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Psychological Distance of Brand Associations and Brand Communication of Luxury versus Non- luxury Brands on Social Media

by

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A thesis submitted in partial fulfilment of the requirements for the
degree of Doctor of Philosophy.

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Thesis Declaration

I confirm that this thesis presented for the degree of PhD in Management, has

- i) been composed entirely by myself
- ii) been solely the result of my own work
- iii) not been submitted for any other degree or professional qualification

Abstract

Brand management research has focussed on exploring what terms consumers associate with a brand and the strength of these associations. No prior research proposes an approach that goes beyond the determination and measurement of brand associations restricting our understanding to how brand management indirectly influences consumer decision-making. Research is required to i) provide a theoretical explanation of how brands directly influence consumer information processing, ii) how processing styles influence brand associations and behavioural preferences, and, iii) the interplay between consumer brand associations and brand communication. The Construal Level Theory (CLT) of psychological distance offers a useful lens to do this.

Two datasets totalling 6000 consumer tweets to 30 brands show that the 15 investigated luxury brands are psychologically distant while the 15 examined non-luxury brands are psychologically close. Contrary to expectations, 3000 brand tweets from the same 15 luxury and 15 non-luxury brands mismatch consumer brand associations. Luxury brands use psychologically close language and non-luxury brands psychologically distant language. On Facebook, the majority of the examined brands use psychological distance neither consistently nor effectively in their brand communication. An experiment shows that mismatching brand communication decreases purchase intentions and brand liking for psychologically distant luxury brands.

This thesis makes three substantial empirical contributions to the brand management literature and one to research methodology. First, brands are mental representations and, as such, are psychologically close or distant and influence how consumers process brand communication. According to CLT, this affects price perceptions, assortment size preferences, and the positivity of evaluations. Second, psychological distance systematically differentiates luxury brands from non-luxury brands. Third, matching the psychological distance of brand communication to brand associations only improves outcomes for psychologically distant brands. Lastly, the computational method employed to analyse language for psychological distance is more reliable than conventional methods.

1. Introduction

The opening chapter of this thesis outlines the research background, defines the key research constructs, demarcates the research gap and scope, and concludes with an overview of the thesis structure.

1.1 Psychological Distance in Language

Language plays a fundamental role in communication. Usually, it is analysed for sentiment or content but offers many more insights. Language is also psychologically close or distant, as the following examples illustrate.

An example of psychologically distant language comes from Estée Lauder on Facebook: *“Holiday dreaming wishing we were poolside. What are your holiday essentials?”* (Estée Lauder UK, 2016). The Facebook post talks about holiday dreams, which are distant from the daily routine (Holbrook & Hirschman, 1982; Hirschman & Holbrook, 1982) and, almost incidentally, asks the reader not to forget holiday essentials. The word *‘dreaming’*, for example, is abstract (Brysbaert, et al., 2014) and psychologically distant (Trope & Liberman, 2010). While its broad meaning is known, the specifics are not. In the present case, we know that Estée Lauder talks about holiday dreams that include a pool. However, there are different types of pools. They come in all shapes and sizes. Estée Lauder leaves it to the reader’s imagination as to whether it is a pool in a beach resort, a mountain spa resort, a private pool belonging to a villa, or a rooftop pool located high above a bustling metropolis. In a similar vein, Estée Lauder mentions holiday essentials but lets the reader decide what these are. Estée Lauder, thus, uses psychologically distant language.

Nivea provides an example of psychologically close language with the following Facebook post: *“It’s legs-out season (yay!) fancy showing them off on a fabulous holiday? Share your leg selfie on Instagram with #NIVEALegs for a chance to win a £1000”* (Nivea, 2016). In contrast to the Estée Lauder example, this language triggers specific considerations and actions that are psychologically close (Trope & Liberman, 2010). The reader thinks about legs and whether they are presentable for public showcasing in order to enter the prize draw. Legs are psychologically close, because they are very easy to imagine as they are attached to our bodies. There is no dreaminess about legs. Similarly, the post includes a very clear and specific call to action. The reader is instructed to take a picture of one’s own legs and enter

the draw for a prize worth £1000. In this Facebook post Nivea, therefore, uses psychologically close language.

Estée Lauder and Nivea both advertise holiday beauty products online, but they do so in very different ways. The digital space continues to gain in importance as digital advertising in the UK grew by 15% in 2015 (Mintel, 2016) and by 17.2% in 2017 (Mintel, 2018). The difference in advertising language does not seem to stem from differences in the advertised basic product functionality because either a Nivea or Estée Lauder sun cream protect the skin against harm from the sun. However, each brand, of course, adds different types and amounts of value to the core product functionality in order to target their chosen customer segment effectively. Brands, therefore, seem to play a superordinate role in explaining the difference in advertising language.

1.2 Introduction to Different Types of Brands

A brand is a name, term, sign, symbol, or design, or combination of each with the purpose of differentiating one company from another in the market place (Keller, 1993). Estée Lauder is a luxury brand (Deloitte, 2018) and Nivea is a non-luxury brand. On a fundamental level, price and product availability differentiate luxury brands from non-luxury brands. Estée Lauder products, for example, are almost three times as expensive as their counterparts from Nivea and are only available in selected retail outlets. In comparison, Nivea products are widely accessible in many supermarkets. Due to the higher prices and limited product availability, luxury brands are more exclusive, special, and usually not experienced directly (Kapferer & Bastien, 2012; Berry, 1994; Veblen, 1899). Luxury has produced its own vast research body with different definitions and new terms, such as ultra-luxe or premium luxury, indicating a conflation of terminology (Shukla, 2011). In accordance with Kapferer and Bastien's (2012) definition, luxury brands are defined as dream-like, exclusive, and non-comparable for this research. The luxury industry is very robust. It withstands economic downturn (Nunes, et al., 2011) and continues to grow in Europe by 6% in 2017 (Bain, 2017). The presented Estée Lauder and Nivea examples show that the psychological distance of brand communication differs for luxury and non-luxury types of brands within the same product category, because they use different language. Only one previous study has investigated the relationship between psychological distance and luxury. Participants used more psychologically distant language to describe luxury items in comparison to similar non-luxury items (Hansen &

Wänke, 2011). Individuals, therefore, have psychologically distant associations with luxury items and psychologically close associations with their non-luxury counterparts.

1.3 Introduction to Psychological Distance

Construal Level Theory of psychological distance (CLT) (Trope & Liberman, 2010) is a social psychological theory that explains how consumers construe different objects, such as brands, resulting in either psychologically close or distant mental representations. Psychologically distant and abstract language is used for psychologically distant objects and psychologically close and concrete language for psychologically close objects. According to Trope and Liberman, *“Psychological distance refers to the perception of when an event occurs, where it occurs, to whom it occurs, and whether it occurs”* (Trope & Liberman, 2010, p. 442). CLT has four distance dimensions, temporal, spatial, social, and hypothetical. Many social psychological studies have investigated the effect of framing communication as either temporally, spatially, socially, or hypothetically close or distant on information processing, as the literature review in chapter two explains. Consumer behaviour scholars have studied the psychological distance of products with reference to preferences and evaluations (Goodman & Malkoc, 2012; Hamilton & Thompson, 2007; Labroo & Patrick, 2008; Bornemann & Homburg, 2011; Lee, et al., 2009; Pyone & Isen, 2011; Schellekens, et al., 2010; White, et al., 2011; Williams, et al., 2014; da Costa Hernandez, et al., 2015). The psychological distance of brands is underexplored and this is where this thesis is positioned.

1.4 Research Gap and Scope

Psychological distance studies in the consumer behaviour discipline take product as the unit of analysis (Bornemann & Homburg, 2011; Goodman & Malkoc, 2012; Hamilton & Thompson, 2007; da Costa Hernandez, et al., 2015; Schellekens, et al., 2010). No study, so far, has examined the psychological distance of brands on the basis of language and how this affects the management of brands. The psychological distance of brands is important because, according to the CLT literature on products, psychological distance influences consumer assortment size preference (Goodman & Malkoc, 2012), price perceptions (Bornemann & Homburg, 2011; Irmak, et al., 2013), how positively or negatively options are evaluated (Williams, et al., 2014; Labroo & Patrick, 2008; Schellekens, et al., 2010), and message persuasiveness (da Costa Hernandez, et al., 2015). According to CLT, psychological

distance should differ for luxury and non-luxury type of brands (Trope & Liberman, 2010). Moreover, language has hitherto been analysed for sentiment and content (Culotta & Cutler, 2016; Tirunillai & Tellis, 2014; Liu, et al., 2017). The large scale analysis of brand-related language for psychological distance is methodologically new. Figure one illustrates the gap in the current literature and outlines the theoretical conversation to which this thesis seeks to contribute.

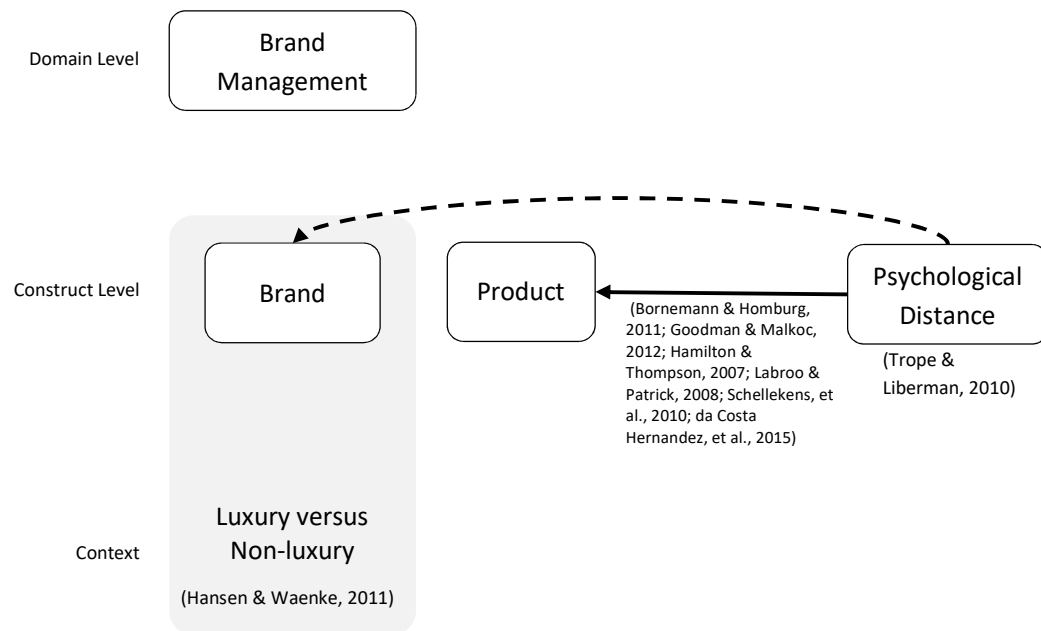


Figure 1: Literature Gap

The psychological distance of brands will be investigated from two different perspectives, the consumer and brand management perspective, because understanding how the consumer views a brand is key for effective brand management (Keller, 1993). The psychological distance in consumer language, thus, provides the psychological distance of brand associations which, in turn, inform brand managers how consumers evaluate the brand. Studying the psychological distance from a marketing management perspective examines whether brands use psychological distance in their brand language consistently and effectively. It also provides an alternative viewpoint to established brand positioning metrics. These include the terms consumers associate with a brand and how strong these associations are (Spector, 1961; Aaker, 1997; Henderson, et al., 1998; Zaltman & Coulter, 1995; Culotta & Cutler, 2016; Tirunillai & Tellis, 2014; Liu, et al., 2017).

Studying the psychological distance of brands from both a consumer and brand management perspective enables a comparison. Such a comparison is important to measure brand management effectiveness on the one hand and enhance consumer evaluations on the other. Consumers prefer options in which psychological distance matches affect (Labroo & Patrick, 2008; Karsh & Eyal, 2015; Schellekens, et al., 2010). In the current research context, matching options refer matching the psychological distance of brand communication to the psychological distance of brand associations.

This thesis will, therefore, extend CLT (Trope & Liberman, 2010) into the marketing discipline addressing the areas below:

- a) how the psychological distance of consumer language and, ultimately, brand associations differs according to luxury and non-luxury brand type;
- b) how luxury and non-luxury brands are utilising psychological distance in their brand language;
- c) how the psychological distance of consumer language compares to the psychological distance of brand language; and,
- d) how this comparison informs consumer evaluations depending on the evaluation criterion.

These four research areas translate into four research objectives. First, the provision of a methodological prototype for the computational psycholinguistics method with which the psychological distance in consumer and brand language is ascertained. Second, the investigation of psychological distance of brands from a consumer perspective. Third, the investigation of psychological distance of brands from a brand management perspective. Fourth, a comparison of how consumers and brands use psychological distance and how this influences consumer evaluations.

Computational psycholinguistics refers to psycholinguistics that is automated with a computer program. Psycholinguistics originates from psychology and examines the relationship between language and psychological processes (Miller, 1965; Rubenstein & Aborn, 1960). Despite the abundance of language data, relatively few studies have used psycholinguistics in social psychology (see for example Hills & Adelman, 2015; Klebanov, et al., 2014; Kuperman, 2015; Vinson, et al., 2015; Bhatia & Walasek, 2016; Hildebrand, et al., 2017; Ren & Nickerson, 2014). The computational application of psycholinguistics in the marketing discipline is unheard of. Hence, this is why a methodological prototype is

established first. Research objectives one, two, and three are addressed with computational psycholinguistics studies and research objective four is answered with experiment. This thesis, therefore, follows a critical realism and deductive stance (Saunders, et al., 2016). The thesis structure is briefly outlined, next.

1.5 Thesis Outline

This thesis comprises six chapters including the present chapter (Introduction). Table one provides an overview of the thesis structure.

Chapter	Title	Chapter Aim and Content
1	Introduction	Introduction to and definition of psychological distance and brands. Provision of thesis background, identification of research gap, and decision of adopted research perspectives and research scope.
2	The Psychological Distance of Brands	Explanation of the Construal Level Theory of psychological distance (CLT) (Trope & Liberman, 2010). Review of relevant CLT literature pertaining to affect and different types of goods to substantiate the identified literature gap. Review of how previous CLT studies have measured psychological distance.
3	Conceptual Development	Development of hypotheses based on the literature review.
4	Research Methodology	Introduction to psycholinguistics and description of different psycholinguistics databases employed. Justification of computational psycholinguistics as a research method for research objectives one, two, and three, i.e., studies one to five, on epistemological grounds. Description of the employed computational psycholinguistics methodology step by step. Justification of the research methodology for research objective four, i.e., study six, and explanation of how the experiment was conducted.
5	Results	Presentation of the results from the six studies.
6	Discussion & Conclusion	Discussion of the results in the context of branding and CLT literature. Definition of the research limitations and recommendations for further research areas. Discussion of results from a practical marketing management perspective.

Table 1: Thesis Structure Overview

2. The Psychological Distance of Brands

A brand exists in a company's marketing strategy papers and in consumers' minds. There is, therefore, a managerial and consumer perspective of a brand. Psychological distance has been studied with reference to products (Goodman & Malkoc, 2012; Bornemann & Homburg, 2011; Hamilton & Thompson, 2007; da Costa Hernandez, et al., 2015), but not brands as figure two illustrates. First, the consumer perspective is considered, then the marketing management perspective.

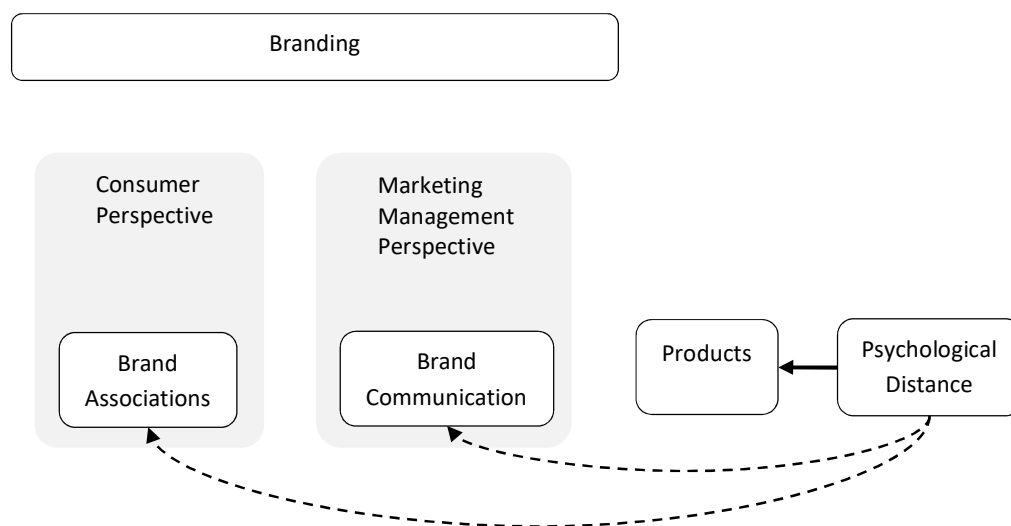


Figure 2: Research Gap: Psychological Distance of Brand Associations and Brand Communication

2.1 Brand Associations: How Consumers View a Brand

How consumers perceive a brand or organisation has been researched for over seven decades (Tyler, 1957). Since then, a number of terms have emerged referring to the same phenomena. In this research the term 'brand associations' is adopted which refers to the total perceptions a consumer associates with a brand. This definition draws on one of the earliest definitions (Spector, 1961). Brand associations are important, because they influence evaluations (for a review see Keller & Lehmann, 2006) and purchase behaviour (Kraft, et al., 1973).

In one of the earliest brand association studies, respondents rated 45 items from personality research on a six-point scale (Spector, 1961). Conducting a factor analysis, Spector proposes

six brand attributes to capture consumer brand associations. These attributes are dynamic, co-operative, business-wise, character, successful, and withdrawn. The notion that brands resemble human personalities has been followed up with a more comprehensive study drawing heavily on The Big Five personality theory. In an initial study 631 respondents rated, in total, 37 brands on 114 personality description items on a five-point scale (Aaker, 1997). A factor analysis produced 42 brand personality items that capture consumer brand associations' reliably and validly. These 42 items fall into five brand association categories: sincerity, excitement, competence, sophistication, and ruggedness. A subsequent study with 120 participants confirmed the validity of these five brand personality attributes. Aaker's (1997) seminal paper showcases how powerful social-psychological theories are in categorising and measuring brand associations.

In the past decades, numerous brand association studies have emerged. In their Meta-Review Berens and van Riel (2004) divide them into three conceptual streams: associations based on social expectations, associations akin to personality perceptions, and associations based on trust. Social expectations refer to how brands should behave in society and has produced a sizeable chunk of literature. Aaker's (1997) brand personality research is a well-known example of the personality based stream. Trust, the third conceptualisation, relates to predicting how a brand behaves (Berens & van Riel, 2004), i.e., the extent to which it will fulfil its promises. In that sense, the social expectation and trust conceptualisations are closely linked. In fact, they should not be considered separately. The former refers to what consumers expect from a given brand and the latter to how probable consumers think that this brand will fulfil these expectations. Brand expectations differ according to brand personality and individual consumers. Some brands may be clustered together and compared. Overall however, Berens and van Riel's (2004) conceptualisation enables a limited comparison between brands. It is possible to assess how similar or dissimilar brand expectations and brand personality attributes are. These conceptualisations, however, have no underlying theory with a body of empirical literature that establishes the influence of brand associations on consumer preferences or behavioural intentions. This is the value the psychological distance of brands on the theoretical underpinning of CLT contributes to brand association and brand management literature.

2.1.1 Measurement of Brand Associations

Brand associations have been studied extensively for decades (Spector, 1961; Tyler, 1957; Aaker, 1997; Berens & van Riel, 2004). They are measured by capturing the attributes that consumers associate with a brand. The approaches to measuring these can broadly be classified into qualitative and quantitative approaches. Qualitative approaches involve asking consumers about their brand associations in interviews and focus groups. The Zaltman Metaphor Elicitation Technique (ZMET) (Zaltman & Coulter, 1995), for example, is a well-known and established technique to capture brand associations with a picture the consumer creates to show how she or he perceives the brand. For quantitative approaches consumers rank brand attributes on scales (see for example Spector, 1961; Aaker, 1997). These scales may be simple Likert scales, Stapel, or semantic differential. Regardless of the employed scale, e.g., Likert, Stapel, or semantic differential, the obtained brand associations remain the same (Menezes & Elbert, 1979). The ranked brand attributes can be put into context to one another with network algorithms to create a brand map (Henderson, et al., 1998). These are some of the most well-known traditional methods to elicit consumer brand associations.

Increasing digitalisation and computing power have boosted traditional methods to provide a more comprehensive understanding of brand associations. However, only a handful of studies have suggested new methodologies to capture brand associations. Using consumer comments in an online car forum, Netzer and colleagues (2012) conducted a semantic co-occurrence analysis. They analysed which car make and models are mentioned in the same post, and are thus similar, in order to create a brand map of the car market. With this technique the co-occurrence of brand attributes, such as luxury and quality, for example, could be measured for a given brand on Twitter. Also based on similarity, Culotta and Cutler (2016) developed a perceptual mapping tool for Twitter. The tool's starting point is two Twitter handles of brands that represent similar things, e.g., Lamborghini and Maserati are both known for being luxury car brands. The tool finds the users who follow either Lamborghini or Maserati and any other similar Twitter handle. Next, the tool computes a similarity score which is then used to map brand attributes. The tool either produces a map for predefined brand attributes or automatically generates the attributes and maps them. Another novel approach draws on topic modelling. Topic modelling stems from natural language processing and clusters words together thematically. A topic modelling algorithm clusters words from consumer comments on websites and tweets together (Tirunillai & Tellis, 2014; Liu, et al., 2017). These word clusters represent brand attributes at different levels of aggregation providing brand associations for different target groups.

2.2 Brand Communication: How Marketing Managers Portray a Brand

The aim of brand communication is to influence consumers' opinions of a brand to position and differentiate the brand in the marketplace. Brand communication should, therefore, consistently and effectively portray the brand in the same way. For that reason, brands employ their own brand language, because inconsistent brand communication risks the dilution of the brand's positioning or may even change it inadvertently.

2.2.1 Brand Language and Psychological Distance

The language in brand communication announcing a new arrival may, for example read "... *in store soon*..." or "... *tomorrow in store* ...". The word "*soon*" is psychologically more distant than the word "*tomorrow*", because the latter uses a very specific time frame: the next day. Following the Construal Level Theory (CLT) of psychological distance (Trope & Liberman, 2010), psychological distance has four dimensions: temporal, social, spatial, and hypothetical. These dimensions are reflected in language as the subsequent examples show. A "... *colleague or boss* ..." is psychologically more distant than a "... *friend* ...". The word "... *there* ..." is again psychologically more distant than the word "... *here* ..." in terms of spatial psychological distance. Similarly, the words "... *unlikely, possible, or improbable* ..." are psychologically distant. Inversely, the words "... *likely, possible, or probable* ..." are psychologically close. These are simple examples to illustrate how language is psychologically distant or close. However, psychological distance in brand language can be measured in an automated and sophisticated manner with computational psycholinguistics, as chapter four details.

The psychological distance of language influences product evaluations and purchase intentions. Positive (negative) word-of-mouth (WOM) with psychologically distant (close) language leads to the inference that the WOM sender has a more favourable product attitude and increases the WOM receiver's purchase intention in comparison to a positive (negative) WOM with psychologically close (distant) language (Schellekens, et al., 2010). Psychological distance is not only represented in language but in all informational objects we process, such as people, places, or brands, as the subsequent section explains.

2.3 Construal Level Theory of Psychological Distance (CLT)

The Construal Level Theory of psychological distance (CLT) is based on the common notion in social psychology that our minds process real world objects differentially depending on how psychologically close or distant they are with reference to here, now, and ourselves. Psychological distance, therefore, has an ego- and present-centric reference point. As we are unable to directly experience what is not present right here and now, we need to undertake mental travelling to be able to experience the absent (Trope & Liberman, 2010). With increasing psychological distance, mental representations of experiences, people, and places become more coherent, homogenous, schematic, context-independent, and essential. CLT has been studied extensively in social psychology with lab experiments (Trope & Liberman, 2010), but only to a limited extent in consumer research focussing only on products (Bornemann & Homburg, 2011; Goodman & Malkoc, 2012; Hamilton & Thompson, 2007; Labroo & Patrick, 2008; Schellekens, et al., 2010; da Costa Hernandez, et al., 2015).

As CLT is relatively new to the consumer behaviour discipline and entirely new to the marketing discipline, the subsequent sections first explain CLT in depth including the four distance dimensions and their interrelatedness. Next, the chapter reviews the relationships between psychological distance, construal level, and affect. Afterwards, the discussion turns to the psychological distance of different types of goods and concludes with different ways of how psychological distance has, hitherto, been measured.

2.3.1 Temporal Distance

CLT originates from temporal construal theory, which is based on temporal discounting. In fact, variations in temporal discounting motivated the temporal construal theory research. Activity descriptions about the distant future were more superordinate and broad in comparison to those about near future activities (Liberman & Trope, 1998). Highly desirable but little feasible options become more attractive in the more distant future. Inversely, preference increases for little desirable but highly feasible options in the near future. Hence, desirability considerations are salient in the distant future and feasibility considerations in the near future. Desirability is an abstract concept focussing on central aspects. In contrast, feasibility entails various and heterogeneous aspects. The central features of a job, product, or task are more salient in the distant future in comparison to the near future (Trope & Liberman, 2000). Inversely, participants focus more on peripheral features in the near future. The alternative affect-dependent time discounting explanation was ruled out, because the

distant future did not significantly reduce the preference for funny and uninformative film clips over informative and unfunny film clips. Following the affect-dependent discounting explanation, the affect-based value, i.e., the funniness of the film clip, would be discounted more steeply than the cognitive value, i.e., the informational value of the film clip. Therefore, funny and uninformative film clips should have been preferred over unfunny and informative ones in the near future. However, this was not the case, suggesting that temporal rather than affective discounting explains the different construal levels.

