matching harmonious colours together is aesthetical rather than functional. However, since this thesis does not study colour harmony, it only speculates on the prospective value of harmony.

Below, Seija preferred a turquoise phone over a black phone because turquoise is easier to find in a purse than black (Table 21). This finding shows that in order to understand how consumers perceive value, it is important to first understand what they do with the products, instead of only considering what the products do for them, which is in line with the ideology of the service(dominant)-logic and the customer-dominant logic, which argue that value is not exchanged in a purchase situation (Kowalkowski, 2011), rather, it emerges in everyday life processes when consumers use goods and services (Heinonen et al., 2010).

Table 21 Example quotes on other sources of functional value

Interviewee	Example quotes
Janne	Black [on a car] is easy to match with the colour of the car interior and the rims. [Electric] blue needs to be matched with brown leather interior. There are no alternatives. With black you have more options.
Seija	My phone is turquoise. I didn't want a black phone. I mean, you can't find a black phone in your purse unless it's ringing!

The findings indicate that, unlike the experiential and symbolic value, the functional value never stems directly from colour's upstream effects (colour's physiological effects, general colour preferences and meanings) but rather, to be functional, colour needs to have a context.

The functional value dimension in the existing literature

The functional value dimension can also be found in the existing literature. For instance, Berthon et al. (2009) propose a functional value dimension in relation to luxury brands; Park et al. (1986) distinguish consumers' functional needs which drive them towards products that solve or prevent consumption-related problems; Smith and Colgate (2007) speak of the functional/instrumental value dimension while Sánchez-

Fernández et al. (2009) propose the quality dimension of consumer value, which both refer to a product's ability to be useful and perform a desired function; Creusen and Schoormans (2005) discover the 'functional role' of consumption, which means a product's ability to perform the intended utilitarian function, or other utilitarian functions that consumers demand of the product (Veryzer, 1995); Hirschman and Holbrook (1982) acknowledge 'utilitarian consumption', which is driven by cognition and rationality. By utilitarian consumption, Batra and Ahtola (1990), in turn, refer to functional, means-ends type and non-sensory attributes, that is, how useful an object is for the underlying usage purpose. In product design literature, term semantic interpretation is used to refer to how the design of an object communicates its utility (Crilly et al., 2004).

4.4.2.4. Other (unencountered) value dimensions

As this study adopted the inductive approach, no existing theory of value was deductively tested in the empirical study. Nonetheless, the findings of this study extensively support the existing literature. However, there are some perceived value dimensions that have been considered important in other studies which did not emerge in this study. From a careful reading of the interviews and comparing them with the existing literature, the gaps in the data became apparent. These unencountered value dimensions are shortly discussed below. Further, one value dimension found in the literature corresponded to all three value dimensions presented previously.

Smith and Colgate (2007) propose a value dimension called 'cost/sacrifice value', which refers to all costs and sacrifices that are involved in purchasing and using products. A similar dimension is found in other studies and called, for example, 'efficiency' which emphasises the comparison between consumer perceived benefits and sacrifices (Holbrook, 1994; Sánchez-Fernández et al., 2009). This value dimension was not found in this study. Interestingly, interviewees very rarely brought up monetary sacrifice when talking about colours. When asked, they mostly explained that they were willing to pay more to get desirable colours. They found it difficult, though, to determine how much more they would be willing to pay and only said that they would pay more but only to a certain point – although a few interviewees were ready to pay whatever it took to have their desired colours. Overall, money was by no means on their agenda. This indicates that when making sense of colours, monetary costs are more an afterthought than a part of actual sense-making. Admittedly, monetary sacrifice is generally considered an important element in a purchase situation, but because the data did not support this consideration, and because the purpose of this study was not to focus on the price elasticity of demand, monetary costs were not included in the framework of how consumers perceived the value of product colour. Separate future studies are needed to determine how much consumers are willing to pay to get their desired colour versus a tolerable colour.

Additionally, interviewees did not mention other sacrifices besides money. A few interviewees mentioned a long waiting time if one wanted to purchase a certain coloured car, while a handful explained that they did not bother with researching phone alternatives before making purchase decisions. Nevertheless, these comments were so rare, that they did not qualify as an important theme. Having said that, it is acknowledged that consumers were not directly asked about sacrifices, and another kind of study design could show the effect of a cost/sacrifice dimension on the value of colour.

Another dimension which in the literature was related to experiential, symbolic and functional dimensions of product appearance but which did not emerge in this study was a product's 'ergonomic role' (Creusen and Schoormans, 2005), referring to the ergonomic usability of an item. Although Creusen and Schoormans (2005) argue that consumers use product appearance as a clue to assess products' usability, they do not mention colour in this context. Interviewees also did not mention colour as a factor affecting their perception of how ergonomic a product was to use, hence the reason this dimension was not applicable in this thesis.

Finally, in their study, Creusen and Schoormans (2005) point to a 'categorisation role' of product appearance, which means that the appearance of a product gives clues as to how it should be categorised amongst other products and to which category it belongs. In this thesis, the categorisation role was regarded as a characteristic of each of the proposed value dimensions. That is, consumers may categorise colours and products according to their likes and dislikes (cf. experiential value), symbolic meanings (cf. symbolic value), or colour functionality (cf. functional value). Therefore, the categorisation role is considered as a related concept in each value dimension proposed in this thesis. Chapter 5 discusses categorisation of colours in greater detail.

Table 22 presents an overview of the concepts found in the existing literature which either support the findings or were not found in this study.

Table 22 Overview of relating concepts

Dimensions proposed in this thesis	Related concepts	Source
Experiential dimension	Experiential dimension	Berthon et al., 2009
	Experiential needs	Park et al., 1986
	Experiential/hedonic value	Smith and Colgate, 2007
	Aesthetic	Creusen and Schoormans, 2005; Crilly et al., 2004; Desmet and Hekkert, 2007; Holbrook, 1980; Sánchez-Fernández et al., 2009
	Gaining attention	Creusen and Schoormans, 2005
	Hedonic consumption	Batra and Ahtola, 1990
	Biological responses	Labrecque et al., 2013
	Self-orientation	Holbrook, 2006
	Categorising role	Creusen and Schoormans, 2005
Symbolic dimension	Symbolic dimension	Berthon et al., 2009
	Symbolic needs	Park et al., 1986
	Symbolic/expressive value	Smith and Colgate, 2007
	Social value	Sánchez-Fernández et al., 2009
	Symbolic association	Crilly et al., 2004
	Symbolic role	Creusen and Schoormans, 2005
	Gaining attention	Creusen and Schoormans, 2005
	Hedonic consumption	Hirschman and Holbrook, 1982; Batra and Ahtola, 1990
	Learned associations	Labrecque et al., 2013
	Experience of meaning	Desmet and Hekkert, 2007
	Emotional experience	Desmet and Hekkert, 2007
	Other-orientation	Holbrook, 2006
	Normative colour	Funk and Ndubisi (2006)
	Categorising role	Creusen and Schoormans, 2005
Functional dimension	Functional dimension	Berthon et al., 2009
	Functional needs	Park et al., 1986
	Quality	Sánchez-Fernández et al., 2009
	Functional/instrumental value	Smith and Colgate, 2007
	Functional role	Creusen and Schoormans, 2005
	Utilitarian consumption	Hirschman and Holbrook, 1982; Batra and Ahtola, 1990
	Semantic interpretation	Crilly et al., 2004
	Categorising role	Creusen and Schoormans, 2005

Table 22 continued

Dimensions that did not emerge in this study	Related concepts	Source
Monetary or other sacrifices	Cost/sacrifice value	Smith and Colgate, 2007
	Efficiency	Holbrook, 1994; Sánchez-Fernández et al., 2009
Ergonomics of design	Ergonomic role	Creusen and Schoormans, 2005

4.4.2.5. Trade-offs between value dimensions

Besides communicating the three value dimensions, interviewees described situations where there was conflict between the dimensions. For instance, when the colours in the CPS of one dimension differed drastically from the CPSs of the other dimensions, interviewees had to compromise and make a trade-off between the value dimensions.

Similar trade-offs have been suggested, for example, by Holbrook and Hirschman (1982) and Batra and Ahtola (1990) who propose that consumption can be either hedonic or utilitarian – which refers to consumers' tendency to highlight either the associations related to consumption (Holbrook and Hirschman, 1982) or functional, means-ends type and non-sensory attributes (Batra and Ahtola, 1990) – and hedonic and utilitarian benefits may sometimes be contradictory (Batra and Ahtola, 1990). Also Crilly et al. (2004) point out that consumer' cognitive response is divided into three categories, and when consumers assess a product's appearance, "looking good" (cf. experiential value dimension) is only one aspect of the evaluation and that consumers also consider whether the product appears functional (cf. functional value dimension) and correlates with their self-image (cf. symbolic value dimension). Notwithstanding, Crilly et al. (2004) mainly discuss the interaction of the three categories, in that perceptions of one category may affect how other categories are perceived. In other words, they did not acknowledge that consumer perceptions of the three categories may contradict. In the context of colours, Creusen and Schoormans (2005) discover that certain colours may be valued aesthetically but are not seen as practical because they diminish the functional value of the product.

Woodall (2003), in turn, proposes a value for customer (VC) framework which includes trade-offs between (1) benefits and sacrifice (Net VC), where benefits can be considered as product attributes (Marketing VC), outcomes, or both, and sacrifices can be either cognitive or affective; (2) benefits and sacrifices, where benefit is a consumption-related experience (Derived VC); and (3) price and perceived benefits, where benefits can be product attributes (Marketing VC) or other kinds of benefits (Rational VC). A supplier can eliminate or diminish the trade-off between price and perceived benefits by reducing the price (Sale VC). While Woodall's (2003) framework covers consumer value and trade-offs, it clusters all product attributes into one dimension (Marketing VC) and the trade-offs are made between elements intrinsic to a product (perceived benefits) and elements extrinsic to a product (price, units of exchange). What his model fails to consider is a situation where product attributes alone create conflict.

According to the interviews, trade-offs can occur between (1) experiential and symbolic dimensions, (2) experiential and functional dimensions, (3) experiential and symbolic dimensions, and (4) an unacceptable colour in any dimension and not making a purchase at all. In light of these findings, it is expected that a trade-off can also occur

between all three dimensions, but interviewees mainly communicated trade-offs between two dimensions at a time or an unacceptable colour and not making a purchase. Only one interviewee expressed a situation where there was a trade-off which included all three dimensions, but because this situation was not common amongst interviewees, this thesis proposes only the four aforementioned trade-offs and concludes that a fifth trade-off including all three dimensions is possible but requires further research.

In the following sections, the four types of trade-offs are discussed in greater detail.

The trade-off between the experiential and symbolic dimensions

A trade-off between the experiential and symbolic value dimensions occurs when a consumer experientially desires a colour which is not desired symbolically, or vice versa. That is, interviewees often chose other colours besides the most attractive ones, thereby supporting the findings of existing colour studies (Funk Ndubisi, 2006; Grossman and Wisenblit, 1999; Holmes and Buchanan, 1984; Saito, 1983). Table 23 demonstrates how Stina, Erika and Mikael described such situations.

Table 23 Example quotes on trade-off between experiential and symbolic value dimension

Interviewee	Example quotes
Stina	I like pink; it's my overall favourite. … But it [pink phone] jeopardises my credibility. It would have to be a pink phone case which I can take off in the office. I can't have a pink phone at work.
Erika	I really would like to have a pink mobile phone, but I can't because then it would be *a pink mobile phone*! I mean, pink mobile phones are something that teenagers use to vote for their favourite *Idol*.
Mikael	Red would have been a nice option. … But we didn't even look for red cars. Where I live, there is this car rental shop whose cars are all red. That was one reason why we didn't want a red car [so people would not think we were driving a rental car].

Trade-offs between the experiential and symbolic dimensions seemed to reflect some level of (sub-) cultural value determination. For instance, as Table 23 demonstrates pink created the most experiential value for Stina, but the symbolic meaning of pink decreased the perceived value of the product and prohibited her from actually using a pink mobile phone, and made her settle for another colour. The symbolic meaning of pink, for her, seemed to stem from sub-cultural norms, that is, which colours were considered credible in her working environment. Erika faced a similar trade-off as Stina – pink was experientially desired but symbolically unacceptable – but in her case, the source of the symbolic meaning was cultural rather than sub-cultural. That is, in Western culture, pink is not necessarily a colour for grown-ups, but rather, it is often associated with little girls and teenagers. The difference between Erika and Stina was that for Stina, the symbolic meaning was workplace-specific, implying that it would be possible for her to use a pink phone in another office environment. Erika, in turn, generalised the association of pink, in that, she did not mention not using a pink phone at work but not using a pink phone in general. Mikael's trade-off, in turn, reflected associative learning. That is, he, and other people living in the same area, learned that red cars were usually rentals, a fact that decreased the perceived value of the car and made red symbolically unacceptable for Mikael.

The trade-off between the experiential and functional dimensions

Consumers face trade-offs between the experiential and functional dimensions when an experientially desired colour is not desired functionally, or the other way around. This type of trade-off was most frequently communicated amongst interviewees. Table 24 shows how interviewees described such trade-offs.

Table 24 Example quotes on trade-offs between experiential and functional value dimensions

Interviewee	Example quotes
Eva	I wish I could have a black car, but because it's always dirty, I won't.
Caj	I was specifically looking for a black car. Black is my favourite [car] colour. Grey would be easier in a sense that it would look cleaner.
Tuukka	Ideally, I would like to have either a black car or a white car. … But I'd have a white car only if I had someone to clean it. And a black car is way too hot in the summer time! I mean, it's parked somewhere and then it's so hot you cannot touch anything.
Sonja	I actually like bright colours, but white is easy [on a phone] because it's a contrast. I mean, if I wear a yellow shirt, I couldn't have an orange phone. It's easier when accessories [like phones] are kind of neutral.
Janne	I have a black car. I like electric-blue; it would be my favourite [car colour]. I would have liked to choose that colour. … But black coordinates easier with the car's interior and rims. Blue needs to be matched with brown leather interior. There are no alternatives. With black, you have more options.
Berit	I have a white car and I think it's really nice looking. I like the colour. … The only thing is that in my last apartment, there was a garage in the building, and right next to my car, there was a car of this family with three children. On my car, there are seven clear scratches on the door because the children weren't careful when opening the door of their car. When my car is washed and waxed, the scratches are really visible.

When talking about trade-offs between the experiential and functional dimensions, the aspect most frequently communicated by interviewees was how easily colours magnified dirt and scratches on a car. As demonstrated in Table 24, Eva and Caj had a similar perception of black. Experientially, they desired black but not functionally because it amplified dirt. However, the outcome of their colour perception processes was dissimilar. In Eva's case, being functionally unacceptable, the experientially preferred colour (black) decreased the perceived value of the car, and therefore, she did not have a black car. Even though she found the colour desirable experientially, black was functionally unacceptable for her. Caj, in turn, also found black functionally problematic, but in his case the experiential desirability of black increased the perceived value of the car and he chose black anyway. This meant that by definition, in Caj's CPS in relation to the functional dimension, black was not unacceptable but tolerable.

Besides dirt and scratches, interviewees also described other functional reasons for making trade-offs (Table 24). For instance, Tuukka desired a black car experientially, but steered clear of the colour because it got too hot under sunlight. Both Sonja and Janne compromised on their experientially desired colours because other colours increased the perceived value because they more easily coordinated with other elements, such as clothing and rims. Berit's quote, in turn, demonstrated that the trade-off may not be clear to the consumer in the purchase situation and may present itself only in use.

The trade-off between the symbolic and functional dimensions

A trade-off between the symbolic and functional value dimensions occurs when a colour is desired symbolically but not functionally, or vice versa. In the interviews, out of the proposed trade-offs, this trade-off was least often communicated. Table 25 presents example quotes on such trade-offs.

Table 25 Example quotes on trade-offs between the symbolic and functional value dimensions

Interviewee	Example quotes
Anton	My favourite car colour is black. I associate black with the secretary of state or a high level executive. They usually have black cars. But black is always dirty, you have to wash it constantly. ... I had a black car and I realised that it was not good to use. The next car I buy.., I have been looking at this grey car. Grey is a good colour; it doesn't magnify dirt and dust. But it's boring. It's really, really boring.
Pentti	I have a grey car. ... I was looking at lots of cars, and the only colour I totally excluded was black. I used to have a black car and it was so difficult to keep clean that I thought to myself that I would not buy another black one. ... But the grey is what everyone else has. It blends in the mass. And also, if you think about getting grey, getting old, it's not really a youthful colour. ... If I get rid of this grey car, I'll avoid grey in the future. ... The perception of the colour has grown more negative over the years because I drive my car to my garage and there are 20 cars out of which a dozen are of a similar colour.

