

Unintended Negative Effects of the Warmth Advertising Appeal on Brand Competence  
and Brand Attitude: A Compensation Effect between Brand Warmth and Competence

A DISSERTATION  
SUBMITTED TO THE FACULTY OF  
UNIVERSITY OF MINNESOTA  
BY

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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY

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July 2016

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## **Acknowledgements**

I would like to express the deepest appreciation to my adviser, Dr. Jennifer Ball. She supported, helped, encouraged, and trusted me. Her guidance and support enabled me to achieve my goal in my doctoral program. It would have been impossible to complete this work without her. I would like to thank my co-adviser, Dr. Jisu Huh. She always gave me great insights and encouragements, which made me open my eyes to academic research. I also would like to express my gratitude to my committee members, Dr. Deborah John and Dr. Hyejoon Rim for willingness to offer great insights for my dissertation.

## **Dedication**

I dedicate this dissertation to my wife, Youn Hwa Jo and my son James Jin Kim.

Without their support and love, I would not have completed my doctoral program.

Thanks also to my father, Cholrang Kim, to my mother, Soodong Kim and to my sister,

Eunyoung Kim, who always encouraged and trusted me.

## **Abstract**

Recently, the warmth appeal in advertisements has drawn much attention. This study seeks to examine the widely used warm creative approaches in advertising and to examine unintended negative effects of the warmth appeal by applying two fundamental dimensions of social perceptions, warmth and competence, and a compensation effect between the two to the advertising and branding context. Therefore, the purpose of this study is to examine: 1) under what conditions a warmth appeal can attenuate perceived competence of a brand; 2) how the potential negative effects of a warmth appeal on brand competence affects overall brand evaluation (brand attitudes); and 3) a mechanism of these unintended negative effects of a warmth appeal on brand attitudes. To investigate the effects of the warmth advertising appeal, this study focuses on several specific variables: 1) advertising warmth, 2) perceptions of a product category, 3) perceived competence of a brand, and 4) attitude toward the advertised brand. Particularly, this study seeks to demonstrate an interaction effect on brand competence between the warmth appeal and the product category. To demonstrate the interaction effect, this study uses two different product categories: a high strength-related product category and a high gentleness-related product category. Based on this categorization, this study posits that the warmth advertising appeal can attenuate competence perceptions of a brand in the high strength-related product category, which would lead to a negative effect on brand attitude. On the other hand, this study proposes that warmth appeals could enhance competence perceptions of a brand in the high gentleness-related product category and it would result in more positive brand attitude. The problems of this study were examined

by considering consumers' categorization mental activity and inferential processes of warm advertisements against a product category of the advertised brand. In the high strength-related product category which is perceived as low warm, when the warmth appeal is used in an ad, a compensation effect would occur and perceived brand competence would be lowered, which will lead to decrease in brand attitude. On the other hand, in the high gentleness-related product category, when the warmth appeal is used, perceived brand competence will be enhanced, which would lead to increase in brand attitude. Additionally, considering that perceived brand competence has more impact on brand attitude, lowered brand competence would function as a mediating variable in relationship between the warmth appeal and brand attitude in a high strength-related product category. To test these hypotheses, this study employed a 2 (a warmth advertising appeal: presence vs. absence) x 2 (a product category based on the type of benefit: when gentleness-related attributes are highly valued vs. when strength-related attributes are highly valued) between-subjects factorial design. However, the results did not support the study hypotheses. Instead, ads with warmth appeals enhanced perceived brand competence and attitude toward the brand rather than they attenuated them. The Discussion Chapter explains why the experiment failed to support hypotheses by focusing on the methodological and theoretical issues in this study.

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# **CHAPTER 1**

## **INTRODUCTION**

The advertising appeal is a specific creative approach that is used in the advertisement, and its purpose is to present the message that an advertiser intends to deliver to consumers (Akbari, 2015; Laskey, Day, & Crask, 1989). The advertising appeal is related to consumers' motivation for using the advertised brand or product (Royne, Martinez, Oakley, & Fox, 2012; Schiffman & Kanuk, 2007). Thus, advertisers seek to use the appropriate appeal for an effective advertising creative and brand strategy because advertisements can create images or perceptions and personality of a brand, which can influence brand attitude and purchase intention (Aaker & Biel, 2013; Aaker, 1997; Keller, Parameswaran, & Jacob, 2011).

One of the advertising appeals that have drawn much attention in recent years is a warmth appeal. Previously many Super Bowl commercials used the warm and cozy creative approaches like the Budweiser's "Lost Dog," and Toyota's "Dad." Procter & Gamble's (P&G) recent commercial titled "Thank You, Mom" in the 2014 Olympic Games also used the warmth appeal by focusing on love and warm relationships between moms and kids. Ads using the warm and cozy approaches have been seen in various product categories such as retailer brands (e.g., Walmart's "Fight Hunger" commercial), car brands (e.g., Mazda's "a driver's life" and Subaru's "Father and Daughter" commercials) and even in banking services (e.g., Ally Bank). The media paid attention to this trend in the commercials focusing on warm relationship between dads and kids, and furthermore they named these ads "Dadvertising" (Bukszpan, 2016; Siegel, 2015).

The goal of these warm ads in general may be to build a relationship with their customers and to enhance consumers' attitudes toward brands by transferring positive feelings and images to brands. Another objective may be to imbue a positive, caring, and generous image with their brands to differentiate them from competitors. Based on the expectancy-value model of attitude, this approach focusing on specific aspects of a brand would lead to change in consumers' beliefs about the brands directly and in turn, result in change in attitudes toward the advertised brands positively (Mitchell and Olson, 1981; Yi, 1990).

Likewise, it is reasonable to believe a warmth approach or warmth appeal in advertising would positively influence consumers' perceptions of the advertised brand and enhance consumers' attitude toward the brand. Marketers think that characterizing brands as "warm" is one way to enhance connection with consumers (Fournier & Alvarez, 2012), and it will lead to positive brand attitudes.

The warmth appeal or warm creative approach is not a completely new topic in advertising research. Scholars have examined warmth in advertising and attempted to measure warmth in advertising as a type of viewers' response (Aaker & Stayman, 1990; Stayman, Aaker, & Bruzzone, 1989; Stayman & Aaker, 1993). However, the stream of literature on warmth in advertising has raised several issues. First, research on warmth in advertising has focused only on viewers' emotional response and has not focused on what element or feature in advertisements can create ad warmth. Second, literature on warmth in advertising was not based on any academic theory. Rather, researchers have investigated the warmth appeal or warmth in advertising as an ad-hoc creative approach

that is considered as an all-time good and positive approach for a brand without any strategic consideration. Advertisers may believe that an ad using a warmth appeal is always good, and it will result in positive effects on brand attitude and consumer-brand relationship. Thus, this study seeks to examine these issues to better understand how warm ads or warmth appeals can influence consumers' brand perceptions and attitude toward the brand based on the theoretical framework of social psychology theory, and to provide practical implications for using warmth appeals in advertisements more strategically.

### **Research Focus**

The current study seeks to examine the effects of widely used warm creative approaches in advertising by applying the theory of social perceptions, warmth and competence perceptions. According to Fiske et al. (2007), when we meet a person, we will assess how warm the person is (i.e. "Does she or he have good or ill intention toward me to help or hurt me?") and how competent the person is to carry out that intention (i.e. "Is he or she capable of carrying out that good or ill intention to me?"). Some scholars applied the two dimensions to a brand: warmth perceptions of a brand (brand warmth) and competence perceptions of a brand (brand competence) (Aaker and Vohs, 2010; Fournier & Alvarez, 2012; MacInnis, 2012). Their studies suggested that greater brand warmth or brand competence (or both) leads to greater brand attitudes, purchase intention and brand loyalty.

While employing warmth and competence dimensions and applying them to the advertising context, the current study also attempts to test potential unintended negative

effects of the warmth appeal from a perspective of a compensation effect between the two dimensions. An interesting phenomenon has been observed between warmth and competence, called a compensation effect (i.e. trade-off or negative relationship) between warmth and competence perceptions (Yzerbyt, Kervyn, & Judd, 2008). Warm behavior or warmth of a person enhances perceived warmth of the person, which is natural. However that warm behavior or warmth can attenuate perceived competence of the person under particular conditions. In the same vein, warmth perceptions of a brand created by the warmth appeal in an advertisement can generate negative perceptions of the brand in terms of competence, i.e. a warmth appeal can generate low perceived competence of a brand in certain conditions. In other words, consumers can make inferences about lower perceived competence of a brand when seeing the warmth appeal in the ad.

### **Research Purpose and Contribution**

Despite prevailing uses of warmth appeals in ads, previous branding research on the positive effects of brand warmth on brand attitudes, and prior social psychology research on the positive effects of people's warm behaviors on their impression, little research has been conducted to investigate the effects of a warmth appeal in the advertising and branding contexts. Moreover, there has been no research on the unintended effects of the warmth appeal on brand competence and brand attitudes. Therefore, the purpose of this study is to examine under what condition a warmth appeal can generate a negative effect on brand attitudes from a perspective of consumers' inferential processes in advertising research (Ford & Smith, 1987; Kervyn, Yzerbyt, &

Judd, 2011). Additionally, another purpose of this study is to explain why this negative effect occurs by using a compensation effect from social psychology and person perception research. In this study, the researcher intends to examine whether a warmth appeal can influence perceived competence of a brand indirectly, which is unrelated to the warmth appeal and not featured in the ad. Thus, this study examines: 1) under what conditions a warmth appeal can attenuate perceived competence of a brand; 2) how the potential negative effects of a warmth appeal on brand competence affects overall brand evaluation (brand attitudes); and 3) the theoretical mechanism of these unintended negative effects of a warmth appeal on brand attitudes.

To investigate the effects of the warmth advertising appeal, this study focuses on several specific variables: 1) advertising warmth (how warm consumers think the ad with the warmth appeal is, and how warm they feel for the ad), 2) perceived competence of the brand (how consumers perceive a brand in terms of competence perceptions), and 3) attitude toward the advertised brand.

In sum, the objective of this study is to test potential negative effects of the warmth appeal in an advertisement and to explain why these negative effects occur by examining the underlying mechanism through the compensation effect framework. Additionally, this study seeks to find why the compensation effect occurs in the advertising context, and how the product category of the brand can influence the compensation effect and attitude toward the brand. This study applies the Stereotyped Content Model, a compensation effect between warmth and competence, and system justification theory as theoretical frameworks to explain the effects of warmth appeal.



To the author's knowledge, this study is the first study that attempts to apply warmth and competence person perceptions and the compensation effect to the context of the advertising appeal and brand perceptions. In this regard, this study would contribute to advertising research and provide practical implications as follows. First of all, this study would provide a foundation for advertising research on effects of the warmth and competence appeal in the advertisements. There have been several studies on warmth and competence perceptions of a brand in consumer behavior domain. However, there has been little research on warmth and competence in the context of the advertising message or appeal. Thus, this study would extend warmth and competence in social psychology and branding research to the advertising research domain. Second, by using the stereotyped content model (SCM) and a compensation effect adapted from social psychology research, this study would provide why negative effects of the warmth appeal can emerge. In other words, this study aims to identify the underlying mechanism to explain the negative effects of the positive advertising appeal on brand evaluations and another perceptions of a brand.

To advertising and marketing practitioners, this study would offer several practical implications. First, if negative effects of the warmth appeal are demonstrated, and if we can know under what conditions such negative effects would occur, practitioners would be able to avoid those situations when developing and executing advertisements. Specifically, this study would offer why the warm ad should be used strategically and what conditions should be considered for advertisers to achieve their goals (e.g., to enhance positive brand perceptions/images and attitude toward the brand).

Additionally, this study would provide implications for brand management and advertising strategies. Since warmth and competence are fundamental dimensions of social judgements and perceptions, this study would help marketers and advertisers view an advertising creative strategy and brand strategy from a perspective of warmth and competence. This would be helpful because warmth and competence are composed of only two dimensions and they can offer concise and simple criteria and guidelines for advertisers to create advertising campaigns and to manage brands. Compared to other ad hoc perceptions of a brand which cannot be used universally, and to Aaker's (1997) brand personality perceptions composed of five different dimensions, warmth and competence would provide more intuitive and simple approaches to advertisers and marketers.

### **Dissertation Organization**

This dissertation is composed of eight chapters including this introduction chapter. Chapter 2 provides a theoretical background on warmth and competence perceptions. This chapter applies the warmth and competence dimensions in person perception to brands and advertisements. Chapter 3 reviews literature on consumers' inference making processes and relationship between warmth and competence, and a compensation effect from the perspective of consumers' inferential processes. In other words, in Chapter 3, a compensation effect in the advertising and branding contexts is suggested and explained focusing on why this occurs in processing advertisements. Chapter 4 presents general theory of categorization as a basis of the role of a product category serving as a standard of comparison. Specifically, the chapter explains how a

product category and consumers' perceptions of a product category can serve as a standard of comparison in consumers' information and inference processes. This literature review suggests that a product category can be a moderating variable that affect the relationship between the warmth appeal and brand competence perceptions. Chapter 5 presents the hypotheses of this study. Chapter 6 presents the method of this study and details the experiment procedure and the study's key variables to be manipulated and measured. Chapter 7 presents the results of the study, and Chapter 8 provides theoretical implications of the key findings from this study, and offers practical implications along with limitations and future research suggestions.

## CHAPTER 2

### LITERATURE REVIEW: CONCEPTUAL BACKGROUND ABOUT BRAND WARMTH AND COMPETENCE

This chapter discusses concepts of warmth and competence in person perception and its application to brands and advertising. Research on warmth and competence was originally from research on social perceptions of individuals and social groups in social psychology. Previous studies have suggested that warmth and competence are fundamental dimensions of social perceptions. In the meantime, just as a brand relationship (consumer's relationship with brands) is conceptualized based on a human relationship, consumer psychology scholars attempted to apply warmth and competence perceptions of individuals and social groups to consumers' perceptions of brands. Recent research on brand perceptions and brand relationship conceptualized warmth and competence perceptions of a brand based on person perception and brand relationship.

#### **Conceptual Background about Brand Warmth and Competence**

*Warmth and Competence Person Perception: The Stereotyped Content Model (SCM).* Prior to brand warmth and brand competence, a person perception concept of warmth (hereafter person warmth) and competence (hereafter person competence) is discussed at first. When we encounter a certain person, we tend to judge that person by means of some human traits such as honest, kind, sincere, trustworthy, intelligent, capable, skillful. A number of human traits are used when judging other people (Judge, Higgins, Thoresen, & Barrick, 1999). Research on warmth and competence in person perception suggests that those human traits to be used to perceive and judge others are

classified into two fundamental dimensions: warmth and competence (Cuddy, Fiske, & Glick, 2008; Fiske, Cuddy, & Glick, 2007). For example, if we meet a male person working at a large investment bank on Wall Street, you would probably perceive him as somewhat less kind, less warm, and not very generous, but as very intelligent, organized and capable. Many traits can be used to judge and evaluate him, but those traits can be classified into two fundamental dimensions: warmth and competence. The former traits such as kind, warm, and generous are associated with warmth perceptions, whereas the latter traits such as intelligent, organized and capable mean competence perceptions. Although it appears that there are numerous and various traits to judge a person, most of the human traits can be categorized and classified to two dimensions, which are fundamental dimensions of social perceptions, warmth and competence (Kervyn, Fiske, & Yzerbyt, 2013).

Prior social psychology research suggested that most of our everyday social judgment when meeting a person is predicted by assessment of these two questions: “What intentions does this person have toward me (is this person harmful or good to me)?” and “How capable is this person of carrying out this intention?” (Fiske et al., 2007). In other words, when people meet a person, they tend to judge that person by assessing his/her perceived intentions and abilities. Person warmth can answer the former question regarding the intentions (i.e. “Does this person have good intention?”), whereas person competence perception can answer the latter question regarding the capabilities to perform the intentions (i.e. “Can this person carry out his or her intention?”) (Cuddy, Fiske, & Glick, 2007).

The person warmth and competence dimensions have long been studied by social psychologists. Asch (1946) first found that some traits such as warm or cold express different impression and information of a person compared to other attributes describing one's capabilities such as intelligent, practical, skillful and industrious. The author gave participants various words describing a person, such as intelligent, skillful, industrious, determined, practical, cautious and warm or cold. Participants perceived a person that they knew in a similar way based on those traits, but they differently perceived the person based on "warm" or "cold." In other words, a trait of "warm" or "cold" was perceived as a different trait compared to the other traits. Thus, the author showed that "warm" or "cold" was a central trait to differently influence impression of a person.

Bakan's (1956) research showed a slightly different result from the person warmth and competence dimensions, but a compatible argument. He proposed the communion and agency perception, which are similar to warmth and competence. The communion and agency dimensions are two fundamental modalities of people in personality psychology, and they are linked to people's social motives (McAdams, Healy, & Krause, 1984). Rosenberg, Nelson and Vivekananthan (1968) also proposed two similar dimensions; socially good (akin to warmth) and intellectually good (akin to competence). They demonstrated that a number of human personality traits can be used to perceive a person, but those traits can be classified into two dimensions: socially good and intelligently good. In their study, the authors asked participants to judge and describe other people that they knew by using 64 human personality traits. Then, the researchers asked participants again to sort out those traits into similar groups of traits that the

participants thought appropriate and meaningful while asking them to judge a person that they knew. Specifically, participants were given all pairs of the sixty four personality traits, and asked to evaluate them with multidimensional scaling measures. Then, the researchers classified all traits and pairs of them based on participants' evaluations and sorting. The results revealed that those traits were grouped by similarity, and categorized into two dimensions: socially good and intelligently good.