Temporal distance has produced a sizeable body of literature. The most important papers for this research are reviewed next. Participants in the distant future created fewer categories when asked to categorise travel items described in a leisure scenario than those in the near future. With increasing temporal distance, information is increasingly abstracted, thus, fewer categories were created (Liberman, et al., 2002). Similarly, considerations of the self in the distant future are more coherent, schematic, and less complex than the self-view in the near future, which is more detailed and contextualised (Wakslak, et al., 2008). A more recent investigation of natural language from Twitter demonstrates that tweets relating to upcoming dates are psychologically closer because they use psychologically close language. The same holds true for tweets about temporally distant dates and psychologically distant language (Bhatia & Walasek, 2016). In the context of consumer behaviour, consumers prefer a smaller set of products to choose from in the distant future (Goodman & Malkoc, 2012). The reverse holds true for the near future. Consumers prefer a larger assortment with more products. Temporal distance has been frequently used to prime participants due to its effectiveness and ease of use (see for example Steinhart, et al., 2013; Rim, et al., 2013; Ledgerwood, et al., 2010; Chandran & Menon, 2004; Trope & Liberman, 2000; da Costa Hernandez, et al., 2015; Eyal, et al., 2004) and has served as an outcome variable to measure psychological distance (Van Boven, et al., 2010; Huang, et al., 2016).

2.3.2 Spatial Distance

In comparison to temporal distance, spatial distance has been researched less. Spatial distance pertains to the geographical distance between the “*here*” and “*there*” on the basis of the ego-centric reference point. Events taking place in a geographically close location were described as a means to an end and in terms of their feasibility. In comparison, events taking place at a geographically distant location were described as an end in themselves and in terms of their desirability (Fujita, et al., 2006). Similarly, participants recalling a spatially

distant event used psychologically more distant language to describe the event in comparison to describing a spatially close event. Participants thinking about a geographically distant place created fewer categories, i.e., had a more homogenous and schematic view, than participants thinking about a geographically close place (Henderson, et al., 2006). In the spatially near condition participants were paying more attention to the context than participants in the spatially distant condition. In spatially distant locations, typical events were judged to be more probable in comparison to spatially near locations. The same is true for spatially close locations and atypical events. Participants were more likely to use general trends for extrapolation in the spatially distant condition, but used a more heterogeneous basis for extrapolation in the spatially close condition (Henderson, et al., 2006). In line with these findings, Goodman and Malkoc (2012) show that consumers prefer a small choice set when an ice cream shop is far away. When the ice cream shop is just outside town, however, they prefer more choice. Another noteworthy study of spatial distance comes from Williams and Bargh (2008), because they criticise the egocentric reference point. Using a Cartesian coordination plane, they find that spatial psychological distance does not necessarily need a reference to the self. Thereby, they challenge a key assumption of CLT. However, the consensus in the CLT literature is that psychological distance is ego-centric and this is the viewpoint adopted in this research.

2.3.3 Social Distance

Social distance refers to how psychologically distant or close other individuals are perceived. Power and politeness are important aspects characterising social relationships. Smith and Trope (2006) propose that individuals holding more power in a relationship think more abstractly, resulting in more psychological distance. Indeed, participants in the high power condition were more likely to include atypical items in categories and select more schematic items pertaining to meaning and gist from the Behaviour Identification Form (Vallacher & Wegner, 1989) than participants in the low power condition. Similarly, participants in the high power condition were better at distinguishing coherent from incoherent word triads. The alternative explanation that power led to more accurate or achievement-focussed behaviour was ruled out. Politeness is another aspect of social relationships. Individuals who do not know each other well, i.e., socially distant, tend to use more polite language and behaviour when interacting. Participants being primed to think in a psychologically distant and abstract manner used more polite words to address another person than those who

were in the psychologically close and concrete thinking condition (Stephan, et al., 2010). Similarly, politeness increased with temporal or spatial distance and more polite ways increased temporal or spatial distance. The relationship between politeness and psychological distance is, thus, bi-directional. Social distance has also been used in experimental studies to manipulate psychological distance, i.e., for oneself versus for one's boss, due to its implementation ease (see for example Liberman & Förster, 2009a; Liberman & Förster, 2009b; Hamilton & Thompson, 2007; Williams & Bargh, 2008; Williams, et al., 2014).

2.3.4 Hypothetical Distance

Hypothetical distance pertains to the likelihood of an occurrence. An unlikely event is psychologically distant while a likely event is psychologically close. There are relatively few studies on hypothetical distance in comparison to the other distance dimensions. Participants classified objects related to a scenario into fewer categories when they were told that the scenario was unlikely in comparison to a likely event (Wakslak, et al., 2006), demonstrating that unlikely (likely) situations are psychologically distant (close). Neither mood nor involvement influenced the results. Moreover, participants in the low probability condition included more atypical items in a categorisation task, chose a more general and psychologically distant description, created broader categories, and were more successful at detecting the image structure in a visual abstraction task than those in the high probability condition. Inversely, a picture completion task requiring participants to identify the missing detail was completed more easily in the high-probability condition in comparison to the low-probability condition (Wakslak, et al., 2006). When the event is unlikely to occur, consumers prefer a desirable event in comparison to a feasible event (Todorov, et al., 2007). Inversely, when the event is likely to occur, consumers prefer a feasible event in contrast to a desirable event. Also, a likely event is perceived to be more real in comparison to an unlikely one. Following this rationale, estimates of how long an unrealistic task would take were higher than estimates of a realistic task because, with increasing abstraction and psychological distance, time units become smaller resulting in more time units being required to complete a psychologically distant task (Kanten, 2011).

2.3.5 Interrelatedness of Psychological Distance Dimensions

The four initial distance dimensions, temporal, spatial, social, and hypothetical, share the same underlying process (Bar-Anan, et al., 2006) and are interrelated. Spatially close events were judged as more likely to happen than spatially distant events (Henderson, et al., 2006). Spatial distance is positively correlated with temporal, social, and hypothetical distance (Bar-Anan, et al., 2007). In fact, Trope and Liberman (2010) consider spatial distance as more fundamental than temporal distance, as it is learned earlier, more clearly detected, less ambiguous, and more easily communicated. The three dimensions of space, e.g., length, height, and depth, can be easily measured and detected in an experimental setting by moving closer to or further away from a real-life object. Following this notion, Zhang and Wang (2009) investigated spatial distance with reference to the other three distance dimensions. Increasing spatial distance leads to greater perceived temporal, social, and hypothetical distance. However, this relationship is not bi-directional because the other three distance dimensions are understood in terms of spatial distance.

2.3.6 Experiential Distance

In addition to the initial four distance dimensions, experiential distance is suggested which refers to the extent to which an object can be directly experienced (Hamilton & Thompson, 2007; Fiedler, 2007). Fiedler (2007) loosely defines experiential distance as a concept and provides no empirical evidence. In contrast, Hamilton and Thomson (2007) provide a detailed definition and ample empirical proof. A direct experience involves touching, seeing, smelling, or hearing a product (Hamilton & Thompson, 2007). Inversely, an indirect experience entails reading a description about the product or watching a promotional video about it, which is not present. In a longitudinal study, a highly desirable MP3 player became less desirable when participants first read about the MP3 player and after two weeks performed four tasks with it (Hamilton & Thompson, 2007). Participants, thus, first indirectly experienced the MP3 player followed by a direct experience. Inversely, participants experiencing the MP3 player directly first, preferred a highly feasible MP3 player in comparison to a highly desirable MP3 player. However, a subsequent indirect experience eliminated the feasibility preference. When participants had to choose a highly feasible versus desirable MP3 player for themselves or others, they preferred the feasible MP3 player for themselves and the desirable MP3 player for others. These studies show that an indirect product experience activates abstract processing resulting in psychological distance. On the other hand, a direct

experience, such as a product trial, activates concrete processing resulting in psychological closeness.

2.3.7 Psychological Distance and Construal Level

For simplicity purposes, high (low) construal level has, until now, been referred to as abstract (concrete) processing. Psychological distance and construal level are separate constructs, but they are tightly interrelated (Trope & Liberman, 2010). Without any manipulation, a psychologically distant (close) stimuli, such as brand communication, activates high-level (low-level) construal. In the same vein, high-level (low-level) construal leads to psychologically distant (close) representations. However, with an intervention, individuals can be primed to construe either high or low level.

Such an intervention can be achieved in various ways. Asking why (how) questions, for example, activates high (low) level processing (Hamilton & Thompson, 2007; Williams, et al., 2014; Lee, et al., 2009). Similarly, references to the distant future, such as six months or a year from now, activates high-level construal while references to the near future, e.g., tomorrow, activates low-level construal (Steinhart, et al., 2013; Rim, et al., 2013; Ledgerwood, et al., 2010; Chandran & Menon, 2004; Trope & Liberman, 2000; da Costa Hernandez, et al., 2015; Eyal, et al., 2004). Social distance cues are another way to manipulate construal level. The indicators for oneself versus for one's boss, for example, activate low-level or high-level construal respectively (Liberman & Förster, 2009b; Hamilton & Thompson, 2007; Williams & Bargh, 2008; Williams, et al., 2014). Telling participants that an event was unlikely (likely) primed them into high-level (low-level) construal and made them choose more psychologically distant (close) behaviour descriptions (Wakslak, et al., 2006). These examples show how construal level can be manipulated.

High and low-level construal are different in a number of important ways. High-level construal involves much more abstraction in comparison to low-level construal. This process of abstraction reduces the specific, individual, and contextual information of a mental representation to create a consistent memory. In fact, participants primed to construe high-level were not influenced by a stranger's opinion, but participants construing at low-level incorporated a stranger's opinion when evaluating alternatives (Ledgerwood, et al., 2010). Similarly, participants in the low-level condition paid more attention to the context, than

those in the high-level condition (Henderson, et al., 2006). These findings illustrate how high-level construal reduces the importance of situational context.

High-level construal largely ignores psychologically close mental representations, because they are subordinate. A study tested this notion with stimuli that were either psychologically close or distant on the social or temporal distance dimensions. Participants only had a psychologically close mental representation if the priming stimuli was perceived as psychologically close on both the temporal and social distance dimension (Kim, et al., 2008). If the priming stimuli was perceived as distant on either one of the two dimensions, high-level construal was activated. Therefore, a mental representation that is inconsistent with the overall memory is omitted or assimilated with the other memory pieces. This is not the case during low-level processing: psychologically distant memory pieces may influence low-level information processing because they are superordinate. Low-level construal focusses on minute details, the feasibility of something and 'how' considerations. Given that information processing capacity is limited, an interesting point refers to how relevant informational pieces are selected during low-level construal. Following this notion, Fiedler (2007) suggests an additional distance dimension: informational distance. The question if and why some psychologically close mental representations are omitted is an important one. According to associative memory (Loeb, 1900), memory nodes become stronger and more readily available the more they are encountered. In other words, more frequent brand experiences make informational pieces pertaining to the experienced brand easier to retrieve from memory and process. Less frequently encountered brands become less accessible and psychologically distant (Trope & Liberman, 2010). Similarly, CLT should change depending on the purchase phase, i.e., perspective distance, based on commitment and myopia (Fiedler, 2007). The question of how informational pieces are selected is theoretically an important one for social psychology but has limited relevance for the marketing and consumer behaviour discipline that seeks to advance theory while providing applied value for industry. Real purchase decisions are complex. Managerial insight is derived from consumer evaluations and preferences. Low-level construal increases preference for a highly feasible MP3 player over a desirable MP3 player (Hamilton & Thompson, 2007). Following this rationale, price is viewed as a monetary sacrifice when it is considered in the now and for oneself because it is construed as low-level. When price is considered from a temporally or socially distant perspective, however, price is seen as a quality indicator because it is construed as high-level (Bornemann & Homburg, 2011). The underlying notion is that during high-level processing, desirability and why considerations become much more salient

(Liberman & Trope, 1998; Trope & Liberman, 2000; Todorov, et al., 2007). Desirability (feasibility) has been used in experimental construal level studies to prime participants in a high-level (low-level) mind set (see, for example, Irmak, et al., 2013; Hamilton & Thompson, 2007; Lee, et al., 2009).

Low-level (high-level) construal has also been linked to local (global) processing (Liberman & Förster, 2009a; Liberman & Förster, 2009b). On the basis of visual information processing, local processing focusses on details while global processing concentrates on the big picture (Navon, 1977). Interestingly, Navon's third experiment (1977) shows that local visual cues had no impact on global visual cues but global cues influenced the local ones. This is in line with the finding that psychologically distant mental representations influence low-level construal but not the other way around. CLT, therefore, links processing styles with the formation of mental representations and vice versa. In contrast, Navon's (1977) local versus global processing does not make such a claim and is purely an information processing theory.

Despite being tightly interrelated, psychological distance and construal level are two separate constructs. This finding is underpinned by CLT and affect research. Several experiments studying the impact of construal level and psychological distance on valence and affect intensity failed to find an interaction effect between construal level and psychological distance (Williams, et al., 2014).

2.3.8 Construal Level, Psychological Distance, Valence, and Affect Intensity

Affect is a vast research area of its own. In his conceptual paper, Fiedler (2007) suggests affective distance as an additional distance dimension, which is influenced by "*warm emotionally charged pictures and films or [...] cold descriptive text sources.*" (Fiedler, 2007, p. 102). In fact, pictures are construed low-level and text high-level (Amit, et al., 2013; Amit, et al., 2009). According to CLT and affect research, however (Labroo & Patrick, 2008; Pyone & Isen, 2011; Schellekens, et al., 2010; Williams & Bargh, 2008; Eyal, et al., 2004; Herzog, et al., 2007), psychological distance and affect are correlated regardless of the stimuli type, i.e., visual or text. More importantly, affect may not only differ in valence, i.e., be positive or negative, but also in arousal, i.e., be more or less intense (Williams, et al., 2014). The subsequent sections review empirical CLT literature pertaining to valence and affect intensity.

2.3.8.1 Valence

Spatial, social, and temporal distance activate high-level construal resulting in more positive valence ratings. High-level construal always increases pleasantness ratings in comparison to low-level construal, but the same is not true for psychological distance (Williams, et al., 2014). Spatial distance leads to more enjoyment of a media clip in comparison to spatial proximity (Williams & Bargh, 2008). Participants considering a positive experience, a functioning product, or the best possible experience from a third-person perspective reported much higher pleasantness ratings than those considering the same situations from a first-person perspective. The opposite was true for a negative experience, a defective product, or the worst possible experience. In sum, participants reported much lower pleasantness ratings in the low-level than high-level condition (Williams, et al., 2014).

In several studies, Eyal and colleagues (2004) found that participants consider the advantages of an action more when the action takes place in the distant rather than the near future. Similarly, when asked to generate advantages and disadvantages of an action, participants generate more advantages for an action taking place in the distant than in the near future. By asking participants to consider the actions either in the near (distant) future, low (high) level construal was activated making feasibility (desirability) considerations more salient. Unsurprisingly, participants describing more advantages of an action were also more likely to carry out the action thus demonstrating greater behavioural intentions. In a similar vein, participants more easily and quickly name the advantages of an action in comparison to disadvantages if the action takes place in the distant future (Herzog, et al., 2007). The opposite holds true for the near future: participants more easily state disadvantages of an action in comparison to advantages. More easily generated advantages lead to a better overall attitude toward the action. Investigating the impact of both spatial and temporal distance from online reviews of restaurant visits on valence shows that increasing psychological distance leads to more review positivity (Huang, et al., 2016). The further a reviewer lives away from the restaurant and the longer the time delay between the restaurant visit and the review, the more stars are awarded for the restaurant experience. The subsequent mediation analysis shows that spatial and temporal distance influence construal levels which, in turn, influence review positivity.

High-level construal improves valence in comparison to low-level construal but the link between psychological distance and valence is more faceted. Psychological distance does not consistently influence valence (Williams, et al., 2014) and mood valence did not influence psychological distance (Wakslak, et al., 2006). These findings suggest that the link between

psychological distance and valence is weaker or more complex than that between construal level and valence. Positive (negative) mood triggers high-level (low-level) construal in comparison to the control group (Labroo & Patrick, 2008). Participants primed into a positive mood construe the subsequent task in a more high-level manner than participants primed into a negative mood. Similarly, participants primed into a positive (negative) mood exhibit higher purchase intentions when reading a psychologically distant (close) framed product advertisement in comparison to a psychologically close (distant) framed advertisement (Labroo & Patrick, 2008). Moreover, participants primed into a positive mood more often selected psychologically distant descriptions and focussed more on the future than those in the negative mood condition (Pyone & Isen, 2011). The relationship between valence and construal level thus seems to be bi-directional. Next, the relationship between CLT and affect intensity is discussed.

2.3.8.2 Affect Intensity

Affect intensity refers to the level of intensity with which a positive or negative emotion is experienced. Increasing psychological distance reduces affect intensity (Williams, et al., 2014). Moreover, participants watching a media clip depicting a violent scene experienced less emotional stress in the spatially distant condition than those in the spatially close condition (Williams & Bargh, 2008). Spatial distance decreased the attachment to participants' family and hometown in comparison to spatial proximity (Williams & Bargh, 2008). The relationship between affect intensity and psychological distance is likely to be bi-directional as another strand of studies shows that increasing affect intensity reduces psychological distance (Van Boven, et al., 2010). In six studies, participants described a variety of different events including embarrassing autobiographical events, past and future dentist appointments, positive and negative events, and a national tragedy. Participants who described these previous events in an emotionally more intense manner perceived the event to be psychologically closer than those describing it less vividly (Van Boven, et al., 2010). Affect is a general term encompassing different emotions, which is the subject of the subsequent section.

2.3.8.3 Emotions

Different types of emotions have been linked to CLT. The results of CLT and emotion research are fragmented, as the following studies illustrate. In comparison to shame, guilt activates low-level construal making feasibility and secondary product features more important (Han, et al., 2014). Another study shows that love triggers high-level processing while lust triggers low-level construal (Förster, et al., 2009). Happiness has also been considered in the second study of the aforementioned research but did not give conclusive results. Happiness can be viewed in terms of 'feeling happy' but also 'life satisfaction'. This illustrates a potential operationalisation problem of the happiness emotion. While the former is a temporary positive feeling, the latter is more stable and long-term. Based on temporal distance, the former definition would activate low-level construal and the latter high-level construal. Akin to the preceding study, Karsh and Eyal (2015) investigated two positive emotions, namely pride and joy. Participants evaluated a future event better when considering pride instead of joy. The reverse holds true for an upcoming event and joy. Similarly, pride was more persuasive in a message pertaining to the distant future. However, no difference in persuasiveness was found between messages pertaining to the near future stressing either pride or joy. Similarly, participants primed to feel pride and reading a psychologically distant advertisement displayed a higher willingness to donate money than those primed to feel joy. The reverse does not hold true for joy and a psychologically close advertisement (Karsh & Eyal, 2015).

Both guilt and shame are negative emotions, yet they yield different construal levels. Similarly, love, lust, pride, and joy are all positive emotions but construed at different levels which contradicts CLT and valence research (Williams, et al., 2014; Williams & Bargh, 2008; Eyal, et al., 2004; Labroo & Patrick, 2008; Pyone & Isen, 2011; Huang, et al., 2016). This raises important questions with reference to the findings about the relationship between construal levels and valence. Is this valence effect driven by the more salient emotion? Or does psychological distance and construal level impact affect and emotions differentially as Williams and colleagues' (2014) research suggests? These questions are of interest to psychology research with a lab-based approach. Real life consumer decision-making is more complex. Untangling the salience of different emotions, which depends on numerous factors, such as product type, purchase type and context, and the differential mechanisms that underlie affect, psychological distance, and construal level seem to contribute limited value to the marketing discipline. These factors can hardly be isolated and influenced separately in real life consumer decision-making processes. Moreover, other experimental studies are

already being carried out to address these and other questions arising from studying CLT and emotions. In accordance with the majority of CLT and valence research (Labroo & Patrick, 2008; Williams & Bargh, 2008; Huang, et al., 2016; Herzog, et al., 2007; Eyal, et al., 2004), this thesis adopts the stance that high (low) construal levels or psychological distance (closeness) is linked with positivity (negativity). In keeping with marketing relevance, this research focusses on the psychological distance of brand associations and brand communication. Brands can sell different types of goods.

2.3.9 Psychological Distance and Different Types of Goods

There are two main ways to categorise goods: luxury versus non-luxury and products versus services. Only three studies have linked psychological distance to these two categorisations.

2.3.9.1 Luxury versus Non-luxury Types of Goods

Following Veblen's (1899) Leisure Class, goods may be categorised as either luxury or functional (non-luxury). Luxury goods are dream-like, exclusive, and non-comparable goods (Kapferer & Bastien, 2012). Luxury consumption is hedonically and/or conspicuously motivated (Hirschman & Holbrook, 1982). Particularly for conspicuous consumption, brands play an important role (Han, et al., 2010). By definition, a luxury is something special. In fact, luxury goods are limited in access to establish continuous exclusiveness (Berry, 1994). The term functional has been used in many contexts, drawing on different theoretical viewpoints reflecting different meanings. To avoid confusion, the term 'non-luxury' is adopted for this research. Non-luxury goods are instrumental, non-sensory, and serve a means-end purpose (Batra & Ahtola, 1990) and provide more tangible benefits in comparison to luxury goods (Hirschman & Holbrook, 1982).

In three experiments Hansen and Wänke (2011) examined how consumers construe luxury versus non-luxury items. Participants describe luxury items (e.g., a mansion, gourmet restaurant, limousine, five-star hotel, candelabra, and gemstone) with psychologically distant words in comparison to their non-luxury counterparts (e.g., a house, canteen, car, hostel, lamp, and stone). Therefore, consumers construe luxury and non-luxury items differentially resulting in different mental representations in terms of psychological distance. Advertisements using psychologically distant words result in higher luxuriousness ratings than advertisements with psychologically close words and this holds true for a variety of

categories, e.g., yacht trips, dog food, cars, TV sets, vacuum cleaners, and watches (Hansen & Wänke, 2011). The relationship between luxury and psychological distance seems to be bi-directional. Luxury product items are described with psychologically more distant language on websites in comparison to non-luxury product items within the same product category. These experimental findings about luxury items suggest that psychological distance in language directly influences consumer evaluations. Some of the investigated items can be viewed as products, such as a limousine or a car, while a yacht trip tends to be a service experience.

2.3.9.2 Product versus Service Types of Goods

Goods may also be classified as product- or service-based. Goodman and Malkoc (2012) studied both types of goods with reference to psychological distance and assortment size preferences. Consumers prefer a larger menu when a restaurant opens the same day, but a smaller menu when the restaurant opens next semester. Similarly, consumers prefer to choose from a large set of different ice creams when the ice cream shop is close by and a small set of alternatives when the shop is faraway. When choosing a vacation just outside town, consumers preferred a travel agent with more options to choose from. However, when the vacation was 2000 miles away, consumers were indifferent to the assortment size. The same mechanism holds true when consumers have to buy a blender. A larger set of choices is preferred in the near future in comparison to the distant future. With increasing psychological distance, the alternatives become more substitutable. Hence why consumers prefer smaller assortment sizes. Involvement was ruled out as a potential mediator or moderator as response times did not differ for psychologically close and distant conditions. However, when consumers were made aware of desirability/feasibility considerations, the observed effect was reversed. Consumers in the psychologically close condition preferred a smaller assortment size of blenders in comparison to those in the psychologically distant condition. The same applies when consumers buy chocolate. Goodman and Malkoc (2012) argue that two processes are at work. First, a process of abstraction which makes options become more similar and, thus, more substitutable. Accordingly, consumers prefer large choice set during low-level construal but are indifferent to the number of available options during high-level construal. Second, feasibility/desirability information shifts the weights attached to feasibility and desirability considerations when the information is processed. This results in preferring a small choice set during low-level construal because it is more feasible to choose from fewer options in comparison to many options. During high-level

construal more choice is preferred because more options are more desirable. This second process is only activated, however, when such information is available and salient.

Goodman and Malkoc's (2012) experiments used a variety of different types of goods, e.g., a restaurant, vacation, blender, ice cream, and chocolate. The first two comprise service-based experiences. In contrast, a blender is a product. An ice cream and chocolate may also be classified as a consumable product. Following Hamilton and Thompson's (2007) study of experiential distance, however, products should be psychologically close and services psychologically distant because it is much more difficult to directly experience services. Some services, such as a cinema visit or a holiday, can be directly experienced during the consumption phase but other services, such as a mobile phone subscription or insurance for example, can hardly ever be directly experienced. Many products, on the other hand, can be tried out before purchase and the consumption time-span is not as limited as for a service-based good. In the context of different types of goods, these findings (Goodman & Malkoc, 2012; Hamilton & Thompson, 2007) are contradictory, which is why this research focusses on luxury and non-luxury brands that are product based.

2.3.10 Measurement of Psychological Distance

Previous approaches to measure psychological distance can be categorised into three groups: non-language based methods, predefined language based response items, and language coding schemes. The Behavioural Identification Form (BIF) (Vallacher & Wegner, 1989) and the Implicit Association Test (IAT) are famous examples of predefined language based response items. Similarly, the Linguistics Category Model (LCM) (Semin & Fiedler, 1991) is a famous language coding scheme for psychological distance. CLT studies have relied heavily on language to measure psychological distance (see, for example, Lee, et al., 2009; Hansen & Wänke, 2011; Schellekens, et al., 2010; Goodman & Malkoc, 2012; Bornemann & Homburg, 2011). Psychological distance measures have, therefore, with a few exceptions, been language based. Table two summarises the previous methodological approaches.

Group	Examples	Reference
Non-language based methods	Self-report scale	(Van Boven, et al., 2010; Fiedler, et al., 2012; da Costa Hernandez, et al., 2015)
	Actual temporal or spatial distance	(Huang, et al., 2016; Bhatia & Walasek, 2016)
	Written versus visual response	(Amit, et al., 2013; Amit, et al., 2009)
Predefined language based response items	Behaviour Identification Form (BIF) (Vallacher & Wegner, 1989)	(Smith & Trope, 2006; Williams, et al., 2014; Fujita, et al., 2006; Lee, et al., 2009; Wakslak, et al., 2006)
	Implicit Association Test (IAT)	(Bar-Anan, et al., 2006; Amit, et al., 2009)
	Keywords derived from temporal distance	(Bhatia & Walasek, 2016)
	Category creation	(Wakslak, et al., 2006; Henderson, et al., 2006)
Language coding schemes	Linguistic Category Model (LCM) (Semin & Fiedler, 1991)	(Schellekens, et al., 2010; Fujita, et al., 2006; Lee, et al., 2009; Huang, et al., 2016)
	Researchers coding text on scales	(Schellekens, et al., 2010)

Table 2: Overview of Previous Methodological Approaches to Measure Psychological Distance

The aim of this section is to critically evaluate existing methods to identify a methodological gap. Non-language based methods are reviewed first, followed by predefined language based methods, and language coding schemes.