Anton described a trade-off between the symbolic and functional dimensions when he said that he found black cars symbolically desirable but functionally unacceptable. For Anton, a black car signalled appreciation and respect, but being functionally unacceptable, black decreased the perceived value of the car because he found that it was not worth all the washing. Thus, he decided that he would sacrifice the symbolic value and buy a symbolically tolerable, yet not desirable, colour (grey) because black was functionally unacceptable. Pentti made a similar trade-off; he purchased a grey car for functional reasons but found it symbolically problematic. Therefore, when making a purchase decision black was functionally unacceptable for Pentti, whereas grey was symbolically tolerable. However, his current perception implies that grey has become symbolically unacceptable, as he has indicated that he would avoid grey in the future. Thus, when buying the next car Pentti probably will not choose black because it is functionally unacceptable, nor will he choose grey because it is symbolically unacceptable.

The trade-off between an unacceptable colour and not making a purchase

In addition to trade-offs between the three value dimensions, consumers may face a conflict in which the alternatives are an unacceptable colour or not making a purchase at all. As such, interviewees explained that they were often ready to compromise, but only when they did not have to settle for an unacceptable colour; if the colour was unacceptable, they usually ended up not buying the product.

An unacceptable colour, which can make consumers walk away instead of making the purchase, can be found in all three value dimensions. Table 26 demonstrates how Tom and Jussi described situations in which the only alternatives were experientially unacceptable colours, and they both admitted that they would probably rather walk away than purchase an unattractive colour. Caj and Anssi, in turn, spoke of a trade-off

between a symbolically unacceptable colour and not making a purchase. They both had an opportunity to purchase a car, but the colours of the cars signalled wrong associations, thereby pushing them to decide against making the purchases. Pentti and Jaakko described trade-offs between functionally unacceptable colours and not making a purchase. Pentti explained that he would never buy a black car because it was so difficult to keep clean, while Jaakko excluded white mobile phones from his purchase decisions because scratches were highly visible on white surfaces.

Table 26 Example quotes on the trade-off between an unacceptable colour and not making a purchase

Interviewee	Example quotes
Unacceptable colour in the experiential value dimension	
Tom	I'd say that colour is not that important to me. It's more about the features that I want to have [in my car]... But I don't like neon colours [on my car]. For example, if I found a car that met my requirements but is neon green, I would be very sceptical about buying it.
Jussi	When you are evaluating products [mobile phones] in a store... if the colour is hideous you end up not buying anything at all
Unacceptable colour in the symbolic value dimension	
Caj	I don't like dark green on cars. It's an old man's colour. I actually test drove a dark green Audi, but I didn't buy it because of the colour.
Anssi	Last time, when I was buying a car I found a super awesome one which was like a sports car and would have matched my style very well. But the colour was bright light-blue; it looked really syrupy [which was not suitable for me]. I rejected the car solely on the basis of colour.
Unacceptable colour in the functional value dimension	
Pentti	I was looking at lots of cars, and the only colour I totally excluded was black. I used to have a black car and it was so difficult to keep clean that I thought to myself that I would not buy another black one.
Jaakko	I will never buy a white phone again because white amplifies every little scratch.

An unacceptable colour does not necessarily mean a colour of a single item, but instead, the colour range offered can also be regarded as unacceptable. In Table 27, example quotes are presented which demonstrate how an unacceptable colour range can propel consumers against purchasing a product.

Table 27 Example quotes on how colour range can create a negative product perception

Interviewee	Example quotes
Samuli	I don't like Nokia's N8 because it doesn't come in good colours. The fact that the colours are not nice really lowers the value of that model.
Tuukka	The N8 colours tell me that the phone is targeted at people who like to listen to music, appreciate a good screen, and want to play games [which is not me], whereas E71 comes in conventional and low-key colours, which tells me that it is meant for business people. The offered colours do have a huge impact.

Samuli and Tuukka both mentioned Nokia's N8 mobile phone. Samuli said that he generally did not like the phone because of the colours; Tuukka believed he could

identify the target consumers of the product, on the basis of the colours offered, and excluded himself from that group. The Nokia N8 came in five colours, three bright and two more traditional colours.[9] It appeared that Samuli and Tuukka only remembered seeing the bright colours which were so overpowering that they refused to even consider the traditionally coloured (black and silver) versions of the phone, though they regarded those colours as generally acceptable for a mobile phone. This suggests that colour offerings could harm consumers' image of a product. Notwithstanding, Lai et al. (2006) have found a contrasting suggestion in their study which proposes that offering a vast range of colours is beneficial for manufacturers. However, simply increasing the number of offered colours may not be sufficient to meet the needs of consumers (Trent, 1993). Perhaps companies need to understand that some consumers evaluate the assumed target group not on the basis of single colours in a product line, but based on the range of colours offered. Thus, mixing widely divergent sets of colours may be confusing to consumers and can engender a situation in which consumers do not relate to the intended target group.

While unacceptable colour ranges were communicated by only two interviewees, their quotes are important examples of how consumers' colour perceptions of a particular item can make them walk away from the entire product line.

The trade-offs between an unacceptable colour in any dimension and not making a purchase at all imply that the colour which consumers ultimately choose has to be at least tolerable in each dimension. This suggestion is in line with other studies which indicate that consumers would walk away from their dream car if the colour was not right.[10] Consumers are often prepared to switch from one design to another to obtain a desired colour, but not purchase an unacceptable colour regardless of the design (Birren, 1945). Noteworthy, by not making a purchase I do not mean that consumers would survive without a car or a mobile phone altogether, but rather, they would end up not buying that specific item. From the vendors' point of view, this is seen as not making a purchase at all.

Trade-offs can be rational or emotional

According to the interviewees, the most frequently encountered trade-offs were between the experiential and functional dimensions. However, in considerations concerning trade-offs between the experiential and symbolic dimensions, they seemed to be more upset about having to compromise. This could be due to the fact that a trade-off between the experiential and functional dimensions is a rational choice, similar to utilitarian consumption (Hirschman and Holbrook, 1982), whereas a trade-off between the experiential and symbolic dimensions is probably more often an emotional choice, similar to hedonic consumption (Hirschman and Holbrook, 1982). In general, consumers find it easier to justify a utilitarian purchase than a hedonic purchase (Dhar and Wertenbroch, 2000), which would explain why the interviewees were less upset about having to make a rational trade-off.

It is also arguable that consumers are more attached to emotional and hedonic choices; Okada (2005) has found that a hedonic alternative is generally preferred over a utilitarian alternative when the alternatives are presented singly, although the utilitarian alternative is rated higher when the alternatives are presented jointly, which is in line with utilitarian purchases being easier to justify (Dhar and Wertenbroch,

[9] http://europe.nokia.com/find-products/devices/nokia-n8 (accessed August 13, 2012)
[10] http://www.tradercorporation.com/en/news (accessed August 21, 2012)

2000). Chitturi, Raghunathan and Mahajan (2008) have found that meeting consumers' utilitarian needs increases customer satisfaction, whereas meeting consumers' hedonic needs increases customer delight, and that increasing customer delight is more important for customer loyalty than increasing customer satisfaction in terms of word-of-mouth and repurchase intentions. In turn, Dhar and Wertenbroch (2000) have discovered that owners of hedonic cars value their vehicles more than owners of utilitarian cars.

These findings imply that meeting consumers' hedonic needs may be more important for companies in terms of customer loyalty and re-purchase behaviour, than meeting their utilitarian needs.

4.4.3. Summary of the findings of Study 1

The first study found two patterns according to which consumers perceived colour. First, they categorised colours in their minds as desirable, tolerable or unacceptable, which consist a colour preference scale (CPS). The effect of desirable and unacceptable colours on perceived value was more powerful than the effect of tolerable colours. That is, interviewees felt very strongly about desirable colours (ones they would rather have on their cars and mobile phones) and unacceptable colours (ones they would never want). Tolerable colours, in turn, are nothing special; they are simply some colours that are neither desirable nor unacceptable.

The second pattern was the dimensionality of the perceived value of colour. That is to say, interviewees perceived the value of product colour on experiential, symbolic and functional value dimensions. The experiential value dimension represented interviewees' personal taste: what they personally liked and disliked. The second dimension, the symbolic dimension, carried the culturally and sub-culturally learned meanings of colour; what certain colours meant and represented. The third dimension, the functional dimension, represented the functionality of colours. That is, how the colour of a product added value to the underlying usage purpose of that product. The perceived value of product colour was often rooted in colour's downstream effects, but occasionally also in the upstream effects. However, the functional value stemmed only from colour's downstream effects.

In each value dimension, there was a CPS. This meant that consumers found colours desirable, tolerable and unacceptable experientially, symbolically and functionally. At times, consumers preferred different colours in each dimension, which lead to trade-offs between the dimensions. A trade-off could occur between (1) experiential and symbolic dimension, (2) experiential and functional dimension, (3) symbolic and functional dimension, and (4) an unacceptable colour in any dimension and not making a purchase at all.

Finally, the interviewees perceived value as an overall phenomenon, instead of a distinction between whether value emerges in purchase or use or whether it is created by companies or the interviewees themselves (cf. Sánchez et al., 2006). Moreover, they did not appear to distinguish between lived and imaginary scenarios (cf. Helkkula et al., 2012; Hirschman and Holbrook, 1982) or false and true beliefs (Heinonen et al., 2010). The findings corresponds to the view of the customer-dominant logic, according to which marketing research needs to aim at understanding how value emerges for customers and how customers construct their experiences through sense-making processes (Heinonen et al., 2010).

Study 1 conceptualised how consumers perceived the colour of their cars and mobile phones and proposed a framework for further research. The sample size in Study 1 was relatively small, as is typical of qualitative studies, and the generalisations were theoretical rather than empirical.

Study 2 was conducted in order to examine whether the propositions from Study 1 also emerged in a larger sample and by another method. The second study also adopted the inductive approach. In the second empirical study, 655 respondents performed an on-line task in which they were instructed to group coloured products (cars or mobiles) into categories. The control group was not given a product context, but it was instructed to group colours from a colour palette into categories. Respondents were not given other instructions about how they should form the categories, rather, they were asked to categorise the coloured products and colours from the colour palette, whichever way they felt made sense. The purpose of Study 2 was three-fold: to study (1) on what basis consumers categorised colours, (2) whether colour categorisations differed depending on product context and (3) to compare consumers' categorisation of coloured products with categorisations of colours without a product context (control group).

5 STUDY 2

The second study investigated how consumers categorised coloured products (cars and mobile phones). The purpose of Study 2 was to scrutinise (1) the basis on which consumers categorised colours, (2) whether colour categorisations differed between product contexts and 3) to compare consumers' categorisations of coloured products with categorisations of colours without a product context (control group).

Categorising coloured objects was considered task-worthy, because it is natural for humans to perceive colour categorically. Franklin and Davies (2004) have found that infants as young as four months old perceived colours in categories. Colour categorisation is an instant neural response to colour. Fontenau and Davidoff (2007) have observed subjects responding to colours as quickly as 160 ms after exposure. One school of researchers believe that colour categories are universal, whereas others believe that they are learned (Franklin and Davies, 2004; Roberson, Davidoff, Davies and Shapiro, 2005). Findings are contradictory: Studies by Franklin et al. (2005) and Roberson, Davidoff, Davies and Shapiro (2004) show strong similarities in the categorical perception of young children in two cultures, suggesting that there are some hard-wired categorical perceptions in humans. However, other studies show that language and colour terms affect how colour categories are perceived (e.g. Davidoff, Davies and Roberson, 1999; Franklin, Drivonikou, Bevis, Davies, Kay and Regier, 2008; Franklin, Drivonikou, Clifford, Davies, Kay and Regier, 2008).

In this study, no cultural differences are compared; instead, the study focuses on two product categories. Respondents are divided into three groups: one group categorising car colours, another group categorising mobile phones colours, and a third group categorising colours on a colour palette as a control group. To my best knowledge, no study has been conducted to detect colour categorisation in relation to products.

Categorical perception of colour typically refers to discrimination of colours that cross a common category boundary, such as blue, red, green, yellow and so on (Franklin et al., 2005). For example, in the English language as well as in Western categorical perceptions, blue and green are separate categories, and therefore, it is easy for us to distinguish blue and green from each other. However, in a Namibian Himba-tribe blue and green belong to the same category and it is more difficult for Himbas to make a distinction between the two colours (Roberson et al., 2005). In categorical perception studies, categories are usually determined according to the hue, value and chroma of the colours and their order in a colour system such as Munsell's (see e.g. Davidoff et al., 1999; Fontenau and Davidoff, 2007; Franklin and Davies, 2004; Franklin et al., 2005). Drawing on previous colour studies (e.g. Miller and Kahn, 2005), colour categories based on hue, value and chroma (i.e. dark green, light yellow etc.) are considered *common* and are called *common colour categories* in this thesis, as opposed to other types of categories that emerged in the findings.

Unlike most colour categorisation studies, this study did not focus on the distinction between common colour categories; instead, respondents were instructed to categorise colours whichever way they felt made sense. A similar experiment was conducted by Dr. R. Beau Lotto, in collaboration with the BBC, to film the documentary *Horizon: Do you see what I see?*[11]. The experiment revealed that consumers often arranged colours into patterns which were found in nature, which did not correspond to common colour

[11] http://www.lottolab.org/articles/publiccolour.asp (accessed on August 5th, 2013, first broadcasted in the UK in August 2011 and in Finland in July 2013)

categories. Therefore, it is expected that consumers may also perceive other colour categories besides the commonly acknowledged hue, value and chroma when categorising coloured products.

5.1. Study design

The second study investigated how consumers categorised coloured products. In this study, respondents performed an on-line task in which they were asked to group coloured products (cars or mobiles) into categories. They were instructed to form categories, whichever way they felt made sense. They were further instructed to form at least two categories, but no more than eight categories, and were given an option to not categorise all the colours if they felt that some colours did not belong to any of the categories. After grouping the colours into categories, respondents were instructed to name each colour category that they formed and they were asked several questions about the colour categories, such as how they categorised colours, why certain colours belonged to a particular category and how the categories differed from each other. Respondents were encouraged to explain the categorisation in detail.

A reputable market research agency was contacted, and it agreed to provide access to its panel of consumers to provide a heterogeneous sample of consumers (age, gender, education). This research agency holds ISO 9001, ISO 20252 and ISO 26362 certificates. It would have been difficult, if not impossible, to obtain a large and heterogeneous sample without the help of the market research agency. The agency selected three random samples from its database. The samples will be presented later in greater detail.

Three separate questionnaires were constructed, where the only differentiating factor was the task object: (1) coloured cars, (2) coloured mobile phones, or (3) a colour palette. The first group (Group CAR) was given a task to categorise coloured cars, and the second group (Group PHONE) was given a task to categorise coloured mobile phones. The third group (Control Group) was a control group and was given a task to categorise colours from a colour palette, no product categories were mentioned. The colours were the same in all three groups. The purpose of separate tasks for each group was to find out whether colour categorisations differed between products, or between products and colour palettes. In the pictures of the coloured products, the same picture was retouched so that the consumers saw the exact same product in different colours. Any feature that could reveal the manufacturer (such as logos) was removed from the images. The names of colours were not presented. While it is acknowledged that individuals may physiologically sense colours differently, it was not expected to affect the findings because the purpose of the study was not to map the particular hues that respondents grouped into categories. As such, respondents base their consumption decisions on the personal sensation of colours, regardless of whether the sensation is similar or dissimilar to that of other consumers.

Respondents conducted their tasks by using a web questionnaire to which they were sent a link in an invitation e-mail. In the questionnaire, respondents saw a number of images with either cars in varying colours (Group CAR), mobile phones in varying colours (Group PHONE), or a colour palette (Control Group). The colours were randomly rearranged for each respondent in order to avoid the effect of the order of the colours. Respondents categorised the colours by dragging and dropping images into category boxes. After grouping the colours, respondents were asked a few background

questions regarding their cars (only Group CAR), mobile phones (only Group PHONE) and demographics (all groups).