Wojciszke (1994) also suggested slightly different but similar dimensions: a moral dimension instead of warmth. The author employed and categorized similar traits previously used in other research on human personality traits. However, the authors focused more on people's goals behind their behaviors when sorting out those traits. The results of their study identified two slightly different dimensions, the morality dimension and competence dimension. Their study interpreted previous research on warmth and competence from a different perspective by focusing on people's good/bad intention of their behaviors. As a result, a warmth dimension is associated with a person's good intentional goal for his or her behavior. A major question to judge that person based on behavioral goals in terms of warmth is whether this person has good or ill intention. On the other hand, the question to judge that person in terms of competence is whether that person is capable of carrying out the intentions mentioned earlier. Based on different levels of behavioral intentions and capabilities, the author suggested four different dimensions of perceptions: sinful success, sinful failure, virtuous success, and virtuous failure.

More recently, Abele and Wojciszke (2007) also demonstrated that the warmth and competence dimensions are still valid and appropriate in the person perception by using more various traits and characteristics from different domains. Similar to Rosenberg et al.'s (1968) approach, the authors employed 300 personality traits to test whether they can be classified to two dimensions. Their findings showed that they were mainly grouped into two dimensions, warmth and competence as expected. The authors also showed that warmth and competence dimensions explained almost 90% of the variance in 300 personality traits. They showed that warmth and competence dimensions are still valid in spite of different environments and situations like previous studies.

In addition to the person or individual perception domain, Fiske, Cuddy, Glick and Xu (2002) extended the warmth and competence dimensions to a social group perception domain. In their study, the authors selected twenty three different groups based on gender, religion, race, wealth, occupation. Then, they tested how those groups are perceived differently based on the two dimensions. They demonstrated that warmth and competence were two primary dimensions in people's social perceptions (i.e. perceptions of various social groups) like ones in prior research in person perception. These different groups were identified and grouped into four different dimensions through cluster analysis. For example, a high warmth and low competence dimension shows the elderly and the disabled, and a low warmth and low competence dimension holds poor people, welfare recipients, and homeless people. Additionally, a high warmth and low competence dimension shows the rich, Jews, and Asians, and a high warmth and high competence dimension holds the middle class people and Christians. Another



interesting result is that most of the social groups showed mixed levels of warmth and competence perceptions. That is, they are seen as warm but incompetent or competent but not warm, which are called ambivalent stereotypes of social groups (Fiske et al., 2002; Fiske, Xu, Cuddy, & Glick, 1999; Fiske, 2000). Finally, high perceived competition (i.e. the extent to which a social group (i.e. an out-group) competes with us (i.e. an in-group) in a society) was associated with a lack of perceived warmth, and high perceived social status also led to high perceived competence of social groups (Fiske et al., 2002). They explained these stereotyped perceptions about social groups by employing a model called the Stereotyped Content Model (SCM). Similar to person perception, the SCM hypothesizes two dimensions of social perceptions on social groups: warmth and competence (Fiske et al., 2002). The authors demonstrated that people have stereotypical perceptions of those social groups, and it is widely consistent across cultures and countries.

Cuddy, Fiske, and Glick (2007) extended the SCM to people's behavioral outcomes of warmth and competence perceptions of social groups by employing the BIAS map (Behaviors from Intergroup Affect and Stereotypes). They suggested that four dimensions on warmth and competence perceptions toward different social groups generated four unique patterns of people's behavioral intentions. In their study, warmth had positive correlations with active behaviors. Specifically, high warmth perceptions of social groups tended to elicit active facilitation in behavior toward the social groups (i.e. helping), while low warmth perceptions lead to eliciting active harm (i.e. attacking or harassing). On the other hand, competence had positive correlations with passive

behaviors. High competence perceptions tended to elicit passive facilitation (i.e. obligatory association) while low competence elicited passive harm (i.e. ignoring). These unique behavioral responses based on warmth and competence perceptions resulted in different types of behaviors, called discrimination toward outgroups (Fiske et al., 2007).

In sum, a number of studies have shown that warmth and competence are universal dimensions of social perceptions toward people and social groups. Additionally, it is generally agreed that warmth perception refers to social perceptions of a person or a social group that is kind, generous, honest, benevolent, friendly, caring, benefiting others, and moral, whereas competence perception refers to social perceptions such as capable, efficient, intelligent, and organized (Abele & Wojciszke, 2007; Cuddy, Fiske, & Glick, 2008). Finally, these two dimensions of perceptions about individuals or social groups can predict the observers' behavioral intentions and responses.

### **Warmth and Competence Perceptions of a Brand (Brand Warmth and Competence)**

Consumer psychology and marketing scholars attempted to apply person warmth and competence to a brand. They suggested that a brand can be perceived through the same lens that was used in the person perception and the SCM. There are two streams of research that justify the application of person warmth and competence to a brand: 1) anthropomorphization of a brand and 2) a brand as a relational partner with consumers. The following sections discuss these two streams.

*Anthropomorphization of a Brand as a Basis of Brand Warmth and Competence.* A brand is considered a humanlike and personified being (Aaker, 1997;

Epley, Waytz, & Cacioppo, 2007). People tend to personify an object that they encounter, and anthropomorphism or personification of a brand is quite common in consumer behavior (Aaker & Fournier, 1995). The attribution of human traits or human characteristics to a brand in consumers' brand choice and purchase has been widely observed in the markets and studied in marketing research (Aaker & Fournier, 1995; Aaker, 1997). Aaker (1997) suggested that a brand has personality like a human. She conceptualized brand personality and created brand personality measures based on human personality traits adjusted from Big Five personality traits. She defined brand personality as "the set of human characteristics associated with a brand" (Aaker, 1997).

Other brand measures used in marketing research also connote humanlike traits. Brand reputation, brand attachment, brand engagement and brand love are evaluated assuming a brand is a person or a living entity that is perceived in human terms (Park, MacInnis, Priester, Eisingerich, & Iacobucci, 2010). These humanlike traits can provide a differentiating point to a brand from other brands (Plummer, 1985). Thus, one of the important missions of marketers or brand managers is to imbue their brands with positive and unique perceptions or associations, which is called brand image or brand concept management (Park, Jaworski, & MacInnis, 1986). Consumers frequently choose and purchase a particular brand due to these unique characteristics because a brand can express one's personality (i.e. a brand can express who the owner or user is) (Fennis & Pruyn, 2007). Thus, consumers often purchase a brand whose personality is congruent with their actual and ideal self (self-concept) (Aaker, 1999). For example, many consumers purchase Apple's products because they embody creativeness, innovation, and

freedom rather than the generic and functional product attributes of other competitors. Warmth and competence person perceptions are not an exception. Aaker, Vohs, and Mogilner (2010) suggested that person warmth and competence can be applied to a brand because consumers tend to see a brand as a personified entity. A brand possesses traits like a human, and consumers perceive those traits when they judge and evaluate a brand. Thus, a brand can be perceived and judged through the concept of person warmth and competence adapted from the SCM.

***Consumer-Brand Relationship as a Basis of Brand Warmth and Competence.***

Consumer-brand relationship can also justify application of person warmth and competence to a brand. Consumers tend to relate to a brand just as they build relationships with other people (Fournier, 1998a; Kervyn, Chan, Malone, Korpusik, & Ybarra, 2014; Veloutsou, 2007). Fournier's seminal work (1998) suggested that people's relationship metaphor is applicable to consumers' brand choice and purchase. The author explored similar types of relationship between consumers and brands to those among people. For example, a brand that reminds a divorced woman of a former husband is called an "enmity" brand because her former husband frequently consumed that brand. Thus, a brand is considered an anthropomorphized entity that consumers can often regard as a person or even a friend. This relationship results in a positive and loyal relationship with consumers called consumer-brand relationship that affects consumers' purchase intentions and brand reputation significantly (Esch, Langner, Schmitt, & Geus, 2006; Veloutsou & Moutinho, 2009).

Based on this relationship metaphor between consumers and brands, Kervyn, Fiske, and Malone (2012) applied the SCM to brands and conceptualized warmth and competence perceptions of a brand (hereafter brand warmth and brand competence respectively) from a perspective of consumer-brand relationship. They focused on a relational aspect of a brand with consumers. The authors viewed brand warmth and competence as consumers' social perceptions of a brand in terms of person warmth and competence. They proposed that a brand is an intentional agent that interacts with consumers by introducing the Brands as Intentional Agents Framework (BIAF). The authors suggested the way that consumers perceive brands is the same as how individuals perceive other people. Keller (2012) agreed that consumers tend to form relationships with brands, and this relationship is a starting point leading to brand warmth and competence as an indicator or consequence of that relationship. He also suggested that when a human character (e.g., a CEO or a founder of a company/brand) is involved in a brand (e.g., Richard Branson in Virgin), application of person warmth perceptions to warmth perceptions of the brand will be more applicable from a perspective of the consumer-brand relationship approach. Relationship between consumers and brands is a basis of brand warmth and competence, and it justifies application of person warmth perception to brand warmth and competence perceptions (Malone & Fiske, 2013).

In sum, brand warmth and competence are conceptualized based on person warmth and competence. Thus, warmth perceptions of a brand (i.e. brand warmth) is conceptualized as a brand that has good intentions toward consumers and a brand that is perceived as sincere, kind, and generous with good will. On the other hand, competence

perceptions of a brand (i.e. brand competence) is conceptualized as a brand that shows capability of carrying out good or ill intentions toward consumers, and that is perceived as capable, effective, efficient and intelligent.

### **Application of Warmth and Competence to Advertising**

*Conceptualization of warmth and competence advertising appeal.* Based on prior research on person perception, and brand warmth and competence, a warmth advertising appeal in the present study is defined as an advertisement containing elements that can express and deliver an idea, theme, content or information associated with a brand's good intention or goodwill through certain advertising claims and creative approaches such as love, friendliness, being sociable, morality, caring, and communion, whereas a competence appeal is defined as an advertisement using elements that can express a brand's capabilities, effectiveness, efficiency, industriousness and intelligence. More importantly, conceptualization of warm advertising appeals, that is the focus of this study, is also supported by research on warmth feelings in advertising even though warmth in this stream of research focused on emotional outcomes or responses of recipients after viewing advertisements (Aaker, Stayman, & Hagerty, 1986). Aaker et al. (1986) defined warmth in advertising as "a positive, mild, volatile emotion involving physiological arousal and precipitated by experiencing directly or vicariously a love, family, or friendship relationship."

In addition to the focus on consumers' emotional responses after seeing ads rather than advertising elements or claims eliciting warmth, the conceptualization of warmth advertising appeals in this study is also justified and supported by other research in

advertising. Coke, Batson, and McDavis (1978) argued that warmth is one of the emotional responses associated with empathy. Research on viewers' responses to television commercials suggested that there are four major perceptual dimensions in advertising viewers' responses, and warmth is one of them, which is common in television commercials. Aaker and Bruzzone (1981) attempted to exemplify advertising message features eliciting warm feelings by using a sample of prime time television commercials and conducting cluster analysis of viewers' responses. They suggested that warmth in advertising (i.e. warm feelings elicited by an ad) is one that uses and shows "sentimental," "feel-good-about-yourself," or "family-kids/friends-feelings" appeals or claims. Another classic advertising study mentioned creative approaches showing gentleness, tenderness, something soothing and lovely (Wells, Leavitt, & McConville, 1971). Additionally, another study in advertising suggested examples of warmth appeals such as affectionate couples, warm relationships with other people, mom-child interactions, or vacation settings (Schlinger, 1979).

One important and different point, when applying person warmth and competence to advertising messages or appeals, is that a low warmth appeal does not mean a coldness appeal that is perceived as negative because the purpose of advertising a brand is basically to promote the brand to consumers with positive impressions or images of the brand, thus promoting something negative about a brand is not possible in advertising. In a similar way, a low competence message does not mean an incompetence appeal in advertising. In other words, warmth and competence messages in the advertising context are not a bipolar concepts, but are separate unipolar concepts:

continuum concepts with a low through a high level of warmth (competence) in the advertising appeals.

Thus, based on prior research on person perception, and brand warmth and competence, a warmth advertising appeal in the present study is defined as an advertisement containing advertising elements that can express and deliver an idea, theme, content or information associated with a brand's good intention or goodwill by using certain appeals such as friendliness, being sociable, morality, caring, and communion, whereas a competence message is defined as a content or information relevant to a brand's capabilities, effectiveness, efficiency, industriousness and intelligence (Aaker, Stayman, & Hagerty, 1986).

*Direct effect of warmth appeals on the advertised brand.* Advertising elements or features constituting advertising appeals influence viewers' cognitive processing, i.e. what consumers think after viewing the ad (Li & Miniard, 2006). For example, credible endorsers can enhance credibility and believability of the ad message, and attractive celebrity can generate positive and favorable thoughts toward the ad and the brand. Goldsmith, Lafferty, and Newell (2000) demonstrated that trust appeal in an advertisement is more likely to generate thoughts about trustworthiness of the advertised brand compared to an ad without trust appeals (i.e. a control advertisement). Li and Miniard (2006) explained this direct effect by employing a priming effect. When viewers are exposed to a certain trait term (e.g., kindness) that is evoked by a particular advertising appeal, a "construct designated by the term" is activated in consumers' minds. This process leads viewers to perceive and categorize the advertised brand as the



activated construct (i.e. a brand perceived as trustworthy). Their study showed that a trust appeal generated favorable attitude toward the ad and the advertised brand, and also increased likelihood that viewers perceive the brand as being trustworthy. The same process may apply to warmth appeals in an advertisement by enhancing warmth perceptions of the advertised brand (i.e. brand warmth). Additionally, since brand warmth has been considered as positive perceptions of a brand, warmth advertising appeals could arguably generate favorable attitudes toward the ad and the advertised brand, which can also enhance purchase intention of the brand.

As for warmth and competence messages, a couple of studies used warmth and competence as advertising messages or appeals focusing on direct effects of these appeals. Zawisza and Pittard (2015) suggested that warmth and competence messages differently influenced the attitude toward the brand in various contexts. They tested the effects of warmth and competence messages in low involvement and high involvement product categories. They demonstrated that the warmth message was more effective for low-involving products in terms of purchase intention and brand attitude, whereas the competence message was more effective in high-involving products.

Some studies used the warmth message or appeal as one type of emotional appeal in advertising. Aaker, Fournier, and Brasel (2004) used the warmth appeal, such as a cute dog and a cute font in text, for their stimuli (fictitious advertisements) in order to manipulate brand sincerity, one facet in the brand personality construct (Aaker, 1997). The brand sincerity facet or dimension includes some items to measure brand warmth. In their study, participants were exposed to either the warmth appeal or the message

associated with “excitedness” of a brand. The result revealed that the warmth appeal was more likely to enhance a sincerity personality trait of a brand (i.e. brand sincerity) than the excitedness appeal did. Although their research was not conducted from a perspective of brand warmth, it is plausible that warmth advertising appeal can enhance the level of warmth (sincerity) perception of the advertised brand.

Kervyn et al. (2014) also used the warmth message in their experiments to test whether the warmth message influenced consumers’ attitude toward the brand in a disaster situation. The results of their study revealed that when a brand used the low warmth message to explain a cause of a local environment disaster, participants were more likely to show negative and harsh judgments toward the brand compared to when the high warmth message was used. However, the high warmth message was less effective compared to the high competence message in the post-disaster cleanup communication to the public. Although their experiments were conducted in the context of public relations rather than advertising, they suggested that the warmth or competence message differently influenced people’s attitude depending on the timing of the communication, either during the disaster or post-disaster.

In sum, although warmth advertising appeals use various advertising elements in visuals and text, they can create warmth perceptions of a brand directly like other advertising appeals or claims do. Thus, warmth perceptions of a brand can be applied to the advertising context through warmth advertising appeals that can perceive a brand as warm in a direct way.

In the meantime, although an ad intended to enhance a particular perception, the

ad sometimes can influence another perception negatively in an unintended way. For example, when an ad for a car brand uses a relevant advertising appeal (e.g., a visual showing many passengers sitting in a car) to make consumers perceive the car as a large-sized car, the ad often influences another perceptions of the brand (e.g. low gas mileage of the car) unintentionally. Likewise, the current study explores the possibility of unintended effects of warmth advertising appeals like other advertising studies on unintended consequence of an advertising message (Kopf, Torres, & Enomoto, 2011). To do so, relationship between warmth and competence should be discussed further because this relationship can predict unintended effects of warmth advertising appeals on the advertised brand if the two fundamental dimensions are related to each other in any way. The next chapter discusses the relationship between warmth and competence in general and explores possibility of potential indirect effects of warmth advertising appeals in the lens of consumers' inference making processes about unfeatured information based on given information. The purpose of the next chapter is to build up the foundation and basis of relationship between warmth appeals and other perceptions of a brand (particularly competence perceptions of a brand).

## **CHAPTER 3**

### **LITERATURE REVIEW: INFERENCE MAKING AND THE RELATIONSHIP BETWEEN WARMTH AND COMPETENCE**

The previous chapter discussed concepts of warmth and competence in person perception and its application to advertising and brands. Chapter 3 discusses a compensation effect between warmth and competence in an advertising context. To do so, this study views the compensation effect in the lens of consumers' inference making processes. Based on this view, a compensation effect means a compensatory or trade-off relationship between brand warmth created by warmth appeals in an ad, and inferred brand competence by the ad. In other words, when consumers see warmth appeals in an ad, they perceive an advertised brand as warm through a direct priming effect of warmth appeals that was discussed in the previous chapter. However, consumers also make inferences about competence perceptions of the brand based on given information or an information cue even though there is no direct appeal or claim about brand competence. By applying a compensation effect in person perception, this study posits that brand competence is attenuated when brand warmth is enhanced through warmth advertising appeals under a particular product category condition. Since a compensation effect in an advertising context is a new research subject introduced in this study, there was no prior study on this topic. In spite of little literature, a compensation effect in advertising can be understood through indirect effects of advertising messages. This means that warmth advertising appeals can lead to indirect effects on brand competence. The following sections discuss consumers' inference making processes in general. Next, based on the

stereotyped perceptions of social groups, the relationships between warmth and competence are discussed among various social groups. The negative relationship between two dimensions in some social groups under particular conditions is a basis of a compensation effect between warmth and competence that this study focuses on. Then, it is discussed how a compensation effect might occur in the advertising context.