2.3.10.1 Non-Language Based Methods

Non-language based methods include scales, actual distance, and written versus visual response type. Several studies measured psychological distance with six- or ten-point self-report scales (Van Boven, et al., 2010; Fiedler, et al., 2012; da Costa Hernandez, et al., 2015). Actual spatial and temporal distance has been measured with GPS data and time stamps (Huang, et al., 2016), which increases ecological validity in comparison to an experimental setting. Measuring the actual geographical distance between the restaurant location and the

reviewer's home as well as the time elapsed between the restaurant visit and when the review was posted, both actual spatial and temporal distance increase review positivity. Similarly, actual temporal distance has been measured with the publication dates of New York Times articles and US election dates to which the articles were referring (Bhatia & Walasek, 2016). Another method to measure psychological distance is based on the difference between verbal and visual construal. Words are construed as high-level and pictures as low-level (Amit, et al., 2013; Amit, et al., 2009). Giving participants the choice to either write a description as a response or respond with a drawing thus represents another way to assess psychological distance.

2.3.10.2 Predefined Language Based Response Items

Predefined language based response items refer to methods in which participants are presented with predefined written options from which to choose. The Behavioural Identification Form (BIF) and the Implicit Association Test (IAT) give participants two sets of options. One set of descriptions or words, respectively, is psychologically close and the other psychologically distant. Other approaches in this group include keyword and category creation based measures.

2.3.10.2.1 Behavioural Identification Form (BIF)

The BIF (Vallacher & Wegner, 1989) was originally developed to identify different styles of actions and personal agency. High-levels of personal agency refers to seeing one's action in terms of consequences and implications or 'why' terms. In contrast, low-levels of personal agency refers to understanding one's actions in terms of their details or 'how' terms. 'Why' and 'how' questions have been used to prime participants to construe high-level or low-level (Lee, et al., 2009; Hamilton & Thompson, 2007; Williams, et al., 2014). Although put forward almost two decades earlier than CLT, the BIF ties in well with high and low-level construal. In fact, the BIF has been used as an outcome variable measuring psychological distance (Fujita, et al., 2006; Smith & Trope, 2006; Williams, et al., 2014; Lee, et al., 2009; Wakslak, et al., 2006)

2.3.10.2.2 Implicit Association Test (IAT)

The premise of the IAT is that congruent options yield faster response times than incongruent ones. Bar-Anan and colleagues (2006) paired either a low-level or a high-level stimuli with either a psychologically close or distant framing to create congruent or incongruent options. The words '*eat*' and '*second*' represent a congruent option, because they pair a near event with near time. Similarly, the words '*theirs*' and '*stranger*' are both socially distant. An incongruent stimulus is, therefore, '*second*' and '*theirs*'. In line with Bar-Anan and colleagues' findings (2006), participants responded faster to congruent stimuli than incongruent ones (Amit, et al., 2009). A drawback of this method is that it does not provide conclusive empirical evidence concerning which of the stimuli is psychologically distant and which is close. Following CLT, '*second*' should be psychologically close and '*theirs*' psychologically distant. There are many CLT studies to support this particular claim. However, it remains an untested assumption with the IAT.

2.3.10.2.3 Keyword and Category Creation

Keywords and category creation are two other employed approaches. Language includes cues for temporal, spatial, social, and hypothetical distance, as section 2.2.1 explains. According to this rationale, Bhatia and Walasek (2016) examined temporal distance in tweets based on temporal keywords, such as '*next week*' versus '*next month*'. In another approach participants sorted written content into as many or few categories as they liked (Wakslak, et al., 2006; Henderson, et al., 2006). The underlying rationale is that psychological distance (closeness) triggers high (low) level construal which, in turn, influences the number of categories being created. Specifically, high-level construal is characterised by homogeneity resulting in fewer information chunks and, ultimately, fewer categories being created. During low-level construal, on the other hand, various and heterogeneous aspects are salient resulting in more categories being created (see section 2.3.8 for a discussion on construal level).

2.3.10.1.3 Language Coding Schemes

Instead of giving participants different descriptions from which to choose, participants can also write a text for researchers to code. The most well-known coding scheme is the Linguistic Category Model (LCM) (Semin & Fiedler, 1991), but there are also less well-known coding methods to measure psychological distance in language.

2.3.10.3.1 Linguistic Category Model (LCM)

The LCM proposes that language has different levels of psychological distance (Semin & Fiedler, 1991). Descriptive action verbs are psychologically the closest and most concrete word type, followed by interpretive action verbs, state verbs describing a state, and with adjectives being psychologically the most distant and most abstract word type. The occurrence of each word type in a given text is manually counted, then the total number of occurrences is multiplied by the weight allocated to each word type (Huang, et al., 2016; Lee, et al., 2009; Fujita, et al., 2006). Other word types that do not belong to any LCM category, such as nouns or conjunctions, for example, are not considered. The noun '*table*' is much more specific and concrete than the noun '*luxury*'. In a similar vein, the conjunction '*here*' is spatially much closer than its counterpart '*there*'. To add another example, the word '*mine*' is closer than the word '*hers*' on the social dimension of psychological distance. These examples and those mentioned in section 2.2.1 illustrate a limitation of LCM in assessing psychological distance. Despite its limitation, LCM has successfully been used to manipulate psychological distance perceptions in simple sentences (Schellekens, et al., 2010). The verb in a seven-word sentence has been adapted following the different LCM categories. The findings support LCM: participants perceive the sentence with a descriptive action verb as the most concrete and psychologically closest, followed by a sentence with an interpretive action verb, a state verb, and an adjective. However, most natural language is more complex, with longer sentences and containing verbs and adjectives together.

2.3.10.3.2 Other Coding Schemes

In addition to LCM, psychological distance in language can be established with three more coding schemes. The first one relies on the 'why' versus 'how' rationale. The 'why', 'how', and neutral thoughts are counted in the text that participants write. Such a text can also be coded on the basis of it containing more general and superordinate or more detailed and subordinate elements. Yet another approach is to simply code how psychologically close or distant a text is on a seven-point Likert scale (Schellekens, et al., 2010).

2.3.10.4 Critical Evaluation of Established Psychological Distance Measurement Methods

Non-language based methods, predefined language based response items, and language coding schemes are critically evaluated with reference to the current research context.

While scales are easy to implement, the question is to what extent the respondent can decide what is psychologically close and what is psychologically distant. Giving the participants the choice to either draw a picture or write a text as a response is simple to analyse with a logistic regression, but data collection would be very time consuming and possibly biased by respondents' communication tendencies. Some people like to draw a visual to help explain their thoughts while others prefer to express themselves in a verbal way. Collecting data with the IAT would be less time consuming, but rely on specialist software coding skills, a laboratory setting and, most importantly, on previous assumptions which require pretesting. The BIF (Vallacher & Wegner, 1989) would be simpler to implement in comparison. Yet another data collection technique would collect the written responses from consumers and brand managers about a given luxury and non-luxury brand.

There are different ways to code language. The most commonly used LCM (Semin & Fiedler, 1991) does not consider nouns and conjunctions. Other coding schemes based on the characteristics of high and low construal level, respectively, have emerged but are difficult to automate. Manual coding is labour-intensive requiring a considerable research budget as a minimum of two independent coders are needed to complete the coding. Otherwise, interrater reliability (LeBreton & Senter, 2008) cannot be computed, which is a key indicator to gauge how robust the findings are. In fact, due to time and budget constraints, researchers could only code a subset of the language data collected (Huang, et al., 2016).

In summary, the BIF would probably be the simplest and most efficient way to measure psychological distance. However, it would inadvertently introduce a bias and raise questions about the sampling. In the present research context, this bias would be particularly pronounced for responses from brand communication managers. Their responses could be a reflection of their own individual brand perception or what the brand looks like in the marketing strategy paper. These responses, however, could not reflect actual brand communication. In addition to this bias, sampling issues exist. A student sample would, for example, only be generalizable to some extent. Recruiting a large and representative sample via crowdsourcing platforms or a consumer panel would, again, incur considerable costs. A generous research budget would address the consumer sample selection issue, but not necessarily the one for brand managers as money would not necessarily grant data access.

2.4 Chapter Summary

Social-psychological theories are useful in explaining and measuring brand associations. The Construal Level Theory of psychological distance (CLT) (Trope & Liberman, 2010) is a recent social psychological theory that explains how consumers construe information. Specifically, psychologically distant (close) objects are construed as high-level (low-level) during which desirability (feasibility) (Liberman & Trope, 1998; Trope & Liberman, 2000; Todorov, et al., 2007) and uniqueness (comparability) (Ledgerwood, et al., 2010; Henderson, et al., 2006) considerations are prominent, leading to different mental representations. CLT has also been linked to valence and affect intensity. Increasing psychological distance increases valence (Williams & Bargh, 2008; Eyal, et al., 2004; Herzog, et al., 2007; Huang, et al., 2016), but decreases affect intensity (Williams, et al., 2014). CLT literature in the consumer behaviour domain shows how construal level and psychological distance influence product price perception, product purchase intention, and product evaluations (Bornemann & Homburg, 2011; Goodman & Malkoc, 2012; Hamilton & Thompson, 2007; Schellekens, et al., 2010). Psychological distance thus influences consumer decision-making, but no previous research has investigated the psychological distance of brands and brand associations. Instead, brand associations have been conceptualised in terms of social expectations, brand personality attributes (Berens & van Riel, 2004; Aaker, 1997) and the terms consumers associate with a brand and the strengths of these associations (Zaltman & Coulter, 1995; Spector, 1961). The idea that brands can be psychologically close or distant is novel. This is the theoretical gap this research aims to fill. This gap is important because previous brand association research makes no claim on information processing and subsequent influences on consumer decision-making. According to CLT research on products, psychological distance influences price perceptions (Bornemann & Homburg, 2011), assortment size preferences (Goodman & Malkoc, 2012), the persuasiveness of messages (da Costa Hernandez, et al., 2015), and the positivity of evaluations in general (Williams, et al., 2014; Labroo & Patrick, 2008; Huang, et al., 2016; Pyone & Isen, 2011; Labroo & Patrick, 2008; Schellekens, et al., 2010).

Given how previous CLT studies have measured psychological distance, consumers and brand managers would need to be surveyed to determine the psychological distance of brand associations and brand communication. Such an approach not only requires a considerable research budget and time, making it difficult to replicate, but also reduces construct validity (Peter, 1979) due to brand managers' responses not reflecting real brand communication. Instead, actual brand and consumer language is collected and analysed for psychological distance. This is the methodological gap this research aims to fill.

3. Conceptual Development

Aaker's (1997) seminal paper illustrates how powerfully personality theory explains brand associations. Personality theories stem from social psychology. It seems, therefore, only natural to extend the Construal Level Theory of psychological distance (CLT) (Trope & Liberman, 2010), another social-psychological theory, into the domain of brand associations and brand communication. Studying the psychological distance of brand associations and brand communication is not only novel but important because according to psychological distance research on products, psychological distance influences consumer assortment size preferences (Goodman & Malkoc, 2012), price perceptions (Bornemann & Homburg, 2011), the persuasiveness of marketing messages (da Costa Hernandez, et al., 2015) and improves evaluations in general (Williams, et al., 2014; Labroo & Patrick, 2008; Huang, et al., 2016).

Psychological distance has four dimensions, i.e., temporal, spatial, social, and hypothetical which, inter-relatedly, influence the overall psychological distance of a brand (Trope & Liberman, 2010). Consumers have different touch points with a brand and these differ along the four psychological distance dimensions. For example, a consumer may walk past a Boots store regularly on the way to work. This may not hold true for another consumer. Boots is thus temporally and spatially closer for one consumer than for another consumer. Similarly, a consumer may drive a Suzuki car, i.e., frequently and directly encounter the brand, whilst his boss drives a Vauxhall. In this case, the brand associations for Suzuki are closer than for Vauxhall due to social distance. These examples illustrate how consumer touchpoints influence the four distance dimensions differentially depending on the individual consumer. The individual measurement of the four distance dimensions adds another layer of complexity that is difficult to operationalise, particularly on a large scale, and does not provide additional insight with reference to the psychological distance of brands. In order to compute the temporal, spatial, and social distance, much more information is required such as temporal activity pattern, location, and social relationship types. More importantly, the dimensions are interrelated and, together, create the overall psychological distance of a brand that influences consumer preferences (Williams, et al., 2014; Labroo & Patrick, 2008; Huang, et al., 2016; Bornemann & Homburg, 2011; Goodman & Malkoc, 2012). In that sense, measuring the four distance dimensions separately is unnecessarily complex and does not provide an additional benefit for the research topic at hand. Therefore, the overall psychological distance of brands is measured.

The structure of this chapter is as follows. First, the link between psychological distance and affect is discussed to prototype the computational natural language approach adopted for establishing the psychological distance of brand associations and brand communication. Second, a difference in psychological distance between luxury versus non-luxury brand associations and brand communication is proposed. The chapter concludes with a conceptual framework and chapter summary.

3.1 Psychological Distance, Valence, and Affect Intensity

Psychological distance has been linked with valence and affect intensity. Specifically, increasing distance results in more positive valence but less affect intensity (Williams & Bargh, 2008; Huang, et al., 2016; Williams, et al., 2014; Eyal, et al., 2004). These findings are based on lab experiments. In fact, most CLT studies are laboratory based experiments with three notable exceptions (Bhatia & Walasek, 2016; Huang, et al., 2016; White, et al., 2011). White and colleagues (2011) conducted a field experiment. Bhatia and Walasek (2016) used tweets and newspaper data while Huang and colleagues (2016) based their research on a TripAdvisor dataset. These studies (Bhatia & Walasek, 2016; Huang, et al., 2016) leveraged natural data, which is created organically without the researcher planning and executing the data collection. Instead, the researcher harvests already existing data that has higher ecological validity.

Only Huang and colleagues (2016) analysed the relationship between psychological distance and valence with natural data. They measured psychological distance with actual temporal and spatial distance between the restaurant visit and the review time point, and the restaurant's location and the user's home address respectively. Valence was measured with the numbers of stars awarded in the restaurant review. To my knowledge, there is no study examining psychological distance, valence, and affect intensity with natural language data. This is important for two reasons. First, most CLT studies are experiments with a language based dependent variable (see section 2.3.10). Testing CLT predictions with natural language data strengthens CLT theory. Second, natural language data is omnipresent today on social media, in e-mails, or in chat transcripts. Only Bhatia and Walasek (2016) analysed the language of tweets for psychological distance. However, language can also be analysed for language affect intensity and valence (Warriner, et al., 2013). There is, therefore, a need to further test the predictions of CLT in a natural setting. In analysing language for psychological distance, affect intensity, and valence, previous CLT predictions can be tested with naturally

occurring language data. In doing so, a methodological prototype is established for the subsequent studies of this thesis that contributes to CLT research methodology and the wider discussion about how to derive insights from natural language data.

The relationship between psychological distance and valence is positive. The more psychologically distant language is, the more positive it should become (Huang, et al., 2016; Williams, et al., 2014; Eyal, et al., 2004). The first hypothesis is, thus, as follows:

H1: With increasing psychological distance in natural language, valence of natural language should become more positive.

The relationship between psychological distance and affect intensity is negative. Decreasing psychological distance results in more affect intensity (Williams & Bargh, 2008; Williams, et al., 2014). With decreasing psychological distance in language, the language should become more intense and arousing. Hypothesis two, thus, reads as follows:

H2: With decreasing psychological distance in natural language, affect intensity of natural language should become more arousing.

In summary, the aims of testing hypotheses one and two are two-fold. First, to examine whether the previous findings about the relationship between psychological distance, valence, and affect intensity also hold in a natural setting. This is achieved with natural language data. Second, to showcase how natural language data can be used to determine psychological distance and, thereby, provide a methodological prototype for the subsequent studies of this thesis about psychological distance of brand associations and brand communication.

3.2 The Role of Psychological Distance in Consumer Brand Associations

Consumers should have different brand associations for different types of brands. Mapping brand associations onto psychological distance, they can be either psychologically close or distant. Following CLT, brands that are considered unique, desirable, and inaccessible should be psychologically distant. Brands that are considered comparable, affordable, and accessible should result in psychologically close brand associations. Psychologically distant (close) brand associations activate high (low) level processing during which uniqueness (comparability) and desirability (feasibility) considerations are salient. In fact, luxury items

are psychologically more distant than non-luxury items (Hansen & Wänke, 2011) providing a useful indication that luxury versus non-luxury types of brands should lead to different brand associations in terms of psychological distance.

3.2.1 Luxury Brands are Unique – Non-luxury Brands are Comparable

Consumers should have psychologically distant (close) brand associations with luxury (non-luxury) brands, because they are unique (comparable). Both Dior and Chanel are luxury fashion and accessories brands, but consumers have distinct brand associations for them. A Dior dress and a Chanel dress are easily recognised as being either a Dior or a Chanel dress due to their distinctive styles. The differences between an H&M and a Topshop dress are much subtler. Uniqueness (comparability) has been linked with high (low) level construal and subsequent psychological distance (closeness) (Ledgerwood, et al., 2010; Henderson, et al., 2006). Consumers buy an item from a luxury brand because of what the brand embodies, i.e., the brand value and brand positioning. Price-value considerations are not a key decision criterion. This is not the case for non-luxury brands. The role of price is important when purchasing a non-luxury brand item. Price-value considerations entail comparisons between the different alternatives in order to decide which option provides the best value for the resources invested. Such considerations include various heterogeneous aspects activating low-level construal (see section 2.3.8 for a discussion on the characteristics of high and low-level construal). In addition to luxury brands' unique brand positioning, they are also desirable.

3.2.2 Luxury Brands are Desirable – Non-luxury Brands are Feasible

Desirability is the very essence of luxury brands. While many consumers may like a Cartier watch, for example, not many can afford one. Consumers construe desirable objects in a high-level manner while they construe feasible objects in a low-level manner (Liberman & Trope, 1998; Trope & Liberman, 2000; Todorov, et al., 2007). The underlying reason why construal levels of desirability and feasibility differ is that the former refers to the valence of an action's end state whereas the latter relates to the process of reaching that end state (Liberman & Trope, 1998). The desirable Cartier watch should, therefore, trigger high-level processing leading to psychologically distant brand associations. Inversely, a Swatch is

cheaper and, thus, much more feasible to own. Swatch should, thus, be construed in a low-level manner leading to psychologically close brand associations.

3.2.3 Luxury Brands Have a Positive Valence – Non-luxury Brands May Vary

Due to its very nature, desirability has a positive valence, while feasibility is more neutral in valence due to the trade-off between the desired end state and the means available to reach this desired state. When buying a watch for example, feasibility considerations entail how much money the watch costs, the time and effort invested to obtain this amount of money, and the time and difficulty to buy the watch itself. Positive valence activates high-level processing and negative valence activates low-level construal (Labroo & Patrick, 2008; Pyone & Isen, 2011). Therefore, desirable and positively valenced luxury brands are psychologically distant. Non-luxury brands, in comparison, entail negative aspects leading to psychologically close brand associations.

Arguably, not all consumers share this positive sentiment about luxury brands. Luxury is about abundance: excess of money, space, time, or items in general. This abundance may be frowned upon by the not-haves as waste. Excessively stimulated consumption, termed hedonism, is another key characteristic of luxury. Hedonic consumption refers to multi-sensory, emotionally arousing, and dream-like consumption experiences (Hirschman & Holbrook, 1982). This excessive stimulation has been criticised on moral and ethical grounds. Luxury brands, therefore, do not go without criticism. This concern is addressed during sample selection.

3.2.4 Luxury Brands Are Bought Less Frequently than Non-luxury Brands

Purchasing a luxury brand item is a much rarer event than buying a non-luxury brand item. By definition, a luxury is something special. The majority of consumers are, thus, more likely to regularly buy and own non-luxury brand items. Based on hypothetical distance (see section 2.3.4), luxury brands should, therefore, be psychologically more distant than non-luxury ones. This argument, of course, depends upon the consumer's financial means. However, the following examples illustrate that the consumer's socio-economic status impacts product perceptions much more than brand associations. A deodorant from Estée Lauder, for example, is three times more expensive than a deodorant from Nivea. The Estée Lauder deodorant is, therefore, less affordable and accessible than the Nivea deodorant. This

example illustrates how a product can be either exclusive or accessible depending on the brand. Nivea and Estée Lauder are both beauty brands, but they position themselves very differently. Nivea positions itself as an accessible, everyday brand for everybody. In contrast, Estée Lauder is positioned as an exclusive brand for the targeted few. Both brands curate a distinguishable brand image so that consumers have distinct brand associations. Therefore, brand associations are a much more precise unit of analysis in comparison to product perceptions.

Summarising, objects that are unique, desirable and unlikely to be owned or accessed are psychologically distant (Ledgerwood, et al., 2010; Henderson, et al., 2006; Liberman & Trope, 1998; Todorov, et al., 2007; Trope & Liberman, 2000). Inversely, objects that are comparable, feasible and likely to be owned or accessed are psychologically close. Accordingly, luxury brands should be psychologically distant and non-luxury brands psychologically close. Hypothesis three is as follows:

H3: Consumer brand associations for luxury brands should be psychologically more distant than consumer brand associations for non-luxury brands.

3.3 The Role of Psychological Distance in Brand Communication

Brand communication is the vehicle with which a brand's image is portrayed. No previous study has investigated the psychological distance in brand communication. Only a few CLT studies have analysed communication outcomes. Consumers construing high (low) level are more likely to recycle when the call to recycle is gain (loss) framed and this effect persists over a time period of six months (White, et al., 2011). Communication messages emphasising benefits are more persuasive when the purchase is planned in the distant future. For purchases in the near future, communication messages highlighting product features are more persuasive (da Costa Hernandez, et al., 2015).

The idea to measure psychological distance directly in brand language for brand positioning and consumer evaluations reasons is new. A brand may be positioned as psychologically close or distant depending on the type of brand. Psychological distance is not only important for brand positioning due to its influence in the consumer decision-making process

(Bornemann & Homburg, 2011; Goodman & Malkoc, 2012; Schellekens, et al., 2010), but also for matching reasons. Tailoring brand communication to brand associations in terms of psychological distance should improve evaluations. First, the role of psychological distance for brand positioning is discussed followed by an explanation of how matching the psychological distance in brand communication with the psychological distance of brand associations should improve consumer evaluations.

3.3.1 Brand Positioning

Brands, in general, want a distinct brand positioning. However, uniqueness is paramount to luxury brands, in particular, because they carefully curate their unique brand identities (Kapferer & Bastien, 2012). Effective luxury brand communication should, therefore, employ psychologically distant language to increase psychological distance from consumers to convey uniqueness and desirability. Despite the advantages of psychological distance in inducing higher uniqueness and desirability for a brand, it is less appropriate for non-luxury brands. The objective of non-luxury brand communication is fundamentally different from that of luxury brands. Non-luxury brand communication promotes the brand, product functionality, and price value considerations. Non-luxury brands should, therefore, focus on affordability and accessibility. In order to be perceived as affordable and accessible, non-luxury brands should reduce the psychological distance in order to be psychologically close to the consumer. Framing brand communication in a psychologically distant manner to increase desirability would, therefore, be inconsistent with the brand communication aim of a non-luxury brand. Inversely, luxury brands do not aim to be accessible and affordable. In fact, more widely available luxury brands are no longer luxury brands, but rather 'masstige' brands (Silverstein & Fiske, 2003). In sum, luxury (non-luxury) brands should use psychologically distant (close) language to induce psychological distance (closeness) for brand positioning reasons.

3.3.2 Matching Brand Communication to Brand Associations to Improve Evaluations

Matching the psychological distance in brand communication with the psychological distance of brand associations should reinforce the brand positioning on one side and improve consumer evaluations on the other, as CLT and valence research suggests (Labroo & Patrick,

2008; Pyone & Isen, 2011; Schellekens, et al., 2010). The psychological distance in brand communication can reinforce or change consumer brand associations depending on whether they match existing brand associations or not. Consumers should hold psychologically distant (close) brand associations with luxury (non-luxury) brands. By matching the psychological distance of brand language to the psychological distance in brand associations, luxury (non-luxury) brands can reinforce desirability (affordability) and exclusivity (accessibility) considerations in consumer brand associations. Psychologically distant (close) brand associations activate high (low) level construal during which desirability (affordability) and exclusivity (accessibility) characteristics of the brand communication are more salient. Moreover, CLT and valence research shows that matching positive (negative) valence with psychological distance (closeness) increases purchase intentions (Schellekens, et al., 2010; Pyone & Isen, 2011; Labroo & Patrick, 2008). Similarly, matching psychological distance in communication to the communication framing, improves consumer evaluations and behavioural intentions (White, et al., 2011; da Costa Hernandez, et al., 2015). Therefore, luxury (non-luxury) brands should use psychologically distant (close) language.

For brand positioning and matching reasons, luxury (non-luxury) brands should use psychologically distant (close) language to increase consumer preference and behavioural intentions.

H4: Luxury brand communication should use psychologically more distant language than non-luxury brands.

3.4 The Effect of a Communication Style Match

Matching construal levels with valence increases purchase intentions and choice preference (Schellekens, et al., 2010; Pyone & Isen, 2011; Labroo & Patrick, 2008; Trope & Liberman, 2000). Specifically, participants in the positive mood condition who read a psychologically distant framed product advertisement displayed higher purchase intentions than those in a negative mood condition (Labroo & Patrick, 2008). Matching construal level with the psychological distance of descriptions increases choice preference. Participants read six scenarios, three of which were described in a psychologically close way and the remaining three in a psychologically distant way (Trope & Liberman, 2000). In the near future psychologically close event descriptions pertaining to the course of action and the context

were preferred in comparison to psychologically distant descriptions that focussed on meaning and the significance of the event. The reverse holds true for the distant future. The temporal indication primed participants to construe the description either as high-level or low-level. This study is fundamental to this research because it indicates that a match between consumer construal level and psychological distance in brand communication should lead to more favourable outcomes.

The present research deviates from the previous seminal study in two important ways. Firstly, the past study connected temporal distance with description framing. Instead of temporal distance, the present research links the luxury versus non-luxury type of brand associations with the language in brand communication. Secondly, the past study has focussed on the overall style of the description, i.e., the course of action and the context of an event versus the meaning and significance of the event, and not language specifically. While there is a strong indication that matching brand associations with brand communication results in better consumer evaluations, this has not yet been tested. This is important, because it extends previous findings theoretically as well as empirically. The notion that consumers like congruent options is fundamental to consumer behaviour and marketing.

In conclusion, brand communication employing psychologically distant (close) language should lead to more favourable outcomes for luxury (non-luxury) brands. The final two hypotheses are, therefore, as follows:

H5a: Psychologically distant brand communication should lead to more favourable evaluations for luxury brands than psychologically close brand communication.