Pre-tests

The questionnaire was tested in a pilot study which included six respondents (two from each group) who were observed while they performed the task and answered the questions, and they were also interviewed briefly to get feedback and to reflect on their perceptions of the questionnaire. Alterations were made on the questionnaire based on the pilot study. Before launching the questionnaire, it was tested on several browsers and computers to ensure technical usability regardless of the hardware and software respondents used.

Additionally, a simple web survey was conducted in order to decide what kind of car and mobile phone should be used in the study. The purpose of the web survey was to study which car and mobile phone shape was considered the most generic in order to avoid a situation where the shape of a car and a mobile phone would guide respondents' perceptions. After investigating the offerings of seven major car manufacturers and seven major mobile phone manufacturers, it was discovered that the most typical car shapes were sedan, hatchback and SUV. Mobile phones – while it is typical for each manufacturer to have its own shape – could be narrowed down to round-cornered phones, business phones with a keypad, and sharp-angled phones. In order to find the representative agent of each product category, a convenience sample was presented with images of the three options of each product category with instructions to voice their opinion on which shape they found most generic, that is, best representing the product category. They were further instructed that the purpose was not to find out which shapes are the most common, that is, which shapes are sold the most, but to study the personal perceptions of the consumers. Any feature that could reveal the manufacturer (such as logos) was removed from the images. The analysis consisted of calculating how many respondents had chosen each alternative.

The web survey collected responses from 83 consumers, out of which, 45 were female and 38 were male. It was confirmed with a chi-square test that the distributions of the responses by male and female respondents did not differ from each other. Therefore, the p-value for both cars and mobile phones was $p > 0,05$, with $\chi^2=4,954$ for cars and $\chi^2=1,504$ for mobile phones, respectively.

The majority of respondents selected the sedan and the round-angled mobile phone as the most generic shapes. Therefore, these shapes were selected as representative agents and used in the actual study. The results of the web survey are presented in Table 28, calculated as proportions of the respondents who chose each shape.

Table 28 Results of the survey to select the representative agents

Cars		Mobile phones	
Sedan	49%	Round-angled	70%
Hatchback	36%	Business with a keypad	30%
SUV	14%	Sharp-angled	0%

5.2. Sample

The second study was sent to 2404 randomly selected members of a consumer panel, of which 655 completed the on-line task of grouping colours and coloured products into categories. Respondents were members of a consumer panel of a leading market research company in Finland. Given that performing an on-line task required more effort than a regular on-line survey, it was important to involve respondents who were used to different types of web-based surveys and who would take the task seriously. Thus, an experienced consumer panel was chosen. The panel consists of consumers of various backgrounds, who are committed to completing a survey once they have started. The panel had one week to complete the task. The response rate was 27.9% for Group CAR, 28.4% for Group PHONE and 28.8% for Control Group; the overall response rate was 28.4%, which can be considered good for online survey. Table 29 presents the sample in more detail. Although a small number of respondents reported colour vision deficiencies, this did not seem to have an influence on how they categorised colours, compared to the rest of the sample. However, respondents with colour vision deficiencies constituted only 3.2% (Group CAR), 4.8% (Group PHONE and Control Group) of the sample, and therefore, this thesis does not draw generalisations about how such consumers categorise colours.

Table 29 Distribution of all respondents according to gender, age, education, colour vision deficiency and ownership of cars and mobile phones

	Group CAR	Group PHONE	Control Group
Number of invitations sent	802	799	803
Total number of responses	224	227	232
Number of valid responses	217	210	228
Response rate	27.1%	26.3%	28.4%
Female	51.6%	52.4%	55.3%
Male	48.4%	47.6%	44.7%
Under 20 years old	0.9%	1.0%	1.8%
20 to 30 years old	15.2%	9.5%	13.6%
31 to 40 years old	12.9%	13.3%	16.2%
41 to 50 years old	17.1%	23.8%	18.0%
51 to 60 years old	17.1%	24.8%	17.1%
Over 60 years old	36.9%	27.6%	31.6%
Highest education level:			
Elementary school	9.7%	6.2%	12.7%
High school	12.0%	10.0%	11.4%
Vocational school	23%	25.7%	25.0%
Bachelor's degree	31.8%	29.0%	30.3%
Master's degree	17.5%	21.9%	16.7%
Other education	6.0%	7.1%	3.9%
Colour vision deficiency	3.2%	4.8%	4.8%
Owns a car	79.7%		
Has previously owned a car	6.9%		
Owns a phone		99.0%	

5.3. Analysis

In the data analysis, responses were first coded according to what the respondents based their categorisations on. This was done by analysing the names and descriptions that the respondents gave to the colour categories that they formed and grouping together responses that used the same reasoning for the categorisation. Appendix 2 presents an example of the response of Respondent 115 (of the Group CAR). The codes that emerged from the data (all three groups) were "colour evokes an association of something", "nature-related associations", "colour features: hue, chroma and value", "likes/dislikes", and "rational reasons". Additionally, two codes emerged from the data of Group CAR and Group PHONE: "could buy/use" and "assumed target group".

Following this, the analysis moved to quantifying the qualitative data (Creswell et al., 2003; Onwuegbuzie and Leech, 2006) through binary coding and responses were recorded in relation to the codes that emerged (Creswell et al., 2003). For each code, if a response corresponded with that code, it was coded as 1 (one), and if not, it was coded as 0 (zero). Each response was analysed in relation to each code, which resulted in a binary data that covered all responses and codes. Table 30 demonstrates the codes and the number of responses within the codes in each group. Noteworthy, the majority of respondents categorised colours according to several reasons simultaneously, and therefore, most responses corresponded with several codes, thus, the combined number of responses in the codes exceeded the total number of respondents.

Table 30 Number of responses in codes in each group

Initial codes	Croup CAR	Group PHONE	Control Group
Colour evokes an association of something	104	116	99
Nature-related associations	17	59	79
Colour features: hue, value and chroma	114	117	161
Likes/dislikes	85	64	55
Could buy/use	70	27	0
Rational reasons	30	9	2
Assumed target group	28	33	0
Total number of respondents	217	210	228

Afterwards, each code was further analysed both individually and in relation to other codes, which lead to developing the codes into themes by combining codes that represented the same phenomenon. The analysis showed that each response that was coded as "nature-related associations" and "assumed target group" was also coded as "colour evokes an association with something". Therefore, codes "colour evokes an association with something", "nature-related associations" and "assumed target groups" were interpreted as examples of a larger phenomenon, namely, colour meanings and association. The new themes thus became "colour meanings and association", "colour features: hue, value and chroma", "likes/dislikes", "could buy/use" and "rational reasons". Table 31 presents the themes and the number of responses under each theme.

Table 31 Number of responses under themes in each group

Themes	Croup CAR	Group PHONE	Control Group
Colour meanings and associations	104	116	99
Colour features: hue, value and chroma	114	117	161
Likes/dislikes	85	64	55
Could buy/use	70	27	0
Rational reasons	30	9	2
Total number of respondents	217	210	228

Statistical tests were then conducted. Chi-square tests were used to investigate whether there was a relationship between two categorical variables: themes and groups. The chi-square tests revealed whether the frequency of 1s and 0s for each theme was statistically significantly different between Group CAR, Group PHONE and Control Group. The results of the statistical analysis are introduced in the following section, where the findings are presented.

Finally, the findings from Study 2 were compared to the findings from Study 1. The comparison of the two empirical studies showed that most of the themes that emerged in the data from Study 2 supported the propositions from Study 1, that is, the underlying criteria according to which Study 2 respondents categorised colours corresponded to the value dimensions identified in Study 2. In other words, I found that the colour categories in Study 2 fell under the same umbrella concepts as in Study 1 although the categories were more delimited and did not cover as wide a spectrum of aspects as found in the interviews in Study 1. In order to report the findings of Study 2 in a way that exemplified the similarities between the findings, four of the five themes under Study 2 were re-named to correspond with the propositions from Study 1. Thus, “colour meanings and associations” was re-named “symbolic value” because the symbolic value dimension included all symbolic meanings of colour and colour associations; “likes/dislikes” was re-named “experiential value” and covered the attractiveness and aesthetics of colour; “rational reasons” was re-named “functional value” because the functional value dimension included the functionality and utility of colour; and “could buy/use” was re-named “colour preference scale” because the colour preference scale demonstrated consumers’ tendency to categorize colours onto three preference levels - desirable, tolerable and unacceptable – depending on whether or not they would like to buy and use products of such colours. The categories and how they were coded will be discussed in greater detail later in the text. The remaining theme (“colour features: hue, value and chroma”) that did not correspond to the findings from Study 1 was re-named “common colour categories” because this theme was similar to the commonly understood categorical perception of colour, which refers to colour categories that are determined according to hue, value and chroma of the colours and their order in a colour system (see e.g. Davidoff et al., 1999; Fontenau and Davidoff, 2007; Franklin and Davies, 2004; Franklin et al., 2005). Table 32 demonstrates the re-naming of the themes as well as the number of observations under each theme.

Table 32 Re-named themes

Old names	New names	Croup CAR	Group PHONE	Control Group
Colour meanings and associations	Symbolic value	104	116	99
Colour features: hue, value and chroma	Common colour categories	114	117	161
Likes/dislikes	Experiential value	85	64	55
Could buy/use	Colour preference scale	70	27	0
Rational reasons	Functional value	30	9	2
Total number of respondents		217	210	228

For clarity, the findings were further structured in that the themes "symbolic value", "experiential value" and "functional value" were merged into one theme "value dimensions". Table 33 presents the final themes.

Table 33 Final themes

Themes	Croup CAR	Group PHONE	Control Group
Common colour categories	114	117	161
Colour preference scale	70	27	0
Value dimensions			
Experiential value	85	64	55
Symbolic value	104	116	99
Functional value	30	9	2
Total number of respondents	217	210	228

The following section describes in greater detail the themes that emerged in Study 2 and provides examples of how respondents named and described the colour categories that they formed. The findings are structured according to the themes that emerged, as presented in Table 33.

5.4. Findings

The findings of Study 2 supported both the commonly used definition of colour categories – that is, categorising colours according to hue, value and chroma – and the findings in Study 1 regarding perceived value of colour. That is, the findings showed that the themes according to which consumers categorised colours were (1) the common colour categories, (2) the colour preference scale, (3) the three value dimensions (experiential, symbolic and functional). Most themes explaining the categorisations were common for all three groups, but some themes were group specific. Findings considering each theme are presented in the following sections.

5.4.1. Categorisation according to the common colour categories

The findings revealed that respondents categorised colours according to the common colour categories. That is, according to hue (e.g. to blues, reds, yellows etc.), value (e.g. to light shades and dark shades) or chroma (e.g. according to brightness or

colourfulness of colours). As an example of categorisation according to the common colour categories, Table 34 demonstrates how Respondent 253 (from Group PHONE) named the colour categories that he formed during the task according to hue and value. The respondent formed categories 1-6 according to hues, while categories 7 and 8 were formed according to the value of the colours.

Table 34 Example of categorisation according to the common colour categories

	Name
Category 1	Orangey
Category 2	Brownish
Category 3	Bluish
Category 4	Greenish
Category 5	Reddish
Category 6	Yellowish
Category 7	Darkish
Category 8	Lightish

More than a half of the respondents in Group CAR and Group PHONE, and almost three-quarters of the respondents in Control Group based their categorisations on the common colour categories (Table 35).

Table 35 Observations on categorisation according to the common colour categories

	Number of observations	Percentages	Total number of respondents
Group CAR	114	52.5%	217
Group PHONE	117	55.7%	210
Control Group	161	70.6%	228

Chi-square tests were conducted between groups. The chi-square tests revealed a statistically significant difference between Group CAR and Control Group (χ^2=15,394, p=0,000) as well as between Group PHONE and Control Group (χ^2=10,467, p=0,001), while there was no statistically significant difference between Group CAR and Group PHONE (χ^2=0, 354, p=0,560). Table 36 summarises the results of the chi-square tests.

Table 36 Chi-square test results considering the common colour categories

Chi-square test between:	χ^2-value	p-value
Group CAR and Group PHONE	0,435	0,560
Group CAR and Control Group	15,394	0,000
Group PHONE and Control Group	10,467	0,001

The results of the chi-square tests indicate that in the absence of a product context (Control Group), consumers categorised colours according to the common colour

categories more often than when there was a product context (Group CAR and Group PHONE). Additionally, regardless of which coloured products that respondents categorised (cars or mobiles), roughly half of them used the common colour categories as a basis for their categorisation.

A high use of the common categories, in general, is not surprising, given that this type of categorisation is something we are used to and what most categorical colour perception studies focus on (see e.g. Davidoff et al., 1999; Fontenau and Davidoff, 2007; Franklin and Davies, 2004; Franklin et al., 2005; Franklin, Drivonikou, Bevis et al., 2008; Franklin, Drivonikou, Clifford et al., 2008; Roberson et al., 2005).

Categorisations based on several themes simultaneously

In general, respondents often based their colour categories on several themes simultaneously. That is, they expressed several themes that influenced their colour categories.

Out of those respondents who categorised colours according to the common colour categories, nearly half also used other themes as a basis for the categorisation. As an example, Table 37 demonstrates how Respondent 15 (from Group CAR) named his colour categories according to the common colour categories (according to hues and value of colours), but when he described his colour categories, he expressed his likes and dislikes (Category 3, 5 and 6), what associations colours evoked (Category 1), as well as which colours he would accept for his car (Category 2 and 4).

Table 37 Example of how a respondent named the colour categories according to hue, value and chroma but also expressed other reasons behind the categorisation

	Name	Description
Category 1	Black and grey	Black and grey cars are really elegant, but for me they are a bit too harsh and cold.
Category 2	Red	I could have a red car, although it's not my first choice.
Category 3	Pastel	I do not like these colours at all. They are too loud or too pale.
Category 4	Light	I would never want a white or a very light car.
Category 5	Bluish	These colours are attractive; I like these the most.
Category 6	Broken hues	Quite similar to the colours in Category 5, but they are not my favourites.

When respondents reported several themes in their categorisation, their responses were coded into all the appropriate themes. For example, the example response in Table 37 was coded as (1) common colour categories because he named the categories after the common colour categories; (2) the colour preference scale (see section 5.4.2) because he communicated which colours he found tolerable and unacceptable; (3) the value dimensions (see section 5.4.3) because he expressed his likes and dislikes (experiential value) and the associations that colours evoked (symbolic value).

What the findings do not show is whether respondents, who had several reasons for their colour categorisations, first categorised colours according to the common colour categories after which they came up with reasons for the categorisation, or whether the starting point was to categorise the colours according to liked/disliked colours, for example, resulting in what looked like the common colour categories.

5.4.2. Categorisation according to the colour preference scale

The findings of Study 1 revealed that consumers tended to cluster colours in their minds as desirable, tolerable or unacceptable in a particular context. In this thesis, this perception is called the colour preference scale (CPS). Also, the respondents of Study 2 categorised colours according to the CPS, although this type of categorisation was characteristic only of Group CAR and Group PHONE. As could be expected, categorisation according to the CPS was not found in the Control Group, given that the CPS is product category specific.

According to Proposition 2, the CPS is included in the three value dimensions and is not considered to exist without a context. However, here, the CPS is presented separately for two reasons: 1) not all the responses considering the CPS were clear on the specific value dimension. For example, if a respondent categorised the colours according to whether he or she found them desirable or unacceptable, the response aligned with the definition of the CPS but gave no clues as to whether the respondent desired the colours experientially, symbolically or functionally; 2) responses that expressed categorisation according to the likelihood of buying certain coloured products (e.g. categories such as “Would buy”, “Would not buy”) could not be coded as any of the value dimensions because it was not clear whether the respondent would like to buy or not buy the colours because of their experiential, symbolic or functional value. However, as the CPS relates to buying and using products, these responses were coded as “categorisation according to the CPS”.

As an example of categorisation according to the CPS, Table 38 presents the names that Respondent 185 (from Group CAR) gave to the colour categories that she formed. Here, the names are interpreted to represent desirable colours (Category 3), tolerable colours (Category 2) and unacceptable colours (Category 1).

Table 38 Example of categorisation according to the CPS

	Name
Category 1	Would never buy
Category 2	Tolerable colours
Category 3	Would buy

As was discussed previously, the CPS is closely related to purchasing or using products (see section 4.4.1.2). Therefore, in coding the data, the distinction was made between categorising colours according to likes and dislikes (experiential categorisation) and the CPS. That is, only respondents who clearly stated that they categorised colours according to whether or not they would like to buy/use particular cars and phones were coded as “categorisation according to CPS”; if they only expressed their likes and dislikes without mentioning buying or using, the response was coded as “experiential”; and therefore, as “categorisation according to the value dimensions” (for categorisation

according to the value dimensions, see section 5.4.3) because it is possible for a consumer to like a colour but still not be willing to purchase it (e.g. trade-off between the experiential value and another value dimension).