### **Consumers' Inferential Processes**

***Background.*** Consumers often make judgements of attributes of a brand based on given information to purchase a product or determine consideration sets of brands for future purchase. Advertising is one of the important information sources for consumers' purchase decision. Although advertising provides consumers with useful information to help them make a decision, consumers sometimes need more information about what they want to buy. However, marketers or advertisers cannot always provide all necessary information to satisfy every target segment of consumers. In this case, when consumers think that given information from an ad or a package (i.e. any form of mass communication) is not enough for their judgments, they often infer and judge some unobservable or unfeatured information based on what is explicitly given and provided (e.g., advertising claims that are explicitly given). This process of reasoning is a typical example of consumers' inference (Stayman & Kardes, 1992).

#### Definition

Inference is defined as “the act or process of reaching a conclusion about something from known facts or evidence” (Webster, 2006). In research on person perception and impression formation, inference is referred to as inferring people's traits

or characteristics based on people's behaviors or behavioral cues even though those people that are evaluated neither have nor show any explicit intention to form such impression (Fiske & Macrae, 2012). There is not a consistent definition of inference in academic research, but Fishbein and Ajzen (1975) attempted to define inference by focusing on processing and reasoning by going beyond observable information. The authors defined inference as "the belief that goes beyond directly observable events." Wyer and Carlston (1979) suggested that when inferring, people attempt to construct meaning by going beyond explicitly given information. Cherniak, Nisbett, and Ross (1983) focused on a result of an act of inferring by explaining inference as an outcome of people's reasoning process. Fiske and Taylor (2013) focused on more active aspects of people's information process. They defined inference as the process of collecting and combining various sources and types of information that are given for the purpose of making judgment of a target object. Thus, this study defines inference as a belief that goes beyond explicitly given information and is developed based on people's mental activity.

***Research on inferential processes in consumer behavior.*** People's inferential process has been a common research topic in consumer behavior. One of the most common sub-topics is inferences based on product price information. Many studies have investigated the relationship between mentioned price information of a product and unknown quality of the product. Price information of a product tends to be an important signal of product quality. Huber and McCann (1982) demonstrated the importance of consumers' inferences in their decision making and product choice when some

information (i.e. price) was omitted. In their study, they demonstrated that if the price of a beer brand was omitted, the value of its taste quality decreased. Additionally, omitting price information attenuated consumers' purchase intention of the brand and perceived (i.e. inferred) quality of the product. In other words, consumers tend to perceive high price as high quality of a product. This inference making is facilitated by a situation of prompt inference making (Huber & McCann, 1982), which means a situation that people's inference is made in a hurry and spontaneously.

Johnson and Levin (1985) also showed the importance of consumers' inferences about missing information in the stimuli containing different prices, various features and different warranty information for a TV set. They suggested that more amount of missing information in the stimuli led to less favorable evaluations of a product. Specifically, large amounts of missing information increased consumers' perceived uncertainty of overall product quality, and also resulted in less favorable evaluation of a product and less purchase intention. Additionally, the authors showed that the effect of missing information and consumers' inference depended on perceived correlation between missing and featured information. If missing and featured attributes were perceived to be positively associated with each other, the effect of the missing attribute and consumers' inference on consumers' satisfaction was greater compared to when two attributes were negatively related to each other. The authors demonstrated that perceived correlation between given and missing attributes determines the extent to which consumers' inferences are impactful on consumers' evaluation of a product. This correlation between missing and featured information is discussed in the next section.

Similarly, Ford and Smith (1987) suggested that consumers made inferences about unmentioned attributes by showing that highly correlated attributes were more likely to influence consumers' inference making processes. In other words, if consumers perceived one attribute as highly correlated with another attribute that was unmentioned and unknown (i.e. "missing information" in their study), consumers were more likely to make inferences about missing information and to evaluate it based on the correlated attribute that was explicitly given. Their study also demonstrated that highly correlated attributes of a product showed more consistent results in consumers' inferences compared to when low correlated attributes did. If consumers perceived that two attributes were not very correlated, they were less likely to infer the unmentioned information about a brand, and more likely to evaluate a missing attribute negatively. Additionally, the authors showed that if consumers were directly asked to evaluate the missing attribute or information, they were more likely to make inferences about the missing information compared to when being asked to evaluate a brand or product overall, not the missing information directly and specifically. In other words, if missing information was salient to consumers at the moment of evaluation, consumers were more likely to actively make inferences about that missing information.

***Inference making about missing information influenced by contextual information.*** Research has shown that inference making is often influenced by contextual information that appeared not to be directly correlated with a target attribute. Broniarczyk and Alba (1994) demonstrated that consumers make inferences about quality of a product based on price of a product like previous studies, but they added one interesting variable:



perceived amount of advertising. In their study, participants made inferences about higher quality of a product based on higher price of a product. However, when information about a large amount of advertising for a brand was given to participants, they were less likely to make inferences about high quality of a product any more based on the high price. While high price can be a signal of high quality in general, if a company advertises a brand to a large extent, consumers tend to infer that a company's money and efforts is less likely to be spent to improve quality of its manufactured product. The author showed that consumers tend to overestimate the relationship between price and quality of a product if no information is given except price information. The implication of this study is that contextual information or a context that is not explicitly related to some attributes of a product can influence the effect of unfeatured information and consumers' inference making processes. In other words, although consumers' inferences about a missing attribute of a product rely on a featured attribute that is related to the missing attribute, some contextual information can decrease or increase the effects of consumers' inferences.

In line with this idea, brand or store names are important contextual information when consumers make inference about unfeatured attributes. Dodds, Monroe, and Grewal (1991) investigated the effects of a brand name and a store name, and price information on perceived quality of the product. They used various brand names and store names in terms of familiarity and favorableness. That is, they manipulated a brand name and a store name into three different levels: high vs. low vs. absent familiarity and favorableness of a brand name and a store name. The dependent variables were perceived

quality of a brand and purchase intention of two brands (stereo headphones and calculators). Their findings revealed that high price was more likely to result in high quality of a product, which is the same finding as most prior studies on inferences about high quality based on high price (i.e. price-quality correlations). However, an interesting finding was that if a brand and store name were familiar to participants, they did not show positive relationships between price and high quality any more. In other words, they made inferences about product quality based on brand name information, not price information, if a brand was perceived as highly familiar and favorable by consumers. This means that consumers' inferences about unfeatured information (i.e. product quality in their study) can be made as long as other information or a context was not given. They called price information an important cue to infer product quality as long as price information was the only given information. Additionally, in their study, if price was too high, consumers began to doubt whether it was an appropriate price for a product; thus they came to depend more on a brand name and a store name rather than price information to make inferences about the quality of a brand. Considering that brand name and store name information is consumers' prior knowledge about a brand and a store, their study emphasized the importance of consumers' previous knowledge about a brand in consumers' inference making processes in addition to price information itself.

*Inference making about missing information based on unrelated attributes.* On the contrary to the positive relationship between featured and inferred attributes, other studies have shown that consumers' inference making about unobservable attributes are observed even though featured and unobservable attributes are not related to each other

or even negatively related to each other. Chernev and Carpenter (2001) suggested that consumers make inferences about unobservable attributes and evaluate them based on featured information in the stimuli, but sometimes there was trade-off relationship between observable and unobservable attributes. They suggested that consumers who had more knowledge about market efficiencies (i.e. how competitive the market is) in a product category tend to believe that if one attribute is perceived as apparently superior, another unobservable attribute in the stimuli is perceived as inferior compared to those who had less knowledge about market efficiencies. For example, when consumers acknowledge that a market for a laptop computer category is very efficient (i.e. very competitive), if Brand A shows far faster CPU speed than Brand B does, and two brands are equally priced, the memory ability of Brand A (an unobservable attribute) is perceived as inferior to that of Brand B. They called this negative relationship between two attributes (i.e. CPU speed and memory) compensatory inferences. They explained this negative relationship by employing consumers' knowledge or intuition of market efficiency in the given product category. The author argued that consumers tend to believe that when a market is very competitive, corporations can manufacture products in a very efficient way, thus it is impossible to make all attributes superior while keeping price same.

Similarly, Luchs et al. (2010) also suggested that consumers make inferences about unfeatured information from the stimuli and the inferred information showed a negative relationship with featured attributes. The authors showed that sustainability of a product (e.g., an eco-friendly product attribute) could lead to negative evaluation of the

product for a certain product category. They suggested that when strength-related attributes are more valued for a product category, sustainability of the product attenuated consumers' preference of the product. However, when gentleness-related attributes were more valued for a product, sustainability of the product enhanced consumers' evaluations of the products. Hence, they demonstrated that there is a negative relationship between product preference and sustainability of the product for a certain product category even though the relationship between the two has been mostly positive by marketers (i.e. sustainability of a product is always beneficial for consumers' preference of a product). They explained this phenomenon by using a lay theory about the negative relationship between one's ethicality and capability. That is, an unethical person is perceived as more capable of his or her work compared to an ethical person. In American culture, ethicality of a person is often translated to a weak and incompetent personality trait. Likewise, the authors argued that consumers believe that a sustainable brand or product implies weak and poor capability of a manufacturer, which can elicit perceptions of inferior quality of a product just as an ethical person appears less capable of his or her work, whereas an unethical person appears authoritative, efficient and powerful.

In sum, consumers' inference making processes involves making judgments and evaluation of unfeatured information based on featured or given information/attributes, and this can influence overall evaluation of a brand whether unfeatured or featured information is related to each other positively or negatively. One important implication of the previous studies was that inferences could be made based on uncorrelated attributes and also influenced by contextual information. The next section extends these consumers'

inferential processes based on uncorrelated attributes and contextual information to the advertising context and warmth and competence in advertising.

### **Inferential Processes in the Advertising Context**

*Indirect Effects of the Advertising Messages on Brand Perceptions and Evaluations.* Consumers form impressions or perceptions of an advertised brand based on featured or observable information in an advertisement (more specifically advertising message features, advertising elements, or advertising contents, etc.). Thus, marketers or advertisers usually attempt to create and build positive images or perceptions of an advertised brand by communicating positive characteristics and features of a brand via advertising (Ang & Lim, 2006). However, like consumers' inference making in consumer behavior, inference is also important in the context of advertising. In the advertising domain, consumers' inference making have been studied in the lens of indirect effects of advertising messages. Consumers tend to make inferences about missing or unobservable information about an advertised brand or product based on given information (Huber & McCann, 1982). That is, consumers infer some attributes of an advertised brand by going beyond information given in an advertisement (Kardes, 1988).

For example, if consumers see an ad focusing on extremely thin size of a laptop computer, they could make inferences about relatively small capacity of the storage in the laptop or a certain type of a storage equipped in the laptop computer (e.g., small capacity of a stable storage disk rather than large capacity of a hard drive). Another example may be a car advertisement. If an advertisement emphasizes a large size of a car (e.g., a large SUV vehicle), consumers may make inferences about high gas consumption of the car

and even negative influence on the environment. This inference making can be activated or strengthened by a cue in an advertisement and a context around the advertisement.

Yi (1990) suggested that ad processing included not only beliefs about the attributes featured in the ad, but also beliefs about non-featured attributes. The author suggested that consumers shaped their beliefs about the attributes that were not shown in the ad through viewers' inferential processes, meaning that consumers can make inferences about the unfeatured attributes based on limited information that they can see in the stimuli. He showed that consumers made inferences about low repair costs of a car when high dependability of a car was mentioned in the ad. The author also demonstrated that a visual cue (e.g., showing a person who is receiving a bill in his study) facilitated consumers' inferences about unmentioned features or attributes of an advertised brand. He showed that dependability of a car was associated with repair costs of a car, thus he suggested that interdependence of two attributes was an important facilitator of consumers' inferences about unmentioned attributes. However, if two attributes are not related to each other, inference about unmentioned attributes is less likely to be made compared to when attributes are related to each other, which is a similar result to research on consumers' inference in marketing.

Yi (1990) also demonstrated that consumers' inferences based on featured information in an advertisement have a significant impact on brand evaluations and purchase intentions. According to this view, indirect effects of advertising messages as consumers' inferential processes were more impactful than direct effects of advertising messages (i.e. explicit messages) because consumers become more involved in the

advertising messages while making inferences about unfeatured information in the ad. Inferences in advertising can be considered as consumers' voluntary information processes and as advertisers' indirect persuasion attempts, thus consumers' counterarguments against the advertiser's persuasion attempt may be attenuated.

Yi (1993) extended his research on the influence of an informational cue on the role of contextual information in consumers' inferences in advertising. He tested the effects of contextual information on interpretation of ambiguous information in an advertisement. In the experiment, car advertisements focusing on different sizes were used because the size of a car could be understood and translated in a different way. In his study, a large size of a car was translated to more safety of a car (i.e. positive relationship), but also translated to low fuel economy (i.e. negative relationship). In other words, this stimulus ad contained ambiguous information. Before showing this ambiguous ad to participants in the experiment, the author showed a news article about either oil industry or safety of a flight as contextual information to prime participants. As expected, consumers who saw the news article about oil industry were more likely to perceive an advertised car as high consumption of gas and low gas mileage, whereas those who saw the news article about flight safety, were more likely to perceive the car as a safer car. His study showed that contextual information before seeing ambiguous information in an ad can influence consumers' attitudes toward the advertised brand. His study also suggested that consumers who had little knowledge about other products in a same category, were more likely to use the news articles as important contextual information. Additionally, the author showed the indirect effects of contextual

information on brand evaluations and demonstrated that the extent of those effects depended on amount of knowledge that consumers had about products in the category.

Smith (1991) attempted to specify the effects of an advertising message into visual and verbal contents. He investigated the effects of visual and verbal contents of advertising on consumers' inferences about unfeatured product attributes. The author suggested that consumers made inferences about unfeatured information and unknown attributes of the advertised product based on the pictures and text claims in an advertisement. Although both visual and verbal contents affected consumers' inferences, the strength of inference making was greater for verbal contents than that was for visual contents. Additionally, consumers' inferences were influenced by perceived covariation between missing attributes of a product and featured attributes in an advertisement. For example, "strong" of a fence product was perceived to covariate with "rarely need replacement." Also, "fast delivery" of a pizza restaurant was perceived to covariate with "delivered hot" or "reliable." The author explained consumers' inferences through an ad by using previous psycholinguistic research, suggesting that people's inference making processes are more likely to emerge when they strive to use their general knowledge associated with the advertising messages. The implication of her study is that the study showed a potential influence of visual contents of an ad on consumers' inferences about unfeatured information of a product because most of previous studies focused on influence of verbal contents only.

Another research stream on indirect effects of advertising messages is literature on the effects of implicit messages or metaphorical messages on consumers' inferences.



Just as consumers make inferences about unobservable information in an advertisement, they frequently translate metaphorical messages to make inferences about perceptions of a brand when they are given indirect metaphorical advertising contents (McQuarrie & Phillips, 2005). The authors suggested that consumers became more “receptive to multiple positive inferences about the advertised brand” when they were exposed to and tried to comprehend metaphorical claims. In addition, when the metaphorical claims are visual contents (i.e. pictures), consumers are more likely to make inferences about positive perceptions of an advertised brand, compared to when verbal contents are only provided. Metaphoric contents, particularly visual metaphor as a way of indirect messages in advertising are more likely to result in positive effects on brand perceptions and evaluations than direct advertising messages do.

Puzakova, Kwak, and Rocereto (2013) suggested that some advertising appeals can result in positive brand personality traits, but also generate negative brand personality traits. They tested whether an advertising claim can generate brand sincerity, one trait out of five brand personality traits (sincerity, excitement, competence, sophistication, ruggedness) suggested by Aaker (1997), but it could also generate low level of a competence trait as kind of counter-reaction. Their study showed an important implication to marketers because indirect effects of an advertising claim have received much attention as in branding and advertising research. According to their study, an individual difference in thinking about oneself (the extent to which consumers are ego-centric in their decision making) can result in negative effects of an advertising claim whose purpose is to enhance one brand personality trait on another brand personality

trait. In other words, an advertising claim can generate and enhance some perceptions of a brand, but this can also influence another perceptions of a brand negatively, which shows a possible compensatory relationship between certain types of brand perceptions. Their study hints on a main focus of this study, a compensation effect or compensatory relationship between warmth and competence perceptions of a brand in the context of advertising. In other words, an advertising message influences some perceptions of a brand positively, but it could affect other perceptions negatively. Additionally, contextual information in an ad can influence perceptions of a brand and could affect the effects of an advertising message on brand perceptions.

### **Halo Effect as Indirect Effects of Advertising Messages**

*Background.* The focus of this study is on a compensation effect between warmth and competence. More specifically, this study explores how warmth perceptions of a brand that warmth advertising appeals enhance, can influence competence perceptions of a brand unintentionally and indirectly. In other words, this study posits that consumers make inferences about different levels of brand competence based on brand warmth information in an advertisement and based on other contextual information in the ad. In the meantime, the previous sections investigated consumers' inference making processes in the consumer behavior and advertising domains. Thus, the inferred competence perceptions of a brand can be justified and explained by literature on non-featured attributes and formation of inferred beliefs in the advertising context. In other words, consumers can make inferences about unknown traits and attributes of the advertised brands based on given information in an ad. The question is whether and when the

direction of the inferred trait will correspond to the provided product attribute (a halo effect) and when it will run counter to the provided attribute (a compensation effect).