H5b: Psychologically close brand communication should lead to more favourable evaluations for non-luxury brands than psychologically distant brand communication.

3.5 Chapter Summary and Conceptual Framework

CLT (Trope & Liberman, 2010) explains how consumers process different types of brands and has been linked to valence and affect intensity. Specifically, increasing psychological distance reduces the intensity with which affect is experienced (Williams & Bargh, 2008), but enhances valence (Williams, et al., 2014) and consumer positivity ratings (Huang, et al., 2016). These theoretical predictions have been tested in separate experiments, but not with natural language. This is the objective of hypotheses one and two in order to provide a methodological prototype for the employed methodology, computational psycholinguistics, which is new to the marketing domain. Hypotheses one and two, therefore, lay the methodological basis and proof of concept for the subsequent hypotheses as illustrated in the conceptual framework, below. According to previous findings, luxury items are psychologically more distant than non-luxury items (Hansen & Wänke, 2011). Consumers should, thus, construe luxury brands differentially from non-luxury brands leading to psychologically distant or close brand associations (H3). Adopting the brand management perspective, brand communication can be psychologically distant or close. For brand positioning and match effect reasons, luxury brand communication should use psychologically distant language and non-luxury brand communication should use psychologically close language (H4). The match effect proposes that matching the psychological distance in brand communication to the psychological distance of consumer brand associations should generate more favourable outcomes. Specifically, luxury (non-luxury) brands using psychologically distant (close) language in their brand communication should lead to more favourable consumer evaluations (H5a & H5b).

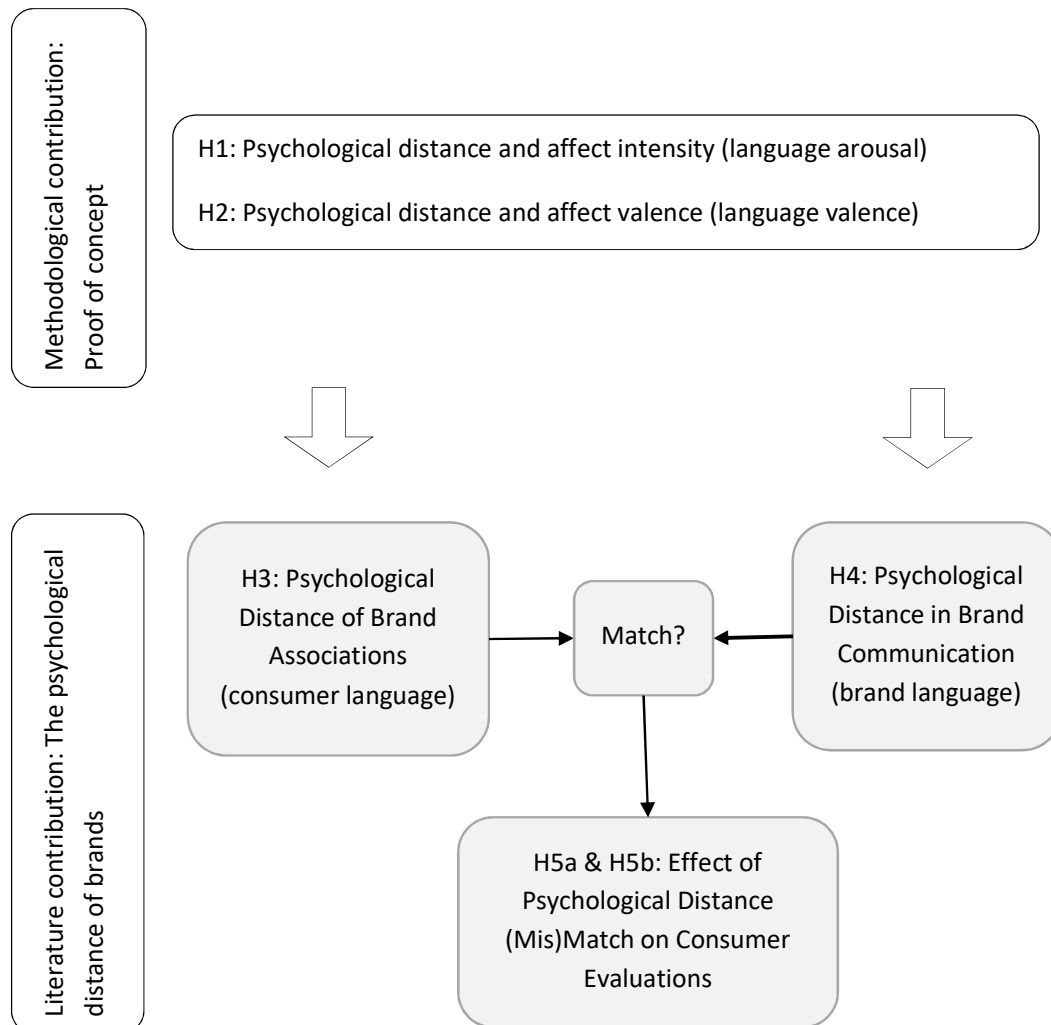


Figure 3: Conceptual Framework: Psychological Distance of Consumer Brand Associations and Brand Communication

4. Research Methodology

Critical realism with a deductive approach underlies this research (Saunders, et al., 2016). Consumer and brand language is studied in terms of CLT, which explains the underlying structure of how language is processed and the resulting mental representations of brands. From the researcher's viewpoint, consumer and brand language is objectively observable. The researcher thus leans towards objectivism in terms of the underlying ontology. In line with the epistemological considerations of critical realism, the researcher is aware that analysing a sample of consumer and brand language does not capture the entirety of consumer brand associations and brand positioning. Instead, the researcher aims to minimise biases with careful methodological choices and enable a generalisation to non-luxury and luxury brands, per se. In accordance with the deductive approach, this thesis employs different quantitative methods. The computational psycholinguistics studies and the experiment, thus, represent the quantitative methodological data collection choice. The former are large-scale longitudinal observation studies and the latter is a causal mixed design experiment. In figure four, below, Saunders and colleagues' 'research onion' (2016, p. 124) is applied to the research topic.

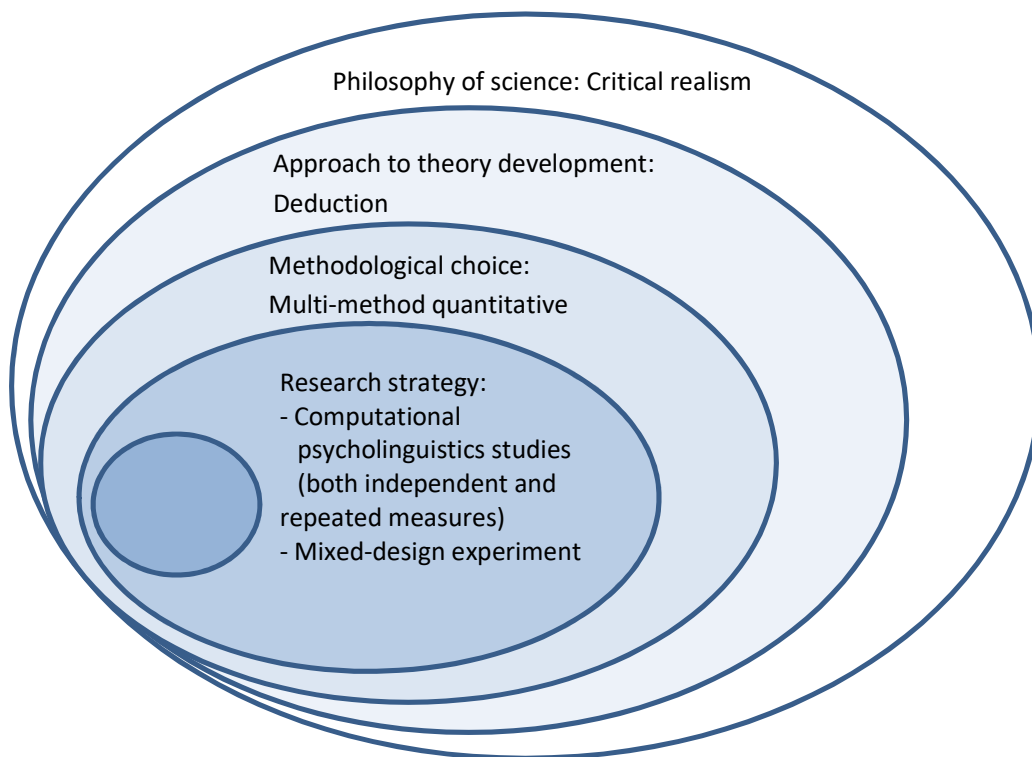


Figure 4: Research Philosophy, Approach, and Methodological Choices

This thesis includes five computational psycholinguistics studies and one experimental study in order to address the four research objectives of this thesis. The first research objective aims to provide a methodological prototype. The second and third research objectives concern whether the psychological distance of consumer brand associations and brand communication differs for luxury and non-luxury types of brands. The fourth research objective tests the impact of a match between the psychological distance of consumer brand associations and brand communication on consumer evaluations.

The chapter is structured according to these research objectives which inform the adopted quantitative mixed-method approach. While research objectives one, two, and three can be addressed with the same methodology, as table three shows, research objective four requires a different approach. The subsequent sections, therefore, first explain psycholinguistics, provide a research strategy justification for psycholinguistics, and then detail the data collection procedure for the computational psycholinguistics studies. Next, the research strategy to address research objective four is justified, followed by an account of how the experiment was conducted.

No	Data	Study Title	Research Objective	Hypotheses	Design
1	All Twitter and Facebook datasets	Valence, Affect Intensity, and Psychological Distance in Consumer Tweets and Brand Communication	1	H1: With increasing psychological distance in natural language, valence becomes more positive. H2: With decreasing psychological distance in natural language, affect intensity becomes more arousing.	Computational Psycholinguistics
2	Twitter	Psychological Distance in Consumer Tweets to Luxury and Non-luxury Brands	2	H3: Consumer brand associations for luxury brands should be psychologically more distant than consumer brand associations for non-luxury brands.	Computational Psycholinguistics
3	Twitter (without retweets)	Psychological Distance in Pristine Consumer Tweets to Luxury and Non-luxury Brands	2	H3	Computational Psycholinguistics
4	Facebook	Psychological Distance in Luxury and Non-luxury Brand Communication on Facebook	3	H4: Luxury brand communication should use psychologically more distant language than non-luxury brands.	Computational Psycholinguistics
5	Twitter	Psychological Distance in Luxury and Non-luxury Brand Communication on Twitter	3	H4	Computational Psycholinguistics
6	Student sample	The Effect of Different Types of Mismatches on Brand Liking and Purchase Intention	4	H5a: Psychologically distant brand communication should lead to more favourable evaluations for luxury brands than psychologically close brand communication. H5b: Psychologically close brand communication should lead to more favourable evaluations for non-luxury brands than psychologically distant brand communication	Mixed design experiment

Table 3: Overview of Studies

4.1 Psycholinguistics

Using the rules of language, psycholinguistics is concerned with language comprehension and the relationship between language and psychological processes (Miller, 1965; Rubenstein & Aborn, 1960). Crowdsourcing platforms have fuelled the creation of psycholinguistics databases (Brysbaert, et al., 2014; Warriner, et al., 2013) containing the concreteness, arousal, and valence ratings for several thousand words. These databases have been widely used in social psychological studies (see, for example, Hills & Adelman, 2015; Klebanov, et al., 2014; Kuperman, 2015; Vinson, et al., 2015; Bhatia & Walasek, 2016; Hildebrand, et al., 2017; Ren & Nickerson, 2014) and are explained next.

4.1.1 Language Concreteness

Brysbaert and colleagues (2014) have compiled a word concreteness database of 40,000 words. They have taken the SUBTLEX-US database (Brysbaert & New, 2009) as a starting point and supplemented it with words from the English Lexicon Project (Balota, et al., 2007), the British Lexicon Project with Americanized spelling where necessary (Keuleers, et al., 2012), and the Contemporary American English database (Davies, 2009). Participants were recruited from Mturk, a crowdsourcing platform, to rank word concreteness on a five-point scale. The scale was anchored with one (abstract, language based) and five (concrete, experience based). If participants felt that they did not know the word well enough, they could indicate this by ticking the option 'N' instead of giving a rating. Due to missing values and exclusion criteria, each word was rated between 25 and 30 times. Given the nature of the task, detailed instructions and precise definitions were given to participants who reported to be residents of the United States. Concrete *"...words refer to things or actions in reality which you can experience directly through one of the five senses"* (Brysbaert, et al., 2014, p. 906). Abstract *"...words refer to meanings that cannot be experienced directly but which we know because the meanings can be defined by other words"* (Brysbaert, et al., 2014, p. 906).

These definitions relate well to the *'mental travel'* notion (Trope & Liberman, 2010) (see section 2.3) and experiential distance (see section 2.3.6). According to the *'mental travel'* notion, people are unable to experience what is not present. Therefore, we need to abstract information in order to *'mentally travel'* to a different context and be able to indirectly experience the absent context. Brysbaert et al.'s definitions also tie in well with Hamilton and Thompson's (2007) idea of experiential distance. Experiential distance refers to the

extent to which an object can be directly experienced. Objects that can be directly experienced, e.g., touched, smelled, heard, or seen, are psychologically close. Inversely, objects that cannot be directly experienced are psychologically distant. Based on the '*mental travel*' notion and experiential distance, language concreteness measures psychological distance. Specifically, concrete words are used to describe psychologically close objects and abstract words for psychologically distant objects.

4.1.2 Language Valence and Arousal

In an effort to update and extend an existing database about affective ratings for words (Bradley & Lang, 1999), Warriner and colleagues (2013) undertook the compilation of affective ratings for 13,915 words. They supplemented Bradley and Lang's database consisting of 1,034 words with words from the Category Norms (Van Overschelde, et al., 2004) and the SUBTLEX-US database (Brysbaert & New, 2009). The study relied, again, on a crowdsourcing design and participants from Mturk, who declared to live in the United States. The affective ratings included ratings on word valence, arousal, and dominance. The vast majority of words were rated by at least 18 different individuals. This is a lot, given that another natural language processing study in the consumer behaviour domain revalidated spatial embedding with ratings by four different individuals (Van Laer, et al., 2018). Participants in the Warriner et al. study (2013) received detailed instructions depending on the type of affective norm they ranked. For the valence scale, the instructions read as follows: *"At one extreme of this scale, you are happy, pleased, satisfied, contented, hopeful. When you feel completely happy you should indicate this by choosing rating 1. The other end of the scale is when you feel completely unhappy, annoyed, unsatisfied, melancholic, despaired, or bored. You can indicate feeling completely unhappy by selecting 9. The numbers also allow you to describe intermediate feelings of pleasure, by selecting any of the other feelings. If you feel completely neutral, neither happy nor sad select the middle of the scale (rating 5)"* (Warriner, et al., 2013, p. 1195). In comparison to the concreteness database, participants did not have the option to provide no rating by ticking the 'N' option but, instead, had a neutral anchoring point in the middle of the scale. The study, thus, adopted an approach similar to semantic differential. Warriner and colleagues recoded the database to range from one (happy, calm, or controlled respectively) to nine (unhappy, excited, in control respectively).

4.1.3 Research Strategy and Justification

Psycholinguistics analysis that is automated with a computer program is called computational psycholinguistics. The computational psycholinguistics approach is chosen because it is more valid, reliable, and efficient in comparison to traditional CLT research approaches. According to traditional CLT research approaches (see section 2.3.10), participants either rank psychologically close or distant descriptions or write a text which is then manually coded for psychological distance. In the present research context, the responses from consumers and brand managers would, thus, need to be analysed. Instead, consumer tweets to brands are analysed for psychological distance with language concreteness. This provides an unbiased measure of how psychologically close or distant a brand is for consumers. There are no unintended noise effects caused by the researcher designing a questionnaire or selecting a specific question wording. Moreover, the data are collected in a non-intrusive fashion. Consumers share their thoughts to the public and these are harvested for this thesis. Similarly, actual brand communication on Twitter and Facebook is analysed for psychological distance with language concreteness because the responses from brand managers would not represent actual brand communication. Brands use Twitter and Facebook to promote their brand and talk to their customers. The data reflect a brand's actual positioning in the marketplace, not what the brand manager thinks it is or what the marketing strategy paper says it should be. Examining actual brand communication, thus, improves construct validity, because validity refers to *"...the degree to which instruments truly measure the constructs which they are intended to measure"* (Peter, 1979, p. 6). Ecological validity (Bateson & Hui, 1992) is also improved because tweets and Facebook posts are natural data that occur organically without the researchers' involvement. Natural data thus correspond to an actual real life setting. In addition, computational psycholinguistics also increases reliability because the results can be easily reproduced, showing that the measure is consistent (Peter, 1979). Programmed scripts automate the analysis and are available from the researcher upon request. The data source is freely available. In contrast, manual coding of consumer and brand language for psychological distance would provide results that are more difficult to reproduce. It would, thus, be more difficult to validate measurement consistency.

Computational psycholinguistics is, therefore, a cost-effective approach that can easily be scaled up for academic and industry use. However, gathering consumer data online requires privacy considerations. No person-identifiable data were collected, thus the data are completely anonymous. Moreover, consumers can make any of their tweets unavailable for

research, by enabling the privacy function Twitter provides. In any case, the research topic is not sensitive on moral, ethical, or other grounds, thus, no further considerations about research ethics are required. In sum, computational psycholinguistics is not only an appropriate approach due to its increased reliability but also superior validity. The present research approach shows how word concreteness, valence, and arousal ratings from two published databases (Brysbaert, et al., 2014; Warriner, et al., 2013) link to CLT thereby integrating psycholinguistics with CLT. Despite the perpetual growth of unstructured text data in organisations and on social media, psycholinguistics has received little attention from the marketing discipline.

4.2 Computational Psycholinguistics Studies

This section explains the research method employed to address research objective one, i.e., provide a methodological prototype, and research objectives two and three, i.e., determine the psychological distance of brand associations and brand communication. This method can be broadly classified into four steps. First, individuals rate how concrete, arousing, or positive words are to create look-up databases that serve as dictionaries. This step has already been established (Brysbaert, et al., 2014; Warriner, et al., 2013) and is, thus, not part of this thesis. Steps two to four form part of this thesis. In a second step, consumer communication to brands and brand communication is gathered and cleaned. In a third step, each remaining word in consumer and brand communication is replaced with word concreteness, arousal, and valence ratings. In a fourth and final step, these ratings are analysed statistically to test the hypotheses. Next, the sections explain in depth how the datasets entailing consumer and brand communication were constructed, how the data were cleaned and then analysed.

4.2.1 Data Sources

From the many different natural data sources available, Twitter and Facebook are selected due to their relevance, popularity, and access. Twitter and Facebook are amongst the most popular social media platforms with consumers in the UK (Department for Culture Media & Sport, 2016). The benefit of Twitter in comparison to other social media platforms, such as YouTube or Instagram, is that it is mainly text based due to its history as a short messaging service. Initially, a tweet was restricted to 140 characters but this has now been doubled to 280 characters (TechCrunch, 2018). Facebook started as a platform to connect students and

has never had the same character limitations as Twitter (The Independent, 2018). However, both Twitter and Facebook are much more language and text based than Instagram or YouTube. In comparison to Facebook, Twitter data can be more easily collected by an individual researcher. Therefore, Twitter is the primary data source for this thesis, supplemented with Facebook data. Table four provides an overview of the different datasets.

Study No	Data Source	Data Collection	Data Range	Sample	Sample Size
1	Twitter	5 th Feb 2017	22 nd Jan to 5 th Feb 2017	Consumers to 15 luxury and 15 non-luxury brands	3000 consumer tweets
2	Twitter without retweets	8 th Apr 2018	25 th Mar to 8 th Apr 2018	Consumers to 15 luxury and 15 non-luxury	3000 consumer tweets
3	Facebook	13 th Jul 2016	6 th Jul 2015 to 12 th Jul 2016	12 luxury and 14 non-luxury brands to consumers	1480 Facebook brand posts
4	Twitter	16 th Feb 2017	2 nd to 16 th Feb 2017	15 luxury and 15 non-luxury brands to consumers	3000 brand tweets

Table 4: Overview of Data Sources

4.2.2 Sample Selection

Following the literature gap, the sample frame includes all luxury and non-luxury bands with an active presence on Twitter and Facebook. According to the methodological choice, the luxury and non-luxury brands need to communicate in English because the psycholinguistic databases are for English words. The sample selection for the studies followed four criteria: brand image, industry affiliation, tweet frequency, and amounts of tweets received. French and Italian sounding brand names were selected for the luxury brand sample because many luxury brands stem from France or Italy (Kapferer & Bastien, 2012). Some of them have become global brands, such as Chanel, Louis Vuitton, or Dior. The non-luxury brands were selected based on their affordability and accessibility, two key characteristics of non-luxury brands (see section 2.3.9.1). The majority of UK consumers can buy the selected non-luxury brands regularly. Non-French and non-Italian sounding brand names were chosen for a clear differentiation from luxury brands. The next criterion was industry affiliation. The selected brands should encompass different industries, thus, brands from the fashion, car, beauty and personal hygiene, watches, and alcoholic beverage industries were picked. Wherever possible, an equal number of luxury and non-luxury brands were selected for the different industries. Some brands only have one Twitter handle in English, such as Givenchy or H&M.

Other brands have several Twitter accounts in English, in which case the UK Twitter handles were scraped. The initial selection included 17 luxury and 17 non-luxury brands. A preliminary data inspection revealed that some brands, such as Casio or Hyundai, do not tweet frequently enough and/or mainly retweet other content. These brands were, thus, excluded. For reliable analysis, brands not only need to tweet frequently enough but, also, receive enough tweets from consumers. This did not pose a problem after the brands with low tweeting frequencies were excluded. The final Twitter sample comprised 15 luxury and 15 non-luxury brands, as detailed in table five.

Luxury		Non-luxury	
Brand	Twitter Handle	Brand	Twitter Handle
Givenchy	@givenchy	H&M	@hm
Lancôme	@LancomeUK	Topshop	@Topshop
Yves Saint Laurent	@YSL	Carlsberg	@carlsberg
Hermès	@Hermes_Paris	Heineken	@Heineken
Moët	@MoetUSA	Swatch	@Swatch
Cartier	@Cartier	Nivea	@niveauk
Estée Lauder	@EsteeLauder	The Bodyshop	@TheBodyShop
Guerlain	@Guerlain	Superdrug	@superdrug
Bugatti	@Bugatti	Toyota	@Toyota
Lamborghini	@Lamborghini	Vauxhall	@vauxhall
Maserati	@Maserati_HQ	Suzuki	@SuzukiCarsUK
Louboutin	@LouboutinWorld	Matalan	@Matalan
Dior	@Dior	Dorothy Perkins	@Dorothy_Perkins
Louis Vuitton	@LouisVuitton	Primark	@Primark
Chanel	@CHANEL	Zara	@ZARA

Table 5: List of Examined Luxury and Non-luxury Brands on Twitter

The Facebook dataset was collected with the software ‘netvizz’ (Rieder, 2013). Facebook pages of individual people, however, cannot be accessed. Table six lists the brands whose Facebook pages were scraped. Netvizz provides downloadable CSV files, thus, the raw Facebook posts were stored in CSV file format. An initial data inspection revealed two issues, posting language and post type, resulting in an additional data cleaning step for the Facebook data. Despite the fact that English Facebook brand pages were scraped, not all posts were in English. While the majority of posts were in English, some were in other languages. The non-English posts were removed from the dataset as they could not be analysed further with the employed psycholinguistics databases (Warriner, et al., 2013; Brysbaert, et al., 2014). Second, many non-luxury brands and a few luxury brands allow consumers and other

companies to post on their brand page. Hence, scraping a brand's Facebook page gives brand and other communication. The scraped posts subsequently needed to be manually coded concerning whether they were a brand communication or not (0 = other communication, 1 = brand communication). The main coding criterion was who posted, e.g., the brand itself, consumers, other businesses, or other individuals, and then the post's content. Only communication from the brand itself and from affiliates that posted about the brand were considered brand communication. Boots, for example, had some posts from shopping centres that posted specific offers that the local Boots shop in the shopping centre was running. This was considered brand communication. Other communication included consumer complaints, other businesses advertising their products, or random nonsensical comments. Nivea, for example, had some posts from enraged customers because they use unsustainably produced palm oil. A few luxury fashion brands had posts from model agencies and individual models advertising their services. The coding was done in Excel which supports the CSV file format. Only posts identified as brand communication were used for the analysis.

Due to non-English posts and non-brand communication the sample was unbalanced. In an attempt to balance the sample, more non-luxury brands were included in the data collection. As table six illustrates, luxury brands generally provided more brand communication (BC) posts that could be analysed further than non-luxury brands. For that reason, posts were collected from Boots', Casio's, and Suzuki's Facebook pages. These brands have been chosen, because they belong to industries that the existing sample already covers. Picking brands from other industries would have resulted in covering a new industry from a non-luxury perspective only. Another measure was to exclude Nivea, Vauxhall, and Zara from the sample because they yielded fewer than ten usable brand communication posts from the 100 collected posts. The final dataset contained 895 brand posts from luxury brands and 585 posts from non-luxury brands as table six demonstrates. Section 4.2.5 details how the Facebook data were analysed in light of the still unbalanced sample.

Luxury Brands				Non-luxury Brands			
Brand	Facebook Page Number	Total Posts	BC	Brand	Facebook Page Number	Total Posts	BC
Givenchy	39253099575	100	100	H&M	21415640912	100	17
Hermès	104907696213843	100	98	Topshop	59672929326	100	15
Moët	38995979792	100	49	Carlsberg	9401782383	100	58
Cartier	553037164823912	100	84	Heineken	1689013614665814	100	77
Guerlain	438059079634508	100	95	Swatch	297973083586150	100	89
Bugatti	593852694001381	100	94	Nivea	351330671179	100	4
Lamborghini	227228333969461	100	15	The Bodyshop	119905691356787	100	41
Maserati	18010778998	100	31	Boots	137917343831	100	25
Louboutin	124842316864	100	29	Superdrug	149952066774	100	28
Dior	118197471568260	100	100	Toyota	100175607632	100	22
Louis Vuitton	215138065124	100	100	Vauxhall	137239006315597	100	4
Chanel	10109514234	100	100	Suzuki	186986368003956	100	51
				Matalan	136979063529	100	20
				Casio	120293974669902	100	27
				Dorothy Perkins	129829153993	100	16
				Primark	268505109890322	100	99
				Zara	33331950906	100	8
Total			895				585

Table 6: List of Examined Luxury and Non-luxury Brands' Pages on Facebook

4.2.3 Data Collection Procedure

This section details when and how the data were collected. The data were collected in several intervals during July 2016 and April 2018, as table four details. First, the data collection for Twitter is described, then the data collection for Facebook.