In Group CAR, one in three respondents used the CPS as a basis for their colour categories. The corresponding proportion in Group PHONE was one in eight respondents. Table 39 presents the observations in each group regarding the CPS.

Table 39 Observations on categorisation according to the CPS

	Number of observations	Percentages	Total number of respondents
Group CAR	70	32.3%	217
Group PHONE	27	12.0%	210
Control Group	-	-	-

A chi-square test was conducted to investigate whether there was a statistically significant difference between Group CAR and Group PHONE in categorising the coloured products according to the CPS. The test revealed that Group CAR categorised colours according to the CPS more often than Group PHONE (χ^2=22,881, p=0,000). Table 40 demonstrates the results of the statistical test.

Table 40 Chi-square test results considering the CPS

Chi-square test between:	χ^2-value	p-value
Group CAR and Group PHONE	22,881	0,000
Group CAR and Control Group	-	-
Group PHONE and Control Group	-	-

Experiential, symbolic and functional CPS

As proposed in Chapter 4, the CPS is included in each proposed value dimension. That is, consumers may find colours desirable, tolerable and unacceptable, either experientially, symbolically or functionally. Although some of the Study 2 respondents who categorised colours according to the CPS did not elaborate whether they meant the CPS in the experiential, symbolic of functional value dimension, others elaborated which CPS (which value dimension) they referred to. On average, two-thirds of the respondents who categorised colours according to the CPS expressed the experiential CPS, nearly half expressed the symbolic CPS and one in ten expressed the functional CPS.

Table 41 summarises the proportion of the respondents who expressed the experiential CPS, the symbolic CPS and the functional CPS, calculated out of those who used CPS as a basis for their colour categories. The results indicate that Group CAR categorised colours according to the experiential and functional CPS more often than Group PHONE; however, no statistical tests were conducted due to the small number of respondents (<30) in Group PHONE who categorized the colours according to the CPS. Noteworthy, many responses – particularly in Group CAR – included several value dimensions' CPS, and therefore, the combined percentage of observations exceeded a hundred percent.

Table 41 Proportion of respondents who used experiential, symbolic and functional CPS

	Experiential CPS	Symbolic CPS	Functional CPS
Group CAR	74.3%	45.7%	18.6%
Group PHONE	59.3%	40.7%	3.7%
Control Group	-	-	-

5.4.3. Categorisation according to the value dimensions

The propositions presented in Chapter 4 suggested that consumers perceived the value of product colour on three value dimensions: experiential, symbolic and functional. The same value dimensions were found also in Study 2. This section presents findings of how respondents categorised colours according to the value dimensions. First, findings regarding the value dimensions in general are presented, after which, categorisations according to the experiential value, the symbolic value and the functional value are introduced in greater detail.

On average, 62.9% of all respondents used at least one value dimension as a basis for their colour categorisations. Chi-square tests were conducted to investigate whether there were differences between the groups in the usage of at least one value dimension as a basis for colour categorisation. The results show that there was a statistically significant difference between Group Car and Control Group (χ^2=5,737, p=0,020) as well as between Group PHONE and Control Group (χ^2=7,027, p=0,008), whereas a chi-square test between Group CAR and Group PHONE (χ^2=0,077, p=0,837) did not reveal a statistically significant difference. The results show that Group CAR and Group PHONE, more often than Control Group, used at least one value dimension as a basis for their colour categories. Table 42 presents the observations in each group regarding usage of at least one value dimension, whereas Table 43 shows the results of the chi-square tests.

Table 42 Observations on categorisation according to at least one value dimension

	Number of observations	Percentages	Total number of respondents
Group CAR	144	66.4%	217
Group PHONE	142	67.6%	210
Control Group	126	55.3%	228

Table 43 Chi-square test results regarding usage of at least one value dimension

Chi-square test between:	χ^2-value	p-value
Group CAR and Group PHONE	0,077	0,837
Group CAR and Control Group	7,072	0,008
Group PHONE and Control Group	5,737	0,020

Further, the findings show that some respondents used several value dimensions simultaneously. On average, out of those who used at least one value dimension as a basis for categorisation, 67.2% based their colour categories on one value dimension, whereas 28.6% used two value dimensions, and 4.1% used all three value dimensions

simultaneously. Table 44 presents the total proportion of respondents in each group who used at least one value dimension, as well as the proportion using one value dimension, two value dimensions and all three value dimensions, calculated out of those who used at least one value dimension.

Table 44 Proportion of respondents who used at least one value dimension, the proportion that used one value dimension, two value dimensions and all three value dimensions

	Group CAR	Group PHONE	Control Group
Used at least one value dimensions	66.4%	67.6%	55.3%
Used only value dimension*	56.3%	70.4%	76.2%
Used two value dimensions *	35.4%	26.1%	23.8%
Used all three value dimension*	8.3%	3.5%	0%

* out of those who used at least one value dimension

While the number of respondents who used all three value dimensions together was small, it is noteworthy that in this study respondents were not asked about the value dimensions; they were only asked to categorise the colours the way they felt made sense. Arguably, the findings represent their top-of-mind categorisations, while another type of study, for example, if consumers were explicitly asked about the value dimensions, would likely increase the proportion of consumers who categorised product colours according to all three value dimension.

Categorisation according to the experiential value

In Chapter 4, it was proposed that consumers perceived the value of colour in three dimensions: experiential, symbolic and functional. The experiential value dimension represents consumers' likes and dislikes, that is, their subjective taste.

Although the existing literature does not relate experiential value to colour, this thesis suggests that experiential value covers the individually and personally experienced attractiveness of colour, because the experiential value is determined by consumers' personal tastes, hedonic desires (Berthon et al., 2009) and likes and dislikes (Yu and Fang, 2009). The experiential value is subjective (Berthon et al., 2009) and self-oriented (Holbrook, 2006), and it fulfils experiential consumer needs, such as sensory pleasure, variety and/or cognitive stimulation (Park et al., 1986). Aesthetics is also related to the experiential value in the existing studies (e.g. Smith and Colgate, 2007). Noteworthy, while the word aesthetics has several meanings, in this thesis, it refers to aesthetic preference (Schloss and Palmer, 2011), that is, an individual opinion on whether an object is pleasurable to look at (Holbrook, 1980), and does not include colour harmony or emotions.

In Study 2, the respondents who categorised the colours according to the experiential value, expressed their individual opinions (Berthon et al., 2009) about the colours. Categorisations according to the experiential value demonstrated the importance of a person's sense of beauty (Palmer et al., 2013) and of colours being pleasurable to look at (Holbrook, 1980), and of sensory pleasure (Park et al., 1986).

Noteworthy, in coding the data, only the responses which clearly expressed experiential value (words such as beautiful, ugly, attractive, unattractive, like, dislike) were coded as

"experiential". If the respondent categorised only according to, for example, the likelihood of buying, the response was categorised as "CPS" (see section 5.4.2) because of a lack of clarity as to whether the respondent found colours desirable, tolerable and unacceptable experientially, symbolically or functionally.

As an example of categorisation according to the experiential value, Table 45 demonstrates how Respondent 601 (from Control Group) named the colour categories that he formed. That is, he categorised the colours according to whether he found them attractive or unattractive.

Table 45 Example of categorisation according to the experiential value

	Colour categories
Category 1	Attractive colours
Category 2	Unattractive colours
Category 3	Neutral colours

As discussed in the previous section, respondents often used several themes simultaneously as a basis for their colour categories. The findings confirmed that it was important to ask the respondents not only to name the colour categories that they formed, but also, to describe the colour categories in more detail because the descriptions often revealed other themes besides the one used in naming the categories. As an example, Table 46 demonstrates how Respondent 6 (from Group CAR) named the categories in a way that could merely be interpreted as the CPS (e.g. best, never, maybe), but when she clarified how she formed the colour categories, it turned out that she used the experiential value as a basis for her categorisation; she expressed her likes and dislikes and the attractiveness of the colours.

Table 46 Example of how a respondent named the colour categories according to the CPS but described the categories according to the experiential value

	Name	Description
Category 1	Best	Favourites, these I like the most
Category 2	Never	Hideous
Category 3	Maybe	Quite good
Category 4	Yuck	Disgusting
Category 5	Not good	Not attractive

In general, four in ten respondents in Group CAR, three in ten respondents in Group PHONE and a quarter in Control Group categorised colours according to the experiential value. Table 47 presents the observations on categorisation according to the experiential value in each group. Chi-square tests were conducted to explore whether there were differences between the groups in the usage of the experiential

value dimension as a basis for colour categorisation. The results (Table 48) show that there was a statistically significant difference between Group CAR and Control Group (χ^2=15,394, p=0,000) and a marginally significant difference between Group CAR and Group PHONE (χ^2=3,551, p=0,068, p<.10) but no difference between Group PHONE and Control Group (χ^2=2,230, p=0,162). The results indicate that using the experiential value dimension as a basis for categorisation was the most common in Group CAR.

Table 47 Observations on categorisation according to the experiential value

	Number of observations	Percentages	Total number of respondents
Group CAR	85	39.2%	217
Group PHONE	64	30.5%	210
Control Group	55	24.1%	228

Table 48 Chi-square test results regarding the experiential value dimension

Chi-square test between:	χ^2-value	p-value
Group CAR and Group PHONE	3,551	0,068
Group CAR and Control Group	15,394	0,000
Group PHONE and Control Group	2,230	0,162

Categorisation according to the symbolic value

The second value dimension proposed in Chapter 4 was the symbolic value dimension. The symbolic value dimension represents the learned meanings and associations of colour because the value perception is affected by the social context and the culture in which consumers live and consume.

In the existing literature, symbolic value is characterised as other-oriented (Holbrook, 2006). It highlights the social context and the social collective (Berthon et al., 2009), and it fulfils symbolic needs, such as needs for self-enhancement, role position, group membership and ego-identification (Park et al., 1986). The symbolic element has often been found in colour studies (Aslam, 2006), typically in the form of colour meanings and associations (e.g. Adams and Osgood, 1973; Bellizzi and Hite, 1992; Elliot and Maier, 2007; Levy, 1984; Manav, 2007; Middlestadt, 1990; Saito, 1996a, 1996b). For example, scholars have found that consumers tend to prefer colours which they associate with something pleasant and, similarly, dislike colours that provoke associations of something unpleasant (Palmer and Schloss, 2010).

The symbolic value also appeared in Study 2 as one of the themes according to which respondents categorised colours. The findings revealed that colours reminded respondents of something or they associated colours with certain emotions, people or events. However, symbolic value categories vary. While some respondents' symbolic associations expressed stereotypes (e.g. Barbie, grandpa), some were associations of holidays (e.g. Christmas, Easter), emotions (e.g. joy, sorrow, love), a certain friend, relative or a favourite pullover. In this thesis, the symbolic value was not further divided into sub-themes, such as meanings, emotions or associations, but instead, the thesis adopted the suggestion proposed by Levy (1959), according to which anything that represents something other than itself can be considered a symbol. Therefore, in

this thesis, all types of symbolic associations are considered examples of the symbolic value.

To demonstrate categorisations according to the symbolic value, Table 49 shows how Respondent 595 (from Control Group) and Respondent 115 (from Group CAR) named and described the colour categories that they formed according to the symbolic value. The example categories of Respondent 595 represent socio-culturally determined colour associations. Within a demographic group (Arnould and Thompson, 2005), that is, the residents of the country, the colours of a flag of a country most likely carry a shared meaning, whereas the colour association is probably dissimilar for residents of other countries. Similarly, which colour is associated with the fire department varies depending on where a person grew up, and therefore, the association is probably shared locally but varies between residents of countries and cities. The example categories of Respondent 115, in turn, reflect the respondent's individual worldview more than the example categories of Respondent 595. That is, Respondent 115 associates colours with candies, mundane vehicles and partying. These associations may not be shared within any traditional demographic group (Arnould, Price and Malshe, 2006), such as a nation, but are more likely her individually determined associations, or shared by an emergent group, such as a consumer tribe or a group of friends (Arnould et al., 2006).

Table 49 Examples of categorisation according to the symbolic value

	Respondent 595		Respondent 115	
	Name	Description	Name	Description
Category 1	Finland	Colours of the flag of Finland	Candy	Bright candy colours, like artificially coloured fruit-flavoured candies.
Category 2	Fire department	Colours of the fire department.	Plain	Regular, mundane vehicles whose purpose is to transport people from A to B without passion.
Category 3	-	-	Party	Youthful and a little extraordinary, colours that catch your eye and invite you to party.

Respondents also associated colours with natural elements, such as rocks, trees, sun, sea and flowers. Similar findings were reported by Dr. R. Beau Lotto in the BBC's documentary, *Horizon: Do you see what I see?*[12] Accordingly, when categorising colours without further instructions – particularly in Control Group – subjects tended to arrange colours in a way that they were represented in nature.

One aspect of the symbolic value was characteristic to only Group CAR and Group PHONE; respondents categorised the coloured objects according to assumed target groups. That is, respondents believed that by colours, they could define persons who would choose certain cars and mobile phones. This finding is in line with the findings of Study 1 as well as existing literature which proposes that consumers use possessions to display their inner self for others (Mittal, 2006) and match product-image to either

[12] http://www.lottolab.org/articles/publiccolour.asp (accessed August 5th, 2013, first broadcasted in the UK in August 2011 and in Finland in July 2013)

their self-image or ideal self-image (Landon, 1974), and respectively, they evaluate other consumers accordingly (Mittal, 2006). Not surprisingly, categorisations according to assumed target groups did not appear in the Control Group which was not given a product context. Out of those who reported symbolic colour categories, more than one-quarter in both groups categorised colours according to assumed target groups. As an example, Table 50 demonstrates how Respondent 240 (from Group PHONE) described the colour categories that she formed based on assumed target groups.

Table 50 Examples of assumed target groups as a basis of categorising colours

	Name	Description
Category 1	Sir	This target group wants an elegant and appropriate phone. Although it includes "an entertainment centre", they don't want to show it by the looks of the phone.
Category 2	Madam	This target group is very energetic and use their phones in a versatile manner. The colours signal that the phone is always ready for use.
Category 3	Joy	The phones in this category are for young adults who are somewhere between stylish and unconditional.
Category 4	Caramel	This group consists of adolescents and teenagers
Category 5	Earth	This target group considers their phones simply as phones, although they don't mind if there is some colour involved.

In general, roughly half of the respondents in Group CAR and Group PHONE, and four in ten respondents in Control Group, categorised colours according to the symbolic value. Table 51 shows the observations of categorisations according to the symbolic value in each group. Chi-square tests were conducted between the groups. The results (Table 52) revealed that there was a statistically significant difference between Group PHONE and Control Group (χ^2=6,108, p=0,017). However, there were no significant differences between Group CAR and Group PHONE (χ^2=2,284, p=0,147) or between Group CAR and Control Group (χ^2=0,910, p=0,343). The results indicate that using the symbolic value dimension as a basis for categorisation was more common in Group PHONE than in Control Group.

Table 51 Observations on categorisations according to the symbolic value

	Number of observations	Percentages	Total number of respondents
Group CAR	104	47.9%	217
Group PHONE	116	55.2%	210
Control Group	99	43.4%	228

Table 52 Chi-square test results regarding the symbolic value dimension

Chi-square test between:	χ^2-value	p-value
Group CAR and Group PHONE	2,284	0,147
Group CAR and Control Group	0,910	0,343
Group PHONE and Control Group	6,108	0,017

Categorisation according to the functional value

The third value dimension proposed in Chapter 4 was the functional value dimension, referring to how colour adds value to the usage of a product. The functional value dimension represents reason-based value perceptions.

In the existing literature, functional value (also called utilitarian value or instrumental value) is seen to highlight an object's utility (Berthon et al., 2009) and its ability to be useful and perform a desired utilitarian function (Creusen and Schoormans, 2005; Smith and Colgate, 2007) or other utilitarian functions that consumers demand of the product (Veryzer, 1995). Consumers' functional needs are typically consumption-related problems for which they seek products that solve or prevent these problems (Park et al., 1986). The functional value dimension highlights rationality (Hirschman and Holbrook; 1982) as well as means-ends type and non-sensory attributes (Batra and Ahtola, 1990). The functional value is rarely related to colours although scholars acknowledge that colours do have a functional dimension (Creusen and Schoormans, 2005; Mundell, 1993).