A halo effect is one example of these indirect effects of the ad and a positive effect of an advertising claim: when a certain claim or message enhances perceptions of a brand directly, that message could also generate other perceptions of the brand that are not relevant to that message but reflect the same direction as the primary perception communicated in the message. A compensation effect is another example in which individuals infer one attribute from information about another attribute, but the relationship between the two attributes is inversely rather than positively correlated. In this regard, the following section discusses a halo effect which has been mostly considered as common in social psychology and consumer psychology followed by a compensation effect between warmth and competence that contrasts with a halo effect.

### ***The Halo Effect***

#### Definition

The halo effect is defined as people's behavioral tendency that overall perceptions of a person (or an object) influences their evaluations of other attributes of the person or object in a consistent way (Asch, 1946; Nisbett & Wilson, 1977). For example, prior research in social psychology has suggested that people who are evaluated as attractive are more likely to be perceived as more sociable, and intelligent compared to people who are evaluated as unattractive (Feingold, 1992). In a reverse way, a halo effect means the tendency that when people think of a person as inferior in general, this feeling tends to "color the judgment of the separate qualities" (Kelley, 1950). In his study, Kelley (1950)

demonstrated that students (participants) who were given positive information about their new instructor evaluated that instructor more positively for unknown or ungiven traits of the instructor, compared to those who were not informed (i.e. a control group).

Specifically, participants evaluated the new instructor as more sociable, more considerate to others, and more humane when the new instructor was described as a warm and industrious person in a vignette.

According to literature on impression formation, positive impression on one dimension or facet tends to cause impression on other dimensions to be evaluated positively as well. In other words, if a person is perceived to be attractive, that person can be also evaluated to be kinder and even more intelligent than a less attractive person (Chernev & Blair, 2015). People often infer ambiguous traits or unknown attributes based on good impression which is not directly related to the unknown attributes. This tendency is called a spillover effect and also a halo effect, which is a type of confirmation bias proposed by Thorndike (Ahluwalia, Unnava, & Burnkrant, 2001; Balzer & Sulsky, 1992; Kervyn, Judd, & Yzerbyt, 2009).

A number of studies in consumer social psychology have applied the halo effect to consumer behavior and marketing. These studies are understood from a perspective of consumers' inferences because the halo effect suggests that consumers tend to evaluate other traits or attributes of a person or an object based on overall evaluation or impression of it by making inferences. In other words, the halo effect is similar to consumers' inference making about unknown information based on known information.

Boatwright, Kalra, and Zhang (2008) divided the halo effect into two different meanings in the context of consumer behavior. The first halo effect is defined as “the interdimensional similarity halo” which means that consumers make inferences about missing information and unknown attributes of a product based on given information. Cooper (1981) called this type of a halo effect the “conceptual similarity” halo. The second halo effect is described as a “general impression halo effect” by suggesting that a consumer’s overall evaluation of a product can influence evaluation of every aspect of product performance. They demonstrated that when consumers were exposed to information of multiple attributes of a product in an advertisement, they were more likely to show a stronger halo effect on evaluation of the advertised product, compared to when they were exposed to a single attribute of a product in an ad. The authors argued that consumers’ behavior based on the halo effect is rational behavior to avoid estimated risk of their consumption behavior. Additionally, the authors also showed an attribute that was not associated with a certain attribute can influence evaluation of product performance.

In a different context, Han (1989) demonstrated that country image (i.e. image of a country in which a product is made) influences consumers’ evaluations of a product. In his experiment, the author showed that positive image of a country of origin led to positive evaluation of attributes of a brand and attitude toward a brand. Ahluwalia, Burnkrant, and Unnava (2000) extended the halo effect to information about a brand in publicity. They called the effect of negative publicity on a brand a spillover effect instead of the halo effect. In their study, the spillover effect refers to “the extent to which a

message influences beliefs related to attributes that are not contained in the message.”

The authors demonstrated that negative information about a brand in publicity were more likely to influence unmentioned attributes of a product when participants were not familiar with a brand. On the other hand, when participants are familiar with a brand, the spillover effect of negative publicity about product evaluation did not occur. Another interesting finding in their study is that positive information is less likely to influence attributes of a product compared to when negative information does. However, if consumers like a brand in the same situation, positive information about a brand is more likely to influence evaluation of unmentioned attributes of a brand compared to when consumers do not like that brand. Their study showed a moderating role of brand familiarity and valence of information on consumers’ evaluations of unknown attributes of a brand.

Chernev and Blair (2015) extended the halo effect to the context of corporate social responsibility (CSR). They demonstrated that corporations’ goodwill represented in their CSR activities influenced performance of a product. In their experiments, the authors showed that participants who were informed about the company’s CSR activities evaluated the taste of a product (wine in their experiments) more positively than those in a control condition. Additionally, they attempted to demonstrate what factors can strengthen the halo effect in that situation. In the subsequent experiment, they demonstrated that if motivation of a company for CSR is social interest (i.e. when it is moral for a company to donate), consumers are more likely to evaluate performance of a product positively compared to when motivation of a company is self-interest (i.e. when

there is a selfish reason to donate for the purpose of increasing sales). That is, the effects of CSR activities on performance of a product was stronger when consumers were informed about benevolent motivation of CSR compared to when they were informed about self-interested motivation. The extent to which a halo effect of CSR influence perceived quality of a product depends on the “moral undertone” of the company.

In sum, many studies have examined the halo effect of one attribute of a brand on overall evaluation of a brand or evaluation of other attributes. However, although a halo effect has been observed in many cases, studies on warmth and competence perceptions have showed a negative relationship between two dimensions and even a compensation effect when one dimension is salient under a certain condition. The following section discusses the negative relationship and compensation effect between warmth and competence which is contrasting to the halo effect.

### **Compensation Effect between Warmth and Competence**

*Relationship between Warmth and Competence.* Previous studies on person perception have suggested that there is a mixed relationship between warmth and competence. Rosenberg et al. (1968) found that the social good–bad (warmth) and the intellectual good–bad dimensions (competence) were positively related. In their experiments, a target person that was perceived positively on one dimension was also more likely to be perceived positively on the other dimension. This is a typical example of a halo effect that Thorndike (1920) suggested.

However, some studies suggested that there is an orthogonal relationship between warmth and competence. Fiske et al. (2002) suggested that people perceive various social

groups differently on two dimensions of warmth and competence. In-groups and groups to which people aspire (i.e. aspired groups) are perceived as both warm and competent in general. Some groups such as elderly people and housewives are perceived as warm and less competent, whereas other groups that people envy such as Jews or Asians are perceived as less warm but competent. Black people and homeless people are perceived as less warm and less competent, which is called a derogated social group (Fiske et al., 2007; Kervyn et al., 2013). Likewise, other research on person perception has also suggested that two dimensions of warmth and competence are negatively correlated to each other (Cuddy, Fiske, & Glick, 2004; Cuddy et al., 2008; Yzerbyt, Kervyn, & Judd, 2008).

Some people belonging to a social group can often be perceived differently due to a small difference, a cue describing them. Glick and Fiske (2001) demonstrated that there are two different stereotypical perceptions of women: women who are warm and incompetent and who are less warm and competent. The former is a traditional perception of women perceived as caring and warm like a mother, whereas the latter is women who are competent and less warm like a feminist or a professional woman. They suggested that there is a negatively correlated relationship between two dimensions for women. Cuddy et al. (2004) extended this study by demonstrating a working woman who does not have a child is perceived as more competent and less warm compared to a working woman who has a child. On the contrary, a working woman with a child is perceived as warmer and less competent compared to a working woman without a child.



Yzerbyt, Provost, and Corneille (2005) also suggested the two dimensions tend to be negatively related when comparing an in-group with an out-group. As an example, the authors tested a negative relationship on both dimensions between the Belgian (in-group) and the French (out-group) by using a sample of the Belgian. Results revealed that the Belgian were perceived as warmer than the French by the Belgian, but the Belgian were perceived as less competent than the French. Although the other dimension, warmth is not known and not given to participants in their study, participants evaluated the other ambiguous dimension, warmth based on one given dimension, competence. They called this negative relationship a compensation effect between warmth and competence. A compensation effect between two dimensions means that if a level of one dimension (e.g., competence) is perceived high, a level of the other dimension (e.g., warmth) tends to be perceived low.

Interestingly, a compensation effect has been observed only in warmth and competence social perceptions. Other than warmth and competence, a compensation effect is not consistently observed (Holoien & Fiske, 2013). Rather, a halo effect is observed in general for other social perceptions. In other words, people balance their perceptions of others for warmth and competence perceptions only. Yzerbyt et al. (2008) used other perceptions than warmth and competence to test whether a compensation effect is observed in other perceptual dimensions. The authors tested whether a compensation effect occurred among other irrelevant social perceptions to warmth or competence by using perceived healthiness of a person and people's political interests. As a result, no compensation effect was observed in other perceptions except warmth and

competence. This means that a compensation effect between warmth and competence is a unique relational effect in people's social perception (Holoien & Fiske, 2013).

In sum, there are mixed results in previous studies regarding the relationship between warmth and competence, but a compensation effect is uniquely observed between warmth and competence perceptions (Yzerbyt et al., 2008).

### **Boundary Conditions for a Compensation Effect**

Although a halo effect has been common in research on person perception and consumer behavior, warmth and competence often shows a compensatory relationship and a compensation effect in people's inference processes. This section discusses a compensation effect between warmth and competence. Specifically, it focuses on theoretical background of a compensation effect and the conditions under which a compensation effect is more likely to occur.

*System Justification Theory, Stereotype and a Compensation Effect.* System justification theory supports a compensatory relationship between warmth and competence. System justification theory suggests that people tend to defend and justify the status quo in society (Kay & Jost, 2003). One aspect of system justification theory is compensatory stereotypes which lead to further justification of the status quo. Compensatory stereotypes tend to easily justify the inequality of the social system by cancelling out the negative sides of the stereotypes. For example, people tend to think "poor but happy" or "rich but miserable" when they perceive others (Jost & Kay, 2005; Kay & Jost, 2003). Likewise, people may think that a person who is mean (i.e. cold or not warm) is smarter and more intelligent (i.e., more competent) than a kind and nice person

is (Kervyn et al., 2009). (Yzerbyt, Kervyn, and Judd (2008) tested a compensation effect between warmth and competence person perception by employing social justification theory. They suggested that people tend to hold both positive and negative perceptions of other people in general. This means that people balance their opinions about other people to justify present social structure because equality or equilibrium in society means stability and safety that are a positive social state and pursued by people living in society (Jost & Banaji, 1994).

Some scholars attempted to explain both positive and negative perceptions of others by using cultural stereotypes. Jost and Kay (2005) found that female participants in their study were more likely to support an unjust social system when they saw statements describing benevolent sexism than when they read non-stereotypical favorable stereotypes about women. Thus, they interpreted these findings by using people's existing cultural stereotypes of other people, suggesting that system justification behaviors are transferred from their cultural stereotypes. However, there has been little research on why a compensation effect occurs between warmth and competence exactly except some studies that attempted to explain it by using social justification theory. Additionally, there has been few studies on why compensation occurs only between warmth and competence, not between other traits. More systematic theoretical explanations should be necessary, but the SCM implies that warmth and competence is a fundamental dimension of people's social perception, which has been developed and established in an evolutionary process, thus the compensation effect occurs as an

important tactic for human's survival (Cuddy, Fiske, & Glick, 2007; Fiske, Cuddy, Glick, & Xu, 2002; Fiske, 2015).

***Boundary Conditions for a Compensation Effect.*** Although a compensation effect has been observed in literature on person perception research in the sections above, a compensation does not always occur. Under what conditions or situations does a compensation effect occur? Based on research on a compensation effect, there are several particular conditions that make a compensation effect more likely to occur. First, this compensatory relation occurs in a comparative context (Kervyn et al., 2010). A comparative context means that two persons or groups showing a high and a low level of one dimension respectively are compared at the same time. For example, when Person A who is perceived warmer than Person B based on their behaviors, if respondents are asked to compare the two persons and to infer the competence perception of each person, Person B is likely to be perceived as more competent than Person A. They also demonstrated that only one person is shown to participants and participants were asked about making inference about the other dimension of that person in the pilot test, a halo effect tends to occur (i.e. a warm person was perceived as more competent compared to a cold person).

Second, a compensation effect occurs when information about one dimension is given and information about the other dimension is inferred. In other words, information about one of the dimensions should be unknown or ambiguous. Judd et al. (2005) demonstrated that a compensation effect occurred by using two fictitious groups. In their experiment, they described one group as being high on one dimension (e.g., high in

warmth perception) for participants, whereas they described the other group as being low in the same dimension (e.g., low in warmth perception). Then, participants were asked to make inference about the other dimension (e.g., competence perception) for which information was not provided. The result showed that the high-warmth group was perceived less competent than the low-warmth group by participants, whereas the high-competence group was perceived less warm than the low-competence group. In other words, participants made inference about the other dimension even though they were given information about one of the dimensions only.

Kervyn et al. (2009) also demonstrated a compensation effect by using fictitious groups. In their study, participants were given two fictitious groups that were low or high in the warmth or competence dimension. Instead of asking about perception of people used in the Judd et al.'s (2005) study, Kervyn et al. (2009) asked which questions participants were more likely to ask out of the questions that were either high or low in the other unmanipulated dimension to the fictitious groups. The result showed that participants were more likely to choose questions that were low in the unmanipulated dimension (e.g., low competence questions) for group members with a high level in one dimension (e.g., high warmth group). In other words, they were more likely to ask low competence questions for the high warmth group and low warmth questions for the high competence group, which means that a compensation effect also occurs “in behavioral confirmation” (Holooin and Fiske, 2013).

Lastly, a target person (or a target group) should be little known and unfamiliar. This means that a target person should not show any stereotypical perception or schema

about that particular target. In the example of Person A and B above, these two persons were unknown and unfamiliar ones in the experiment (Yzerbyt, Provost, and Corneille, 2005). In other words, there should be little information to evaluate the target person or group other than warmth or competence perception for occurrence of a compensation effect.

### **A Compensation Effect in the Advertising and Branding Context**

*The effect of the advertising message on brand perception.* In studies on a compensation effect in person perception, people's behaviors or behavioral cues were given to participants to infer warmth or competence person perception. Those behaviors and behavioral cues were independent variables in those studies, which are similar to advertising messages or appeals in the advertising context because the advertising message or appeals can influence and even determine how viewers perceive the advertised brand. Additionally, perceptions of a person are an outcome variable in the experimental studies in person perception research, which is similar to brand perceptions (e.g., brand warmth and competence) as an outcome variable in advertising and branding research. Thus, just as people's behaviors or behavioral cues in terms of warmth and competence led to warmth and competence person perception, warmth advertising appeals can lead to warmth perceptions of the advertised brand. This can show a possibility that a compensation effect can be applied to the relationship between the warmth advertising appeals and competence perceptions of the advertised brand. The possibility of a compensation effect between the advertising appeal and brand perceptions

can be also supported by unintended or indirect effect of the advertising message on perception of the advertised brand, which were discussed earlier.

In the meantime, another question about a compensation effect in advertising may arise: what if consumers see one ad only in a non-comparative context instead of a comparative context (i.e. instead of seeing two ads for two brands simultaneously)? Additionally, given that there are different contexts and situations in consumers' process of an advertising message, is there any context or contextual information that should be considered? One important context is a product category of a brand because consumers have previous knowledge about products in the same category and this existing knowledge frequently influences consumers' perceptions of a brand in addition to the advertising message (Keller, 1993; Sujan & Dekleva, 1987). Thus, the following section discusses how a compensation effect will likely occur in a non-comparative advertising context.

### **A Compensation Effect in an Implicit Comparative Context**

*Product Category and Warmth Appeal Advertisements.* As noted earlier, the important boundary conditions for a compensation effect are a comparative context and little information about the target person or a brand. However, every brand or product belongs to a particular product category. Perceptions or information about a product category should be considered when a compensation effect is applied to an advertising context because consumers use the product category as contextual information when perceiving and evaluating brands, and the product category can be an important context (Ang & Lim, 2006; Keller, 1993; Sujan & Dekleva, 1987). As discussed earlier, if given

information is not enough, consumers' inferences about missing information can be influenced by contextual information (Broniarczyk & Alba, 1994; Dodds et al., 1991). Keller (2003) also suggested that perceptions of a product category can serve as some standard when consumers judge a brand, particularly when the brand is unfamiliar and unknown. In other words, perceptions of a product category can influence perceptions of a brand if information about that brand is unknown or ambiguous (Hoch and Deighton, 1989).

Thus, a product category might serve as an important factor and contextual information to influence a compensation effect in the advertising context. The next chapter discusses how a product category can play an important role in a compensation effect and how it functions as a standard of comparison which is similar to a comparative context even though two ads or brands are not directly compared, and only one ad for a brand is given to consumers.



## **CHAPTER 4**

### **LITERATURE REVIEW: PRODUCT CATEGORY AS A STANDARD OF COMPARISON**

As discussed in the previous chapter, the important boundary conditions for a compensation effect between warm and competent perceptions of individuals or social groups are a comparative context (i.e. comparing Person A with Person B at the same time) and lack of information about a target object. If it is not a comparative context, a compensation effect is less likely to occur. In the meantime, applying this to advertising and branding contexts, there is an important context to be considered: a product category.