A computer script (written by the researcher in the programming language R) collected, in total, 6,000 consumer tweets and 3,000 brand tweets. The programme script draws on the 'TwitterR' package (Gentry, 2018) from the R software library. The researcher's script establishes contact with Twitter and scrapes the tweets up to two weeks back from the search query date. It, therefore, scrapes historical tweets. For each dataset 100 tweets per brand were collected and stored within the R software environment. While the brand tweets are time correlated, this is not the case for consumer tweets to brands. The first Twitter dataset was collected on 5th February 2017 with a historical keyword search. The keyword consisted of the @ symbol and the brand's Twitter handle name. The @ symbol in Twitter is a function by which the tweet is addressed and sent to another user. The search query for H&M would thus be '@hm'. In this way, only tweets addressed to H&M were gathered. The second dataset was collected shortly afterwards scrapping tweets from brands' Twitter handles. In order to refine the data collection procedure and have a comparison to the first Twitter consumer dataset, another Twitter consumer dataset was collected, which excludes retweets. The function to exclude retweets is not detailed in the TwitterR manual (Gentry, 2018) or any other documentation about Twitter data collection in R. The researcher discovered the function by accident. The advantage of filtering out retweets during data collection is an equal sample size. Excluding retweets after data collection would have resulted in a very unequal sample size. In this way a more pristine dataset was obtained. All Twitter datasets include the same brands in the sample.

In addition to the three Twitter datasets, one Facebook dataset was collected, as detailed in table six. Netvizz (Rieder, 2013) was queried on 13th July 2016 to collect the 100 most recent posts between 6th July 2015 and 12th July 2016. The reason why such a long time span was chosen is posting frequency. Brands may not post during the week-end or every working day. Querying Netvizz for little more than a year assumes that a brand posts approximately every third day. In order to cast a wide net and avoid problems downstream, this longer query time span was employed.

4.2.4 Data Cleaning Procedure

This section explains how the Twitter and Facebook data were structured and cleaned in order to correspond to a suitable data format for the subsequent analyses. The raw data from Twitter and Facebook are in different formats. While the Twitter data is already in the R environment ready for further processing, the Facebook data first needed to be imported and formatted to correspond to the right data structure. For that reason, the CSV file for each brand was read into the R environment and labelled accordingly. A new column for brand type, e.g., luxury or non-luxury, had to be created. Finally, only brand communication posts were selected. After this initial difference, the data cleaning procedure is the same for all Twitter and Facebook datasets.

Table seven illustrates the process each tweet or post underwent to reach word concreteness, arousal, and valence ratings. The first step involved removing numbers, website links, emoticons, and special characters (Tirunillai & Tellis, 2014). Next, all words were made lower case to conform to the look-up databases with the word concreteness, arousal, and valence ratings. In a third step, stop words were removed so that only content words remained. Screening out stop words is customarily done in natural language processing studies (Tirunillai & Tellis, 2014; Bhatia & Walasek, 2016; Hills & Adelman, 2015). Stop words are very frequently used words that carry little or no meaning by themselves. Examples of stop words are *'in'*, *'on'*, *'the'*, *'for'*, et cetera. Most natural language processing (NLP) packages have predefined stop word lists. In the present case the stop word list from the R package *'tm'* was used (Feinerer & Hornik, 2018) (see appendix A). The remaining content words per tweet and post, respectively, were rated according to word concreteness, arousal and valence ratings (Brysbaert, et al., 2014; Warriner, et al., 2013). The databases, thus, acted as look-up dictionaries (see sections 4.1.1 and 4.1.2 for a description). In practice, this meant that the computer program took the first word of the tweet or post, e.g., the word *'fun'* in the example provided in table seven, and looked it up in the dictionary. According to the dictionary database (Brysbaert, et al., 2014) fun has a word concreteness rating of 1.97. The word *'fun'* is, therefore, psychologically distant because the concreteness ratings measure psychological distance and range from one (very abstract) to five (very concrete). The valence ratings range from one (unhappy) to nine (happy) whereas the arousal ratings measure affect intensity and range from one (calm) to nine (excited).

Raw data		From my fun time in London with photographer @dannymeijaphoto Skirt&sweater from @hm https://t.co/KC2FXbsUr9				
Step 1	Remove numbers etc.	From my fun time in London with photographer dannymeijaphoto Skirt sweater from hm				
Step 2	Make lower case	from my fun time in london with photographer dannymeijaphoto skirt sweater from hm				
Step 3	Remove stop words	fun time london photographer dannymeijaphoto skirt sweater hm				
Step 4	Look up each word in concreteness dictionary	fun	time	photographer	skirt	sweater
		1.97	3.07	4.76	4.82	4.78

Table 7 Illustrative Example of Data Cleaning Process for Psychological Distance Ratings

The computer script repeats this process for every word in the tweet or post. As step four illustrates, not all words can be found in the dictionary database. Places and names, such as London, H&M, or dannymeijaphoto, for example, are not included in the dictionary databases and, thus, excluded from the subsequent analysis. A place, such as London, influences spatial distance which is, of course, dependent on the Twitter user's location. This information is not available on Facebook and only to a limited extent on Twitter. Not all Twitter users disclose their location information. Similarly, the name dannymeijaphoto, presumably a photographer, is not considered in the analysis. This example, again, illustrates the different touch points a consumer has with a brand (see chapter 3). Spatial and social distance influence, together, the overall psychological distance of a brand. Hence why the overall psychological distance is measured instead of individual distance dimensions. Moreover, the research objectives concern the psychological distance of luxury and non-luxury brands rather than cities or other locations. Anticipating places or people adding noise to the natural language data collected, well-known brands with a clear brand image that distinctly represent luxury or non-luxury have been selected. Hence, the associations the Twitter user has with dannymeijaphoto play a subordinate role in comparison to that with H&M. Otherwise, most of the words in the tweets and posts are considered in the analysis, because the dictionary databases are very extensive with almost 40,000 words (Brysbaert, et al., 2014) and 14,000 words (Warriner, et al., 2013). They include all frequently and less frequently used words. Therefore, they include all words used in everyday language, which is how consumers communicate on social media.

4.2.5 Data Analysis

Natural language data may not always be normally distributed. In anticipation of this, the mean and median concreteness, arousal, and valence ratings were computed per tweet and post. The rationale behind computing two central measures of tendency is to have two complementary measures. While the mean is less sensitive to skew, the median is less sensitive to outliers. These mean and median concreteness, arousal, and valence ratings are the basis for further statistical analyses, such as correlation analysis, Student's T-Test, Analysis of Variance, repeated measure Analysis of Variance, and linear mixed models.

The statistical procedures differ from study to study to accommodate the different research designs and data structures. Consumer brand association studies follow an independent design, while brand communication studies are repeated measures. Brands are study subjects and repeated observations are gathered from each subject. An advantage of natural data is high ecological validity (Bateson & Hui, 1992), but the data can be messier and samples unbalanced. A linear mixed model was fitted to the Facebook data instead of a repeated measure ANOVA, because linear mixed models provide more reliable results for unbalanced samples than repeated ANOVAs. The sample sizes in the Twitter datasets are almost perfectly balanced, not warranting sophisticated statistical procedures.

4.3 Experiment

The effect of a match between the psychological distance of consumer brand associations and the psychological distance in brand communication on consumer evaluation is examined with an experiment. The following sections justify the methodological choice and explain how the experiment was conducted.

4.3.1 Research Strategy and Justification

Research objective four aims to investigate the match effect between the psychological distance of brand associations and brand communication and its potential impact on consumer evaluations. Testing hypotheses 5a and 5b requires a controlled setting, because different parameters influencing the match effect can be singled out and exchanged if necessary. More importantly, construct validity is higher in comparison to modelling the Twitter or Facebook dataset collected for research objective two due to differences in the operationalisation of consumer evaluations.

There are different operationalisations of consumer evaluations. The number of likes and shares on Twitter and Facebook, for example, may be taken as an indication of consumer evaluations making experiments potentially redundant. A like may be an approximation of brand liking and sharing content could be viewed as an endorsement. However, the construct validity of likes and shares depend on the brand's reach, social desirability, and involvement. Brand reach refers to how many consumers a brand reaches and is mainly determined by advertising budgets and strategic partnerships. This information is not always publicly available, making it difficult to control for this influence. Moreover, consumers tend to feel under pressure to like what their friends like to conform to social norms. Content may be liked or shared because of its identity signalling (Han, et al., 2010) and/or entertainment value. Yet, on another note, liking and sharing can be low involvement. It is done easily, quickly, and without any deliberation. It is, therefore, questionable to what extent liking or sharing content represent genuine positive consumer evaluations. Moreover, this measurement does not capture nuances of positive evaluations or negative evaluations.

Summing up, the construct validity of likes and shares to measure consumer evaluations are fuzzy. An inference on purchase intention based on likes and shares would be weak, at best, because likes and shares are perception measures. Consumer evaluations can either measure perceptions or behavioural intentions. Reliable and actionable results matter. Hence why an experimental approach that simulates real-life settings as closely as possible (Bateson & Hui, 1992) is more appropriate to examine the match effect between the psychological distance of brand associations and brand communication on consumer evaluations.

4.3.2 Study 6: The Effect of Different Types of Mismatches on Brand Liking and Purchase Intention

The aim of this study is to examine the impact of brand communication mismatching brand association in terms of psychological distance. An initial pilot experiment is conducted because previous CLT studies propose that psychological distance (closeness) increases (decreases) the desirability of an object (Trope & Liberman, 2000; Todorov, et al., 2007; Hamilton & Thompson, 2007; Liberman & Trope, 1998), but this has never been tested on the basis of overall psychological distance in language.

4.3.2.1 Pilot Experiment

The pilot employs a two (psychologically distant vs psychologically close brand language) by three (luxury brand vs non-luxury brand vs control) repeated measure design. Thirty-seven undergraduates from a British university participated in the pilot experiment. Participants first consented to participate on a voluntary basis. They were told that they could stop participating in the survey at any time without giving any reason. Next, participants were presented with four brand communication texts, which they ranked on a five-point scale on desirability and expensiveness. The scale was anchored with one (extremely desirable; expensive) and five (not at all desirable; expensive). The brand communication texts were first randomly presented without a brand logo to create a base condition and then randomly presented with the Primark or Chanel logo. After the first block of questions, participants answered a control question to maintain their attention and focus them on the task at hand. Next, participants' demographics were collected.

The pilot utilises real brand communication from Primark's and Chanel's Facebook pages to increase ecological validity. Chanel and Primark were selected because they are both fashion brands and have a clear brand positioning. Primark is a well-known non-luxury brand selling affordable fast fashion. In comparison, Chanel is a well-known luxury brand with a distinct luxury positioning and a rich history in fashion due to its co-founder Coco Chanel who was a fashion designer. Despite Chanel's reputation, only a few consumers actually own something from Chanel, underlining how inaccessible and exclusive the brand is. The texts were selected based on their psychological distance and pre-tested with face validity from academic experts. Table eight presents the stimuli used and details the average psychological distance rating (APDR) per stimuli based on language concreteness (Brysbaert, et al., 2014) (see section 4.1.1 for details).

	Psychologically distant and abstract wording	APDR	Psychologically close and concrete wording	APDR
Chanel	Allure is a spirit. Glide. Own the experience.	1.96	I scream you scream we all scream for ice cream.	2.77
Primark	Looking fresh does not have to cost a fortune.	2.27	Weekend wardrobe price.	4.04

Table 8: Materials for Experimental Pilot

4.3.2.2 Experiment Design and Participants

The main experiment follows a two (low-level vs high-level construal) by two (luxury vs non-luxury brand type) by two (psychologically distant vs psychologically close brand language) mixed design. While construal level is a between subject factor, brand type and brand communication are within (repeated) factors.

One hundred and sixteen undergraduates from a British university participated in the experiment. Two participants completed the experiment only partially, three participants gave identical responses, and another participant did not complete the manipulation task. These six responses were excluded from further analysis, yielding a sample consisting of 110 responses.

4.3.2.3 Procedure and Materials Used

The experiment consists of four sections. First, participants were informed about the nature of the study and that their participation was voluntary. They could stop their survey participation at any time without giving any reason. Once participants gave their consent, they were randomly allocated into the high or low construal level condition. Participants were primed with a 'how' or 'why' question to construe low-level or high-level (Hamilton & Thompson, 2007; Lee, et al., 2009; Williams, et al., 2014). In the high-level 'why' condition participants were asked to indicate why they chose to study at this particular university and describe three benefits from studying at this university. In the low-level 'how' condition participants were asked to describe how they revise for exams and to describe three methods. In the subsequent third section, participants were presented with four fictitiously branded communication messages for footwear. In comparison to the pilot study, fictitious footwear brands were created to avoid the influence of existing brand associations. Footwear was chosen because it is a relatively gender neutral product category. The fictitious brand communications are illustrated in table nine. The stimuli included a fictitious communication text and brand name. The instructions for the fictitious non-luxury brand 'Barnet' read *".... advertisement for a normal everyday footwear brand."* and for the fictitious luxury brand 'Ernest' *"...advertisement for a luxury footwear brand."* All brand communication text stimuli were pretested for psychological distance by computing the average psychological distance rating per stimuli with language concreteness (Brysbaert, et al., 2014). In addition, the complete stimuli, i.e., text and brand name, were pre-tested with face validity from academic experts. Participants ranked the randomly presented brand

communication on how much they liked the brand and their purchase intention. Liking ratings were collected on a seven-point scale ranging from one (dislike very much) to seven (like very much). In contrast to expensiveness ratings, purchase intention is a behavioural measure and has been adapted from Juster (1966). This scale is probability based and originally ranges from zero (absolutely no chance to buy) to ten (absolutely certain to buy). The scale has been adapted to range from one (extremely unlikely) to seven (extremely likely). In the final section, demographics were collected including gender and age.





	Psychologically distant and abstract wording	APDR	Psychologically close and concrete wording	APDR
Luxury	 A new chance for discovery, adventure and bliss	1.99	 From dawn till dusk we have you wrapped up	3.34
Non-luxury	 True to our principles: timeless quality	1.77	 Protects your feet from rain, mud and ice	3.52

Table 9: Materials for Experimental Study Six

4.4 Chapter Summary

In order to address the three research objectives that this thesis entails, six studies were conducted. Study one fulfils the first research objective by providing a methodological prototype for computational psycholinguistics, an established method in psychology that has, surprisingly, not yet found an application within the marketing discipline. For the current research, computational psycholinguistics yields superior validity and reliability in comparison to previous methods employed to study psychological distance. Study two to five answer the second and third research objectives: establishing the psychological distance of consumer brand associations and brand communication for luxury versus non-luxury types of brands. For that reason, four datasets were collected between July 2016 and April 2018: two datasets comprising 3,000 consumer tweets to 15 luxury and 15 non-luxury brands each, i.e., 6,000 consumer tweets in total, one dataset comprising 1,480 Facebook brand communication posts from 26 brands, and one dataset entailing 3,000 brand tweets from 15 luxury and 15 non-luxury brands to consumers. The language of these tweets and posts was analysed for psychological distance, emotional intensity, and valence with a computer

program written by the researcher. Study six employs an experimental approach to satisfy the fourth research objective, which concerns the impact of a match effect between the psychological distance of brand associations and brand communication on consumer evaluations.

5. Results

The findings of the six studies are presented in this chapter. As detailed in table three in chapter four, studies one to five employ a computational psycholinguistics approach. Study six is an experiment. The preceding methodological chapter explains the research approach for each study in-depth. Therefore, only important methodological deviations are mentioned in this chapter. As the analytical approach for each study varies, they are explained and justified for each study.

The chapter is structured according to the six studies that this thesis comprises. Study one examines the relationship between psychological distance and valence as well as psychological distance and affect intensity, thus providing a methodological prototype. Study two analyses the psychological distance of consumer brand associations for luxury and non-luxury types of brands based on the language consumers use when tweeting luxury and non-luxury brands. In comparison to study two, study three excludes retweets and, thus, obtains a more accurate measurement of how psychologically distant or close consumer brand associations are for the same luxury and non-luxury brands. Studies four and five investigate the psychological distance in luxury and non-luxury brand communication on Facebook and Twitter. Study six examines the effect of brand communication mismatching consumer brand associations on consumer perceptions and behavioural intentions.

5.1 Study 1: Valence, Affect Intensity, and Psychological Distance in Consumer Tweets and Brand Communication

Study one tests the predictions of the Construal Level Theory of psychological distance (CLT) (Trope & Liberman, 2010) with reference to valence on the one side and affect intensity on the other. The relationship between psychological distance and valence is positive, because increasing psychological distance results in more positive evaluations (Herzog, et al., 2007; Williams & Bargh, 2008; Huang, et al., 2016; Williams, et al., 2014; Eyal, et al., 2004). Therefore, with increasing psychological distance in natural language, the language should become more positive. The relationship between psychological distance and affect intensity is negative, because increasing psychological distance reduces affect intensity (Williams, et al., 2014; Williams & Bargh, 2008; Van Boven, et al., 2010). Therefore, psychologically more distant words should be emotionally less intense and arousing.

These predictions are tested with a computational psycholinguistics approach. The data collection and cleaning procedure detailed in section 4.1 was followed without any deviation. As explained in section 4.2.5, the mean and median ratings for psychological distance, valence, and affect intensity per tweet and post have been computed. Psychological distance is measured with language concreteness, affect intensity with language arousal, and valence with language valence. The language concreteness ratings range from one (psychologically distant) to five (psychologically close) (Brysbaert, et al., 2014). The language arousal ratings range from one (calm) to nine (excited) and the language valence ratings from one (unhappy) to nine (happy) (Warriner, et al., 2013). As the two databases have different scales, the concreteness ratings first had to be normalised and reverse coded to a range from one (psychologically close) to nine (psychologically distant).

5.1.1 Psychological Distance, Valence, and Affect Intensity in Consumer Tweets

According to a visual data inspection, the means and medians for psychological distance are normally distributed, but this is not the case for affect intensity and valence. Kendall's *tau* has, therefore, been used to measure the strength of the associations between psychological distance, affect intensity, and valence. The standard errors of Kendall's *tau* are less biased than those of Spearman's *r*, because Kendall's *tau* is based on the inversions of the rankings (Howell, 2013, p. 316).

Psychological distance correlates positively and significantly with valence, supporting hypothesis one. The psychologically more distant words are, the more positive they become in consumer tweets. Psychological distance and affect intensity are also significantly positively correlated. With the increasing use of psychologically distant words, emotionally more arousing and intense words are used in tweets. Following the prediction, psychologically more distant language should be emotionally less arousing. Table 10 details the results of the correlation analyses.

Dataset	Correlation Type	Measure	Correlation Coefficient	Z Score
Twitter	Psychological Distance (PD) – Affect Intensity	Mean	tau = .126	z = 10.001 ***
	PD – Affect Intensity	Median	tau = .114	z = 9.041 ***
	PD – Valence	Mean	tau = .117	z = 9.310 ***
	PD – Valence	Median	tau = .149	z = 11.778 ***
Twitter (without retweets)	PD – Affect Intensity	Mean	tau = .093	z = 7.156 ***
	PD – Affect Intensity	Median	tau = .083	z = 6.38 ***
	PD – Valence	Mean	tau = .196	z = 15.077 ***
	PD – Valence	Median	tau = .191	z = 14.646 ***

Table 10: Independent Correlation Coefficients for Psychological Distance, Affect Intensity, Valence in Consumer Tweets

*** $p < .001$, ** $p < .05$, * $p < .01$

5.1.2 Psychological Distance, Affect Intensity, and Valence in Brand Tweets and Facebook Posts

Brand communication on Twitter and Facebook have been analysed with a repeated measure approach because the tweets or posts from a brand are not independent of each other. Bland and Altman (1995) propose a repeated measure correlation approach following which the subjects, brands in the present case, are treated as a categorical factor in an analysis of covariance. In this way the inflated degrees of freedom problem an independent correlation analysis would cause is avoided (Bland & Altman, 1994). Bland and Altman's procedure computes Pearson's r and can be interpreted as customary. Table 11 summarises the results.

Psychological distance and valence are significantly positively correlated. With psychologically more distant language in Twitter and Facebook brand communication, the valence increases. Hypothesis one is, therefore, confirmed. Psychological distance and affect intensity are significantly positively correlated, thus hypothesis two is rejected. Increasing psychological distance in Twitter and Facebook brand communication corresponds to more excited and arousing language.

Dataset	Relationship Type	Measure	Correlation Coefficient	95 Confidence Interval
Twitter	PD – Affect Intensity	Mean	$r = .107^{***}$	$.143 \leq 95CI \leq .070$
	PD – Affect Intensity	Median	$r = .086^{***}$	$.123 \leq 95CI \leq .049$
	PD – Valence	Mean	$r = .199^{***}$	$.243 \leq 95CI \leq .163$
	PD – Valence	Median	$r = .209^{***}$	$.244 \leq 95CI \leq .173$
Facebook	PD – Affect Intensity	Mean	$r = .102^{***}$	$.154 \leq 95CI \leq .040$
	PD – Affect Intensity	Median	$r = .088^{***}$	$.140 \leq 95CI \leq .035$
	PD – Valence	Mean	$r = .233^{***}$	$.282 \leq 95CI \leq .183$
	PD – Valence	Median	$r = .183^{***}$	$.233 \leq 95CI \leq .131$

Table 11: Repeated Measures Correlation Coefficients for Psychological Distance, Affect Intensity, and Valence in Brand Communication

*** $p < .001$, ** $p < .05$, * $p < .01$

Psychological distance is significantly positively correlated with valence and with affect intensity. According to CLT, psychological distance should be positively correlated with valence but negatively correlated with affect intensity. Therefore, CLT predictions with reference to valence also hold in natural data, but not with reference to affect intensity. A possible reason why the predicted positive correlation between psychological distance and affect intensity has not been found could be that it is not present in the two databases employed to measure psychological distance and affect intensity (Brysbaert, et al., 2014; Warriner, et al., 2013). Hence the reason for scrutinising these databases. Prior to correlating the 13,386-word arousal ratings with the corresponding word concreteness ratings that measure psychological distance, the concreteness ratings have been normalised and reverse coded to a range from one (psychologically close) to nine (psychologically distant). The subsequent analysis shows a positive and weak correlation ($\tau = .119$, $z = 20.599$, $p < .001$). The employed databases to measure psychological distance and affect intensity, thus, do not show the predicted correlation raising questions about the operationalisation of affect intensity. Moreover, only a few studies have investigated the relationship between emotional intensity and psychological distance (Williams, et al., 2014; Van Boven, et al., 2010; Williams & Bargh, 2008).

In sum, the findings from the four different datasets collected at different times from two different data sources demonstrate that CLT predictions about psychological distance and valence hold outside a controlled lab environment. Computational psycholinguistics utilising the language concreteness database (Brysbaert, et al., 2014) is, thus, a suitable approach to study the psychological distance of consumer brand association and brand communication. Study one identified data noise and non-normal distribution as potential issues for data

analysis. For that reason, the mean and median psychological distance ratings will be computed (see section 4.2.5) because they are complementary central measures of tendency in the face of skewed distributions and outliers in the data (Field & Miles, 2010). Following the provision of a methodological prototype, the psychological distance of consumer brand associations and brand communication can be examined.

5.2 Study 2: Psychological Distance in Consumer Tweets to Luxury and Non-luxury Brands

Consumers consider brands as either psychologically close or distant. Luxury brands are exclusive, unique, and desirable. Following CLT, they should be psychologically distant for consumers. Conversely, non-luxury brands should be psychologically close because they are affordable and accessible. This prediction is tested with consumer tweets gathered in February 2017 to 15 luxury and 15 non-luxury brands listed in table five (see chapter four). The computational psycholinguistics approach described in section 4.2 was followed without any deviation. Psychological distance has been measured with language concreteness and the original scale has been used, which ranges from one (psychologically distant) to five (psychologically close).

Consumers have psychologically more distant brand associations with luxury brands than non-luxury brands, supporting hypothesis three. They use, on average, psychologically more distant words when communicating with luxury brands ($M = 3.232$) than non-luxury brands ($M = 3.292$, $t(2771.9) = 2.679$, $p = .007$, $d = .196$). The medians per tweet were analysed with a robust Median M-estimator (Wilcox, 2017). Again, consumers use psychologically more distant words ($Mdn = 3.260$) for luxury brands than for non-luxury brands ($Mdn = 3.345$, $p = .025$, $.085 \leq 95CI \leq .175$, $d = .237$). Comparing Cohen's d (Cohen, 1988), the effect size is stronger for median psychological distance ratings than mean ratings.

In sum, consumers view luxury brands as psychologically more distant than non-luxury brands. This analysis draws on a dataset that includes re-tweets, which possibly confounds the results. Consumers may retweet a tweet from a fashion blogger or a friend that has been addressed to a brand. In retweeting this particular tweet, the original tweet gets sent to the brand's Twitter account again. As a result, the same tweet is included twice or multiple times in the dataset. There are two contrasting lines of thought about retweets. On one side, the retweet can be viewed as another consumer thought, because the sender endorses the

content of the original tweet. On the other, it can be seen as a confounding influence due to low-involvement, social desirability, and group affiliation (see section 4.3.1). Re-tweeting is done very quickly requiring little attention and even less cognitive effort. Moreover, sharing the tweet of a friend or a famous blogger is socially desirable and signals group affiliation. Particularly in the case of luxury brands, consumers may retweet content because of its signalling value. The subsequent study, three, addresses this issue.

5.3 Study 3: Psychological Distance in Pristine Consumer Tweets to Luxury and Non-luxury Brands

Previous findings may, in part, be due to retweets in the dataset. To rule out this possibility, re-tweets were automatically excluded during data collection. Otherwise the procedure described in section 4.2 was followed.

Consumer brand associations are psychologically more distant for luxury brands than for non-luxury brands. The language in consumer tweets to luxury brands is, on average, psychologically more distant ($M = 3.022$) than the language in tweets to non-luxury brands ($M = 3.111$, $t(2595.3) = 3.699$, $p < .001$, $d = .872$). Comparing the median per tweets with a robust Median M-estimator (Wilcox, 2017) shows the same result ($Mdn_L = 2.92$, $Mdn_N = 3.00$, $p = .015$, $.015 \leq 95CI \leq .168$, $d = .900$). These results confirm hypothesis three. The comparison of Cohen's d (Cohen, 1988), again, suggests that the effect for the median psychological distance rating is stronger than the mean ratings. More importantly, the effect sizes are much stronger in comparison to study two underpinning the argument that retweets potentially add noise.