The functional value dimension also appeared in the findings of Study 2. In categorising colours according to functional value, respondents considered the utilitarian functions of the colours (Creusen and Schoormans, 2005; Smith and Colgate, 2007) and how they could solve consumption-related problems (Park et al., 1986). In Group CAR, members mainly worried about how visible dirt was on the car and how safe (visible) the car was in traffic. In Group PHONE, respondents considered a functional colour as bright enough to be found in a purse or on a table full of stuff. As expected, the functional value dimension rarely appeared in the Control Group because to be functional, colour needs to have a context.

As an example of categorising coloured products according to the functional value, Table 53 demonstrates how Respondent 73 (from Group CAR) named and described the colour categories that she formed according to the functional value.

Table 53 Example of categorisation according to the functional value

	Name	Description
Category 1	A safe colour in traffic	Research shows that the yellow colour on the post office cars is the most visible in traffic, both on the roads and in the city.
Category 2	Too hot in the summertime	Dark cars are agonising from spring to autumn if you don't have a garage that shields the car. Additionally, even if the car has air conditioning, it uses more fuel to cool the car.
Category 3	Not visible on a snowy road – not safe!	In the wintertime, the landscape is snowy and there is snow on the roads, so it is difficult to see a white – or light coloured – car. Of course, in Finland it's mandatory to use the headlights and it helps a little, but the risk is still high.
Category 4	Candy colours – no thank you!	Blurry and smeary looking colours, these are also difficult to see in traffic when there is no snow on the ground.

Table 54 presents the observations in each group regarding categorisations according to the functional value. The results indicate that Group CAR categorised colours according to functional value more often than the other two groups. However, no

statistical tests were conducted due to the small number of observations in Group PHONE and Control Group.

Table 54 Observations on categorisation according to the functional value

	Number of observations	Percentages	Total number of respondents
Group CAR	30	13.8%	217
Group PHONE	9	4.3%	210
Control Group	2	0.9%	228

5.4.4. Summary and discussion of the findings of Study 2

The main findings of Study 2 were that consumers categorised product colours according to (1) the common colour categories, (2) the CPS and (3) the three value dimensions proposed in Study 1: experiential, symbolic and functional.

While many of the themes were found in similar proportions in all groups, there were some noticeable differences between the groups: (1) Control Group did not categorise the colours according to the CPS; (2) coloured products were categorised according to the value dimensions more often than colours without a product context; (3) Control Group did not use functional value as a basis for categorisation, and therefore, members of Control Group did not use all three value dimensions simultaneously; (4) respondents who were not given a product context categorised colours according to the common colour categories more often than respondents who categorised coloured products; (5) respondents in Group CAR used the CPS as a basis for the colour categories more often than respondents in Group PHONE; (6) Group CAR used the experiential and value as a basis for categorisation more than the other groups.

What follows is a discussion of the main findings of Study 2.

Discussion

The findings of Study 2 showed that respondents in Group CAR and Group PHONE categorised colours according to the CPS, while the CPS was not found in Control Group. This finding supports the proposition that the CPS is product category specific. As Hanari and Takahashi (2013) point out, even though consumers have an overall favourite colour, they do not choose that specific colour for every object and purpose. Thus, Control Group was not expected to categorise colours according to which colours they found desirable, tolerable or unacceptable to use, as it was not given objects as a context. This finding indicates that context is important when studying consumer perceived value of colour. Context has been found to be important for consumer experiences and for how consumers perceive the value of products also in previous studies (Woodruff, 1997).

The vast majority of the respondents who categorised colours according to the CPS also used at least one of the value dimensions as an additional basis for their colour categories. This finding was expected because, as proposed in Chapter 4, the CPS hardly exists in a void. Rather, it exists in the three value dimensions, and thus, the CPS can be experiential, symbolic or functional. That being said, the CPS was treated as a

separate theme in this study because some of the responses were not clear on which value dimension they referred to. Another type of study design, where it would be possible to ask follow-up questions, would allow the researcher to identify specifically which value dimension respondents mean when they categorize colours according to the CPS, thus resulting in findings that do not need to treat the CPS as a separate theme but instead, the CPS could be incorporated in each value dimension individually.

The findings revealed that consumers in Group CAR and Group PHONE used at least one value dimension as a basis for colour categorisation more than the respondents in Control Group. This finding indicated that there was a significant difference between exposing subjects to colour in general (such as colour chips) and to coloured objects. This finding supports the suggestion of Holmes and Buchanan (1984), according to which colour perception cannot be asked independently of the object. Rather, colour perception is a function of the determined object. These findings strongly suggest that using colour chips in research is not sufficient to understand how colour is perceived in relation to products. Arguably, if only colour chips were used in this thesis, the value dimensions could have remained undetected.

The findings further show that consumers sometimes use two or three value dimensions simultaneously as a basis for colour categories. This finding supports the proposition from Study 1, in that, the perceived value of product colour is affected by several value dimensions simultaneously, which arguably sometimes leads to trade-offs.

The functional value dimension was rarely found in Control Group. This finding was expected because the functional value always needs a context, and without a context, Control Group was not expected to categorise colours according to the functional value.

Although both studies in this thesis revealed a similar pattern of how colour was perceived, Study 2 also revealed that the common colour categories, which are typically studied within the colour category research (e.g. Davidoff et al., 1999; Fontenau and Davidoff, 2007; Franklin and Davies, 2004; Franklin et al., 2005), were often used as a basis for categorising colours. This finding was expected, bearing in mind that we learn the categorical colour perception even before we learn how to talk (Franklin and Davies, 2004). Nonetheless, the statistical analysis showed that the respondents who were not given a product context (Control Group) categorised colours according to the common categories more often than respondents who categorised coloured products (Group CAR and Group PHONE). This finding indicates that when not given a context, consumers use a generic way to categorise colours, that is, the common colour categories. Respondents who were given a product context, in turn, turned to the product specific value dimensions and CPS to categorise colours. Nearly half of the respondents in Group CAR and Group PHONE failed to mention the common categories at all. Out of those who did mention the common categories, almost half also used other criteria to categorise colours. This implies that while research on the common colour categories is truly important, it is not sufficient to understand how consumers perceive the value of product colour. According to the findings, relying solely on the common colour categories in relation to product colour corresponds approximately only to a quarter of consumers, leaving out the vast majority who perceive product colours in other ways.

Additionally, the common colour categories were not found in the interviews in Study 1. This might suggest that when consumers actually and actively think and talk about the colours of cars and mobile phones, they do not categorise colours in their minds

according to the common colour categories. Rather, this may be an easy way to categorise colours in a web-based survey when respondents are not as engaged with the task as they are in an interview. Another explanation could be that when Study 1 interviewees talked about colours, they always elaborated the common colour categories to further reasons. That is, while it is natural for us to talk about colours according to the common colour categories (it would be difficult to describe colours if we were not allowed to use the words red, green, blue, yellow, etc.) none of the interviewees talked about colours, only referring to the hue, value and chroma. For example, even though an interviewee stated that some cars are red, some are grey and others are black, they continued by explaining that red cars were attractive (experiential value dimension), grey was handy because it did not amplify dirt (functional value) and black cars signalled power (symbolic value). Therefore, it is possible that the common colour categories are something that we use in our everyday language, but actually not something that consumers use as a single categorisation criterion. Possibly, some of the respondents in Study 2 failed to elaborate on the other reasons for their categorisations behind the common colour categories, and these reasons could be detected in another kind of study, such as interviews.

Finally, while most of the findings applied both to Group CAR and Group PHONE, there was a significant difference in that Group CAR used the CPS as a basis for colour categorisation more than Group PHONE. This could be due to the fact that cars are large, visible, high involvement products and therefore, the desirability, tolerability and unacceptability of colours (whether experientially, symbolically or functionally) could be more important to car consumers than for a small, relatively low involvement product (mobile phone), and therefore, consumers would be more prone to concentrate on which colours they would and would not like to have. Similarly, the findings revealed that Group CAR used the experiential value as a basis for categorisation more than the other groups. A reason could be, as some of the interviewees in Study 1 suggested, that a mobile phone is often considered as less visible than a car, which could explain why the experiential value is more important for cars. Having said that, some Study 1 interviewees feel the opposite; that a mobile phone is visible for themselves and they look at it all day long, unlike a car, and therefore, they find the experiential value more important for a mobile phone. All in all, the interviewees in Study 1 disagreed on whether the colour of a car or a mobile phone was more important, so the relative importance of car colour is only speculation and would require further research to draw conclusions.

6 CONCLUSIONS

This chapter presents a summary of the main findings of the thesis, followed by theoretical and managerial implications. Finally, an evaluation of the studies is discussed and suggestions for future research are presented.

This thesis studied how consumers perceived the holistic value of colour in relation to products, theoretically conceptualising how the value of product colour was perceived. A holistic view of perceived value was adopted, acknowledging that consumers' overall value evaluations can include all consumers' value perceptions, such as experiences before purchase, in purchase, in use and after use (Sánchez et al., 2006) as well as prospective experiences and imaginary experiences (Helkkula, 2011; Helkkula et al., 2012). This thesis proposes that the consumer perceived holistic value of product colour is conceptually positioned in the intersection of the colour literature and the perceived value literature because it draws upon both fields of research.

The main findings of this thesis are: 1) Consumers perceive the value of product colour in three dimensions: experiential, symbolic and functional; 2) In each dimension, there is a consumer perceived colour preference scale (CPS) which consists of desirable, tolerable and unacceptable colours, 3) The CPSs of each dimension may sometimes contradict when consumers prefer different colours in each dimension, which leads to trade-offs between the value dimensions, and 4) An unacceptable colour in any dimension will likely lead to not making a purchase at all.

This thesis contributes to the perceived value research by showing that product colour is an important but neglected factor in existing perceived value studies and by demonstrating the dimensionality of the perceived value of product colour. Additionally, the thesis proposes trade-offs between value dimensions, an aspect that is currently understudied. Furthermore, the thesis shows that some value dimensions which have been considered important in previous research (e.g. cost/sacrifice value) did not appear to be relevant in the current qualitative study in which no pre-conceived dimensions were presented to the study participants. Moreover, the thesis demonstrates consumers' tendency to evaluate colours on three preference levels and proposes a colour preference scale which relates closely to the zone of tolerance in the perceived service quality research. Finally, the thesis supports the customer-dominant perspective on value, in that, it is indeed the customer who determines what is the value of product colour and it depends on the role of the product in the customer's life as well as the use context.

The thesis contributes to colour research by studying colour as a larger concept instead of a combination of hue, value and chroma. The thesis demonstrates the relevance of the object of evaluation for consumer perceptions of colour, in that, studying the perceived value of particular hues is unlikely to reveal consumer perceptions of value in other contexts. Consequently, this thesis did not study specific hues which resulted in a conceptual framework that is likely to be adaptable in other contexts besides cars and mobile phones. Finally, this thesis shows that it is natural for consumers to categorise product colours; also, their categorisations go beyond the common colour categories, which is the focus of the current colour category literature.

The findings of this thesis also have implications for practitioners. The following sections discuss the theoretical and managerial implications, evaluation of the studies and avenues for further research.

6.1. Theoretical implications

This section discusses the theoretical implications of the value dimensions, the trade-offs, the CPS and the adopted holistic approach in relation to the existing literature. The generalisations made in the thesis are theoretical rather than empirical, and it is acknowledged that more research is needed to confirm whether the propositions of the thesis are generalisable in other product categories and cultures. Having said that, the propositions of the thesis provide marketing research with a conceptualisation of how consumers perceive the value of colour in relation to products.

Dimensionality of the perceived value of product colour

This thesis contributes to the perceived value literature in its demonstration of the perceived value of colour as three-dimensional, consisting of experiential, symbolic and functional value dimensions. This suggests that when studying product colour within marketing, scholars should acknowledge the dimensionality of the perceived value of colour and study all three dimensions, either individually to deepen the knowledge of the characteristics of each dimension, or simultaneously to broaden the understanding of the interrelationships of the value dimensions.

Similar value dimensions have also been found in other contexts (e.g. Berthon et al., 2009; Creusen and Schoormans, 2005; Park et al., 1986; Smith and Colgate, 2007). The propositions of this thesis differ from previous suggestions, in that, this thesis (1) proposes a colour preference scale within each value dimension; (2) acknowledges the interrelationships between the dimensions and proposes trade-offs between the value dimensions; (3) is based on an inductive study.

This thesis contributes to the colour literature by studying colour as a larger concept, resulting in an overall conceptualisation rather than sporadic information of particular hues in particular contexts. Currently, colour is understudied within marketing research (Delamare and Guineau, 2000; Labrecque et al., 2013), and the existing research is fragmented (Funk and Ndubisi, 2006). Consequently, scholars have called for an underlying theory of colour (Funk and Ndubisi, 2006; Grossman and Wisenblit, 1999). This thesis is a first that aims at understanding product colour as perceived value, which opens up novel avenues for colour research. The thesis demonstrates that studying particular hues gives little information on how these hues are perceived in other contexts. By studying colour as a larger concept, this thesis, in turn, developed a conceptual framework that is likely to be adaptable beyond cars and mobile phones.

The value dimensions were found inductively both through the phenomenological interviews and the colour categorisation task. In the colour literature, a categorical perception of colour typically refers to the discrimination of colours that cross a common category boundary (Franklin et al., 2005), but recent experiments imply that consumers may also perceive other colour categories.[13] This thesis showed that a categorical perception of colour exceeds the common colour categories because consumers also categorised colours according to the three value dimensions and the colour preference scale. This indicates that colour categorisation studies should also acknowledge other types of categorisation besides the common colour categories.

[13] http://www.lottolab.org/articles/publiccolour.asp (accessed on August 5th, 2013, first broadcasted in the UK in August 2011 and in Finland in July 2013)

Experiential, symbolic and functional value

The experiential value dimension includes consumers' individual taste, that is, what they find attractive and unattractive. The literature reveals that consumers do not prefer the same favourite colour for all products (e.g. Hanari and Takahashi, 2013), and similarly, this thesis showed that consumers often found other colours, besides an overall favourite, experientially desirable in relation to products. However, experientially unacceptable product colours are more often those that consumers find unattractive in general. This indicates that a negative value perception is rooted in colour's upstream effects in terms of generally disliked colours, whereas a positive colour perception stems often from colour's downstream effects in terms of product-specific colour preference. Therefore, colour preference studies should not only study generally preferred colours but also non-preferred colours, as such colours are more likely to apply to various product categories, and respectively, they should study positive value perceptions in relation to colour's downstream effects. Nonetheless, marketing research needs to acknowledge that colour attractiveness in itself does not explain the perceived value of product colour because value is also constructed from the symbolic and functional dimensions.

Similarly, the findings of this study suggest that because symbolic value is one of the three components of perceived value, colour meanings cannot provide stand-alone explanations of perceived value. Scholars have studied the emotions and associations that colours evoke (e.g. Bellizzi and Hite, 1992; Kaya and Epps, 2004; Ou, Luo, Sun, Hu and Chen, 2012; Palmer and Schloss, 2010), but these findings are contradictory and vary between contexts (Grossman and Wisenblit, 1999) and individuals (Plamer and Schloss, 2010), and are influenced by the priming effect (Collins and Loftus, 1975). The findings of this thesis indicate that it is not sufficient to learn which associations a particular hue evokes in a particular context because the association is unlikely to translate to other contexts, but rather, we need to acknowledge that the symbolic value dimension is one aspect of a larger framework, and consumer perceived value of product colour is also affected by the experiential and functional value dimensions.

The functional value of colour is less studied than the experiential and symbolic value dimensions. Scholars acknowledge that colour can be perceived both aesthetically and practically (Creusen and Schoormans, 2005; Mundell; 1993), but the functionality of colour is understudied in colour research. The perceived value literature, in turn, often emphasises consumer rationality, and a functional value dimension (also called instrumental value, utilitarian value or quality) is found in many perceived value frameworks (e.g. Berthon et al, 2009; Creusen and Schoormans, 2005; Hirschman and Holbrook, 1982; Park et al., 1986; Sánchez-Fernández et al., 2009; Smith and Colgate, 2007). This thesis found that the functional value dimension is also important in the context of colour and deserves to be acknowledged in future studies.