In a non-comparative context, i.e. when only one ad is shown, it does not mean that there is no reference information to use to infer missing information because every brand belongs to a certain product category, and the product category usually affects consumers' perceptions of a brand (Sujan & Bettman, 1989). This means that associations, perceptions or information about a product category should be considered as a source of consumers' inferences including the possibility of a compensation effect applied to advertising and branding contexts. Particularly a product category could be important in a non-comparative context that is common in consumer behavior because consumers use the product category as a reference when perceiving and evaluating brands (Bhat & Reddy, 2001). Thus, a product category should be considered as an important context and a standard of comparison that consumers use in their judgments of a brand.

This chapter discusses the role of a product category in emergence of a compensation effect in the advertising context. More specifically, this study posits that a

product category (or perceptions of a product category) can facilitate the possibility that a compensation effect occurs or further increases the degree to which a compensation effect occurs when a warm ad is shown to consumers. The following sections discuss general theory of a product category (i.e. categorization) first, and how a product category can influence consumers' inference processes. Next, it is discussed how a product category influences the processing of advertising messages and perceptions of the advertised brand. Overall, the goal of this chapter is to provide insights on how a product category as contextual information and a standard of comparison can influence warmth and competence perceptions of a brand when a warm advertisement is shown to consumers.

### **Categorization and Product Category**

*Categorization as knowledge and memory based mental activity.* Categorization is important to advertisers and marketers. Positioning their brands into a particular product category is one of their important missions because a product category is helpful to communicate benefits and usages of the product to consumers, and to appeal to their needs and wants (Ratneshwar, Pechmann, & Shocker, 1996). Thus, positioning a product in a particular category is similar to marketing activities of appealing to particular needs and wants of meaningful target segments. A concept of categorization has been studied in research on person perception, impression formation, and stereotypes of social groups. Based on the literature, people tend to categorize other people based on the social groups to which they belong (Fiske, 1982; Wyer, Bodenhausen, & Srull, 1984). Thus,

individuals can develop particular expectations (i.e. expected perceptions) from others based on the parent category to which people belong (Fiske, 1982).

This process is applicable to a context of social experience; for example, when people perceive social objects (e.g. a psychologist), they have some expectations from them based on the category that they belong to (e.g. kind and empathetic traits) (Brambilla, Sacchi, Castellini, & Riva, 2010). Those expectations from a parent category can be used to form an impression of a person within the category and even to make inferences about traits and characteristics of that person (Wyer et al., 1984).

The knowledge about a parent category is composed of stereotyped knowledge or simply stereotypes (Fiske, 2000). The stereotypes of social groups or categories influence people's impression and perception formation (Cuddy, Fiske, & Glick, 2008). Based on Cuddy, Fiske, and Glick's study (2004), although two women are career women working in the same company, a woman with a kid is perceived as warmer than the other woman without a kid. In contrast, the former woman is perceived as less competent than the latter woman. The authors explained this difference in impression of two women by using stereotypes of women and social groups. Stereotypes of social groups such as gender, occupation and social contexts are made by existing knowledge about parent categories that target objects belong to (i.e. product categories of brands in the consumer domain).

Likewise, in a consumer domain, consumers recognize and understand incoming information about a brand based on knowledge about a product category of the brand. The basic assumption of product categorization is that products can be "grouped at varying levels of specificity" based on previous knowledge about the products in the

same category (Sujan & Dekleva, 1987). For example, some cars can be grouped into sport utility vehicles (SUVs), whereas others are into family minivans. This grouping activity is performed based on consumers' previous knowledge and experience of using similar products, companies' previous marketing communications, consumers' product usage situations, their goals, and identity of other users (Kardes, Posavac, & Cronley, 2004). Thus, consumers' categorization in consumer behavior generally is defined as a mental process of how a product or product information is classified by identifying similarities and differences between other products and by comparing a target product with one or more categories and products in those categories (Loken, Barsalou, & Joiner, 2008).

#### **Categorization: Information and Inference Process by Comparing**

##### *The effects of categorization on information processing and inference process.*

Categorization is not only about simple category membership, but also about consumers' mental activity and information processing that help make inferences about a brand (Fennis & Stroebe, 2010). The authors suggested that when consumers are exposed to incoming information, they process and understand that information based on previous knowledge about the product category first. For example, when consumers see an iPad, it can be classified as a tablet computer with a small LCD screen. In terms of a brand, it is perceived as a symbol of tech-savviness and creativeness, and as one of the innovative Apple mobile products with similar but different functions and attributes to those of laptop computers. In other words, consumers make inference about new features of the product based on their previous knowledge.

In an advertising context, when consumers see information about a brand from an ad, their categorization activity can occur, meaning that consumers interpret given information in the ad based on their previous knowledge about a product category in their memory (Kardes, 1988; Stayman & Kardes, 1992). This knowledge is usually learned and memorized by consumers through different forms of communications such as advertisements and various types of previous experiences of using the products. For example, consumers often learn knowledge about a product category based on advertisements of multiple products in the same product category. If we have seen various advertisements about different brands of family minivans, we have knowledge about what minivans are about, what they are for and in what situation they can be more useful (e.g., a situation that multiple members of a family should travel together).

Furthermore, consumers often actively make inferences about unknown or missing information based on their memory or experience about other products in the same category (Loken et al., 2008; Lynch & Srull, 1982). In this regard, consumers' inference process has been an important topic in research on categorization. Loken et al. (2008) explained consumer categorization in terms of consumers' inferential processing. They suggested that consumers make inferences about attributes of a new product based on "category beliefs and affect" toward a product category that a new product belongs to. Those category beliefs and affect are similar to existing perceptions of a product category that this study focuses on, which can influence information and perceptions of a brand, particularly unfeatured information of a brand. The authors called this consumer categorization "similarity-based inferences." That is, consumers understand a new

product by comparing the new product with a product category of it, and identifying similarities between the two. The authors suggested that perceptions and beliefs of a product category of a new product was more likely to influence judgements of the new product when information of a new product was not enough and ambiguous. They also suggested that if a product was similar to other products in a same product category, consumers were more likely to accept a new product (brand extension) (Klink & Smith, 2001; Loken et al., 2008). This view on categorization implies that categorization in the consumer domain is based on comparison activity.

*Categorization as comparative assessment.* In addition to inference process based on knowledge and memory, categorization is fundamentally based on a “comparative assessment of features of the category and incoming information” (Fennis & Stroebe, 2010). More specifically, categorization is associated with people’s comparison activity between a target object and knowledge about a parent category of the target (Ross & Creyer, 1992). Based on research on person perception and impression formation, when people meet a strange and unknown person, they compare that target person with a social group that the person belongs to (Brambilla et al., 2010). For example, when we meet a person working as a high school teacher, we think the person is more sincere, honest and warmer than a car dealer even though we do not have any information about two people other than their occupations (i.e. contextual information).

Likewise, categorization is applied to introduction of a new product to the marketplace. When consumers see a new product, they process new information about the brand by comparing it with a product category of the brand to find similarities and

differences. Loken et al. (2008) suggested that the success of a new product depends on the degree of perceived congruence between a new product and a parent brand in the case that a parent brand is positively evaluated. In this case, when consumers see a new product, they seek to identify similarities and differences between the new product and other products in the same category, which is analogous to a comparison activity.

In the advertising context, when consumers see information about a brand from an advertisement, they think about attributes of the brand based on given information in the ad. Additionally, if they wonder about other attributes that are not featured in the ad, they would make inferences about those unmentioned attributes of the brand based on their knowledge about the product category of the brand. This process is similar to comparison activity between a target brand and a product category. For example, if consumers see some attributes of a product in an advertisement, but they wonder about another attribute of the product which is not mentioned in the ad, they would infer the unfeatured information based on knowledge about other products in the same product category, and they often compare featured information in the ad with their knowledge and perceptions of a product category to infer unknown attributes of a brand (Keller, 2003).

In sum, consumers have previous knowledge or existing perceptions of a product category of a brand, and this knowledge is used to perceive and evaluate the brand. Perceptions of a product category are based on consumers' knowledge and memory about other products in the same category and these category perceptions can be used to infer attributes of a target object by comparing the target (e.g., a brand) with a parent category

(e.g., a product category). Consumers' categorization is a memory-based mental activity, and it is a fundamental cognitive activity of consumers (Mervis & Rosch, 1981).

In the meantime, another question may arise: how can a product category influence consumers' perceptions of a brand by comparison? The following section discusses two main effects of categorization focusing on comparison: assimilation and contrast

### **Effects of Categorization: Assimilation and Contrast**

As discussed earlier, categorization is consumers' inferential process based on their previous knowledge about a category, meaning that it is a memory-based mental activity. Additionally, categorization is consumers' comparison activity between a target brand and a product category. In the meantime, categorization is not limited to consumers' decision making on what category a brand is included in. Research on categorization suggests that categorization can influence consumers' judgment and evaluation of a target brand. For example, one stream of literature on effects of categorization proposes that there are two different effects of categorization on consumers' judgment: assimilation and contrast.

Assimilation means that attributes of a target object are translated into more similar ones to and classified as more similar to a category of the target than they actually are (Srull & Wyer, 1989). Assimilation occurs when those attributes are perceived as congruent with those of a parent category. For example, if you want to buy a family car and see an advertisement representing a vehicle in which smiling family members are sitting, you would believe that the car in the ad is classified to a family car similar to a



family minivan. Assimilation is likely to emerge when information about a category is made salient and evaluation of the parent category of the target is needed. For example, if you are asked to evaluate the oil industry (i.e. category) just after reading a story of the 2010 British Petroleum (BP) oil spill, you would evaluate the oil industry negatively compared to when you did not read the story of the BP oil spill. In this case, your evaluation assimilated into evaluation of a specific case or object, the BP brand.

On the other hand, a contrast effect means that attributes of a target object are translated into different ones from and classified as more distinctive from a category of the target than they actually are (Herr, 1989; Srull & Wyer, 1989). In other words, when a contrast effect occurs, evaluation of a target is contrasted with a parent category (a context), and adjusted from the context. In this case, a parent category given at the time of evaluation becomes a reference for consumers' comparison activity. Thus, when contrast emerges, a parent category or context becomes a standard of comparison (Stapel & Winkielman, 1998). For example, if you are asked to rate an oil company brand, Chevron just after reading a story of the 2010 BP oil spill, you would be likely to evaluate Chevron more positively compared to when you do not read the story of the BP. In this case, evaluation of the Chevron brand is adjusted from a context, negative perceptions of the BP in the same category. Even though Chevron committed a mistake and did something harmful to consumers in the past, the BP served as a standard of comparison at the moment because the BP's oil spill was relatively recent and salient to consumers. Thus, consumers would rate Chevron comparatively and more positively than they actually do by comparing it with the BP.

The comparison relevance model proposed by Stapel & Winkielman (1998) supported this role of a parent category as a standard of comparison in the case of the contrast effect. Based on the model, a category of a target can be used as a standard of comparison. A contrast effect occurs when the parent category (i.e. a context) is relevant to the target, and distinctive from a target during recipients' information process. In other words, if a parent category is quite distinctive from but relevant to a target object, the category can serve as a standard of comparison (Stapel & Winkielman, 1998).

### **The Influence of a Product Category in Advertising Research**

#### ***The Effects of a Product Category on Brand Perceptions in Persuasion of Ads.***

Advertising research has also studied the effects of consumers' categorization and perceptions of a product category on persuasion of the advertising messages. Sujan and Dekleva (1987) suggested that perceptions of a product category influence consumers' perceptions of a brand if there is little information about the brand to use when asked to infer perceptions of that brand. If a brand in an advertisement is new (i.e. unknown), consumers make inferences about unfeatured attributes of the brand based on some contexts in the ad, of which a product category is one important context (Sujan & Dekleva, 1987). Keller (2003) also suggested that perceptions of a product category serve as some standard when consumers perceive and judge a brand, particularly when a brand is new or there is little information about a brand. His study suggested that existing information of a product category in consumers' minds is a part of brand knowledge and it influences brand preferences (Keller, 2003). In other words, perceptions of a product

category tend to influence perceptions of a brand if information about that brand is unknown or ambiguous (Hoch and Deighton, 1989).

The effect of perceptions of different product categories can also interact with the effect of an advertising message on perceptions of a brand. As one example, Ang and Lim (2006) suggested that brand personality perceptions of an unfamiliar brand (i.e. sophistication, excitement, competency, sincerity, and ruggedness) are initially inferred by a product category. However, the influence of product category on brand personality perception was moderated by the use of a metaphoric executional strategy. In particular, Ang and Lim (2006) used two different product categories: a symbolic and a utilitarian product category. Symbolic products are generally associated with sophistication and excitement perceptions while utilitarian products are more associated with sincerity and competency perceptions. However, the use of a metaphoric ad enhanced perceived sophistication and excitement of a brand within a utilitarian product category while further dampening the perceived sincerity and competence of a brand within a symbolic category. This effect of the ad message style was explained by the deviation of a metaphoric ad from our common sense and convention in our culture, which in turn tends to dilute sincerity and competency perceptions (McQuarrie & Mick, 1999; Ward & Gaidis, 1990). The approach of their study is similar to previous studies on the unintended effects of the advertising message, thus it provides an implication to the current study.

Another study that demonstrated differential effects of an ad message by product category examined the effect on attitude toward a brand. Day and Stafford (1997)

categorized products into utilitarian and hedonic (or experiential) products in terms of different benefits gained from the products. In general, for utilitarian products, consumers wish to achieve a goal relevant to performance of a product and functional attributes (e.g., getting work done fast by using the latest Dell PC), whereas regarding hedonic products, they wish to achieve positive emotional experience and “socio-emotional” benefits such as warmhearted feelings, happiness and pleasantness (e.g., happiness from drinking Coca-Cola). Day and Stafford (1997) demonstrated that the advertising message containing superior functional and performance-related attributes was more effective for utilitarian products than they were for hedonic products.

***The Effects of a Product Category on Brand Perceptions in the Warmth and Competence Advertising Messages.*** Geuens, De Pelsmacker, and Fasseur (2011) examined the effects of non-emotional and emotional advertising messages (e.g., an ad using a warm and fuzzy approach) on attitude toward the ad and brand in different product category contexts. They demonstrated that the ad using the warmth message (e.g., a baby wrapping a towel) as an emotional advertising message generated more positive attitude toward the brand in a hedonic product category than it did in a utilitarian product category. From this research, it may be surmised that for utilitarian products, product functions and attributes of the product are relevant for evaluation of the product (Geuens et al., 2011). Thus, consumers focused more on rational information and attributes of the product in the advertising message when they evaluated the brand and made a purchase decision for the utilitarian product. However, for the hedonic product

category, emotional responses such as pleasantness and happiness that are compatible with the warmth message are more effective for consumers' attitude and their behavior.

More directly focusing on warmth and competence in the advertising messages, Zawisza and Pittard (2015) examined that the effects of the warmth and competence advertising messages depend on what product category a target brand belongs to. The author demonstrated that a warmth advertising message is more beneficial for a low involvement product category (e.g., a toothpaste) than a high involvement product category (e.g., a cell phone). Additionally, the warmth advertising message was more effective on purchase intention for consumers whose level of anxiety of purchase decision is low than those whose level is high. Their study was the first study to attempt to examine the effects of warmth and competence-framed advertising messages on consumers' brand evaluations and purchase intentions by product category.

Chattalas and Takada (2013) examined the effects of warmth and competence perceptions of a country where a product is made on consumers' expectations of product attributes. The authors demonstrated that if consumers perceived a country as highly warm, they were more likely to expect hedonic attributes of a product made in that country, whereas if they perceive a country as highly competent, they were more likely to expect utilitarian attributes of a product made in that country. Thus, if a country made an incongruent product with their expectation in terms of warmth and competence, their evaluations of a product made in that country tend to be more negative compared to when a product made is congruent with consumers' warmth and competence expectations. Although their study did not deal with a product category directly, warmth and

competence perceptions of a country is analogous to perceptions of a product category because products made in a particular country (e.g., Germany) hold specific stereotypes influenced by country of origin (i.e. accurate and precise), which is similar to the effects of product category perceptions on a product or brand in the category.

In a similar vein, Luchs, Naylor, Irwin, and Raghunathan (2010) suggested that the degree to which morality of a brand enhances brand preference and purchase intention depended on the type of benefit consumers most value for a product category. In their study, they demonstrated that consumers associated morality of a brand with gentleness-related attributes of a product and valued those attributes. On the other hand, amorality was positively associated with strength, capability and success (Gini, 2006). The positive relationship between morality and gentleness and negative relationship between morality and strength was described as “transferred from the social judgments to the context of product judgments.” Additionally, the authors suggested that products can be perceived as either moral or strong, but cannot be perceived as both moral and strong by consumers. Thus, the study categorized products into two dichotomous categories based on the type of benefit that consumers value more: 1) when gentleness-related attributes of products (e.g., caring and friendly) are most valued by consumers; and 2) when strength-related attributes of products (e.g., strong and effective) are valued. In their experimental studies, they demonstrated that when gentleness-related attributes are valued more (e.g., a baby shampoo product), morality of a brand enhances brand preferences. On the other hand, when strength-related attributes are valued more (e.g., a

car shampoo product), the morality of a brand attenuates brand preferences which results in unfavorable brand attitudes.

Thus, consumers have some expectations (expected perceptions) from a product category, and they use them when processing the advertising messages as a standard of comparison (Ang & Lim, 2006; Keller, 2003; Sujan & Dekleva, 1987). Congruence or incongruence between an advertising message and expectation from a product category influences persuasion of a message and evaluation of the advertised brand (Zawisza & Pittard, 2015). A further illustration of this point is a study conducted by Luchs et al. (2010). Their study categorized products according to the type of benefit consumers wanted to receive from products. They identified in what product category sustainability perceptions of a brand is beneficial or less beneficial on perceived product quality. In particular, it was presumed that gentleness-related attributes are applicable to a product category for which warmth-related attributes such as caring and friendly are most valued, and products with these attributes may be perceived as highly warm. Conversely, strength-related attributes such as strong and effective were similar to a product category for which competence-related attributes were valued, and products with these attributes may be perceived as highly competent. Thus, brand competence would be important for such a product category when consumers purchased the product.