5.4 Study 4: Psychological Distance in Luxury and Non-luxury Brand Communication on Facebook

The previous two studies show that consumers have psychologically distant brand associations for luxury brands and psychologically close ones for non-luxury brands. Psychological distance is not only important to measure brand associations, but also for brand positioning. Psychologically distant brands convey uniqueness, desirability, and exclusiveness. This is in line with the positioning of luxury brands and their brand communication objectives to convey brand meaning. In contrast, non-luxury brands are affordable, accessible, and provide value for money. Their brand communication aims to

promote the brand's products, price value considerations and a clear call to action. Non-luxury brands should, thus, use psychologically close brand communication because psychological closeness conveys accessibility and affordability. Luxury (non-luxury) brands using psychologically close (distant) brand language in their communication would be inconsistent, dilute brand positioning, and even risk unintentional changes to it. Therefore, luxury brand communication should be psychologically distant and non-luxury brand communication psychologically close.

This prediction is tested with Facebook brand communication gathered in July 2016. It was collected, cleaned, and processed as described in section 4.2. Due to the unequal sample size, two mixed models were fitted to the psychological distance mean and median ratings with the following formulas where i stands for the individual brands and j the different observation times:

$$Psychological\ Distance_{Mean} = Brand\ Type_{ij} + Error_i$$

$$Psychological\ Distance_{Median} = Brand\ Type_{ij} + Error_i$$

Luxury brands use psychologically slightly closer language than non-luxury brands. However, the difference is not significant. This holds true when comparing the coefficients for means ($\beta = .056$, $t(24) = 1.251$, $p = .223$) and medians ($\beta = 0.28$, $t(24) = .530$, $p = .601$). Akaike's information criterion (AIC) for the mean model is 2500.9 and 1939.54 for the median model. While the findings for the mean model are robust ($W = .997$, $p = .327$), this is not the case for the medians. The Wilk Shapiro test shows that the errors are not independent of each other ($W = .987$, $p < .001$). Defining an auto-correlation structure in the model that is typically used for time series in linear mixed models (Pinheiro & Bates, 2000) does not increase the robustness of the model ($W = .987$, $p < .001$, AIC = 1939.45). The data, thus, do not support hypothesis four. These results could be due to the data spread or the unequal sample size. It is possible that the psychological distance measures per post are very spread out for some brands, impacting the results. Moreover, the sample is unbalanced. To address this issue, the data were aggregated per brand. Comparing the means of luxury brands with those of non-luxury brand means with a one-sided Student's T-Test and a Welch-Satterthwaite correction (Field & Miles, 2010) shows no significant difference ($t(23.747) = -1.816$, $p = .959$, $d = .167$). Similarly, a comparison between the luxury brand medians and non-luxury brand medians with a robust M-estimator (Wilcox, 2017) shows no significant difference ($p = .331$, $-0.267 \leq$

95CI $\geq .070$, $d = .142$). These findings raise questions of the extent to which the selected brands consider psychological distance in their brand communication.

5.4.1 Psychological Distance in Individual Brand Communication

The aim of brand communication is to establish and maintain a specific brand positioning in the market. The above findings suggest that brands do not communicate consistently in terms of psychological distance. This query is followed up with two linear mixed models for both psychological distance means and medians per post. Brands were treated as fixed effect. A time-series autocorrelation structure was defined to account for the correlation between the multiple observations from different time points per brand (Pinheiro & Bates, 2000). Instead of a repeated measure ANOVA, this more complex approach has been chosen because it provides more accurate results for unequal sample sizes (Field & Miles, 2010). The fitted linear mixed models were tested for significance with an Analysis of Variance based on type III sums of squares, which are best suited to test the main effects of unbalanced samples.

The individual brands use different language in terms of psychological distance ($X^2(25) = 67.006$, $p < .001$). However, the mean model is not robust, as the errors are not independent of each other ($W = .986$, $p < .001$, AIC = 2019.53) despite accommodating the repeated measure design in the model.

Another linear mixed model was fitted to the psychological distance medians per post. The model is robust ($W = .999$, $p = .342$, AIC = 2570.94). The subsequent Analysis of Variance with type III sums of squares yields significant results ($X^2(25) = 64.955$, $p < .001$). Table 12 details the coefficient estimate per brand and reports the mean per brand, because the model fitted to the psychological distance medians is based on the mean. Six of the twelve examined luxury brands use psychological distance consistently and effectively in their brand communication on Facebook. Cartier ($M = 3.161$), Dior ($M = 3.206$), Givenchy ($M = 3.221$), Guerlain ($M = 3.175$), and Maserati ($M = 3.268$) all use significantly psychologically more distant language than the investigated brands use on average ($M = 3.358$). Based on the psychological distance medians, six non-luxury brands use psychological distance consistently in their brand communication, but not effectively. Boots ($M = 3.228$), Carlsberg ($M = 3.09$), Casio ($M = 3.233$) and H&M ($M = 2.213$) use psychologically more distant language

than the average psychological distance in the sample. Heineken ($M = 3.404$) and Suzuki ($M = 3.384$) use psychologically closer language than the sample average.

Brand	Coefficient Estimate	Brand Mean	Std. Error	t-value	p-value
Intercept	3.431	3.358	0.091	37.833	
Boots	-0.247*	3.228	0.147	-1.68	0.093
Bugatti	-0.131	3.122	0.122	-1.079	0.281
Carlsberg	-0.262**	3.09	0.119	-2.206	0.028
Cartier	-0.22*	3.161	0.111	-1.992	0.068
Casio	-0.321**	3.233	0.161	-1.998	0.046
Chanel	-0.178	2.945	0.108	-1.654	0.122
Dior	-0.198*	3.206	0.108	-1.84	0.089
Dorothy Perkins	-0.254	3.34	0.171	-1.488	0.137
Givenchy	-0.337**	3.221	0.107	-3.141	0.008
Guerlain	-0.281**	3.175	0.108	-2.594	0.01
Heineken	-0.194*	3.404	0.112	-1.728	0.084
Hermès	0.059	3.323	0.108	0.544	0.587
H&M	-0.575**	3.213	0.173	-3.324	0.001
Lamborghini	0.063	3.292	0.184	0.341	0.733
Louboutin	-0.085	3.216	0.142	-0.601	0.548
LV	-0.025	3.288	0.108	-0.234	0.815
Maserati	-0.237*	3.268	0.138	-1.72	0.086
Matalan	-0.22	3.127	0.158	-1.395	0.163
Moët	-0.07	3.192	0.126	-0.552	0.59
Primark	-0.067	3.475	0.108	-0.618	0.537
Superdrug	-0.179	3.441	0.143	-1.256	0.209
Suzuki	-0.237*	3.384	0.122	-1.952	0.051
Swatch	-0.015	3.349	0.109	-0.138	0.892
Topshop	0.024	3.155	0.175	0.138	0.891
Toyota	-0.193	3.395	0.153	-1.26	0.23

Table 12: Linear Mixed Model Results for Median Psychological Distance per Post with Brands as Fixed Effect

*** $p < .001$, ** $p < .05$, * $p < .10$,

In sum, some brands use psychological distance consistently in their brand communication while others do not. The luxury brands that communicate consistently also communicate effectively as they tend to use psychologically distant language which corresponds to their positioning and communication objectives. Not all non-luxury brands that consistently use psychological distance in their brand communication also do so effectively. Instead of using psychologically close language to correspond to consumers' brand associations and their

brand positioning, they use psychologically distant language. The findings for mean and median psychological distance ratings share some similarities, suggesting that the data is not as noisy as anticipated. The sample is unbalanced, however. Hence, these findings could be due to the unequal sample size or the nature of how brands communicate on Facebook. These concerns are addressed in the subsequent study.

5.5 Study 5: Psychological Distance in Luxury and Non-luxury Brand Communication on Twitter

In addition to Facebook, Twitter is one of the most popular social media platforms with consumers and represents an important communication platform for brands. In comparison to Facebook, communication is limited to 280 characters per tweet (TechCrunch, 2018). As section 4.2 details, an equal sample could be scraped from brands' Twitter handles making Twitter not only a relevant but also a reliable and convenient data source. The data were collected, cleaned, and processed as described in section 4.2. Two repeated Analyses of Variance with type II sums of squares were computed for the psychological distance means and medians per tweet. The rationale for conducting repeated measure ANOVAs instead of paired t-tests is that the former takes into account that each participant, in the current case a brand, has multiple observations, thus providing a more robust analysis.

Luxury brands use significantly psychologically closer words than non-luxury brands. This holds true for both the mean and median ratings per tweet. Hypothesis four is, thus, rejected. The words found in luxury brand tweets are, on average, significantly psychologically closer ($M = 3.212$) than the words used in non-luxury brand tweets ($M = 3.024$, $F(1,1) = 8.518$, $p = .007$, $\eta^2G = .233$). Comparing the median ratings of luxury and non-luxury brands with another repeated measure ANOVA also shows that luxury brand communication is psychologically closer ($M = 3.200$) than non-luxury brand communication ($M = 2.967$, $F(1,1) = 9.529$, $p = .005$, $\eta^2G = .254$).

These results could be due to the sizable dataset of 3,000 tweets. The mean and median per brand were, therefore, computed for further analysis. Even at an aggregated level, luxury brands communicate, on average, in a psychologically closer way ($M = 3.207$) than non-luxury brands ($M = 3.009$, $t(27.752) = -2.955$, $p = .006$, $d = 1.066$). The same is true when comparing median ratings with a robust median M-estimator (Wilcox, 2017), but the difference is not significant ($-.530 \leq 95CI \leq .055$, $p = .117$). Luxury brands use psychologically closer language

in their brand communication ($Mdn = 3.130$) in comparison to non-luxury brands ($Mdn = 2.935$, $d = 1.124$). Therefore, luxury (non-luxury) brands use of psychologically close (distant) language also holds on an aggregate level.

5.5.1 Psychological Distance Mismatch between Brand Association and Brand Communication on Twitter

The finding that luxury brands use psychologically close language and non-luxury brands psychologically distant language when tweeting consumers is quite robust. The psychological distance in brand communication, therefore, mismatches the psychological distance of consumer brand associations. This mismatch is investigated further. Two separate two (luxury vs non-luxury brand) by two (brand vs consumer) hierarchical Analysis of Variances with type II sums of squares have been computed for the mean and median ratings. Prior to computing the ANOVAs, the data have been aggregated by brand to eliminate the non-independence of tweets from brand communication, which would have biased the results.

The findings of the ANOVA for mean ratings show that only the main effect for who is tweeting, e.g., consumer or brand, is significant. More importantly, the interaction between who is tweeting and brand type is significant, confirming the mismatch between the psychological distance of brand association and brand communication. Brands use psychologically more distant words on Twitter than consumers do ($F(1,56) = 6.031, p = .017, \eta^2 = .097, M_{brand} = 3.108, M_{consumer} = 3.244$). Non-luxury brand communication is psychologically the most distant ($M_{non-luxury\ brand} = 3.001$), followed by luxury brand communication ($M_{luxury\ brand} = 3.207$), consumer tweets to luxury brands ($M_{luxury\ consumer} = 3.216$) and with consumer tweets to non-luxury brands using psychologically the closest language ($M_{non-luxury\ brand} = 3.273, (F(1,56) = 5.290, p = .025, \eta^2 = .086)$).

Figures five and six visualise the mismatch in psychological distance between brand communication and consumer brand associations with difference scores. Mismatches are present in both luxury and non-luxury types of brands, but more pronounced for non-luxury brands. A positive difference score refers to the fact that the brand uses psychologically closer language than consumers tweeting the brand because the difference score has been computed by subtracting the mean psychological distance of consumer tweets from the mean psychological distance of brand tweets. Negative difference scores, thus, refer to

brands using psychologically more distant language than consumers tweeting the brand; thus, the brand distances itself from the consumer.

According to figure five, the brand communication from Louis Vuitton, Guerlain, and Bugatti are mostly in line with how consumers perceive them. In contrast, YSL, Maserati, and Chanel show the greatest difference. However, while YSL and Maserati distance themselves from consumers with psychologically more distant brand communication in comparison to consumer brand associations, Chanel approaches consumers psychologically because it uses psychologically much closer language. Hence, despite the mismatch, the brand communication from YSL and Maserati is more in line with their communication objective to convey exclusivity with distance. Other brands, such as Givenchy or Hermès also use psychologically closer language in comparison to how consumers tweet them, but the difference is not as large.

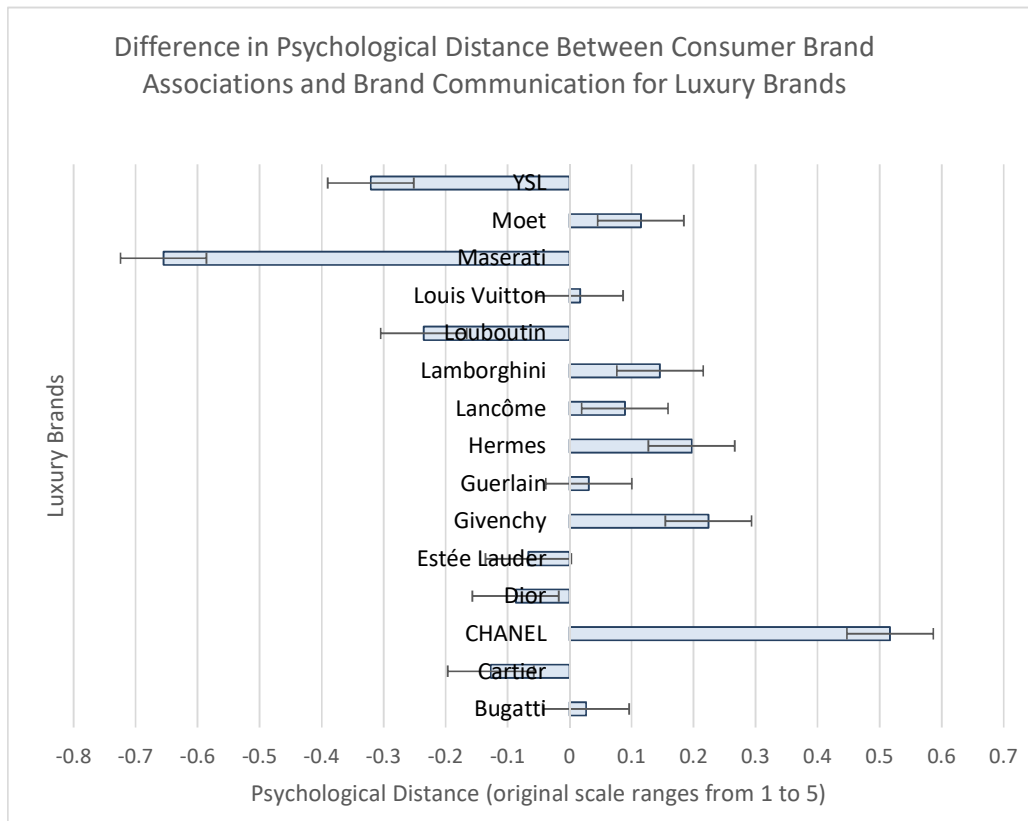


Figure 5: Mismatch in Psychological Distance between Luxury Brand and Consumer Tweets with SEs

Most non-luxury brands distance themselves from consumers, following figure six, because they use psychologically more distant language in comparison to the language consumers use when tweeting them. Particularly, Heineken and H&M communicate in a psychologically much more distant way than how consumers think about them. Only Topshop matches its brand communication to consumer brand associations. Swatch is the only brand that approaches consumers psychologically because it uses psychologically closer language than consumers use when tweeting Swatch.

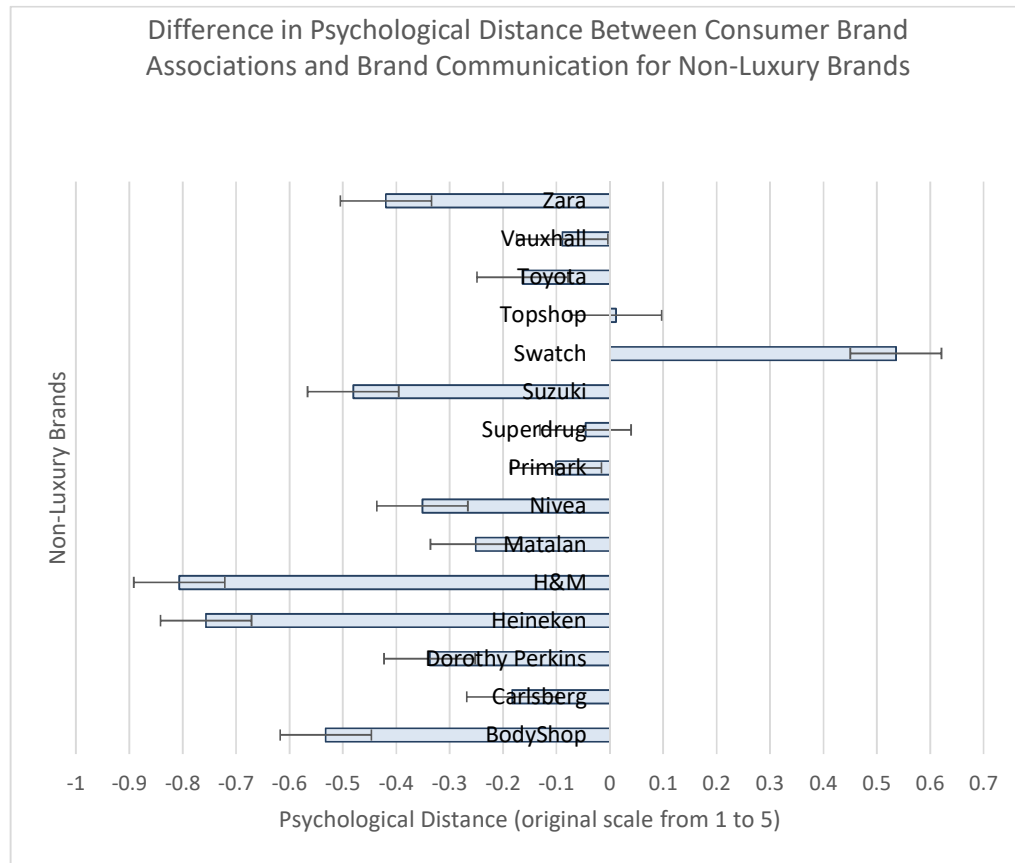


Figure 6: Mismatch in Psychological Distance between Non-luxury Brand and Consumer Tweets with SEs

The findings of the ANOVA for the median ratings paint a similar picture. The main effect for who is tweeting is significant, but not the main effect for brand type. Again, more importantly, the interaction effect between who is tweeting and brand type is significant validating the presence of a mismatch. Brands use psychologically more distant language in comparison to consumers ($F(1,56) = 8.601, p = .04, \eta^2 = .133, M_{brand} = 3.048, M_{consumer} = 3.201$). Non-luxury brand communication is psychologically the most distant ($M_{non-luxury\ brand} = 2.902$), followed by luxury brand communication ($M_{luxury\ brand} = 3.195$), consumer tweets to luxury brands ($M_{luxury\ consumer} = 3.216$), and with consumer

tweets to non-luxury brands using psychologically the closest language ($M_{non-luxury\ brand} = 3.312$, $(F(1,56) = 6.99, p = .011, \eta^2 = .111)$). Again, the difference between brand communication and brand association is more pronounced for non-luxury than luxury brands.

In sum, luxury brands use psychologically closer language than consumers tweeting the same luxury brands. Non-luxury brands, on the other hand, tweet with psychologically more distant language than consumers tweeting the same non-luxury brands. These findings raise two important questions. First, does psychological distance in brand communication matter for consumer evaluations as the same brands communicate very differently on Twitter and Facebook? Second, what is the effect of a (mis)match between the psychological distance of consumer brand association and brand communication on consumer evaluations? These questions are part of the fourth research objective (see chapter four) and are addressed in the subsequent experiment.

5.6 Study 6: Impact of a (Mis)Match Effect between Consumer Brand Associations and Brand Type on Brand Liking and Purchase Intention

This study investigates the effect of a psychological distance (mis)match between brand associations and brand communication on consumer evaluations and behavioural intentions. Brand communication that matches consumer brand associations would use psychologically distant (close) words for luxury (non-luxury) type of brands. Mismatching brand communication, on the other hand, would use psychologically close (distant) language for luxury (non-luxury) brands. Matching brand communication is predicted to lead to more favourable evaluations and behavioural intentions in comparison to a mismatching brand communication, because participants prefer congruent options in which the psychological distance of descriptions matches the time frame of the description (Trope & Liberman, 2000). Specifically, psychologically distant (close) descriptions for the distant (near) future are preferred. Moreover, matching positive (negative) valence with psychological distance (closeness) increases purchase intentions (Labroo & Patrick, 2008; Pyone & Isen, 2011; Schellekens, et al., 2010).

5.6.1 Pilot Experiment

This initial pre-study has two aims. First, it examines the influence of psychological distance in language on consumer evaluations. Second, it explores the effect of (mis)matching brand communication on consumer evaluations which were operationalised with desirability and expensiveness perceptions. Two separate ANOVAs were computed for brand desirability and expensiveness perceptions because theory does not indicate that the outcome variables should be analysed together (Field & Miles, 2010). Mauchly's W is significant for both brand desirability and expensiveness perceptions, indicating that the variances between all group differences of the variable brand type are not identical. Hence, the Greenhouse–Geisser corrected values are reported because it is more conservative than the Huynh-Feldt correction (Field & Miles, 2010).

Brand type and psychological distance in language are both significant for brand desirability and brand expensiveness perceptions, as table 13 details. More importantly, the interactions are significant, suggesting the presence of a (mis)match effect. Psychologically distant luxury brand communication is rated as less desirable than psychologically close luxury brand communication and the control condition. Psychologically close non-luxury brand communication is rated as more desirable than psychologically distant non-luxury brand communication and the control condition. Psychologically distant luxury brand communication yields lower expensiveness ratings than psychologically close luxury brand communication and the control condition. The same holds true for non-luxury brand communication.

	Desirability	Expensiveness
Mauchly's W for Brand Type	.565***	.705**
Mauchly's W for Brand Type x Language	.922	.509***
F test statistics for Brand Type	12.916***	19.344***
Mean for Control	3.329	2.474
Mean for Non-luxury	2.908	4.145
Mean for Luxury	3.697	2.579
F test statistics for Language	17.722***	3.863*
Mean for distant	3.518	2.649
Mean for close	3.105	2.816
F test statistics for Brand Type x Language	4.176**	88.994***
Mean for Control & Distant	3.500	2.947
Mean for Non-luxury & Distant (mismatch)	3.000	1.579
Mean for Luxury & Distant (match)	4.053	3.421
Mean for Control & Close	3.158	2.000
Mean for Non-luxury & Close (match)	2.816	4.711
Mean for Luxury & Close (mismatch)	3.342	1.737

Table 13: Impact of a (Mis)Match Effect between Brand Communication and Consumer Brand Associations on Consumer Expensiveness and Desirability Perceptions

*** p < .001, ** p < .05, *p < .10

Match effects, therefore, exist for both desirability and expensiveness perceptions, but they are not as clear-cut and in the predicted direction. These findings could be due to existing brand associations with the luxury brand Chanel or the non-luxury brand Primark, the outcome variables or differences in construal levels. These issues are tackled in the main study.

5.6.2 Main Experiment

This study addresses the concerns about the operationalisation of consumer evaluations, the influence of existing brand associations, and the difference match types. The first concern has been addressed by using a different, perception based outcome measure, i.e., brand liking. In addition, a behavioural outcome measure was included in the study design, i.e., brand purchase intentions. In order to avoid existing brand associations influencing the results, fictitious brand logos were used and participants were told that the brand communication was for either a luxury or non-luxury brand. In the previous studies of this thesis, psychological distance and construal level have not been measured independently because they are tightly interrelated (Trope & Liberman, 2010). However, they are separate

constructs (Trope & Liberman, 2010; Williams, et al., 2014) and, thus, treated as separate constructs to untangle the match effect further. A match is predicted to increase liking and purchase intention in comparison to a mismatch.

This study employs a two (high vs low construal) by two (close vs distant language) by two (luxury vs non-luxury brand) mixed design. An equal number of participants were primed to construe low-level ('how' condition) and high-level ('why' condition). The exclusion of some responses due to missing or identical answers resulted in 56 participants in the 'why' (high-level) condition and 54 participants in the 'how' (low-level) condition. The analysed dataset, thus, includes 110 participants, 64 of who said they were female, 42 males, and 4 participants did not indicate their gender.

The construal level manipulation was successful. Participants answered the 'why' question with psychologically significantly more distant words ($M = 3.02$) than those answering the 'how' question ($M = 3.59$, $t(104) = -6.597$, $p < .001$). Therefore, participants answering the 'why' question construed in a high-level manner and those answering the 'how' question in a low-level manner. Next, a mixed three-way Analysis of Variance on liking with brand type and psychological distance as within factors and construal level manipulation as between factor was computed using type III sums of squares, due to the slightly unbalanced sample size and correlated predictors. Studies two to five indicate a link between brand type and psychological distance.

The psychological distance in brand language emerges as the only significant main effect on brand liking. Psychologically distant brand communication is liked better ($M = 4.108$) in comparison to psychologically close brand communication ($M = 3.333$, $F(1,108) = 53.96$, $p < .001$, $\eta^2 = .333$). The interaction between psychological distance and brand type is significant ($F(2,108) = 18.904$, $p < .001$, $\eta^2 = .149$). Psychologically close luxury brand communication is liked the least ($M = 2.572$) followed by psychologically close non-luxury brand communication ($M = 3.518$), psychologically distant non-luxury brand communication ($M = 3.846$), and with psychologically distant luxury brand communication being liked the most ($M = 4.209$). Therefore, a match effect exists for luxury brands, but not non-luxury brands because the psychological distance in language shifts brand liking upwards for both brand types, as figure seven illustrates. H5a is thus supported but not H5b. No other main or interaction effect is significant, suggesting that construal level is not an omitted variable. No other types of (mis)matches between construal level and brand type or between construal level and psychological distance in language influence brand liking.