Trade-offs

This thesis proposes that consumers sometimes simultaneously prefer different colours in each value dimension, thereby leading to trade-offs between the value dimensions. Trade-offs are not studied in depth in the colour literature, nor in the perceived value literature although a few studies acknowledge the possibility of trade-offs (Batra and Ahtola, 1990; Creusen and Schoormans, 2005; Crilly et al., 2004; Holbrook and Hirschman, 1982). While Woodall (2003) proposes a framework of trade-offs, his framework groups all product attributes into one dimension (Marketing VC), and it is

suggested that trade-offs are made between intrinsic (perceived benefits) as well as extrinsic (price, units of exchange) product elements. What the model fails to consider is a situation where the product attributes alone create conflict (e.g. different levels of benefit). This thesis, in turn, provides a novel framework for understanding the interrelationships between the perceived value dimensions and emphasises the importance of trade-offs that consumers are forced to make on the basis of one product attribute (colour). When consumers are faced with either a rational or emotional trade-off, they are forced to compromise on at least one value dimension. By definition, this means that they are not able to simultaneously satisfy their needs in all value dimensions, thereby resulting in possible dissatisfaction. At worst, when facing a trade-off between an unacceptable colour and not making a purchase at all, consumers may walk away because of an unacceptable colour.

Colour preference scale

This thesis proposes that there is a colour preference scale (CPS) in each value dimension. This means that consumers may prefer colours experientially, symbolically or functionally. In colour preference studies, the term *colour preference* typically refers to the liking of colours (e.g. Hanari and Takahashi, 2013; Saito, 1996b), although more recently, some scholars have argued that consumers may prefer certain colours because of the agreeable associations they evoke (Palmer and Schloss, 2010) or the emotions related to them (Ou et al., 2004). This thesis suggests that colour preference occurs in the three value dimensions, and therefore, research should acknowledge that *liking a colour* is not synonymous with *colour preference*.

Colour is an important factor in consumer perceived value of a product, particularly when a colour is desirable or unacceptable. The CPS relates closely to the zone of tolerance (Parasuraman et al., 1991) in the perceived service quality research, in that, also in the context of service quality, consumers rank perceived quality as adequate (tolerable) or desirable, and anything below adequate is unacceptable. The impact of unacceptable colours on perceived value is crucial because an unacceptable colour increases the likelihood of consumers walking away instead of making a purchase. The strong effect of losses vs. gains is also found in the context of perceived service quality (Strandvik, 1994) and decision-making (Kahneman and Tversky, 1979; Kanouse and Hanson, 1972: 58; Peeters and Czapinski, 1990). Yet, diminishing value is understudied within the perceived value research (Woodruff and Flint, 2006), although scholars acknowledge that the value outcome can be negative (Grönroos, 2011; Woodruff and Flint, 2006) and that an active misuse or neglect by one or more actors in the service system may lead to value co-destruction (Plé and Cáceres, 2010). The findings of this thesis suggest, however, that by simply controlling their service processes, companies are not able to avoid value-diminishment because perceived value may be diminished through consumers' individual value perceptions without misuse or neglect by companies. Therefore, the perceived value research needs to adopt a consumer-oriented approach in order to understand how consumers perceive diminished value.

Colour research is yet to adopt the zone of tolerance, which has been applied in several service sectors, such as hotelling (Nadiri and Hussain, 2005), banking (Nadiri, Kandampully and Hussain, 2009), call centres (Dean, 2004) and internal call centres (Hsieh, Sharma, Rai and Parasuraman, 2013). Within the perceived value research, the zone of tolerance has been applied to perceived value in terms of, for example, willingness to pay (Liljander and Strandvik, 1993), but also to customer complaint behaviour (Tronvoll, 2007) and e-commerce (van Riel, Liljander and Jurriëns, 2001).

To the best of my knowledge, no other study has proposed desirable, tolerable (adequate) and unacceptable levels in terms of how consumers perceive the value of colour in relation to products. The findings of this study indicate that the three-level perception of colour preference is important for consumers, and they automatically divide colours into desirable, tolerable and unacceptable levels. This suggests that adopting the CPS in colour research would expand our understanding not only in terms of consumer perception of product colours but of their perception of colours in general. Existing colour preference studies are typically limited to the study of the most preferred (desirable) colours, leaving tolerable and unacceptable colours understudied.

Holistic approach to perceived value

This thesis has found that consumers tend to perceive value as an overall phenomenon rather than looking at the distinction between where value emerges (purchase or use) or by whom it is created (company or consumer) (cf. Sánchez et al., 2006). Moreover, consumers do not appear to distinguish between lived and imaginary scenarios (cf. Helkkula et al., 2012; Hirschman and Holbrook, 1982). This finding corresponds to the holistic view of perceived value (Helkkula, 2011; Helkkula et al., 2012; Sánchez et al., 2006) and the view of the customer-dominant logic, according to which, marketing research needs to aim at an understanding of how value emerges for customers and how customers construct their experiences through sense-making processes (Heinonen et al., 2010). The holistic approach is increasingly suggested by scholars (Grönroos and Voima, 2013, Heinonen and Strandvik, 2009, Helkkula et al., 2012; Sánchez et al., 2006), because value can emerge both in exchange (e.g. Bagozzi, 1975) and in use (e.g. Grönroos, 2011; Heinonen et al., 2010), or more generally, in a life-context when a consumer experiences something (e.g. Gummerus, 2011).

The holistic approach has been important in this study because without it, some important aspects of perceived value, such as imaginary experiences, could have remained undetected. Imaginary experiences played an important role in the empirical findings of this thesis because in the findings, perceived value of colour was often based on false truths and assumptions rather than on reality and lived experiences. Therefore, this thesis supports the suggestion of adopting the holistic approach to perceived value; pre-defining perceived value could lead to the neglect of important aspects.

6.2. Managerial implications

In order to draw managerial implications, car and mobile phone colours were discussed with three car retailers and three mobile phone retailers. These managerial implications reflect the findings of this thesis in relation to retailers' views. First, some general implications for retailers and manufacturers are presented, after which product-specific implications for cars and mobile phones are presented separately.

General implications

Product design is a source for comparative advantage for companies (Landwehr et al., 2013), and particularly, product aesthetics is the main reason for the competitive role of design (Bloch, 1995), thereby making product colour an important dimension of competitive advantage. Figure 10 summarises how the upstream and downstream effects of colour as well as the perceived value contribute to the consumer perceived holistic value of product colour, and how companies can benefit from this thesis.

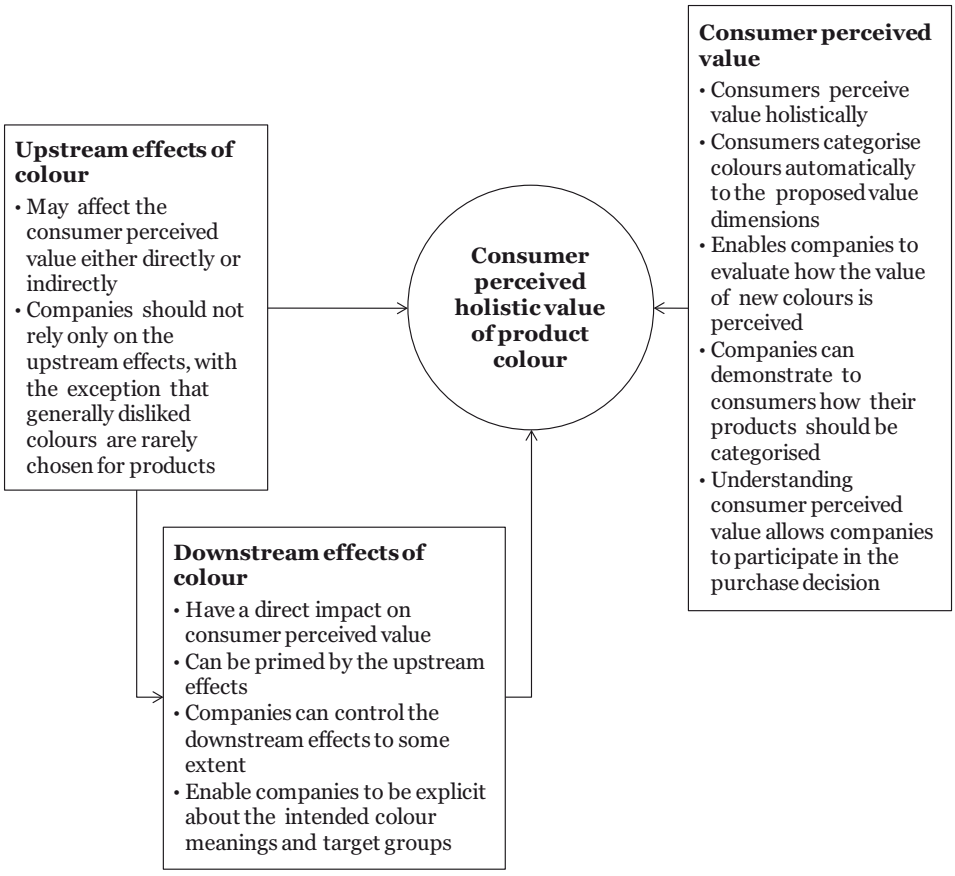


Figure 10 Managerial implications of the upstream and downstream effects of colour and consumer perceived value

Importantly, the upstream effects of colour, such as general colour preferences and meanings of colour, are important factors, but they are insufficient to fully understand the consumer perceived value of product colour. Although the upstream effects of colour can affect the consumer perceived value of product colour directly – for example, a consumer may find his or her overall favourite colour attractive on several other products – they often affect and trigger further downstream effects, such as product perception, which mediate the general effect of colour on the perceived value of the product. For example, learning which associations a particular colour evokes on consumers in general is not a reliable estimation of how it is perceived on a specific product. Red can be associated with love, in general, but with a dynamic lifestyle in the context of cars and unwanted attention in the context of mobile phones. Therefore, companies need to be careful when evaluating how their product colours are perceived. For example, if research shows that blue is often associated with calmness, which is how a company intends the colour to be perceived, the company should acknowledge that blue also has several other meanings. More importantly, a consumer's brain is unlikely to go through all the possible meanings of blue, but instead, it lands quickly on the one that fits either the current context or past experiences, or even imaginary experiences. Thus, if companies are explicit about the context and the intended meaning of colour, they can enhance the likelihood that consumers' minds perceive the

value of the colour in the intended way. If the intended value perception is clear, System 1 of the consumer's brain (Kahnemann, 2011) is likely to settle for that and thus prevent priming (Collins and Loftus, 1975; Kahneman, 2011) of another context from the recent past and applying it to the current context or generating fantasy imageries (Hirschman and Holbrook, 1982) that do not correlate with reality. Indeed, companies should be aware of the downstream effects that relate to their products because they can, to some extent, control these effects. They can, for example, develop their advertising, branding and retail environments in a way that creates positive product perceptions and provide consumers with product colours that correspond to those product perceptions. Doing so is likely to enhance consumers' purchase intentions.

However, companies can utilise research on generally preferred colours by not providing disliked colours because consumers are unlikely to purchase products of generally disliked colours.

This thesis showed that consumers categorise colours of products in their minds according to the three proposed value dimensions. Consumers tend to categorise colours automatically in their minds (Fontenau and Davidoff, 2007) because they try to understand products by positioning them in appropriate categories (Bloch, 1995). Therefore, companies need to proactively consider how they want their products to be categorised (Bloch, 1995). Although categorical colour studies typically focus on the common colour categories (see e.g. Davidoff et al., 1999; Fontenau and Davidoff, 2007; Franklin and Davies, 2004; Franklin et al., 2005), the findings of this thesis revealed that only a quarter of consumers used the common colour categories as a sole categorising criterion. Thus, relying on the common colour categories as a benchmark for product categorisations is risky for companies because it excludes the vast majority of consumers. Instead, companies need to take other types of categorisations into consideration. As this thesis has shown, the top-of-mind categorisation criteria are the three value dimensions and the CPS that companies need to acknowledge in order to successfully cater for the needs of their customers. For example, through advertising, companies can demonstrate the target groups of particular colours and thus control how consumers perceive the symbolic value of product colours. Similarly, they can highlight the functionality of particular colours so that when consumers intend to purchase the products, they already have a perception of the functional value, thus avoiding a situation whereby consumers do not learn the functionality of colours until in use.

According to the discussions with retailers, it appears that retailers do not participate in the decision-making nor are they aware of how consumers choose colours for their cars and mobile phones. This thesis proposes a conceptualisation of how consumers perceive the value of colour, which could help retailers learn how their customers perceive colour. For example, when deciding on new colours for products, manufacturers should consider the three value dimensions in order to anticipate how the new colours are perceived and categorised by consumers. By doing so, retailers, as well as manufacturers, can learn how to offer colours that are at least tolerable (if not desirable) for consumers. Learning to offer the right colours is likely to lead to reduced manufacturing costs and increased sales (Trent, 1993).

Moreover, if retailers are aware of the three value dimensions of the perceived value of colour, they may be able to participate in the purchase decision and assist customers in their choices, which will increase customers' purchase intentions (Kolesar and Galbraith, 2000) and customer satisfaction (Du et al., 2006). For example, retailers can affect consumers' perceptions of colours by providing consumers with information

about the benefits and risks of colour according to each value dimension. According to Finucane, Alhakami, Slovic and Johnson (2000), when assessing the risks and benefits of objects, consumers tend to find the risks reduced and the benefits increased when exposed to new information which either highlights the benefits or presents that the risks are lower than expected.

Another approach for retailers would be to act as colour consultants for consumers. In interior design, for example, designers often interview customers in order to find out their personality, lifestyle and the usage purpose of the space they are about to design, and use this information to suggest colours that match the lives of customers. Similarly, car and mobile phone retailers could also learn about customers and assist them in their colour choices. For example, depending on customers' lifestyles and needs, retailers could guide them towards rational choices through pointing out the functionality of a colour, thereby increasing customer satisfaction (Chitturi et al., 2008), or towards emotional choices by offering a symbolically valued colour aimed at increasing customer delight (Chitturi et al., 2008). Satisfying and delighting customers are likely to increase customer loyalty, positive word-of-mouth and re-purchase intentions (Chitturi et al., 2008).

Further, it is important for both retailers and manufacturers to understand what makes a colour unacceptable for consumers because offering unacceptable colours may make a consumer walk away instead of making the purchase. Thus, it is crucial for manufacturers to produce, and for retailers to offer, colours which are at least tolerable in each value dimension. In this thesis, the strong negative impact of unacceptable colours implies that value diminishes without action or inaction by companies, and therefore, it can be difficult for companies to avoid a diminishing perceived value on the basis of colour if they are not aware of how consumers perceive the value of colour.

Moreover, while this thesis proposes that the value of colour is perceived in three dimensions, more research is needed to explore whether all three value dimensions are equal or whether consumers weigh them dissimilarly. Learning the relative emphasis of the value dimensions would provide further information for retailers on how to select colour ranges for their products and how to assist customers with their colour choices.

Finally, when considering how to provide value for consumers, companies need to avoid the traditional goods-dominant logic because consumers perceive value holistically as they experience it in their lives. In this thesis the holistic approach on the perceived value revealed that consumers do not distinguish lived experiences from imaginary experiences, but both affect the value perceptions of colour. Arguably, it is also important for retailers and manufacturers to acknowledge that consumers are not always rational and their perceptions of the world may be inaccurate yet personally perceived as the truth (Kahneman, 2011). Therefore, when conducting market research companies should be open to more holistic and phenomenological approaches instead of relying only on traditional web-based surveys.

Car-specific implications

Car retailers typically stock cars in a few regular colours. When customers request a particular colour, they usually have to pay more and wait longer. Discussions with car retailers revealed that the price of an ordered colour was not considered a problem. According to these car retailers, the price of a colour was marginal compared to the price of the car, and customers rarely settled for a cheaper colour if the desired colour was available. A problem occurred when a desired colour was not immediately

available. Car retailers felt that customers were not willing to wait for extended periods for a car, and that they would rather settle for a colour that was immediately available. Having said that, car retailers acknowledged that colour was an important component of cars, and because a car was a large investment and the process of purchasing a car was typically long, providing customers with exactly what they wanted usually increased customer satisfaction and re-purchase probability. Therefore, it would be beneficial for car manufacturers to shorten the time it took to order specific colours because the waiting time appeared to hinder customers from spending more money on a desired colour and from being satisfied with the purchase and the customer service.