## **CHAPTER 5**

### **HYPOTHESES**

The purpose of this study is to test whether a compensation effect occurs in a non-comparative (or implicit comparative) condition when warmth advertising appeals are used in a high need for strength product category. To do so, this study seeks to address two issues. One issue focuses on application of a person perception's compensation effect to the advertising and branding contexts. That is, this study tests whether perceived brand competence inferred by warmth appeals in a high need for strength product category, is lower than perceived brand competence inferred in a high need for gentleness product category. Thus, this study examines the effects of two different product categories as important contexts on the compensation effect.

The second issue focuses on how the compensation effect influences brand attitude while examining the mediating role of inferred brand competence between warmth appeals and brand attitude. This chapter applies previously discussed literature to generate hypotheses regarding these issues.

#### **Warmth and Competence in Branding and Advertising Contexts**

Previous studies on brand warmth and competence suggest that person warmth and competence can be applied to brands (Fiske, Malone, & Kervyn, 2012; Fournier & Alvarez, 2012; Kervyn, Fiske, & Malone, 2012). Brand warmth and brand competence were conceptualized based on prior research on person warmth and competence, and consumer-brand relationship (Aaker et al., 2010; Bennett & Hill, 2012). Thus, brand



warmth and brand competence are considered as two fundamental dimensions in consumers' brand perceptions.

Additionally, previous studies on branding and advertising suggested that consumers perceive and judge a brand based on advertising messages and impression cues similar to individuals' behavior or behavioral cues in person perception and impression formation (Aaker, Fournier, Brasel, & Brasel, 2004; Zawisza & Cinnirella, 2010; Zawisza & Pittard, 2015). Studies on priming effects in advertising also suggested that advertising appeals or claims can manipulate perceptions of an advertised brand (Li & Miniard, 2006). In other words, advertising appeals (e.g., the warmth appeal) can imbue a brand with certain perceptions or associations (e.g., brand warmth) that advertisers intend through advertising.

### **Interaction Effect of Product Category and Warmth Appeal on Brand Competence**

Previous studies on consumers' inference making suggest that consumers make inferences about unfeatured information based on given information (Chernev & Carpenter, 2001; Cherniak et al., 1983; Yi, 1990a, 1990b). Scholars examining indirect effects of advertising messages have studied this topic in a similar way because consumers' judgement of missing information in an advertisement is also part of consumers' inference making (McQuarrie & Phillips, 2005; Yi, 1990b). Similarly, previous studies have suggested that a product category is an important context to influence perceptions of a brand in a non-comparative context (Ang & Lim, 2006; Keller, 2003, Ratneshwar, Barsalou, Pechmann, & Moore, 2001). If consumers do not have enough information to judge a brand (as can be the case, they use information about what

category a brand belongs to (e.g. product category membership of a brand). For example, if consumers have little information about a brand in an advertisement, their previous knowledge about a product category of the brand is an important information source (Keller, 1993). Theories of categorization and assimilation/contrast effects also support this notion because, according to this literature, consumers develop brand perceptions based on the extent to which they are perceived as similar to or distinctive from product category perceptions. When brands are seen as similar to product categories, brand perceptions are assimilated to the perceptions of product categories. However, when the brands are seen as distinctive from the product category, a contrast effect occurs (Loken et al., 2008).

Applied to the current study, consumers would be expected to make inferences about competence perceptions of a brand based on the presence of a warmth appeal and perceptions of the product category. Specifically, this study posits that when strength-related attributes are more valued for a brand, consumers' expectations of brand warmth in that category may be relatively low. On the contrary, when gentleness-related attributes are more valued for a brand, expectations of brand warmth in that category is high. Thus, in the case of a high need for strength product category, when warmth appeals are used and shown to consumers in an advertisement, consumers will compare a higher level of perceived brand warmth with a lower level of product category warmth, which is similar to a comparative context situation (i.e. a situation of comparing high warmth with low warmth at the same time). Thus, this condition will lead to a compensation effect compared to when gentleness-related attributes are valued for a

product category of a brand (i.e. in the case of a high need for gentleness product category).

However, for a gentleness product category, since consumers' expectation about warmth perceptions of a product category is high, when warmth appeals are used for an ad, consumers may compare high warmth of a product category with high warmth of a brand created by warmth appeals. Thus, assimilation effect may be more likely to occur because a target and a comparison object is similar in terms of warmth, which is similar to a halo effect condition. Thus, for a gentle product category, ads with warmth appeal is more likely to lead to a halo effect compared to a strong product category, meaning that ads with warmth appeals may enhance perceived brand competence.

Putting all together, it is expected that brand competence that consumers infer (inferred and perceived competence of a brand) is lower if warmth advertising appeals are used in a high need for strength product category compared to when no warmth is used. However, this tradeoff between warmth appeals and brand competence will not occur in a high need for gentleness product category, and furthermore, warmth advertising appeals will increase brand competence in this product category.

H1: In the case that strength-related attributes are most valued for a product category of a brand, perceived competence of the brand will be lower when a warmth appeal is used in an ad than when no warmth appeal is used.

H2: In the case that gentleness-related attributes are most valued for a product category of a brand, perceived competence of the brand will be greater when a warmth appeal is used in an ad than when no warmth appeal is used.

### **The Effects of Brand Warmth and Competence on brand attitude: Mediating Role of Brand Competence between Warmth Appeals and Brand Attitude**

As discussed in Chapter 2, previous studies have suggested that brand warmth and competence predict consumers' attitudes toward the brand. Hence, brand attitude is the combined product of perceived brand warmth and competence. If warmth appeals attenuate brand competence in a certain condition (i.e. for a strength-related product category as proposed), how will brand attitude be? The issue in this case is that even though brand competence is attenuated, brand warmth is enhanced by warmth appeals. If so, enhanced brand warmth can compensate for the loss of brand competence in consumers' attitude formation toward the brand. However, as discussed earlier, the product category may play an important role. Product attributes of strength-related products are closely related to capabilities and abilities of the product. These products are evaluated as superior when capabilities of solving the consumers' problems were better rather than satisfying consumers' affective needs after using the product (Luchs et al., 2010). Those superior attributes and functions are more associated with brand competence than they are with brand warmth. Additionally, brand competence is more important in brand evaluations for utilitarian products which are closer to strength-related products rather than gentle-related products. Chattalas & Takada (2013) suggested that

brand warmth is more important for hedonic product categories than utilitarian product categories, whereas brand competence is more important for utilitarian products.

More importantly, recent research on the interactive effects of warmth and competence on brand evaluation found that brand competence showed a significant main effect on consumers' purchase ( $\beta = 0.69, t = 3.12, p = 0.002$ ), whereas brand warmth had no main effect ( $\beta = 0.21, t = 0.67, p = 0.51$ ) (Aaker, Garbinsky, & Vohs, 2012). The implication of their study was that even though brand warmth and competence influence brand evaluation and purchase intention positively, when they are combined and interacted with each other, the effect of brand competence was greater than that of brand warmth. This finding was consistent with the previous study on the effects of brand warmth and competence on consumers' evaluations of nonprofit and for-profit companies: the study demonstrated that competence perceptions of a brand were more important than warmth perceptions of a brand for increasing consumers' purchase and their attitude toward the brand (Aaker, Vohs, & Mogilner, 2010). Additionally, Bennett and Hill (2012) examined the impacts of brand warmth and competence on consumers' purchase intention. The authors analyzed the effects of combined ratings of brand warmth and competence on consumers' purchase intentions. In order to confirm the impact of each warmth and competence of a brand, they analyzed each construct by conducting a regression analysis, and they found that three distinctive models. Based on their findings, variance of brand warmth to explain consumers' brand evaluation was between .13 and .30. However, for brand competence, variance was between .16 and .34, slightly higher than brand warmth.

Another study on the effect of brand perceptions on brand evaluations also supported the stronger effect of brand competence. Güse (2011) suggested that brand warmth can indirectly influence brand attitude while brand competence directly influences brand attitude. The author proposed a model suggesting that brand warmth and competence were related to positive brand attitude, and that when consumers perceive a brand as warm and friendly, they developed positive emotional cues toward a brand, which the author called indirect effect on positive brand attitude. Additionally, the author demonstrated that brand competence had a direct effect and stronger influence on brand attitude as a mediating variable. The author found that brand competence had a significant effect on consumers' positive emotions toward a brand. In other words, the more consumers attributed competence perceptions to a brand, the less they had negative emotions about the brand. More importantly, brand competence showed direct effects on consumers' attitude toward a brand: the more they perceive a brand as competent, the more positive attitude toward the brand and greater purchase intention were observed (Güse, 2011, p.75).

Lastly, advertising research on the indirect effect of an advertising message suggested that inferred information based on given information has a more persuasive effect on brand attitude (Chang & Yen, 2013; Chebat, Gélinas-Chebat, & Dorais, 2003; Yi, 1990b). Applied to this study, although warmth advertising appeals can enhance brand warmth and this enhanced brand warmth can influence brand attitude positively, if a low level of perceived competence of a brand is inferred according to a compensation effect, the effects of lowered brand competence may be far greater than enhanced brand

warmth because brand competence in this case is an inferred perception which has been considered as having a more impact than a directly received or primed perception (i.e. brand warmth).

In sum, brand competence has been shown to have a more significant effect than brand warmth on brand attitude and even stronger impact in a strength-related product category because this category is more associated with brand competence than brand warmth. More importantly as suggested earlier in the H1, when warmth advertising appeals are used for a strength-related product category, brand competence is lower compared to when an ad without warmth appeal is used. Although warmth appeals may increase brand attitude in that product category, considering the greater impact of brand competence on brand attitude, greater impact of inferred attributes, and more impact of an indirect message than a direct message, this study posits that lowered brand competence by warmth appeals will affect brand attitude more negatively compared to when no warmth appeal is used because an ad without warmth appeal keep brand warmth and competence constant (unchangeable).

Taken together, considering a product category membership of a brand, and a more direct and more significant effects of brand competence than brand warmth on brand attitude, the following hypotheses were posited:

H3: In the case that strength-related attributes are most valued for a product category of a brand, attitude toward a brand will be lower when a warmth appeal is used in an ad than when no warmth appeal is used.

For a gentleness-related product category, enhanced brand competence by warmth appeals can generate greater brand attitude compared to when no warmth appeal is used because an ad using warmth appeals can increase both brand warmth and competence in this category as discussed in the H2.

H4: In the case that gentleness-related attributes are most valued for a product category of a brand, attitude toward a brand will be greater when a warmth appeal is used in an ad than when no warmth appeal is used.

Building on previous empirical findings, this study seeks to further explain why brand attitude decreases when warmth appeals are used in an advertisement for a strength-related product category by demonstrating a mediating role of perceived competence of a brand in addition to the expected mediating role of perceived brand warmth. Perceived brand competence inferred based on warmth advertising appeals and a product category are key variables to explain this result. That is, attenuated brand competence by warmth advertising appeals can result in attenuation of brand attitude for a strength-related product category. This can be demonstrated by examining the mediating role of brand competence between warmth advertising appeals and brand attitude. Previous studies demonstrated that the role of brand competence as a mediating variable on brand attitude (Bennett & Hill, 2012; Güse, 2011). Considering that brand



competence has stronger impact on brand attitude for a strength-related product category, the following hypothesis was posited:

H5: Perceived competence of a brand will mediate the interactive effect of a warmth appeal and the product category (when gentleness- or strength-related attributes are valued) on attitude toward a brand.

On the other hand, brand warmth can also influence brand attitude positively, which is natural. Thus, although the degree to which brand warmth influence brand attitude may be different from the degree of what brand competence does, brand warmth created by warmth appeals can influence brand attitude positively and this brand warmth can explain the relationship between warmth appeals and brand attitude. Thus, a similar hypothesis to H5 is posited by using perceived warmth of a brand.

H6: Perceived warmth of a brand will mediate the interactive effect of a warmth appeal and the product category on attitude toward a brand.

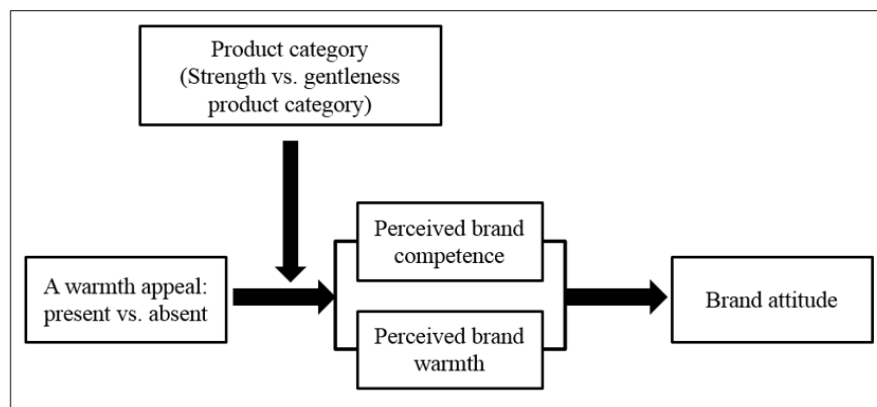


Figure 1. Theoretical Model

## CHAPTER 6

### METHOD

#### Experimental Design

The objective of this study was to test the hypotheses ( $H1 - H6$ ) that there will be a compensation effect between brand warmth and competence created by a warmth advertisement and influenced by a product category when consumers' need for strength is high for a product category (i.e. when consumers most value strength-related attributes for a product), and the compensation effect will influence purchase intention negatively compared to when no warmth appeal is used. Before the main study, pretests were conducted to identify proper product categories to satisfy the conditions that were discussed in the hypotheses. To rule out the confounding variables, two product categories in a test should keep everything as much constant as possible except the specific type of benefit of a product. To do so, pretests were conducted to identify a parent product category that can be classified to two different sub-categories based on type of benefits (strength vs. gentleness). To ensure external validity, two parent categories were selected for study 1, and each category was used for two separate sub studies (i.e. study 1A and study 1B).

#### Pretest 1A and 1B

To identify proper parent product categories, candidate parent product categories were selected based on literature review on marketing and advertising research, and the secondary sources of information such as Simmons and Mediamark Research Inc. (MRI).

The parent categories should be able to be divided into two different product categories with different type of benefit in terms of strength/gentleness.

For example, one of the final candidates for a parent product category is a shampoo category, which includes a children's shampoo, car shampoo and a dandruff shampoo as a product category based on type of benefits. Other candidates for a parent product category were a bank service (including a co-op bank, a generic bank, and a private bank for investment), a collaboration work application called a collaboration app (a collaboration app for family chores and for business), a soap (a soap for sensitive skin, a facial soap and an anti-bacterial soap), a sanitizer (a sanitizer for kids and an anti-bacterial sanitizer), a mouth wash (a children's mouth wash and an anti-bacterial mouth wash), a wet wipe (baby wipes and display wipes), a full-size car (a pickup truck and a minivan), and allergy relief medicine (children's allergy relief and adults' extra-strength allergy relief). Then, these categories were pretested to ensure that they fit to the criteria characteristics for the main study.

The Pretest 1 tested whether a product with gentleness-related attributes was perceived as relatively gentle and warm, and whether a product with strength-related attributes was perceived as relatively strong and less warm compared to each other and compared to the mid-point (e.g., 3.5 out a 7 point scale). Due to a plurality of candidate product categories, two pretests were separately conducted: Pretest 1A and Pretest 1B.

Pretest 1A and 1B were conducted by using the subject pool of School of Journalism and Mass Communication at the University of Minnesota, Twin Cities. Twenty eight students for Pretest 1A (Table 1) and twenty two students for Pretest 1B

were recruited (Table 2). Participants completed four questions to measure strength/gentleness of product categories and perceived warmth and competence of product categories. To measure strength/gentleness, two items were used adapted from Luchs et. al. (2010) on a seven-point scale. Higher (lower) scores of the item indicated that a product category held strength-related (gentleness-related) product attributes/perceptions. To measure perceived warmth of products in a product category (or perceived warmth of a product category), four items were adapted from previous studies on a seven-point (Aaker, Garbinsky, & Vohs, 2012; Aaker, Vohs, & Mogilner, 2010). In these items, higher (lower) scores meant that the product category held highly (low) perceived warmth.

Several criteria were used to select appropriate product categories to be used in the main study. First, a level of perceived strength/gentleness of the product categories should be significantly different from the cumulative mean: perceived strength/gentleness of a high strength product category should be lower than the cumulative mean, whereas those of a high gentleness product category should be higher than the cumulative mean. Second, levels of perceived strength/gentleness between the partner product categories (e.g., a children's and car shampoo product categories) should show statistically significant difference. Third, a level of perceived warmth of the product categories should be significantly different from the cumulative mean: levels of warmth perceptions for a high gentleness product category should be higher than the cumulative mean, whereas the levels for a high strength product category should be lower than the cumulative mean.

Lastly, levels of perceived warmth between the partner product categories (e.g., a minivan and a pickup truck product categories) should be statistically different.