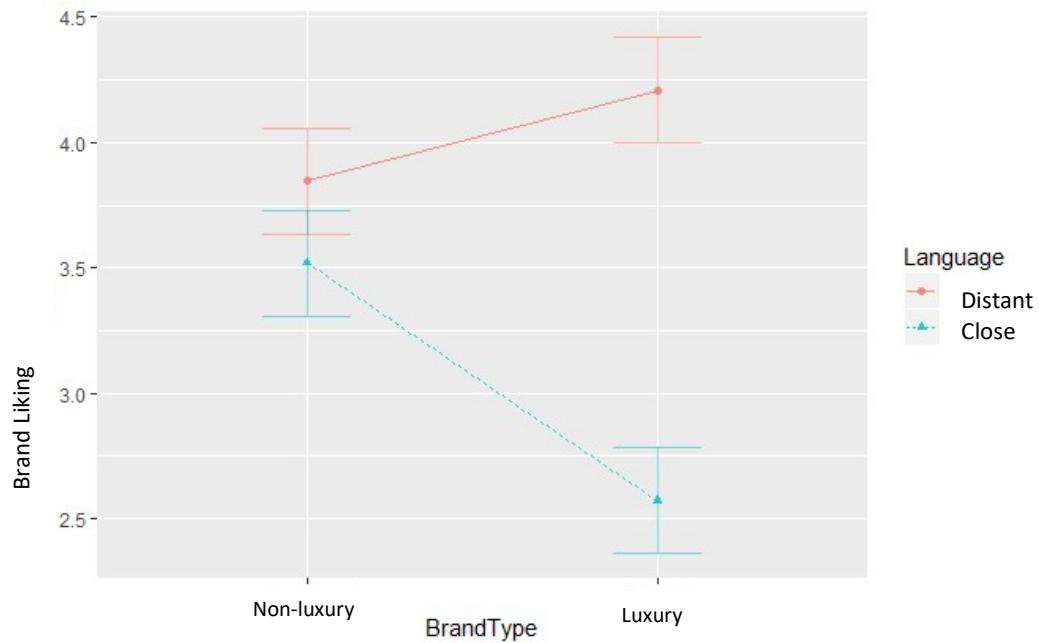


Figure 7: Interaction Effect of Psychological Distance and Brand Type on Brand Liking

A separate, mixed, three-way ANOVA with type III sums of squares was computed for purchase intention. Only psychological distance emerges as a significant main effect. Construal level and brand type, thus, do not significantly influence purchase intention. Psychologically distant brand communication leads to higher purchase intention ($M = 3.323$) than psychologically close brand communication ($M = 2.627$, $F(1,108) = 10.306$, $p < .001$, $\eta^2 = .242$). The interaction between psychological distance and brand type is significant ($F(2,108) = 5.671$, $p = .019$, $\eta^2 = .050$). Psychologically close luxury brand communication yields the lowest purchase intention ($M = 2.464$), followed by psychologically close non-luxury brand communication ($M = 2.791$), psychologically distant non-luxury brand communication ($M = 3.182$) with psychologically distant luxury brand communication yielding the highest purchase intention ($M = 3.464$). In line with the findings about brand liking, psychological distance increases purchase intention for both luxury and non-luxury types of brands, as figure eight shows. H5a is thus confirmed, but is H5b rejected. Again, no other interaction effect is significant, indicating that only one type of (mis)match effect influences consumer evaluations.

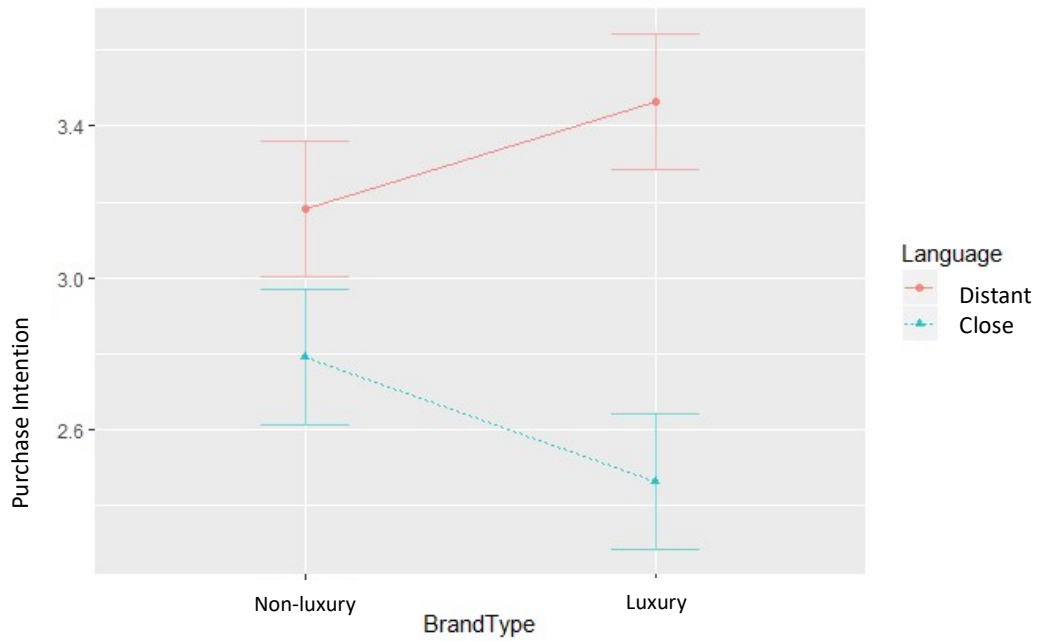


Figure 8: Interaction Effect of Psychological Distance and Brand Type on Purchase Intention

In summary, study six confirms the impact of a (mis)match effect on consumer evaluations for luxury brands, but not non-luxury brands. The underlying reason is that psychologically distant language improves brand liking and purchase intention for both luxury and non-luxury brands. Psychologically close brand communication for non-luxury brands, the match condition for non-luxury brands, does not lead to more favourable evaluations in comparison to psychologically distant brand communication. Moreover, study six treated psychological distance and construal level separately. No interaction effect between construal level and psychological distance in language or construal level and brand type was significant. In line with existing CLT research (Williams, et al., 2014), construal level, thus, has no considerable influence on its own on purchase intention or brand liking; rather, the psychological distance of existing brand associations and brand communication drive the match effect.

5.7 Chapter Summary

Table 14 summarises the results and the outcome of the hypothesis testing per study. Analysing 9,000 tweets and 1,480 Facebook posts shows that CLT and valence predictions also hold in natural language. No evidence was found to support the CLT predictions about emotional intensity. Consumers use psychologically more distant words when tweeting luxury brands in comparison to non-luxury brands and, therefore, hold psychologically distant brand associations for luxury brands and psychologically close ones for non-luxury brands. However, no systematic difference in psychological distance between luxury and non-luxury brand communication on Facebook was found. On Twitter, luxury brands use psychologically closer language when communicating with consumers in comparison to non-luxury brands. Therefore, luxury and non-luxury brands do not match the psychological distance in their brand communication on Facebook and Twitter to the psychological distance of consumer brand associations. The match effect is particularly important for luxury brands because matching brand communication increases brand liking and purchase intentions. This is not the case for non-luxury brands. Instead of matching brand communication, psychologically distant brand language increases brand liking and purchase intentions. No other type of match between construal level and brand type or construal level and psychological distance in language has been found. These findings are compared and contrasted to other CLT studies in the subsequent chapter.

Study No	Study Title	Research Objective / Hypothesis		Result Summary
1	Valence, and Affect Intensity, Psychological Distance in Consumer Tweets and Brand Communication	1 / H1	Supported	Increasing psychological distance significantly increases valence and affect intensity.
		1 / H2	Rejected	
2	Psychological Distance in Consumer Tweets to Luxury and Non-luxury Brands	2 / H3	Supported	Consumers have significantly psychologically more distant brand associations for luxury brands than for non-luxury brands, based on the language they use when tweeting luxury and non-luxury brands.
3	Psychological Distance in Pristine Consumer Tweets to Luxury and Non-luxury Brands	2 / H3	Supported	Excluding retweets, consumers have significantly psychologically more distant brand associations for luxury brands than for non-luxury brands, based on the language in pristine consumer tweets to luxury brands and to non-luxury brands.
4	Psychological Distance in Luxury and Non-luxury Brand Communication on Facebook	3 / H4	Rejected	Luxury brand communication is not significantly different to non-luxury brand communication in terms of psychological distance. Only 12 of the 26 investigated brands use psychological distance consistently. Six luxury and four non-luxury brands psychologically distance themselves from consumers. Two non-luxury brands psychologically approach consumers.
5	Psychological Distance in Luxury and Non-luxury Brand Communication on Twitter	3 / H4	Rejected	Luxury brand communication on Twitter is significantly psychologically closer than non-luxury brands. Analysing the consumer tweets and brand tweets together shows that the psychological distance in brand communication is significantly different from the psychological distance of brand associations.
6	The Effect of Brand Communication Mismatching Brand Associations on Brand Liking and Purchase Intention	4 / H5a	Supported	A match effect exists for luxury brands, but not non-luxury brands. Psychologically distant brand communication increases purchase intention and brand liking for both luxury brands and non-luxury brands.
		4 / H5b	Rejected	

Table 14: Results Overview

6. Discussion and Conclusion

The aim of this chapter is to discuss the current results in the context of existing findings, point out research limitations, and provide directions for further research. The discussion is structured according to the research objectives of this thesis, e.g., the methodological prototype, psychological distance of consumer brand associations, psychological distance in brand communication, and the effect of matching brand communication to consumer brand associations in terms of psychological distance. Next, the chapter turns to the theoretical and methodological contribution statements, research limitations, and directions for future research. The chapter concludes with managerial implications. This research, therefore, not only has theoretical and methodological contributions but, also, speaks to the marketing and communication industry.

6.1 Affect Intensity, Valence, and Psychological Distance in Consumer Tweets and Brand Communication

Study one shows that with increasing psychological distance (Trope & Liberman, 2010) in language, the language becomes more positive. Psychological distance has been measured with language concreteness (Brysbaert, et al., 2014) and valence with language valence (Warriner, et al., 2013). Study one, therefore, corroborates previous CLT findings based on experiments that increasing psychological distance increases valence (Huang, et al., 2016; Williams, et al., 2014; Eyal, et al., 2004) thereby validating the use of the language concreteness database (Brysbaert, et al., 2014) and the computational psycholinguistics method.

The predicted correlation between psychological distance and affect intensity could not be found in consumer language and brand communication on Twitter and Facebook. CLT predicts that with increasing psychological distance affect intensity also decreases (Williams & Bargh, 2008; Williams, et al., 2014). Instead, with increasing psychological distance in consumer and brand language, the language becomes affectively more intense. When analysing the two databases used to measure psychological distance (Brysbaert, et al., 2014) and affect intensity (Warriner, et al., 2013), the predicted correlation could not be found.

Possible explanations for this unexpected finding could be of a methodological or theoretical nature. The biggest strength of natural language is also its weakness. Natural data are created organically without being tailored to the research objective. In that sense, the

researcher decides to repurpose existing data and use them to answer a research question. Repurposed data, therefore, invariably contain more noise than data collected explicitly in response to a research question. In contrast to the current studies, the data for the language concreteness (Brysbaert, et al., 2014) and language arousal (Warriner, et al., 2013) databases, which have been used to measure psychological distance and affect intensity, have been collected purposefully. The data used in the Twitter and Facebook studies have been repurposed, which could, in part, explain the differing results. However, the employed computer script to analyse tweets and Facebook posts for psychological distance is reliable. It produced the same results four times. Reproducibility means that a chosen method consistently measures a chosen construct (Peter, 1979). The employed method is also reliable, because only content words have been analysed (Tirunillai & Tellis, 2014; Bhatia & Walasek, 2016; Hills & Adelman, 2015). From a natural language processing perspective, a sentence contains content and stop words. The former carry meaning in themselves whereas the latter are used to specify the meaning of content words and create grammatically correct sentences. In addition to possible methodological explanations, there is also a theoretical explanation. Only a few CLT studies substantiate the negative relationship between psychological distance and affect intensity (Williams & Bargh, 2008; Williams, et al., 2014). None used psychological distance in language. Instead, they primed experiment participants with spatial, social, temporal, or probability cues to construe high or low-level.

In summary, the first study demonstrates that the language concreteness database (Brysbaert, et al., 2014) reliably measures psychological distance (Trope & Liberman, 2010) in natural language found on Twitter and Facebook and, thereby, provides a methodological prototype. This was the first research objective because the use of the language concreteness database to analyse language automatically for psychological distance is new to the marketing discipline. The results also uncovered that the relationship between psychological distance and affect intensity is not as clear-cut as previously thought. Next, the conversation turns to psychological distance of brand associations.

6.2 Psychological Distance in Consumer Brand Associations

Studies two and three of this thesis show that consumers use psychologically more distant words when tweeting luxury brands than non-luxury brands. Consumers, therefore, have psychologically distant brand associations for luxury brands and psychologically close ones for non-luxury brands. These findings tie in well with previous findings about psychological distance and luxury. People describe luxury items, such as candelabra or gemstone, with psychologically more distant words than non-luxury items, such as candle or stone (Hansen & Wänke, 2011).

The current findings are robust and generalizable, because they have been replicated with two different datasets and are based on 6,000 consumer tweets in total to 30 different brands selling a wide range of products. The examined brands belong to a variety of industries including the fashion, beauty and personal hygiene products, watches, alcoholic beverages, and the car industry. The psychological distance of brand associations, therefore, provides a more holistic view of brand associations because it is applicable to different types of products and services, thus, it is comparable not only within industries, but also across industries. This is important because unified theories along the whole consumer decision-making process are rare. The decision-making process for a new deodorant, for example, is different from the one for a new car because of the purchasing frequency, price, and personal meaning consumers attach to the product. A car is purchased less frequently and is much more expensive than a deodorant. However, the brand associations for the brands Suzuki, Toyota, Boots, and Superdrug are all psychologically closer than their luxury counterparts, e.g., Maserati, Bugatti, Lamborghini, Guerlain, and Estée Lauder. Consumers, therefore, perceive that these brands are closer to them because they are psychologically closer to their ego-centric reference point (Trope & Liberman, 2010). This study, thus, underlines the importance of brands and different types of brands in the consumer decision-making process.

The psychological distance of consumer brand associations is important because it influences price perception (Bornemann & Homburg, 2011) and assortment size preference (Goodman & Malkoc, 2012). According to these findings, consumers buying a Suzuki car, for example, view price in terms of a monetary sacrifice, because the brand Suzuki is psychologically closer than the brands Maserati, Bugatti, or Lamborghini. The reason is that a psychologically close object such as the brand Suzuki activates low-level construal during which feasibility and means-end considerations become salient (Liberman & Trope, 1998). The price perceptions

for psychologically distant brands, in contrast, are viewed as quality indicators (Bornemann & Homburg, 2011), because a psychologically distant brand activates high-level construal during which desirability considerations become salient (Liberman & Trope, 1998). Psychological distance, therefore, increases the positivity of evaluations (Huang, et al., 2016; Pyone & Isen, 2011; Labroo & Patrick, 2008) but this relationship is dependent upon how the information is construed (Williams, et al., 2014). Following the findings concerning assortment size preferences (Goodman & Malkoc, 2012), consumers buying a Suzuki car would, therefore, probably prefer a larger selection of models than consumers buying a Maserati car because Suzuki is psychologically close and Maserati is psychologically distant.

Summing up, studies two and three demonstrate that psychological distance differentiates luxury brands from non-luxury brands in consumers' minds and this has implications on consumer price perceptions (Bornemann & Homburg, 2011), assortment size preference (Goodman & Malkoc, 2012), and the positivity of consumer evaluations (Huang, et al., 2016; Pyone & Isen, 2011; Labroo & Patrick, 2008).

6.3 Psychological Distance in Brand Communication

The psychological distance of brand language in brand communication is important, because it informs how consumers construe brand communication which, subsequently, governs the psychological distance of brand associations. As such, psychological distance is a brand positioning measure.

Brands do not use psychological distance consistently or effectively in their Facebook and Twitter brand communication. According to study four, most of the examined brands use psychological distance neither consistently nor effectively on Facebook. Three non-luxury brands use psychological distance consistently but ineffectively in their brand communication on Facebook. On average, they use psychologically more distant brand communication than the other brands in the sample. By using psychologically distant language, these brands increase the psychological distance between them and the consumer, which does not correspond with how consumers view them.

More examples of consistent yet ineffective use of psychological distance in brand communication is found on Twitter. The 15 investigated luxury brands use psychologically closer language in comparison to their non-luxury counterparts on Twitter. The examined non-luxury brands, therefore, increase the psychological distance to consumers while the

examined luxury brands decrease the psychological distance to consumers. This is the exact opposite of how consumers perceive these brands on Twitter. Comparing brand and consumer tweets, only three of the 15 investigated luxury brands use psychological distance in their Twitter brand communication consistently and effectively. Givenchy, Guerlain and Maserati use psychologically distant language. This corresponds to how consumers perceive them. These three brands use psychological distance not only consistently but also effectively because consumers tend to prefer congruent options (Schellekens, et al., 2010; Pyone & Isen, 2011; Labroo & Patrick, 2008; Trope & Liberman, 2000).

The use of psychologically close brand language does not align with non-luxury brand communication objectives. The use of psychological distance for desirability reasons is understandable. Every brand wants to be desirable to consumers. However, increasing the psychological distance to consumers diverges from non-luxury brand communication objectives, which is to be affordable and accessible for consumers. In fact, non-luxury brands' distribution and pricing strategies make them psychologically close. Non-luxury brands are frequently available, together, in a single retail environment whether online, such as Zalando, or offline, such as shopping malls. They are, thus, easily comparable and not unique. Their pricing makes them affordable instead of inaccessibly exclusive.

The finding that luxury brands use psychologically less distant language than non-luxury brands is puzzling because it is inconsistent with other research, luxury brand communication objectives, and consumer brand associations for luxury types of brands. Other research based on 46 product descriptions shows that luxury items are described with psychologically more distant words on websites in comparison to non-luxury items (Hansen & Wänke, 2011). Moreover, psychological distance increases luxuriousness perceptions. Instead of portraying a sense of luxuriousness, uniqueness and exclusiveness with psychological distance, luxury brands psychologically approach the consumer on social media with their psychologically close brand communication.

There are two conjectures why luxury brands may use psychologically close language. First, because of their dreamlike nature and, second, because they aim to 'experientialise' the brand. On one side, luxury brands stand for dreamlike desirability but, on the other, they want to be perceived as being almost within reach for consumers; hence, the use of entry-level products to make the brand appear more accessible. In a similar vein, the use of psychologically close language reduces the psychological distance to consumers making the brand psychologically more accessible. Psychological accessibility, however, is not the same

as real world accessibility and luxury brands use pricing effectively to manage real world accessibility. Second, as we entered the experience economy (Pine & Gilmore, 1998), luxury brands started to craft luxurious brand experiences as opposed to selling luxury products. Experientialism is linked to psychological distance (Hamilton & Thompson, 2007). In an attempt to 'experientialise' luxury products and tell an authentic story about them, luxury brands may decrease psychological distance. Authentic stories rely on details to mimic a genuine brand experience. Details are construed as low-level, leading to psychological closeness (Trope & Liberman, 2010). By creating authentic stories around the brand, it becomes easier to experience the brand, which resembles a real brand experience. Direct product experiences are psychologically close (Hamilton & Thompson, 2007), thus, more authentic brand experiences should be psychologically close too. Experientialism may, as a result, potentially decrease psychological distance.

Many brands define their own brand language to ensure consistent brand communication and brand positioning. The finding that brands do not use psychological distance consistently and effectively in their brand language is robust despite being unexpected, because studies four and five both portray the same finding. In sum, the psychological distance in brand communication for luxury and non-luxury types of brands is inconsistent with their brand positioning and communication objectives as well as consumer brand associations.

6.4 The (Mis)Match Effect

A comparison of the psychological distance in brand communication with the psychological distance in consumer language on Twitter shows that they do not match. Study six has investigated the effect of brand communication (mis)matching consumer brand associations in terms of psychological distance because matching psychological distance or construal levels to valence increases purchase intentions and choice preference (Schellekens, et al., 2010; Pyone & Isen, 2011; Labroo & Patrick, 2008; Trope & Liberman, 2000; Labroo & Patrick, 2008; Karsh & Eyal, 2015). A match in the context of this thesis refers to psychologically distant brand communication for luxury brands and psychologically close brand communication for non-luxury brands because consumers have psychologically distant brand associations for luxury brands and psychologically close ones for non-luxury brands. The current findings show that a match increases brand liking and purchase intentions for luxury brands, but not for non-luxury brands. The reason for the absence of a match effect for non-luxury brands is that psychologically distant language increases brand liking and

purchase intentions for both luxury and non-luxury types of brands. A match effect, therefore, only exists for psychologically distant brands.

The absence of a match effect for psychologically close objects has been observed in other research about psychological distance and affect (Labroo & Patrick, 2008; Karsh & Eyal, 2015). A match refers to positive (negative) mood and a psychologically distant (close) advertisement. Participants primed to be in a positive mood showed higher purchase intentions for a psychologically distant framed advertisement. A match effect is, therefore, present for the psychologically distant condition. Unhappy participants, however, showed higher purchase intentions for a psychologically distant framed advertisement instead of a psychologically close one (Labroo & Patrick, 2008). Therefore, a match effect is observed for psychological distance, but not psychological closeness. Another study investigated how pride and joy are construed (Karsh & Eyal, 2015). Pride is construed as high-level, leading to psychological distance whereas joy is construed as low-level, leading to psychological closeness. Participants in the pride condition who read a psychologically distant advertisement showed higher purchase intentions than those reading a psychologically close advertisement. However, participants in the joy condition also showed higher purchase intentions for a psychologically distant advertisement. These findings, again, find a match effect for psychological distance, but none for psychological closeness.

Study six of this thesis is different to previous research (Labroo & Patrick, 2008; Karsh & Eyal, 2015) in two important ways. First, the match of study six is purely based on psychological distance, i.e., the match between the psychological distance of brand associations and brand communication. In comparison, the other two studies matched psychological distance with affect or emotions. Second, the outcome measures are different. While previous research used only purchase intentions, the current research used a variety of different outcome measures including desirability perceptions, brand liking, expensiveness perceptions, and purchase intentions. The former two are affect-based measures and the latter two price related. While expensiveness perceptions are directly price-related, this is not the case for purchase intentions. While price is a strong antecedent of purchase intentions, it is one of many antecedents. In contrast, expensiveness perceptions measure how high or low consumers perceive a price. Price is construed differently from a psychologically close or distant perspective (Bornemann & Homburg, 2011). From a psychologically close perspective, price is perceived as a sacrifice and as a quality indicator from a psychologically distant perspective. While price has a dual role depending on psychological distance and

construal level, this is not the case for affect-based measures. Increasing psychological distance enhances positivity (Huang, et al., 2016; Liberman & Trope, 1998; Eyal, et al., 2004; Labroo & Patrick, 2008). CLT literature, thus, provides some evidence that the match effect influences price and affect-based evaluation criterion differentially. In the present research, however, no evidence was found to support this notion.

There are two potential theoretical explanations for the current findings, ease of processing and CLT. Ease of processing, also termed fluency, refers to how easily new information is processed (Jacoby & Dallas, 1981) or retrieved from memory (Schwarz, et al., 1991). According to ease of processing, congruent options are processed more easily and fluently, yielding more favourable evaluations. Several studies have examined different types of matches. Advantages, for example, are generated more easily for actions pertaining to the distant future than the near future (Herzog, et al., 2007). Matching psychologically distant (close) language with distant (near) future or positive (negative) mood improves evaluations (Trope & Liberman, 2000; Labroo & Patrick, 2008). Promotion (prevention) focussed consumers evaluate a brand presented in a psychologically distant (close) advertisement more favourably (Lee, et al., 2009). Similarly, gain (loss) framed messages are more effective when consumers construe them as high-level (low-level) leading to greater recycling intentions and actual recycling behaviour (White, et al., 2011). The reason why the matching options are evaluated more favourably is ease of processing (Lee, et al., 2009; White, et al., 2011; Herzog, et al., 2007). Following CLT, however, psychologically distant objects are construed as high-level during which desirability considerations become more important (Liberman & Trope, 1998; Trope & Liberman, 2010; Todorov, et al., 2007). In other words, psychologically distant brand communication should activate high-level construal making desirability considerations more salient and should increase the liking of the brand regardless of whether the brand communication matches existing brand associations. The findings from study six found no match effect for psychologically close brands on brand liking. CLT is, thus, conjectured to be the stronger explanation in comparison to ease of processing for the current research context. More support for this argument comes from CLT and valence research (Huang, et al., 2016; Eyal, et al., 2004; Williams, et al., 2014; Pyone & Isen, 2011; Schellekens, et al., 2010).

6.5 Contributions

This thesis makes an original contribution to the marketing literature by demonstrating that the psychological distance of brands varies in a systematic way depending on brand type. The psychological distance of a brand influences how brand communication is processed and evaluated (Trope & Liberman, 2010; Bornemann & Homburg, 2011; Goodman & Malkoc, 2012; Pyone & Isen, 2011; Williams, et al., 2014). In addition, this thesis contributes to CLT research methodology by showcasing how the language concreteness database (Brysbaert, et al., 2014) can be used to measure psychological distance in natural language data in an automated way.

6.5.1 Theoretical Contributions

This research makes an original contribution to the marketing literature in general and the brand management literature specifically by demonstrating the following:

- a) Consumers construe brands differentially according to luxury and non-luxury brand type leading to psychologically distant or close brand associations.
- b) Psychological distance is, thus, another way to measure brand associations to identify a brand's positioning in the marketplace in addition to established methods based on themes (Zaltman & Coulter, 1995), predefined keywords (Menezes & Elbert, 1979; Spector, 1961), personality (Aaker, 1997), or similarity (Tirunillai & Tellis, 2014; Liu, et al., 2017; Netzer, et al., 2012; Culotta & Cutler, 2016)
- c) Brand communication can be psychologically close or distant depending on the language used. Brands do not use psychological distance effectively in their brand communication on Twitter and Facebook. Luxury brands psychologically approach consumers while non-luxury brands increase the psychological distance to consumers, which diverges how consumers view them.
- d) Previous studies have matched psychological distance or construal level to affect (Schellekens, et al., 2010; Pyone & Isen, 2011; Labroo & Patrick, 2008; Trope & Liberman, 2000; Labroo & Patrick, 2008; Karsh & Eyal, 2015) but not the psychological distance of a stimulus to the psychological distance of a mental representation. Matching the

psychological distance of brand communication to the psychological distance of brand associations only improves brand liking and purchase intentions for psychologically distant luxury brands, but not for psychologically close non-luxury brands. Psychologically distant brand communication increases desirability perceptions and brand liking for both luxury and non-luxury brands regardless of whether the psychological distance in brand communication matches the psychological distance of brand associations.