Another option for retailers could be to offer an easy and affordable way to alter the colour from unacceptable or tolerable to desirable. However, the retailers did not consider painting cars a good option because painting, at the moment, is relatively expensive and only a few customers are willing to pay for painting. Thus, reducing the waiting time required for ordering a colour which retailers did not stock was considered the best alternative to meet customer needs.

Mobile phone-specific implications

At the moment, many mobile phone manufacturers produce products in only a few colours – most typically black and white – with a few exceptions who also provide a handful of more chromatic options. However, according to mobile phone retailers, there was a demand for more colours because customers often enquired as to whether they could have a particular phone in another colour. Retailers did not know why manufacturers did not provide a greater variety of colours, but they would like to see more colour variation as they found customers visibly pleased when they received a desirable colour.

As a substitute for a particular colour, consumers typically purchased a phone case of a desirable colour. However, they considered this a mediocre surrogate and would rather have a mobile phone of that colour. Therefore, for manufacturers it would be beneficial to widen their colour ranges in order to meet consumers' needs. A similar suggestion was proposed by Lai et al. (2006) who suggested that manufacturers should provide a vast range of mobile phone colours. It appears that mobile phone manufacturers might already be aware of the demand for coloured mobile phones because one of the major manufacturers, Apple, launched a small array of coloured mobile phones,[14] which is likely to meet the needs of consumers.

However, as the findings of this thesis show, some colour ranges may sometimes harm consumers' perception of a product. Consumers tend to draw conclusions about an assumed target group on the basis of product colour, and some consumers may exclude themselves from a target group if they feel that the colour range as a whole does not target them. They may consider a mix of widely divergent colours confusing. Therefore, simply increasing the number of colours offered is not sufficient to enhance colour selection (Trent, 1993). Instead, manufacturers need to understand how consumers perceive the value of product colour to enhance their colour selections in a way that appeals to an intended target group. For example, let us think of a hypothetical situation in which the current colour selection is a mix of black and white, and the most important target group is business men in their 50s who value colours whose symbolic meanings reflect their occupations. If the company would like to enhance their colour selection, perhaps adding pink, green and yellow to the selection would not lead to the

[14] http://www.apple.com (accessed 11.9.2013)

appeal of the mobile phone to *both* business men in their 50s *and* outgoing women in their 20s who prefer experientially desirable colours. Instead, the original target group (business men in their 50s) would find the new colours confusing and feel that the product no longer targeted them. In this case, enhancing the colour range could be conducted more successfully by adding more subtle colours which the original target group finds symbolically desirable (such as grey, silver, ivory, midnight blue) and offering the more chromatic colours as a separate product line to the new target group.

Retailers anticipate that customers might even like to customise their own mobile phones on-line. Coincidentally, one of the largest mobile phone manufacturers, Google's Motorola, is planning to launch a built-to-order service, meaning that consumers can customise and order a mobile phone on-line.[15] This, however, may lead to the same problem as when ordering a car colour which retailers do not stock; the waiting time could be too long for consumers and they might settle for an undesirable, but immediately available, colour. Motorola plans shipments from six days from the date of order to four days.[16] It remains to be seen how consumers adopt the built-to-order service and whether they accept the waiting period.

A more recreational option would be to provide customers with paint specifically designed for mobile phones in order to paint their mobile phones whichever colour they liked. This alternative, however, was considered suitable only for younger consumers who enjoy doing-it-yourself and not for adult consumers who possibly would not like their mobile phones to look hand-made.

Finally, the mobile phone manufacturing business might witness radical changes in the future. At the moment, the hardware design of mobile phones is more or less identical. Carolina Milanesi, an analyst with the research company, Gartner, points out that consumers are left with "rectangles that are black and white".[17] Nokia's, one of the largest hardware manufacturers, decision to opt out of its unprofitable mobile phone manufacturing[18] may indicate that traditional hardware manufacturers are unable to meet the needs of customers. Coincidentally, hardware manufacturing has already been adopted by fashion houses – such as Chanel, Prada and Gucci – who have launched their own mobile phones. This could imply that in the future, mobile phone design could move from hardware manufacturers to fashion brands that collaborate with software companies, such as Microsoft or Google. Similar change occurred in the past in the eyewear and timepiece markets: Historically, glasses and spectacles were produced as medical devices, but during the past decades, practically every major fashion house has added designer eyewear to their selections, and even many high street brands offer eyewear as well (Pullin, 2007); Manufacturers of timepieces, such as wrist watches, were once only a few (Landes, 1979), however, in 1994 The British Jewellers Yearbook listed some 150 watch brands (Mitchell and Papavassiliou, 1997). Wrist watches were originally luxury products for a wealthy target group (Landes,

[15] http://www.reuters.com/article/2013/09/08/smartphones-fashion-idUSL2N0H217N20130908 (accessed 9.9.2013)
[16] http://www.reuters.com/article/2013/09/08/smartphones-fashion-idUSL2N0H217N20130908 (accessed 9.9.2013)
[17] http://www.reuters.com/article/2013/09/08/smartphones-fashion-idUSL2N0H217N20130908 (accessed 9.9.2013)
[18] http://press.nokia.com/2013/09/03/nokia-to-sell-devices-services-business-to-microsoft-in-eur-5-44-billion-all-cash-transaction/ (accessed 3.9.2013)

1979), whereas today, watches are available in all price ranges from less than 20 EUR[19] to dozens of thousands[20].

It might not be impossible to witness a similar change in the mobile phone market in the future. That is, the hardware design could move from traditional manufacturers to fashion houses and high street brands, and consumers would be able to purchase not only a Chanel mobile phones but even Esprit mobile phones or Hennes & Mauritz mobile phones. This shift could meet the needs of consumers because, arguably, moving hardware design to fashion brands is likely to increase available colours because the variation in fashion brands is likely to lead to a larger number of mobile phone collections – compared to the number of collections today. A variety of collections provides consumers with a vast range of assumed target groups they can relate to. Reflecting on the tendency of fashion brands to offer various collections, for example, Hugo Boss, offers clothing collections to four target groups: a premium, modern and sophisticated collection called Boss; an urban, light-hearted and cool collection called Boss Orange; a relaxed, fresh and sporty collection called Boss Green, and a progressive, contemporary and individual collection called Hugo.[21] Similarly, it could also be expected that mobile phones would be designed for and targeted to various target groups with differing lifestyles.

For mobile phone software companies, moving hardware design from traditional mobile phone manufacturers to fashion brands would lead to collaborations with fashion brands and competition between software companies for the most profitable partnerships.

6.3. Evaluation of the studies

The trustworthiness of a qualitative study can be evaluated according to five criteria: credibility (Lincoln and Guba, 1985; Wallendorf and Belk, 1989), transferability (Lincoln and Guba, 1985; Wallendorf and Belk, 1989), dependability (Lincoln and Guba, 1985; Wallendorf and Belk, 1989), confirmability (Lincoln and Guba, 1985; Wallendorf and Belk, 1989) and integrity (Wallendorf and Belk, 1989).

Credibility is an equivalent of the conventional internal validity (Lincoln and Guba, 1985), which refers to whether findings are a reflection of the studied phenomena and not of other occurrences (Winter, 2000). In phenomenological studies, the only justified source of data is the experiences of the subjects, and therefore, the subjects' views, by definition, reflect the studied phenomenon (Goulding, 2005). However, in qualitative studies, it is always important to monitor how interpretations are developed (Wallendorf and Belk, 1989). Member checks are one of the most important techniques to assess credibility because they allow subjects to verify that the interpretations represent what the subjects intended (Lincoln and Guba, 1985; Wallendorf and Belk, 1989). This thesis established the credibility of the study by performing a member check amongst the interviewees in Study 1. The preliminary analysis was sent to all interviewees and they were encouraged to evaluate whether the interpretations were correct. As is common with member checks, not all respondents were willing to read an academic analysis as a favour for the researcher (Wallendorf and Belk, 1989), and in this thesis, only seven of 39 interviewees responded to the mail and confirmed the analysis. Out of those seven, two wanted to discuss the analysis in greater detail, and

[19] see e.g. http://www.argos.co.uk (accessed 9.9.2013)
[20] see e.g. http://www.cartier.co.uk (accessed 9.9.2013)
[21] http://www.hugoboss.com/de/en/collection.php (accessed 11.9.2013)

small details were altered based on these discussions. It remains unclear whether or not the 32 non-respondents agreed with the analysis, but it is assumed that they would have communicated had they disagreed. Besides a member check amongst interviewees, the analysis was discussed in peer debriefings (Lincoln and Guba, 1985; Thomas, 2006; Wallendorf and Belk, 1989) throughout the process. While these discussions provided me with academic outsider views, they also acted as peer consumer checks. That is, colleagues are, besides scholars, consumers of cars and mobile phones and they all had personal experiences with the colours of those products. Therefore, they were able to reflect on my analysis not only in terms of research theories but also in relation to their individual experiences. Such 'stakeholder audits' are used to enhance the credibility of qualitative studies because they involve people who have particular interest to comment on the findings based on their personal experiences (Thomas, 2006).

The credibility of the thesis was also enhanced by research audits (Thomas, 2006) that assessed whether the findings fit the existing literature (Hycner, 1985). Additionally, some scholars (e.g. Wallendorf and Belk, 1989) suggest a prolonged engagement in order to enhance credibility. While prolonged engagement often refers to ethnographers spending long periods of time in the studied culture (Creswell and Miller, 2000; Lincoln and Guba, 1985; Wallendorf and Belk, 1989), in this thesis, prolonged engagement meant spending two years with the data, analysing the raw data, developing themes, structuring and re-structuring the themes and identifying relationships between the themes. Finally, the credibility of the study was enhanced by triangulation across sources and methods (Wallendorf and Belk, 1989). That is, the interviewees in Study 1 and the respondents in Study 2 were selected in a way that they represented various demographics, and two differing methods were used in the thesis.

Transferability of a study refers to the extent to which the data and the results are applicable in other contexts (Wallendorf and Belk, 1989). Lincoln and Guba (1985) suggest that when two contexts are sufficiently similar, the propositions from one context may be applicable to the other. For other researchers to conduct empirical studies to confirm transferability, a researcher must provide the reader with an adequate amount of information on the original context so that others are able to assess the prospective similarity of the contexts (Lincoln and Guba, 1985). Transferability of findings can be enhanced by triangulation across sites or contexts (Wallendorf and Belk, 1989). The propositions of this thesis were found in two inductive studies with different research methods. Additionally, the empirical studies of this thesis involved two rather different product categories: cars and mobile phones, which represent two contexts. Using two product categories provided an opportunity to enhance transferability and seek limiting exceptions (Wallendorf and Belk, 1989). The findings of the empirical studies showed that the propositions of this thesis were applicable to both cars and mobile phones. Naturally, there are differences in details, for example, the functional value of colour may have differing forms in the two product categories (the functional aspect of a colour showing mud on a car hardly transfers to mobile phones), yet the conceptual framework applies to both product categories. This suggests that the findings of this study are also transferable to other contexts, but naturally, more research is needed to confirm this transferability. Finally, this thesis adopted the holistic view on perceived value, which allows the subjects to determine the "site" or the context (Wallendorf and Belk, 1989) of the perceived value (e.g. purchase, use, after use), which results in a versatile understanding of the phenomenon.

Dependability of a study assesses how well it can be repeated in a similar context with a similar researcher, similar respondents and similar methods. (Wallendorf and Belk,

1989). Although Wallendorf and Belk (1989) point out that dependability is less essential in interpretative studies, they call for evaluations of interpretation, that is, to be constructed so that it avoids instability other than the inherent instability of the phenomenon. Dependability can be enhanced by providing sufficient information on the development of the analysis so that the reader can follow the decisions that were made and activities that were carried out during the process (Carcary, 2009). In this thesis, I have tried to walk the reader through the methodological decisions, provide detailed information of the analysis, and exemplify the findings through direct quotes from the subjects. An alternative technique for enhancing dependability would be to contact the subjects again months or even years after the initial contact to explore possible changes in behaviour (Wallendorf and Belk, 1989). In the course of the research process, the member check was conducted two years after the first interview and seven months after the last interview. It is expected that prospective changes would have occurred during this time.

A study is said to be confirmable if it represents the subjects' views instead of biases or perspectives by the researcher (Lincoln and Guba, 1985). Although inductive, this thesis acknowledged that it is impossible for a researcher to erase his/her memory (Eisenhardt, 1989; Goulding, 2005). Instead, attention was directed against formulating theories or hypotheses as much as possible prior to the data gathering (Eisenhardt, 1989). My personal view is that I conducted the empirical studies successfully without expectations of what was going to be found. Notwithstanding, one might argue that when conducting Study 2, the propositions from Study 1 may have affected my interpretation. While I do recognise this possibility, I tried my best to bracket my own personal preconceptions in order to better focus on the data and enter into the world of the interviewees (Hycner, 1985; Landridge, 2004). The so called pink elephant paradox was avoided through multiple examples of the phenomenon (large sample) and different contexts (two product categories and a control group) (Morse and Mitcham, 2002). Additionally, alternative explanations were looked for (Morse and Mitcham, 2002), and indeed, the findings of Study 2 introduced a theme that was not found in Study 1 (common colour categories), which arguably can be regarded as an example of alternative themes considered during the analysis. Additionally, the member check and peer debriefings enhanced confirmability; the findings are not likely representations of my personal views, otherwise, issues would have arisen in the member check and peer debriefings. The literature suggests external audits of the data and analysis to enhance the confirmability of a study (e.g. Creswell and Miller, 2000), but such a technique is most suitable for small-scale studies (Wallendorf and Belk, 1989) and was not possible for this thesis.

Finally, integrity of a study refers to the extent to which interpretations are not affected by bias such as lies, evasions, misinformation or misrepresentations by respondents (Wallendorf and Belk, 1989). In this thesis, integrity was not considered an issue, because the research area was not sensitive and did not invite subjects to present themselves in a way that did not correspond to reality (Wallendorf and Belk, 1989). The subjects in the empirical studies were volunteers, which suggests that they were comfortable with talking about the colours of their cars and mobile phones. Anonymity (Wallendorf and Belk, 1989) was obtained by changing the names of the interviewees. Furthermore, in Study 2 responses regarded as jokes or otherwise inadequate (for example, if a respondent did not form any colour categories or the categories were clearly random with descriptions such as "could not care less") were removed from the analysis.

To conclude, this thesis is considered to fulfil the requirements of a trustworthy qualitative study. What follows is a presentation of suggestions for future research.

6.4. Suggestions for future research

The propositions of this thesis were the first attempt to holistically understand how consumers perceived the value of product colour as a larger concept. Like theory development in general, this thesis has its limitations and scholars are encouraged to further develop the propositions.

The thesis revealed that the underlying logic of the zone of tolerance applied to the perceived value of colour and strongly suggests further research on the colour preference scale (CPS) in order to develop our understanding of colour, which this thesis shows as an important element in consumer perceived value.

Further, it is highly recommended that the empirical studies of this thesis are replicated in the future in other contexts, such as other product categories and in various cultures. In particular, there is a lack of research on how product colour is perceived as a larger concept across cultures. Scholars have detected cultural differences in colour preferences (e.g. Saito, 1996a, 1996b; Taylor et al., 2012), colour meanings (e.g. Aslam, 2006; Taylor et al., 2012) and categorical perceptions of colour (e.g. Davidoff et al., 1999; Franklin, Drivonikou, Bevis et al., 2008; Franklin, Drivonikou, Clifford et al., 2008), but there are no studies on how colour is perceived as a larger concept across cultures. This deserves more attention. Additionally, this thesis did not study differences between target groups, and therefore, studying whether demographics or socio-economic differences amongst consumers affect how they perceive the value of product colour may be another avenue for future research.

Further, while this thesis adopted the holistic approach to perceived value, it did not specify which areas of consumers' lives were affected by the perceived value of colour. Instead, it acknowledged that colour can affect, for example, purchase decision, post-purchase satisfaction and use experience. Scholars are encouraged to conduct more detailed research to better understand the vast concept of perceived value, and which aspects of perceived value are affected by desirable and unacceptable colours.