To identify proper product categories, first, a one-sample t-test was conducted to compare perceived strength/gentleness of product categories with the cumulative mean. There was a significant difference in the score for the cumulative mean and a children's shampoo ( $M = 5.61, SD = 1.27$ );  $t(22) = 5.98, p < .001$ ; a minivan ( $M = 4.75, SD = 1.16$ );  $t(21) = 2.78, p = .011$ ; a soap for sensitive skin ( $M = 5.50, SD = 1.30$ );  $t(21) = 5.20, p < .001$ ; and a washing machine for underwear ( $M = 5.81, SD = 1.42$ );  $t(21) = 6.81, p < .001$ . These product categories were appropriate for high gentleness product categories. In the same way, there was a significant difference in the score for the cumulative mean and a car shampoo ( $M = 3.52, SD = 1.09$ );  $t(21) = -.232, p = .030$ ; a pickup truck ( $M = 2.65, SD = 1.56$ );  $t(22) = 4.34, p < .001$ ; a heavy duty washing machine ( $M = 3.18, SD = 1.13$ );  $t(21) = -2.85, p = .010$ ; and an extra allergy relief ( $M = 3.36, SD = 1.42$ );  $t(21) = -2.69, p = .014$ . These product categories were appropriate for high strength product categories.

Second, based on the product categories above (if at least one of partner product categories was significantly different from the cumulative mean), a paired-samples t-test was conducted to compare scores of a pair of partner product categories in terms of perceived strength/gentleness. There was a significant difference in the scores for a children's shampoo ( $M = 5.61, SD = 1.27$ ) and a car shampoo ( $M = 3.52, SD = 1.09$ );  $t(21) = 5.30, p < .001$ ; a minivan ( $M = 4.75, SD = 1.16$ ) and a pickup truck ( $M = 2.65, SD = 1.56$ );  $t(21) = 5.00, p < .001$ ; a children's allergy relief ( $M = 4.50, SD = 1.28$ ) and an extra-strength allergy relief ( $M = 3.36, SD = 1.42$ );  $t(21) = -3.25, p = .004$ ; a soap for

sensitive skin ( $M = 5.50, SD = 1.30$ ) and a sanitizer ( $M = 3.57, SD = 1.44$ );  $t(21) = 4.13, p < .001$ ; and a washing machine for underwear ( $M = 5.82, SD = 1.13$ ) and a heavy duty washing machine ( $M = 3.18, SD = 1.64$ );  $t(21) = -4.97, p < .001$ .

Third, a one-sample t-test was conducted to compare perceived warmth of product categories with the cumulative mean. There was a significant difference in the score for the cumulative mean and a children's shampoo ( $M = 5.15, SD = 1.36$ );  $t(22) = 3.74, p = .001$ ; a minivan ( $M = 5.01, SD = .98$ );  $t(21) = 4.41, p < .001$ ; a washing machine for underwear ( $M = 5.30, SD = 1.13$ );  $t(21) = 2.90, p = .009$ ; a soap for sensitive skin ( $M = 4.80, SD = 1.13$ );  $t(21) = 2.93, p = .008$ ; and a children's allergy relief ( $M = 4.94, SD = .84$ );  $t(21) = 1.91, p = .07$ . These product categories were rated as highly warm. In the same way, there was a significant difference in the score for the cumulative mean and a car shampoo ( $M = 3.59, SD = .96$ );  $t(21) = -2.45, p = .023$ ; a sanitizer ( $M = 3.53, SD = 1.28$ );  $t(21) = -2.04, p = .008$ ; and a pickup truck ( $M = 3.41, SD = 1.18$ );  $t(22) = -2.76, p = .011$ . These product categories were rated as low warm.

Lastly, based on the product categories above (if at least one of partner product categories were significantly different from the cumulative mean), a paired-samples t-test was conducted to compare scores of a pair of partner product categories in terms of perceived warmth. There was a significant difference in the scores for a children's shampoo ( $M = 5.16, SD = 1.39$ ) and a car shampoo ( $M = 3.59, SD = .96$ );  $t(21) = 5.67, p < .001$ ; a minivan ( $M = 5.01, SD = .98$ ) and a pickup truck ( $M = 3.39, SD = 1.20$ );  $t(21) = -5.58, p < .001$ ; a soap for sensitive skin ( $M = 4.80, SD = 1.13$ ) and a sanitizer ( $M = 3.53, SD = 1.28$ );  $t(21) = 4.11, p = .001$ ; a children's allergy relief ( $M = 4.94, SD = .84$ ) and an

extra-strength allergy relief ( $M = 4.56, SD = .97$ );  $t(21) = -3.24, p = .07$ ; and a washing machine for underwear ( $M = 5.30, SD = 1.13$ ) and a heavy duty washing machine ( $M = 4.28, SD = 1.03$ );  $t(21) = -1.87, p = .004$ .

Based on the analyses above, the pretests confirmed that the following parent and product categories were most appropriate for the main study: a large-size car parent category composed of a minivan and a pickup truck product category, a soap parent category composed of a soap for sensitive skin and a sanitizer product category, a shampoo parent category composed of a children's and a car shampoo product category, and allergy relief parent category composed of a children's allergy and an extra-strength allergy relief product category.

**Table 1. Pretest 1A Results of Perceived Gentleness, Warmth and Competence Ratings of a Product Category (n = 24)**

Product Category	Strength/Gentleness		Warmth perceptions		Competence perceptions	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<b>Children's shampoo</b>	<b>5.61*</b>	1.27	<b>5.16*</b>	1.39	5.19	1.34
<b>Car Shampoo</b>	<b>3.52*</b>	1.09	<b>3.59*</b>	.96	4.48*	1.08
Dandruff Shampoo	4.05	1.45	4.08	1.18	4.94	1.24
Coop bank	4.00	1.19	4.06	1.14	4.45*	1.06
Bank	2.86*	1.29	3.32*	1.16	4.90	1.13
Private bank	2.93*	1.69	3.17*	1.53	4.90	1.22
Business collaboration app	3.52*	1.10	3.77	.86	4.88	1.02
Family collaboration app	4.36	.83	4.25	1.07	4.91	1.21
<b>Soap for sensitive skin</b>	<b>5.50*</b>	1.30	<b>4.80*</b>	1.13	5.15	1.14
<b>Sanitizer</b>	<b>3.57*</b>	1.44	<b>3.53*</b>	1.28	5.14	1.33
Antibacterial soap	4.27	1.45	3.89	1.37	5.43	1.26
Facial soap	4.84	1.17	4.45	1.28	5.35	1.20
Kids mouth wash	4.39	1.18	4.58*	1.00	4.98	.92
Antibacterial mouth wash	3.16*	1.51	3.75	1.16	5.20	1.39
Facial soap	4.84*	1.17	4.45	1.28	5.35	1.20
Antibacterial soap	4.27	1.45	3.89	1.37	5.43	1.26
Baby wipes	5.48*	1.11	4.89*	1.28	5.28	1.28
Display wipes	3.89	1.57	3.91	1.24	5.28	1.12
<b>Minivan</b>	<b>4.75*</b>	1.16	<b>5.01*</b>	.98	5.50*	1.16
<b>Pickup truck</b>	<b>2.70*</b>	1.57	<b>3.40*</b>	1.20	5.39	1.13
<u>Cumulative <i>M</i></u>	4.06	.66	4.09	.76	5.08	.78

\* Significantly different from cumulative mean at  $p < .05$  (Note: Items in bold were selected for test product categories)



**Table 2. Pretest 1B Results of Perceived Gentleness, Warmth and Competence Ratings of a Product Category (n = 22)**

Product Category	Strength/Gentleness		Warmth perceptions		Competence perceptions	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Detergent for heavy duty	3.59	1.79	4.42	1.06	5.63*	1.03
Detergent for sensitive skin	5.86*	1.01	5.41*	.92	5.23	1.01
Extra-strength pain reliever	3.82	1.72	4.41	1.23	5.86*	.71
Children's pain reliever	4.32	1.04	4.76	.98	5.23	.98
Business podcast	3.68	1.19	3.95*	1.03	4.34*	1.38
Personal interest podcast	4.59	1.20	4.92*	1.09	4.64	1.09
Business travel agent	4.07	1.57	4.09	1.43	4.60	1.57
Wedding travel agent	4.70*	1.07	4.91*	1.17	4.86	1.41
Family travel agent	4.43	1.36	4.53	1.42	4.50	1.64
Life insurance	3.61	1.43	4.38	1.12	5.06	1.25
Mutual fund	3.10*	1.00	3.51*	1.15	4.17*	1.35
Music service	4.45	1.17	5.30*	.92	5.49*	.94
Business document sharing app	3.75	1.43	4.15	1.35	4.92	1.55
Messenger app	4.36	1.26	4.98*	1.21	5.44	1.22
Heavy duty washer	3.18*	1.64	4.28	1.03	5.34	1.20
Underwear washer	5.82*	1.13	5.30*	1.13	5.30	1.13
<b>Children's allergy relief</b>	<b>4.50*</b>	1.28	<b>4.94*</b>	.84	5.32	.82
<b>Extra-strength allergy relief</b>	<b>3.36*</b>	1.42	<b>4.56</b>	.97	5.48	1.09
<u>Cumulative <i>M</i></u>	4.18		4.60		5.08	

\* Significantly different from cumulative mean at  $p < .05$  (Note: Items in bold were selected for test product categories)

## Pretest 2

To create appropriate test stimuli containing warmth appeals and evoking high warmth, initial candidates of advertising visuals and headlines (text) were selected based

on previous advertising and marketing research (Aaker & Stayman, 1990; Aaker, Fournier, Brasel, & Brasel, 2004; Geuens, De Pelsmacker, & Fasseur, 2011; Geuens & De Pelsmacker, 1999; Kervyn, Chan, Malone, Korpusik, & Ybarra, 2014; Zawisza & Pittard, 2015). Examples of warm visuals were a picture of a smiling family including parents and kids, (Aaker, Stayman, & Hagerty, 1986), a picture of a kid (Geuens et al., 2011), a picture of a dad carrying a baby (Zawisza & Pittard, 2015) and a picture of a cute dog (Aaker, Fournier, & Brasel, 2004).

Candidate headlines were adapted from previous research on warmth and competence perceptions of individuals who used particular words or expressions (Holoien & Fiske, 2013; Kervyn et al., 2009). Additionally, appropriate headlines were created for the product categories selected after Pretest 1 and for another possible product categories. Examples of headline for ads were “We care about you,” “Add love to your car,” “Not here for our profit. Here for yours,” “We know how precious your baby is,” and “We want to be your neighbors, not just a company.”

A pretest was conducted by using the subject pool of School of Journalism and Mass Communication at the University of Minnesota, Twin Cities. Thirty two students were recruited and completed four questions to measure perceived warmth of visuals and headlines (Table 3). To measure perceived warmth of visuals and headlines, four items were used adapted from previous studies on a seven-point scale (Aaker et al., 2004; Aaker, Vohs, & Mogilner, 2010). Regarding the items, higher scores indicated visuals/headlines that evoked high warmth. There were two criteria to select appropriate visuals: 1) perceived warmth of visuals should be close to or higher than a mid-point, and

2) visuals over the mid-point should indicate a statistically significant difference in the perceived warmth of visuals and the cumulative mean. As for the headlines, perceived of warmth of all headlines were rated as similar levels of scores except “We care about you.” This means that the cumulative mean was not a proper criterion because most of headlines may not be that different from the cumulative mean. Thus, headlines that were significantly different from the mid-point were selected in this case.

A pretest confirmed that a visual of smiling family members ( $M = 5.76$ ,  $SD = .94$ ;  $t(31) = 3.78$ ,  $p = .001$ ) and a visual of family members lying on the grass ( $M = 5.92$ ,  $SD = .89$ ;  $t(31) = 5.04$ ,  $p < .001$ ) were perceived as highly warm compared to the cumulative mean. Headlines containing love ( $M = 4.22$ ,  $SD = 1.42$ ;  $t(31) = 2.86$ ,  $p = .007$ ), customers’ profit ( $M = 4.56$ ,  $SD = 1.42$ ;  $t(31) = 5.07$ ,  $p < .001$ ), preciousness ( $M = 4.59$ ,  $SD = 1.26$ ;  $t(31) = 4.91$ ,  $p < .001$ ), and neighbors ( $M = 4.86$ ,  $SD = 1.28$ ;  $t(31) = 5.99$ ,  $p < .001$ ) were perceived as highly warm.

However, the visual of family members lying on the grass appeared to be able to influence brand perceptions unintentionally because the background was nature full of grass and trees; these may be perceived as sustainability of a brand, which may not be fit for a high strength product category (Luchs et al., 2010). Additionally, the headlines containing customer’s profit and neighbors were not selected for the main study because these were not fit for selected product categories from Pretest 1. Thus, a visual of smiling family members and the headlines containing love and preciousness were selected as bases of creative approaches for the warm stimuli ads in the main study.

**Table 3. Pretest 2 Results of Perceived Warmth and Preference Ratings of Visuals and Headlines (n = 32)**

Visual Themes	Warmth perceptions		Preference	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Smiling family (parents, a girl, and a boy)	<b>5.76*</b>	.94	<b>5.89*</b>	.87
Family lying on the grass	<b>5.93*</b>	.89	<b>5.06*</b>	.95
Dad carrying a baby	4.69	1.66	4.33	1.86
A kid playing with a car	5.03	.89	5.36	1.20
Neighbors	5.18	1.10	5.54	1.05
A dog biting a sign	5.18	1.08	5.38	1.29
<u>Cumulative <i>M</i></u>	5.29	-	5.43	-

Headlines	Warmth perceptions		Preference	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
“We care about you”	3.88	1.71	3.99	1.58
“Add love to your car”	<b>4.22**</b>	1.42	4.34	1.37
“Not here for our profit. Here for yours”	4.56**	1.19	4.76	1.23
“We know how precious your baby is”	<b>4.59**</b>	1.26	4.64	1.42
“We want to be your neighbors, not just a company”	4.86**	1.29	4.93	1.28
<u>Cumulative <i>M</i></u>	4.42	-	4.53	-

\* Significantly different from cumulative mean at  $p < .05$

\*\* Significantly different from the mid-point at  $p < .001$  (Note: Items in bold were selected for test stimuli)

### Pretest 3 and Pretest 4

Based on the product categories, and visuals/headlines selected in the previous pretests, stimuli ads for four parent product categories (an allergy relief, a shampoo, a soap, and a large-size car parent categories) were initially created and were tested to

check whether ads containing warmth appeals evoked higher warmth and whether ads without warmth appeal sent out far less warmth comparatively.

Two pretests (Pretest 3 and 4) were conducted by using the Amazon Mechanical Turk work force (MTurk). One hundred nineteen for Pretest 3 (Table 4), and one hundred one for Pretest 4 were recruited and completed four questions to measure the level of warmth in the ads (i.e. ad warmth) (Table 5). The criteria to select the final test stimuli for a main study were that 1) ads with warmth appeal should be rated as relatively high in ad warmth, 2) ads without warmth appeal should be rated as relatively low in ad warmth, and 3) there should be a statistically significant difference in ad warmth for an ad with warmth appeal and for an ad without warmth appeal in the same product category.

As shown in Table 4, all ads with warmth appeals indicated relatively high levels of warmth. However, the non-warmth appeal for a soap and a sanitizer product were rated as relatively highly warm ( $M = 4.26$  and  $M = 4.09$ ) compared to the non-warmth appeal ads for a car shampoo ad ( $M = 3.02$ ), a minivan ad ( $M = 3.52$ ) and a pickup truck ad ( $M = 3.60$ ). Additionally, ads with warmth appeal for soap and sanitizer were rated as slightly less warm ( $M = 5.68$ , and  $M = 5.52$ ) than the warmth appeal ads for a children's shampoo (a kid ad;  $M = 5.78$ ) and an extra-strength allergy relief ( $M = 5.85$ ). This means that the ads for a soap and a sanitizer product may be less likely to manipulate low and high warmth of ads for the main study compared to the other stimuli. Thus, ads for a soap and a sanitizer product were removed.

An ad for a children's shampoo product using a family theme (warmth appeal) was removed because ad warmth for that ad was relatively low ( $M = 5.06$ ,  $SD = 1.29$ ) and

there was no difference in ad warmth for the warmth appeal ( $M = 5.06, SD = 1.29$ ) and non-warmth appeal ( $M = 4.71, SD = 1.53$ ) ads;  $t(55) = -.91, p = .365$ . However, an ad for a children's shampoo product using a kid theme (another warmth appeal) was kept to be retested in the next pretest because ad warmth for it was rated as highly warm ( $M = 5.78, SD = 1.06$ ), and there was a statistically significant difference in ad warmth for the warmth appeal ( $M = 5.78, SD = 1.06$ ) and non-warmth appeal ( $M = 4.71, SD = 1.53$ ) ads;  $t(55) = -3.04, p = .004$ .

In the allergy relief parent category, a warmth ad for a children's allergy relief product indicated highly ad warmth ( $M = 5.76, SD = .83$ ), but a non-warmth ad was rated as relatively warm ( $M = 4.76, SD = 1.36$ ). However, there was a statistically significant difference in ad warmth for the warmth appeal ( $M = 5.76, SD = .83$ ) and non-warmth appeal ( $M = 4.76, SD = 1.36$ ) ads;  $t(55) = 2.36, p = .001$ . Additionally, ads for the partner product category indicated high and low ad warmth respectively for warmth appeal and non-warmth appeal. A warmth ad for an extra-strength allergy relief product indicated highly ad warmth ( $M = 5.85, SD = 1.02$ ), and a non-warmth ad for an extra-strength allergy relief product was rated as low warm ( $M = 3.98, SD = 1.67$ ). There was a statistically significant difference in ad warmth for the warmth appeal ( $M = 5.85, SD = 1.02$ ) and non-warmth appeal ( $M = 3.98, SD = 1.67$ ) ads;  $t(60) = -5.39, p < .001$ . Thus, the allergy product categories were selected for test stimuli in a main study.