Despite its obvious importance for the consumer behaviour and marketing disciplines, the psychological distance of brands is unexplored. Brands can add different types and amounts of value to the core product functionality, as the Nivea and Estée Lauder sun cream examples in chapter one illustrate.

Brands differentiate one organisation from another (Keller, 1993) and, thus, play an important part in consumer decision-making. Previous conceptualisations have characterised brands in terms of personality, e.g., brand personality (Aaker, 1997). The associations consumers have with a brand have been measured with both an inductive qualitative approach and a deductive quantitative approach (see for example Zaltman & Coulter, 1995; Aaker, 1997; Menezes & Elbert, 1979; Spector, 1961). Despite the easily accessible consumer data online and computing power, only a handful of studies have proposed new approaches. These are based on similarity to characterise and determine brand associations (see for example Tirunillai & Tellis, 2014; Liu, et al., 2017; Netzer, et al., 2012; Culotta & Cutler, 2016). The similarity or dissimilarity of brands indicates the degree of differentiation in a marketplace and is thus an important measure. However, similarity makes no claim as to how consumers process the communication from a brand and how information processing influences consumer evaluations. H&M and Topshop, for example, are more similar to each other than they are to Chanel. Similarity does not explain whether and how consumers process the H&M brand communication differentially to Topshop or Chanel brand communication and the ensuing impact on consumer evaluations. The psychological distance of brands with CLT as theoretical underpinning provides an additional method to measure consumer brand associations in a customer-centric way.

Consumers prefer congruent options. Several studies have examined different match types including matching the psychological distance with temporal framing (Herzog, et al., 2007),

valence (Schellekens, et al., 2010; Pyone & Isen, 2011; Labroo & Patrick, 2008; Trope & Liberman, 2000; Labroo & Patrick, 2008; Karsh & Eyal, 2015), promotion or prevention focussed consumers (Lee, et al., 2009), and gain or loss framing (White, et al., 2011). No study, so far, has examined a match between the psychological distance of a brand, i.e., an external stimulus, and brand associations, i.e., consumers' internal mental representations. This is the knowledge gap study six fills, which is important because a match improves consumer evaluations and purchase intentions (Schellekens, et al., 2010; Pyone & Isen, 2011; Labroo & Patrick, 2008; Labroo & Patrick, 2008). The manner with which the psychological distance of brand associations and brand communication has been established is novel in both the marketing and consumer behaviour disciplines. Hence, this thesis also contributes to the conversation about research methodologies for psychological distance.

6.5.2 Methodological Contribution

This thesis showcases how natural and unstructured language data can be used to measure psychological distance. The vast body of CLT research relies on lab experiments to test predictions in a controlled setting. There are only three exceptions, one of which is a field experiment (White, et al., 2011) and the remaining two are based on natural online data (Bhatia & Walasek, 2016; Huang, et al., 2016). There is, consequently, a need for more research with natural data that is more readily replicable because many psychological experiments mentioned in published articles cannot be replicated (Gelman, 2015). This thesis responds to this need and makes an original methodological contribution to the psychological distance research methods.

This research analyses naturally occurring consumer and brand language for psychological distance with the language concreteness database (Brysbaert, et al., 2014) and a computational approach. It thereby demonstrates how natural language data provides a valid and reliable measure of psychological distance. The chosen method is valid (Peter, 1979), because it has been able to find the predicted correlation between psychological distance and valence (Eyal, et al., 2004; Williams, et al., 2014; Pyone & Isen, 2011; Schellekens, et al., 2010; Labroo & Patrick, 2008) in four different datasets collected at different times from two different data sources. Moreover, natural data have a higher ecological validity than lab-based data. This method is also reliable because it is easily reproducible (Peter, 1979). In fact, two computational psycholinguistics studies demonstrate the same findings for the psychological distance of brand associations. The computer

program employed to analyse the language data has been adapted to accommodate Tweets and Facebook posts. Hence, it can be easily adapted for another data source and scaled up to test CLT predictions on an even larger scale and in a different context. In that sense, this thesis demonstrates that language concreteness (Brysbaert, et al., 2014) combined with a computational approach is as valid and reliable as traditional research methods but much more cost- and time-effective in comparison.

On a broader level, this research also speaks to the methodological conversation of how to leverage digital data and derive ingenious insights from unstructured language data. With the rise of textual data, which is fuelled by the invention of automated voice call transcription, the research field of unstructured language data will only grow and become more important. Traditional research methods almost exclusively count frequencies. In a digital marketing data context, they would thus count consumer views, likes, shares, or the number of occurrences of a word in a given context thereby capturing a certain analytical scope. However, the richness of language data enables insights that go beyond this scope as another recent study highlights (Van Laer, et al., 2018).

In sum, this research contributes to the brand management literature and language research methods. Given the novelty of this research, the research scope had to be carefully delineated resulting in research limitations, which inform the further research suggestions.

6.6 Limitations and Further Research

This section describes the limitations of this research and outlines suggestions for further research.

6.6.1 Limitations

The limitations of this thesis include the psychological distance of co-branding, different types of brands, and data access. For various reasons, brands affiliate themselves with other brands in co-branding strategies, such as Karl Lagerfeld, the creative director of Chanel, designing a collection for H&M (Vogue, 2016). The individual brands investigated in this thesis were either luxury or non-luxury brands because this context theoretically lends itself. This is one way to categorise brands. Another way of differentiating brands is whether they are product- or service-based. Similarly, a popular place or person can also become a brand,

as the example in table seven illustrates. London, for example, is a place brand and celebrities are examples of people-based brands. Other research has already investigated spatial, social, and temporal distance dimensions (see for example Trope & Liberman, 2000; Liberman, et al., 2002; Wakslak, et al., 2006; Bhatia & Walasek, 2016; Henderson, et al., 2006; Fujita, et al., 2006) and how these dimensions are interrelated (Bar-Anan, et al., 2007; Fiedler, et al., 2012; Zhang & Wang, 2009). Hence, this thesis has focussed on the psychological distance for luxury and non-luxury types of brands. The psychological distance in the context of co-branding and products versus service based brands are interesting ideas, but they are outside the scope of this thesis.

The psychological distance of brand associations has been measured with consumer language on Twitter because no personal Facebook pages can be scraped. The collected consumer data contain no sociodemographic information, because not all Twitter users disclose this information. Even if it is available, it is fragmented and difficult to compare and scrape, because this information resides in Twitter users' profile descriptions that cannot be easily scraped. In comparison, the location from where the tweet has been sent and when it has been sent can be scraped effortlessly, if the Twitter user makes this information publicly available. Organisations have consumer language and sociodemographic data. Such data from organisations were not accessible to the researcher despite multiple attempts to gain data access. The researcher can only speculate why luxury brand companies were very reluctant to enter into research collaborations. Similarly, the reasons why brand managers do not use psychological distance consistently and effectively in brand communication are only conjectures because no brand managers have been interviewed to provide answers to this question. This would go beyond the research objectives of this thesis.

6.6.2 Further Research

This thesis has ventured into largely uncharted territory; thus, there are many different research avenues to explore. The subsequent suggestions focus on the immediate questions ensuing from this thesis and include co-branding, different types of brands, industries, and consumer groups, as well as an investigation of the explanation power of CLT and ease of processing in explaining the match effect.

The co-branding of products and services can be frequently observed, such as Louis Vuitton creating a luggage set for the BMW i8 series (LMVH, 2014) or Donatella Versace creating a

fashion collection for H&M (Vogue, 2016), simply to provide two of the many examples. According to this research, Versace should increase the psychological distance of H&M, because Versace is a luxury brand. The other question is, of course, how this co-branding influences Versace as a brand, and how strong the influence is. In fact, psychological distance could be used to develop a brand construal index that supplies a ranking of how psychologically close or distant brands are positioned and how strong their positioning is. Such a brand construal index would need to undergo validation. This thesis measured the psychological distance of brand associations which, on the theoretical underpinning of CLT (Trope & Liberman, 2010), informs how brands are construed. As chapter two details, there are many ways to measure psychological distance. In order to validate brand construal as a new construct, it would need to be measured in different ways. The development and validation of a brand construal index would be valuable for corporate reputation researchers and market research companies alike.

In addition to the luxury and non-luxury characterisation of brands, they may also be categorised as product- or service-based. Thomas Cook, the travel agency, for example, sells holidays, which are service-based. Goods that can be experienced to a limited extent are psychologically distant while goods that can be readily experienced are psychologically close (Hamilton & Thompson, 2007). According to these findings, the brand Thomas Cook should be psychologically more distant than H&M, because a jumper from H&M can be tried on in the H&M store prior to purchase and worn many times, reflecting direct experiences. In comparison, a Thomas Cook holiday cannot be directly experienced prior to the consumption phase. In fact, even the purchase is an indirect experience, because the consumer obtains a booking confirmation including a description of what was booked, but no tangible object that could be directly experienced. The psychological distance of product- and service-based brands represents a potentially fruitful, further research area.

Another area concerns different types of industries. This research has investigated 30 brands selling tangible products from a wide range of industries such as the fashion, beauty and personal hygiene, watch, car, and alcoholic beverage industries. These industries encompass a wide variety of products. A watch is bought less frequently and is more expensive than shower gel, for example. There may, thus, be industry differences due to hypothetical distance (Wakslak, et al., 2006; Todorov, et al., 2007) and experiential distance (Hamilton & Thompson, 2007). These considerations are out of this research scope but they are, nonetheless, important.

Experiential distance (Hamilton & Thompson, 2007) may also apply to different types of consumer groups. On the most fundamental level, actual brand customers are more likely to view the brand as psychologically close in comparison to general consumers because actual customers had one or several direct experiences with the brand. In a similar vein, customers who frequently buy something from a brand, and thus experience it often, should have psychologically closer brand associations in comparison to those who buy infrequently. This rationale is underlined by hypothetical distance (Wakslak, et al., 2006; Todorov, et al., 2007). Consumer purchase frequency is an indication of share of wallet, which is a behavioural segmentation method. Customers are also segmented based on their lifestyle reflecting differing interests and personalities. CLT posits that construal level is independent of personality traits but, instead, depends upon the psychological distance of touchpoints a consumer has with a brand (Trope & Liberman, 2010). In other words, the temporal frequency with which a brand is encountered (Liberman, et al., 2002; Liberman & Trope, 1998), the nature of the encounter (Hamilton & Thompson, 2007) and within what social context the encounter takes place (Smith & Trope, 2006; Stephan, et al., 2010) determines, in addition to existing brand associations, the construal level and subsequent psychological distance of a brand. The notion that personality traits influence how consumers construe information cannot be dismissed because participants primed in the high-power condition construed high-level (Smith & Trope, 2006). To date there is very limited research on how personality traits influence construal level and psychological distance. The investigation of how psychological distance relates to other behavioural and psychographic segmentation methods and how individual consumer traits influence psychological distance are other interesting research questions.

A final, further, research suggestion concerns the match effect between the psychological distance of brand associations and brand communication. Previous CLT studies have matched psychological distance to affect (Schellekens, et al., 2010; Pyone & Isen, 2011; Labroo & Patrick, 2008), temporal distance (Trope & Liberman, 2000), gain versus loss framing (White, et al., 2011), and promotion versus prevention framing (Lee, et al., 2009). In all studies matching options lead to more favourable consumer evaluations. This match effect is explained by ease of processing (White, et al., 2011). This thesis matches the psychological distance of a stimulus, e.g., brand communication, to the psychological distance of a mental representation, e.g., brand association. Not all types of matches lead to more favourable outcomes pinpointing towards a boundary condition of the ease of processing theory. Only psychologically distant luxury brands benefit from a match effect.

More research is, therefore, needed to better understand what mechanism drives the match effect that is purely based on psychological distance and how this influences affect based and price related outcome measures.

6.7 Managerial Implications

This section details the managerial implication directly ensuing from the presented findings as well as how marketers can use this research and other CLT studies to further develop and refine their customer insight, segmentation, targeting, and positioning techniques.

The psychological distance of a brand allows brand managers to manage psychological accessibility in addition to real world accessibility. Pricing and distribution are effective ways to manage real world accessibility. The management of both psychological and real world accessibility is particularly relevant for luxury brand managers because inaccessibility and exclusivity are the cornerstones of luxury (Kapferer & Bastien, 2012; Berry, 1994). The luxury industry is a sizeable and important research area that remains robust in the face of financial crisis (Nunes, et al., 2011). Some areas, such as luxury hospitality and luxury cars, even continue to grow (D'Arpizio, et al., 2017; D'Arpizio, et al., 2014). The careful management of psychological distance in brand language, as a consequence, enables luxury brands to communicate in a differentiated way to various consumer groups. Psychologically distant brand communication increases brand liking and purchase intentions regardless of the psychological distance of brand associations. In combination with pricing and distribution, the psychological distance in brand language, thus, enables the unique positioning of a brand as desirable, inaccessible, and aspirational for all consumer groups yet as accessible for targeted consumer groups only. This differentiation is more important for luxury brands than for non-luxury brands because luxury brands require to be widely known and desired but inaccessible to the majority of consumers.

Brand managers can utilise this research alongside other CLT findings to further develop and refine their customer insight, segmentation, targeting, and positioning techniques; knowing the customer is vital in today's highly competitive and saturated market place. Customers with psychologically distant brand associations consider the brand as exclusive, desirable, and luxurious (Trope & Liberman, 2010; Liberman & Trope, 1998; Todorov, et al., 2007; Hansen & Wänke, 2011). For them, the brand is less accessible. They consider price as the quality indicator (Bornemann & Homburg, 2011) and prefer a small choice set from which to

choose from (Goodman & Malkoc, 2012). Touchpoints are limited and brand knowledge is consequently also limited. Consumers with psychologically close brand associations, on the other hand, consider the brand as accessible and approachable. They view price as a monetary sacrifice and prefer a large choice set. Touchpoints are frequent, resulting in good brand knowledge, which can be leveraged for innovation.

Psychological distance derived from consumer language can be used as a psychographic segmentation indicator along with existing sociodemographic indicators. Current psychographic indicators include attitudes, beliefs, opinions, personalities, and lifestyles. While marketing managers use lifestyle and personal interest indicators to segment markets, the idea to use psychological distance as a psychographic and customer-centric indicator for segmentation is new.

Psychological distance should also be considered for targeting. Consumers with psychologically distant brand associations and a high spending power are a very interesting target group. They not only have the financial means to buy the brand's products, but also consider them as desirable (Liberman & Trope, 1998). With psychologically distant brand communication they are more likely to buy and less likely to compare the brand's offering with alternatives from competitors than consumers with psychologically close brand association (Ledgerwood, et al., 2010; Goodman & Malkoc, 2012). However, the same does not hold true for consumers with psychologically close brand associations. Instead, they may be useful for peer-to-peer support and brand ambassadorship because they encounter the brand and its products and/or services frequently (Wakslak, et al., 2006; Todorov, et al., 2007; Hamilton & Thompson, 2007) and, thus, have specific knowledge about it.

In the way of assessing the psychological distance of consumer brand associations, a brand's positioning can be determined from a customer-centric perspective. A brand's positioning in terms of psychological distance is important, because psychologically close brands tend to compete on functionality, price, and price value considerations (Liberman & Trope, 1998; Bornemann & Homburg, 2011; Ledgerwood, et al., 2010). Psychologically distant brands, on the other hand, tend to compete on brand image, brand promise, and the extent to which the brand promise resonates with consumers' existing brand associations and their attitudes in general.

Analysing consumer language for psychological distance, therefore, provides underexplored insights. Organisations can easily implement the research methodology employed in this

thesis. They already have a great deal of language data from customer interactions, such as emails, chatbots or transcribed voice calls in addition to natural language data from their own or other social media presences. The employed language concreteness database (Brysbaert, et al., 2014) and the software code is available from the researcher upon request.

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8. Appendices

8.1 Appendix A – List of Stop Words from the ‘tm’ Package in R

[1] "i"	"me"	"my"	"myself"	"we"
[6] "our"	"ours"	"ourselves"	"you"	"your"
[11] "yours"	"yourself"	"yourselves"	"he"	"him"
[16] "his"	"himself"	"she"	"her"	"hers"
[21] "herself"	"it"	"its"	"itself"	"they"
[26] "them"	"their"	"theirs"	"themselves"	"what"
[31] "which"	"who"	"whom"	"this"	"that"
[36] "these"	"those"	"am"	"is"	"are"
[41] "was"	"were"	"be"	"been"	"being"
[46] "have"	"has"	"had"	"having"	"do"
[51] "does"	"did"	"doing"	"would"	"should"
[56] "could"	"ought"	"i'm"	"you're"	"he's"
[61] "she's"	"it's"	"we're"	"they're"	"i've"
[66] "you've"	"we've"	"they've"	"i'd"	"you'd"
[71] "he'd"	"she'd"	"we'd"	"they'd"	"i'll"
[76] "you'll"	"he'll"	"she'll"	"we'll"	"they'll"
[81] "isn't"	"aren't"	"wasn't"	"weren't"	"hasn't"
[86] "haven't"	"hadn't"	"doesn't"	"don't"	"didn't"
[91] "won't"	"wouldn't"	"shan't"	"shouldn't"	"can't"
[96] "cannot"	"couldn't"	"mustn't"	"let's"	"that's"
[101] "who's"	"what's"	"here's"	"there's"	"when's"
[106] "where's"	"why's"	"how's"	"a"	"an"
[111] "the"	"and"	"but"	"if"	"or"
[116] "because"	"as"	"until"	"while"	"of"
[121] "at"	"by"	"for"	"with"	"about"
[126] "against"	"between"	"into"	"through"	"during"
[131] "before"	"after"	"above"	"below"	"to"
[136] "from"	"up"	"down"	"in"	"out"
[141] "on"	"off"	"over"	"under"	"again"
[146] "further"	"then"	"once"	"here"	"there"
[151] "when"	"where"	"why"	"how"	"all"
[156] "any"	"both"	"each"	"few"	"more"
[161] "most"	"other"	"some"	"such"	"no"
[166] "nor"	"not"	"only"	"own"	"same"
[171] "so"	"than"	"too"	"very"	
[1] "a"	"a's"	"able"	"about"	
[5] "above"	"according"	"accordingly"	"across"	
[9] "actually"	"after"	"afterwards"	"again"	
[13] "against"	"ain't"	"all"	"allow"	
[17] "allows"	"almost"	"alone"	"along"	
[21] "already"	"also"	"although"	"always"	
[25] "am"	"among"	"amongst"	"an"	
[29] "and"	"another"	"any"	"anybody"	
[33] "anyhow"	"anyone"	"anything"	"anyway"	
[37] "anyways"	"anywhere"	"apart"	"appear"	
[41] "appreciate"	"appropriate"	"are"	"aren't"	
[45] "around"	"as"	"aside"	"ask"	
[49] "asking"	"associated"	"at"	"available"	
[53] "away"	"awfully"	"b"	"be"	
[57] "became"	"because"	"become"	"becomes"	
[61] "becoming"	"been"	"before"	"beforehand"	
[65] "behind"	"being"	"believe"	"below"	
[69] "beside"	"besides"	"best"	"better"	
[73] "between"	"beyond"	"both"	"brief"	
[77] "but"	"by"	"c"	"c'mon"	
[81] "c's"	"came"	"can"	"can't"	

[85]	"cannot"	"cant"	"cause"	"causes"
[89]	"certain"	"certainly"	"changes"	"clearly"
[93]	"co"	"com"	"come"	"comes"
[97]	"concerning"	"consequently"	"consider"	"considering"
[101]	"contain"	"containing"	"contains"	
	"corresponding"			
[105]	"could"	"couldn't"	"course"	"currently"
[109]	"d"	"definitely"	"described"	"despite"
[113]	"did"	"didn't"	"different"	"do"
[117]	"does"	"doesn't"	"doing"	"don't"
[121]	"done"	"down"	"downwards"	"during"
[125]	"e"	"each"	"edu"	"eg"
[129]	"eight"	"either"	"else"	"elsewhere"
[133]	"enough"	"entirely"	"especially"	"et"
[137]	"etc"	"even"	"ever"	"every"
[141]	"everybody"	"everyone"	"everything"	"everywhere"
[145]	"ex"	"exactly"	"example"	"except"
[149]	"f"	"far"	"few"	"fifth"
[153]	"first"	"five"	"followed"	"following"
[157]	"follows"	"for"	"former"	"formerly"
[161]	"forth"	"four"	"from"	"further"
[165]	"furthermore"	"g"	"get"	"gets"
[169]	"getting"	"given"	"gives"	"go"
[173]	"goes"	"going"	"gone"	"got"
[177]	"gotten"	"greetings"	"h"	"had"
[181]	"hadn't"	"happens"	"hardly"	"has"
[185]	"hasn't"	"have"	"haven't"	"having"
[189]	"he"	"he's"	"hello"	"help"
[193]	"hence"	"her"	"here"	"here's"
[197]	"hereafter"	"hereby"	"herein"	"hereupon"
[201]	"hers"	"herself"	"hi"	"him"
[205]	"himself"	"his"	"hither"	"hopefully"
[209]	"how"	"howbeit"	"however"	"i"
[213]	"i'd"	"i'll"	"i'm"	"i've"
[217]	"ie"	"if"	"ignored"	"immediate"
[221]	"in"	"inasmuch"	"inc"	"indeed"
[225]	"indicate"	"indicated"	"indicates"	"inner"
[229]	"insofar"	"instead"	"into"	"inward"
[233]	"is"	"isn't"	"it"	"it'd"
[237]	"it'll"	"it's"	"its"	"itself"
[241]	"j"	"just"	"k"	"keep"
[245]	"keeps"	"kept"	"know"	"knows"
[249]	"known"	"l"	"last"	"lately"
[253]	"later"	"latter"	"latterly"	"least"
[257]	"less"	"lest"	"let"	"let's"
[261]	"like"	"liked"	"likely"	"little"
[265]	"look"	"looking"	"looks"	"ltd"
[269]	"m"	"mainly"	"many"	"may"
[273]	"maybe"	"me"	"mean"	"meanwhile"
[277]	"merely"	"might"	"more"	"moreover"
[281]	"most"	"mostly"	"much"	"must"
[285]	"my"	"myself"	"n"	"name"
[289]	"namely"	"nd"	"near"	"nearly"
[293]	"necessary"	"need"	"needs"	"neither"
[297]	"never"	"nevertheless"	"new"	"next"
[301]	"nine"	"no"	"nobody"	"non"
[305]	"none"	"noone"	"nor"	"normally"
[309]	"not"	"nothing"	"novel"	"now"
[313]	"nowhere"	"o"	"obviously"	"of"
[317]	"off"	"often"	"oh"	"ok"
[321]	"okay"	"old"	"on"	"once"

[325]	"one"	"ones"	"only"	"onto"
[329]	"or"	"other"	"others"	"otherwise"
[333]	"ought"	"our"	"ours"	"ourselves"
[337]	"out"	"outside"	"over"	"overall"
[341]	"own"	"p"	"particular"	"particularly"
[345]	"per"	"perhaps"	"placed"	"please"
[349]	"plus"	"possible"	"presumably"	"probably"
[353]	"provides"	"q"	"que"	"quite"
[357]	"qv"	"r"	"rather"	"rd"
[361]	"re"	"really"	"reasonably"	"regarding"
[365]	"regardless"	"regards"	"relatively"	"respectively"
[369]	"right"	"s"	"said"	"same"
[373]	"saw"	"say"	"saying"	"says"
[377]	"second"	"secondly"	"see"	"seeing"
[381]	"seem"	"seemed"	"seeming"	"seems"
[385]	"seen"	"self"	"selves"	"sensible"
[389]	"sent"	"serious"	"seriously"	"seven"
[393]	"several"	"shall"	"she"	"should"
[397]	"shouldn't"	"since"	"six"	"so"
[401]	"some"	"somebody"	"somehow"	"someone"
[405]	"something"	"sometime"	"sometimes"	"somewhat"
[409]	"somewhere"	"soon"	"sorry"	"specified"
[413]	"specify"	"specifying"	"still"	"sub"
[417]	"such"	"sup"	"sure"	"t"
[421]	"t's"	"take"	"taken"	"tell"
[425]	"tends"	"th"	"than"	"thank"
[429]	"thanks"	"thanx"	"that"	"that's"
[433]	"thats"	"the"	"their"	"theirs"
[437]	"them"	"themselves"	"then"	"thence"
[441]	"there"	"there's"	"thereafter"	"thereby"
[445]	"therefore"	"therein"	"theres"	"thereupon"
[449]	"these"	"they"	"they'd"	"they'll"
[453]	"they're"	"they've"	"think"	"third"
[457]	"this"	"thorough"	"thoroughly"	"those"
[461]	"though"	"three"	"through"	"throughout"
[465]	"thru"	"thus"	"to"	"together"
[469]	"too"	"took"	"toward"	"towards"
[473]	"tried"	"tries"	"truly"	"try"
[477]	"trying"	"twice"	"two"	"u"
[481]	"un"	"under"	"unfortunately"	"unless"
[485]	"unlikely"	"until"	"unto"	"up"
[489]	"upon"	"us"	"use"	"used"
[493]	"useful"	"uses"	"using"	"usually"
[497]	"uucp"	"v"	"value"	"various"
[501]	"very"	"via"	"viz"	"vs"
[505]	"w"	"want"	"wants"	"was"
[509]	"wasn't"	"way"	"we"	"we'd"
[513]	"we'll"	"we're"	"we've"	"welcome"
[517]	"well"	"went"	"were"	"weren't"
[521]	"what"	"what's"	"whatever"	"when"
[525]	"whence"	"whenever"	"where"	"where's"
[529]	"whereafter"	"whereas"	"whereby"	"wherein"
[533]	"whereupon"	"wherever"	"whether"	"which"
[537]	"while"	"whither"	"who"	"who's"
[541]	"whoever"	"whole"	"whom"	"whose"
[545]	"why"	"will"	"willing"	"wish"
[549]	"with"	"within"	"without"	"won't"
[553]	"wonder"	"would"	"would"	"wouldn't"
[557]	"x"	"y"	"yes"	"yet"
[561]	"you"	"you'd"	"you'll"	"you're"
[565]	"you've"	"your"	"yours"	"yourself"

[569] "yourselves" "z" "zero"

Source: <https://rdr.io/rforge/tm/man/stopwords.html>

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