Moreover, the propositions of this thesis suggest that some consumers are affected by colours more than others. While the findings of the empirical studies did not specify the extent of the effect on consumers, it was suggested that perhaps the thresholds between the levels of desirable, tolerable and unacceptable colours were larger for some consumers than others. In Chapter 4, a hypothetical CPS of two consumers was used as an example. In the example, Customer A and Customer B found the same colours desirable, tolerable and unacceptable, but the strength of the impact of desirable and unacceptable colours on the perceived value was more prominent for Customer B than for Customer A. In the future, it would be interesting to study, for example, whether Customer A is more likely to purchase a product of a tolerable colour, while Customer B dedicates more time and effort in finding a product of a desirable colour. Further, it could be explored whether Customer B is more likely to appreciate companies that understand his colour needs, which could increase customer loyalty, while Customer A is more indifferent which, in turn, may lead to disloyalty. On the other hand, it could be possible that an experience that involves unacceptable colours makes Customer B reject a company and turn to competitors more easily than Customer A. Learning how the strength of the colour impact affects consumers could help marketing research identify

different consumer profiles based on the impact of colour on perceived value, thereby helping companies engage their customers and increase customer loyalty.

This thesis proposes three value dimensions – experiential, symbolic and functional – but does not reveal whether consumers perceive all value dimensions as equal, or whether some are more important than others. Crilly et al. (2004) suggest that perhaps the relative importance of each dimension is context-specific. The findings from Study 2 could imply that the experiential value and the symbolic value are more important than the functional value, but Study 1 does not support this suggestion. The findings are inconclusive and this thesis does not draw conclusions on the relative weight of the value dimensions. Instead, it suggests that an emphasis on the three dimensions be studied further in the future.

This thesis also proposed that consumers faced trade-offs when the CPSs of the three value dimensions contradict. Given that the studies in this thesis were not developed to study trade-offs in particular, the findings did not clarify how consumers decided which value dimensions were more dispensable in order to obtain a desirable colour in another dimension. It remained unclear, for example, how consumers weighed the value dimensions in relation to each other and whether some dimensions were sacrificed more often than others. Learning answers to these questions could have important theoretical and managerial implications, which is why I strongly advice scholars to study the trade-offs further.

Finally, in the empirical studies of this thesis, monetary costs or other sacrifices rarely appeared and, therefore, such a dimension was not proposed, although this dimension was found in the literature (see e.g. Sánchez-Fernández et al., 2009; Smith and Colgate, 2007). However, this thesis did not claim that monetary costs or other sacrifices were unimportant, it only stated that this dimension was not found in the empirical studies. Therefore, it is possible that another kind of study design would result in a cost/sacrifice dimension of value, and this possibility should be studied in greater detail in the future.

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APPENDIX 1. SUMMARY TABLE OF SELECTED RESEARCH ON COLOUR AND PERCEIVED VALUE

Research field	Author(s)	Important findings and arguments
Physiological effects of colours	Jacobs and Hustmyer (1974)	Red and green increase physiological arousal (GSR) more than blue.
	Jacobs and Suess (1975)	Red and yellow increase anxiety levels more than blue and green.
	Smith et al. (1986)	Pink tones inhibit muscle strength, whereas blue tones increase it.
	Lotto[22]	Colour affects the sense of time passing by.
	Hill and Barton (2005a)	Red enhances sporting performance.
	Hurlbert and Ling (2005)	Evaluations of the colours of objects' under changes in lighting are not consistent with evaluations of colour patches.
	Rowe et al. (2005)	In combat sports, blue sportswear results in winning more often than white sportswear.
	Elliot et al. (2007)	Red impairs intellectual performance.
	Hagemann et al. (2008)	Red influences how well referees can see players and how they give points to contestants in combat sports.
	Maier et al. (2008)	Red impairs intellectual performance.
	Greenlees et al. (2013)	In combat sports , seeing red impairs the performance of the opponent.
Colour preferences	Eysenck (1941)	A consistent rank order of colour preferences is as follows: blue, red, green, purple, orange and yellow.
	Choungourian (1968)	There are definite cultural differences between four countries in terms of preferences for eight colours.
	Saito (1983)	Cultural background influences the liking and disliking of colours.
	Holmes and Buchanan (1984)	Colour preference needs to be asked in relation to the determined object.
	Reddy and Bennett (1985)	Indians, Nigerians and Americans prefer different sets of colours.
	Silver et al. (1988)	The same favourite colours are preferred regardless of gender and race.
	Hemphill (1996)	Blue is universally preferred.
	Saito (1996a)	There are both differences and similarities in colour preferences in China, Indonesia and Japan.
	Saito (1996b)	There are both differences and similarities in colour preferences in Tokyo, Seoul and Taipei.
	Madden et al. (2000)	The liking of certain colours is consistent in eight countries, while the preference for other colours varies across these countries.
	Ou, Luo, Sun, Hu, Chen et al. (2012)	Differences in colour preferences between eight countries are mild.
	Taylor et al. (2012)	There are differences in the colour preferences of the British and the Namibian Himba culture.
	Hanari and Takahashi (2013)	Colour preferences allow researchers to create individual preference profiles.
	Saito (2013)	White is commonly preferred in Asia; however, the universally preferred blue is also highly preferred.

[22] http://www.lottolab.org/articles/publiccolour.asp (accessed August 5th, 2013, first broadcast in the UK in August 2011 and in Finland in July 2013)

Research field	Author(s)	Important findings and arguments
Meaning of colour	Bradford (1913)	Red is associated with danger.
	Wexner (1954)	Yellow is associated with good cheer.
	Adams and Osgood (1973)	There are strong similarities in the meanings of colour across cultures.
	Bellizzi and Hite (1992)	Blue is associated with relaxation and pleasantness.
	Saito (1996b)	Black is associated with death and nobility; sub-cultural elements can have an impact on the meanings of colour.
	Heath 1997	Red is associated with danger.
	Soldat et al. (1997)	Red is associated with happiness.
	Caivano (1998)	Red is associated with passion, yellow with cowardice.
	Stone and English (1998)	Red is associated with stimulation.
	Crozier (1999)	Blue is associated with serenity.
	Kaya and Epps (2004)	Blue is associated with depression and sadness, green with envy, hope and comfort and, black with wealth.
	Ou et al. (2004)	Consumers prefer colours that create agreeable emotions.
	Aslam (2006)	Black is associated with grief, fear and power; yellow with jealousy; meanings of certain colours are more universal than others.
	Elliot and Maier (2007)	Red is associated with love.
	Manav (2007)	Blue is associated with calmness; yellow with good cheer.
	Koller (2008)	Sub-cultural elements can affect the meanings of colour.
	Palmer and Schloss (2010)	Consumers prefer colours that create agreeable associations.
	Taylor et al. (2012)	Colour-association valence applies to British consumers but not to the Namibian Himbas.
	Klemm (2013)	Colour perception is objective rather than subjective.
Colour in retail	Bellizzi et al. (1983)	Cool coloured interiors increase purchase intentions.
	Mazursky and Jacoby (1986)	Consumers use a store's interior design as a cue to evaluate the quality of the merchandise and the pleasantness of shopping.
	Middlestadt (1990)	Cool coloured interiors increase purchase intentions.
	Bellizzi and Hite (1992)	Cool coloured interiors increase purchase intentions.
	Crowley (1993)	Extreme wavelengths (red and blue) are perceived as active environments; wavelengths that are closer to blue evoke more positive evaluations than those that are closer to red.
	Wakefield and Baker (1998)	The interior design of malls affects consumer perceived excitement; the décor of malls affects the desire to stay.
	Mandel and Johnson (2002)	A website 's background colour of influences the choice of products purchased.
	Babin et al. (2003)	Cool coloured interiors increase favourable evaluations and excitement, but the results change when the impact of lightning is taken into consideration.
	Miller and Kahn (2005)	Atypical colour names increase purchase intentions.
	Chebat and Morrin (2007)	There are cultural difference in consumer reactions to the colours of mall décor.
	Puccinelli et al. (2013)	Male consumers perceive greater savings when prices are presented in red instead of black.

Research field	Author(s)	Important findings and arguments
Colour in advertising	Schiller (1935)	The perceived appropriateness of colour combinations in ads varies according to the use to which the products are put as well as consumers' past experiences .
	Warner and Franzen (1946)	Coloured ads maintain familiar brands' reputation for quality better than black-and-white ads, but coloured ads are not superior in creating an association between the advertised product and the trade name when promoting a new brand.
	Dunlap (1949)	In terms of the effectiveness of advertising, there are no significant differences between colours.
	Gardner and Cohen (1964)	Compared to black-and-white ads, coloured ads increase ad likability as well as the attractiveness of the advertising company and the advertised product.
	Guest (1966)	Coloured ads do not add more prestige of the advertising company than black-and-white ads.
	Sparkman and Austin (1980)	Coloured ads increase sales more than black-and-white ads.
	Percy and Rossiter (1983)	Compared with black-and-white ads, coloured ads evoke greater emotional responses to the advertised product.
	Lee and Barnes (1989)	Generally preferred colours should be used in advertising.
	Meyers-Levy and Peracchio, 1995	The effect of colours on the persuasiveness of advertisements depends on the viewer's engagement and available resources.
	Gorn et al. (1997)	A high level of (colour) value increases ad likability; a high level of chroma evokes greater feelings of excitement, thereby leading to greater likability.
	Lohse and Rosen (2001)	Compared with black-and-white ads , coloured ads are more effective in enhancing consumer attitudes towards the ad and the advertiser, as well as consumer perceptions of quality and credibility.
	Jain, Roy and Pant (2013)	When product familiarity is high, coloured ads are not more effective than black-and-white ads in enhancing consumers' attitudes.
Colour in branding	Geboy (1996)	When colour has a distinct purpose in supporting a company's strategy, brand colours enable marketing efforts to perform in an intended way.
	Grimes and Doole (1998)	Logo colours can help some international brands communicate their brand identity.
	Bottomley and Doyle (2006)	Consumers find it appropriate to match logo colours with the attempted positioning of the brand.
	Abril et al. (2009)	Brand colours help consumers identify brands.
	Labrecque and Milne (2012)	Brand colours help influence consumer brand perceptions. The hue of a logo, its value and chroma affect consumers' perceptions of brand personality.
	Labrecque and Milne (2013)	Differentiating a brand colour from product category norms can be beneficial in some product categories but not in others.

Research field	Author(s)	Important findings and arguments
Perceived value	Hirschman and Holbrook (1982)	Value is not only based on reason but also on emotion; hedonic and utilitarian value dimensions are proposed.
	Dodds and Monroe (1985)	Value is a cognitive trade-off based on price.
	Porter (1985)	Companies can create and control value; a competitive analysis framework is proposed.
	Park et al. (1986)	Brand value should be based on consumers' experiential, functional and symbolic needs.
	Monroe and Chapman (1987)	Value is a cognitive trade-off based on price.
	Cravens et al. (1988)	Value is a cognitive trade-off based on price.
	Zeithaml (1988)	The means-end theory is proposed.
	Batra and Ahtola (1990)	Two value dimensions are proposed, namely, hedonic and functional.
	Barney (1991)	Companies can create and control value; a resource-based view is proposed.
	Babin et al. (1994)	Two value dimensions are proposed, namely, utilitarian and hedonic.
	Hunt and Morgan (1995, 1996)	Companies can create and control value; a resource advantage theory is proposed.
	Sweeney and Soutar (2001)	Four value dimensions are proposed, namely, emotional, social, price/value for money, and performance/quality.
	Woodall (2003)	Sacrifice can be non-monetary; the value-for-customer framework is proposed.
	Vargo and Lusch (2004, 2008)	Value is co-created; the service-dominant logic is proposed.
	Grönroos (2006, 2011)	Value is co-created; the service logic is proposed.
	Holbrook (2006)	Four value dimensions are proposed, namely, economic, hedonic, social and altruistic.
	Sánchez-Fernández and Iniesta-Bonillo (2007)	Consumer perceived value is insufficiently defined; consumers' view of value is holistic.
	Berthon et al. (2009)	Three value dimensions are proposed, namely, experiential, symbolic and functional.
	Sánchez-Fernández et al. (2009)	Six value dimensions are proposed, namely, efficiency, quality, social value, play, aesthetics, and altruistic.
	Heinonen et al. (2010)	Value is created by consumers; the customer-dominant logic is proposed.
	Gummerus (2011)	Perceived value research can be categorised to value creation and value outcome determination.
	Helkkula et al. (2012)	Value is determined phenomenologically (experientially); the authors call for a more holistic view of perceived value in research.

APPENDIX 2. EXAMPLE RESPONSE OF RESPONDENT 115

Background information on Respondent 115

- Belongs to Group CAR
- Female
- 51 to 60 years old
- Has owned 2 to 3 cars in her life
- Does not have colour vision deficiencies

Task instructions

On the next page, you will see images of a car in 60 colours. The car is exactly the same in each image, only the colour varies. Your task is to group the images into categories, whichever way you feel makes sense. The images are grouped into categories by dragging and dropping the images into category boxes. You can move only one image at a time. You can also move images from one category box to another.

Please continue the grouping until you are satisfied with your categories.

You do not have to use all the category boxes, and you can form as few or as many categories you like. However, you are required to form at least two categories and no more than eight. Please be aware that you do not have to categorise all the images, and you can leave some of them uncategorised if your categorisation so requires.

By clicking the Reset-button, all images will return to their original position. Push this button only if you wish to re-start the grouping.

To conclude, the rules of the task are as following:

1) You can group the images into categories, whichever way you feel makes sense

2) You need to form at least two but no more than eight categories

3) You do not have to group the images equally into the categories, and the size of your categories can vary

4) The size of the categories is unlimited

5) You do not have to categorise all the images, and you can leave some of them uncategorised if your categorisation so requires

After you have finished with your categorisation, please answer the questions below the category boxes and the background questions on the following page.

Question 1: Please group the coloured cars into categories, whichever way you feel makes sense.

Answer:

Category 1



Category 2



Category 3



Question 2: Please name your categories

Answer:

Category 1: Candy

Category 2: Plain

Category 3: Party

Question 3: On what basis did you categorise the colours?

Answer: Based on the associations that colours evoked.

Question 4: In case you did not categorise all the images, why did you leave some of them uncategorised?

Answer: Too many options which, in the end, were very similar or otherwise uninteresting.

Question 5: Please describe your categories in your own words. For example, you can describe why the colours belong to a particular category, in what ways were they similar or how they differed from the colours in other categories.

Category 1: Bright candy colours, like artificially coloured fruit-flavoured candies.

Category 2: Regular, mundane vehicles whose purpose is to transport people from A to B without passion.

Category 3: Youthful and a little extraordinary colours that catch your eye and invite you to party.

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HANNA KIEHELÄ

DIMENSIONALITY OF THE CONSUMER PERCEIVED VALUE OF PRODUCT COLOUR

Consumers' product assessments are largely based on colour, and a product's colour can increase consumer satisfaction, awareness and loyalty. However, existing colour research is fragmented and calls for theoretically-enhanced understandings of the role of colour in consumer product perception.

The existing colour research mainly focuses on consumers' immediate reactions when exposed to colours although studies show that consumers evaluate products differently in purchase and in use. Therefore, to fully understand how consumers are affected by colour, it is insufficient to study instant reactions. Existing colour studies often explore colour in general, without a product context, although the influence of colour on consumers needs an interpretative significance. Thus, colour perception cannot be examined independently of the determined object.

This thesis analysed how consumers perceive the value of colour in relation to products. This has not been extensively examined before although consumers have been found to relate colour to the perceived value of products. Studying the perceived value of product colour allowed this thesis to widen the time scope from consumers' immediate reactions to using products in everyday life.

Two studies were conducted on how consumers perceived the value of product colour by empirically studying the objects of cars and mobile phones. The first study, based on 39 interviews, resulted in an inductive conceptualisation of how consumers perceived the value of colour in relation to products. This study has several important findings: Consumers perceive the value of product colour on three value dimensions – experiential, symbolic and functional; In each dimension, there is a consumer perceived colour preference scale which consists of desirable, tolerable and unacceptable colours; The colour preference scales of the three value dimensions may sometimes clash when consumers prefer different colours in each value dimension, which leads them to make trade-offs between the dimensions; Additionally, an unacceptable colour in any dimension may lead consumers to decide against making a purchase. The second study – an online study with 655 respondents – corroborated this conceptualisation.

This thesis contributes to existing research on perceived value and colour by demonstrating that product colour is an important but neglected aspect of perceived value, by illustrating the dimensionality of the perceived value of product colour and by proposing trade-offs between the value dimensions – a currently understudied area.

The recommendation is for companies to acknowledge the dimensionality of the perceived value of product colour. This would enable manufacturers to better evaluate how consumers perceive new product colours, and retailers to provide customers with better service expertise and assistance, thus likely increasing purchase intentions and customer satisfaction.

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