In the large-size car parent category, a warmth ad for minivan indicated highly ad warmth ( $M = 5.21, SD = 1.06$ ), and a non-warmth ad was rated as low warm ( $M = 3.52, SD = 1.33$ ). There was a statistically significant difference in ad warmth for the warmth

appeal ( $M = 5.21$ ,  $SD = 1.06$ ) and non-warmth appeal ( $M = 3.52$ ,  $SD = 1.33$ ) ads;  $t(55) = -5.29$ ,  $p < .001$ . Additionally, ads for the partner product category indicated high and low ad warmth respectively for warmth appeal and non-warmth appeal. A warmth ad for a pickup truck indicated high ad warmth ( $M = 5.58$ ,  $SD = 1.09$ ), and a non-warmth ad for the same product was rated as low warm ( $M = 3.60$ ,  $SD = 1.62$ ). There was a statistically significant difference in ad warmth for the warmth appeal ( $M = 5.58$ ,  $SD = 1.09$ ) and non-warmth appeal ( $M = 3.60$ ,  $SD = 1.62$ ) ads;  $t(60) = -5.70$ ,  $p < .001$ . Thus, the large-size car product categories were selected for test stimuli in a main study.

After Pretest 3, the selected test stimuli needed to be revised because the difference in ad warmth for warmth ads and for non-warmth ads were not quite large. Thus, for the warm ads to evoke more ad warmth and for the non-warmth stimuli to show far less warmth compared to the stimuli used in Pretest 3, the selected stimuli ads were slightly revised as follows to be tested in Pretest 4.

Research on emotional meanings and responses of color in psychology suggested that yellow color evoked warm feelings than other colors, whereas purple and blue colors elicited cold or cool feelings in general (Clarke & Costall, 2008). Thus, background colors were slightly revised: more yellow color was painted in the background for the warmth ads, whereas purple and blue colors were painted in the background for the non-warmth ads. Then, Pretest 4 was conducted to measure ad warmth of the revised stimuli. As shown in Table 5, the revised stimuli indicated more satisfying scores: the warmth ads were rated as warmer than the previous ads, and the non-warmth ads were rated as less warm than the previous ads.

However, as for the ads for a shampoo parent category, the revised ads did not indicate satisfying scores compared to those in Pretest 3. For the children's shampoo product category, there was no statistically significant difference in ad warmth for a warmth ad ( $M = 4.81, SD = 1.34$ ) and a non-warmth ad ( $M = 4.39, SD = 1.24$ ) when warmth ads used a family theme;  $t(44) = -1.07, p = .291$ . Additionally, when warmth ads used a kid theme, there was no statistically significant difference in ad warmth for a warmth ad ( $M = 5.24, SD = 1.60$ ) and a non-warmth ad ( $M = 4.39, SD = 1.24$ );  $t(44) = -2.00, p = .051$ . Furthermore, for a car shampoo product category, there was no statistically significant difference in ad warmth for a warmth ad ( $M = 4.26, SD = .93$ ) and a non-warmth ad ( $M = 3.43, SD = 1.76$ ) when warmth ads used a kid;  $t(53) = -2.26, p = .028$ . Thus, the ads for a shampoo parent category were excluded for the main study.

After Pretest 4, ads for two parent category were selected: eight ads for allergy relief products and large-size cars were finally selected for the test stimuli in the main study.



**Table 4. Pretest 3 Results of Perceived Ad Warmth and Independent Samples t-test for Stimuli Advertisements (n = 119)**

Product category	Presence of warmth	Theme	Ad Warmth		Independent samples t-test
			<i>M</i>	<i>SD</i>	
Children's allergy relief	Yes	Family	<b>5.76*</b>	.83	t(55) = 2.36, p = .001
	No	Product shot	4.76	1.36	
Extra-strength allergy relief	Yes	Family	<b>5.85*</b>	1.02	t(60) = -5.39, p < .001
	No	Product shot	3.98	1.67	
Children's shampoo	Y	Family	5.06	1.29	t(55) = -.91, p = .365
	N	Product shot	4.71	1.53	
	Y	A kid	<b>5.78*</b>	1.06	t(55) = -3.04, p = .004
	N	Product shot	4.71	1.53	
Car Shampoo	Y	Family	5.21*	1.35	t(60) = -4.94, p < .001
	N	Product shot	3.28	1.73	
	Y	A kid	<b>5.10*</b>	1.53	t(60) = -4.74, p < .001
	N	Product shot	3.19	1.65	
Soap for sensitive skin	Y	Family	5.68*	.89	t(55) = -4.62, p < .001
	N	Product shot	4.26	1.38	
Sanitizer	Y	Family	5.52*	1.41	T(60) = -3.54, p = .001
	N	Product shot	4.09	1.75	
Minivan	Y	Family	<b>5.21*</b>	1.06	T(55) = -5.29, p < .001
	N	Product shot	3.52	1.33	
Pickup truck	Y	Family	<b>5.58*</b>	1.09	T(60) = -5.70, p < .001
	N	Product shot	3.60	1.62	

\* Significantly different from cumulative mean at p < .01 (Note: Items in bold were selected for test stimuli in Pretest 4)

**Table 5. Pretest 4 Results of Perceived Ad Warmth and Independent Samples t-test for Stimuli Advertisements (n = 101)**

Product category	Presence of warmth	Theme	Ad Warmth		Independent samples t-test
			<i>M</i>	<i>SD</i>	
Children's allergy relief	Yes	Family	<b>5.39**</b>	1.20	T(44) = -3.55, p = .001
	No	Product shot	3.78	1.67	
Extra-strength allergy relief	Yes	Family	<b>5.41**</b>	1.10	T(53) = -5.07, p < .001
	No	Product shot	3.54	1.64	
Children's shampoo	Y	Family	4.81	1.34	T(44) = -1.07, p = .291
	N	Product shot	4.39	1.24	
	Y	A kid	5.24	1.60	T(44) = -2.00, p = .051
	N	Product shot	4.39	1.24	
Car Shampoo	Y	Family	5.13**	1.15	T(53) = -4.32, p < .001
	N	Product shot	3.43	1.76	
	Y	A kid	4.26*	.93	T(53) = -2.26, p = .028
	N	Product shot	3.43	1.76	
Minivan	Y	Family	<b>5.63**</b>	1.23	T(44) = -4.57, p < .001
	N	Product shot	3.70	1.49	
Pickup truck	Y	Family	<b>5.73**</b>	1.05	T(52) = -5.00, p < .001
	N	Product shot	3.88	1.66	

\* Significantly different from cumulative mean at  $p < .05$

\*\* Significantly different from cumulative mean at  $p < .01$  (Note: Items in bold were selected for test stimuli in the main test)

## Main Study

### *Design*

The hypotheses were tested on a 2 (a warmth advertising appeal: presence vs. absence) x 2 (a product category based on the type of benefit: when gentleness-related attributes are highly valued vs. when strength-related attributes are highly valued) between-subjects factorial design. In addition, participants saw ads for either an allergy

medication (study 1A) or a shampoo product (study 1B). Figure 2 illustrates the design of the study 1A and study 1B. Most of the content and message features were kept constant except the presence of warmth appeals and type of product categories.

Study 1A

Warmth Appeal Product Category	Presence	Absence
Children’s allergy relief (High need for gentleness)	Condition 1	Condition 2
Extra-strength allergy relief (High need for strength)	Condition 3	Condition 4

Study 1B

Warmth Appeal Product Category	Presence	Absence
A minivan (High need for gentleness)	Condition 1	Condition 2
A pickup truck (High need for strength)	Condition 3	Condition 4

**Figure 2. Designs of Study 1A and Study 1B**

*Participants*

Participants for study 1A and study 1B were recruited by using Amazon MTurk. They were granted \$1 to \$1.5 in exchange for participating in one of the studies (study 1A and study 1B). A total of 120 participants completed study 1A and a total of 121

participants completed study 1B. Eleven participants in study 1A and five participants in study 1B were eliminated due to indicating great familiarity with the brand name and not passing the screening question (an attention check question, “Have you eaten dinosaur before?” on a 7-point scale [“never (1)” – “very often (7)”]). Participants indicating over 2 were removed.

For Study 1A, 50.5% of participants were male whose median age is 37 (ranging from 21-69 years old). 82.6% of participants were Caucasian, 9.2% were African American, 4.6% were Asian and 4.6% were Hispanic American.

For study 1B, 51.7% of participants were male whose median age is 39 (ranging from 21-69 years old). 81% of participants were Caucasian, 8.6% were African American, 4.3% were Asian and 5.2% were Hispanic American.

### ***Procedure***

Participants were randomly assigned to one of the four conditions. For study 1A, a parent product category was allergy relief, which was composed of two product categories; children’s and car shampoo product categories based on the type of benefit (i.e. high need for gentleness and high need for strength). For study 1B, a parent product category was a large-size car, which was composed of two product categories; minivan and pickup truck product categories based on the type of benefit in the same way as in study 1A.

*Qualtrics*, the web-based experiment and questionnaire application, was used to conduct an online experiment. After agreeing with the consent form, participants were asked about individual differences that were used as control variables for the main

analysis. They were first asked about affect intensity (AI) which measures individuals' general strengths of their responsiveness toward an event in terms of being aroused and feeling emotions (Larsen & Diener, 1987). The authors defined AI as "stable individual differences in the strength with which individuals experience their emotions." Although a concept of warmth in person perception is basically based on people's cognitive responses rather than emotion, warmth or warmth appeals in advertising is associated with warm feelings and emotional responses such as warm-hearted and affectionate feelings (Aaker, Stayman, & Hagerty, 1986). Thus, when participants view a warm ad, they may feel emotions based on the message and appeals, and some of them may judge the stimuli based on how they feel. The strengths of the emotional responses after viewing an ad are different among participants. Additionally, previous studies suggested that the AI influenced people's perceptions of a brand and stereotyped perceptions (i.e. perceptions of product category in this study) (Geuens & De Pelsmacker, 1999). Thus, it is necessary to measure the AI as an individual difference to control.

After being asked about the questions about individual differences, they were asked to view one of the four assigned ads in study 1A and 1B respectively. Then, they were asked to rate each brand's perceived competence, perceived warmth, brand attitude, purchase intention, ad warmth and familiarity with the advertised brand. Lastly, they were asked about their demographic information such as gender, age, race, education background and household income. All procedures and processes in the experiments were same between study 1A and study 1B.

### ***Manipulation of Independent Variables and Stimuli***

Stimuli ads were developed based on product categories, visuals and headlines based on the results of Pretest 1 and 2 (Appendix 1). A fictitious (unknown) brand was created and used: “Wellsprings.” To make sure that no inferred information from the brand name by itself could influence participants’ perceptions of the brands, participants were asked about familiarity with an advertised brand in the pretest and the main study to check whether the brands were unknown and unfamiliar at all by participants.

Warmth appeals in the ads were manipulated through multiple elements in the ad: (1) overall tonality in the ad, as expressed through vocabulary and phrases in the headline and body copy (e.g., “we,” “care,” or “love”) (Aaker, Fournier, & Brasel, 2004; Zawisza and Pittard, 2015), (2) characters in the ad (e.g., a mom, a family, a member of a family such as a little kid) (Brambilla, Sacchi, Castellini, & Riva, 2010; Zawisza and Pittard, 2015) and (3) background of the ad (e.g., a family picnic for a warmth appeal and an empty or mono tone background for absence of a warmth appeal) (Aaker, Stayman and Hagerty, 1986; Aaker et al., 2004). Other elements in the ads were kept constant, such that given product attributes and functions were kept constant and other visuals and text were same or neutral if different one is used.

More specifically, the four ads respectively for study 1A and study 1B contained almost the same visuals and message features except the product category of a brand and presence/absence of a warmth appeal. Thus, the same visuals, text, and information about the brand and products were contained in the stimuli except that a warmth appeal was either used or not used. Different product attributes and functions for each product category were allowed and used but kept as neutral as possible (i.e. showing simple

information about usage and functions of products). For example, as for the visuals for the warmth appeal conditions in study 1A, smiling family members (a mom and a daughter) which was confirmed as a warmth appeal in the pretest 2, was used in both a children's allergy and an extra-strength allergy relief ads, whereas a package of a product (i.e. a product shot) was used in the absence of warmth appeal conditions in each product category. This package was described as a generic container of the product.

As for the headline of the ads, almost the same headlines were used for a children's allergy relief ("WE EASED THEIR ALLERGY SYMPTOMS AND YOU MADE IT THE BEST PLAN DATA EVER") and an adults' extra-strength allergy relief ("WE EASED YOUR ALLERGY SYMPTOMS AND YOU MADE IT THE BEST PLAN DATA EVER" in the warmth appeal conditions. On the other hand, in the absence of warmth appeal conditions, almost same headlines were also used: "INDOOR & OUTDOOR ALLERGIES: INTRODUCING WELLSPRINGS' CHILDREN'S ALLERGY RELIEF" for a children's allergy relief and "INDOOR & OUTDOOR ALLERGIES: INTRODUCING WELLSPRINGS' EXTRA-STRENGTH ALLERGY RELIEF" for an extra-strength allergy relief.

For the body copy of the ads, "Just one dose of Wellsprings for kids lasts all day and all night." was written to show general product attributes for both warmth appeal and non-warmth appeal ads in a children's allergy relief product category. On the other hand, for an extra-strength allergy relief product, "Just one dose of Wellsprings' extra-strength lasts all day and all night." was used for both warmth appeal and non-warmth appeal ads in the same way.

In study 1B, a fictitious brand as a car company brand was created: Tysler as a company and Labo as an individual car brand. Pictures of family members and dogs riding and sitting in a minivan or a pickup truck were used for warmth appeal conditions. Some of the pictures were confirmed as a warmth appeal in the pretest 2 (a picture of a family and a dog). For the absence of warmth appeal conditions, a product shot (a picture of a minivan or a pickup truck) was used as a main visual. To eliminate previous perceptions of existing cars, product shots of a minivan and a pickup truck that were made in China but not introduced to the U.S. market, were used.

As for the headline of the ads, the same headline was used for both a minivan and a pickup truck (“Always with your family”) for the warmth appeal conditions. On the other hand, for the absence of warmth appeal conditions, “Introducing the Tysler’s new minivan” or “Introducing Tysler’s new pickup truck” was used.

For the body copy of the ads, most of the content focused on physical functions of the car products such as attributes (“up to 800 lbs., lighter but more powerful” for a pickup truck and “new design, new safety features, more cargo space” for a minivan), and usage (“works like a truck, rides like a family car” for a pickup truck and “perfect minivan for families” for a minivan) which were perceived as neutral product information.

### ***Individual Difference Measures***

*Affect Intensity.* Affect intensity was measured by eight 7-point unipolar scales adapted from Larsen and Diener's (1987) study. The question includes “When I feel



happy it is a strong type of exuberance,” and “Sad movies deeply touch me.” The items included: never (1) – always (7).

*Involvement in a product category.* Involvement in a product category was measured by five 7-point bipolar scales adapted and adjusted from previous studies on product category involvement (Goldsmith & Emmert, 1991; Mittal, 1995). The question included “Product Category [X] (is) ...” The items included: unimportant – important, of no concern to me – of concern to me, irrelevant – relevant, means nothing to me – mean a lot to me, and uninterested – interested.

### ***Dependent Variables***

Key dependent variables include: (1) brand competence, (2) brand warmth, (3) attitude toward the brand and (4) purchase intention.

*Brand competence.* Brand competence (perceived competence of a brand) was measured by four 7-point unipolar scales (Aaker et al., 2010; Aaker et al., 2012). The question includes “I think the advertised Brand [X] is seen as ...” The items included: not effective at all – very effective, not competent at all – very competent, not efficient at all – very efficient and not capable at all – very capable.

*Brand warmth.* Brand warmth (perceived warmth of a brand) was measured by four 7-point unipolar scales (Aaker et al., 2010; Aaker et al., 2012). “I think the advertised Brand [X] is seen as ...” The items included: not warm at all – very warm, not kind at all – very kind, not generous at all – very generous, and not friendly – very friendly.

*Attitudes toward the Brand.* Attitude toward the brand was measured by using five 7-point semantic differential scales (MacKenzie, Lutz, & Belch, 1986; Spears and Singh, 2004). The items include: “bad – good,” “unappealing – appealing,” “unpleasant – pleasant,” “unfavorable – favorable,” “unlikeable – likeable.”

*Purchase intention.* Purchase intention was measured by using four 7-point semantic differential scales adapted from previous studies (Jamieson & Bass, 1989; Dodds, Monroe, & Grewal, 1991; Hartmann & Apaolaza-Ibáñez, 2012). The question includes “Indicate the probability that you will try this brand, Brand [X] if you were going to buy this product and the brand becomes available.” The items include: “very unlikely – very likely,” “Improbable – very probable,” “impossible – possible,” and “never try this brand – willingly try this brand.”

*Manipulation Check.* Manipulation check was conducted by asking participants about 1) the level of warmth that the ad elicited and 2) overall tonality of the ad by using items adapted and adjusted from Zawisza and Pittard’s (2015) and Geuens and Plesmacker’s (1998) study with 7-point Likert scales (strongly disagree – strongly agree). The questions include “I think the ad is cozy,” “I think the ad sends out warmth,” “I think tone of the ad is affectionate,” and “I think the ad is warm.”

## CHAPTER 7

### RESULTS

The study 1A and 1B used two different parent product categories: an allergy relief parent category (a children's vs. extra-strength allergy relief product), and a large-size car parent category (a minivan vs. a pickup truck). First, the results for an allergy relief category in study 1A are discussed. Then, the results for a large-size car category are discussed in study 1B.

#### Study 1A

**Manipulation check.** To ensure that warmth appeal manipulation (a warmth appeal ad vs. a non-warmth appeal ad) was successful, an independent t-test was conducted on ad warmth as the dependent variable (Table 6). As expected, an ad with warmth appeal ( $M = 5.73$ ,  $SD = .89$ ) was evaluated warmer than an ad without warmth appeal ( $M = 3.25$ ,  $SD = 1.73$ ,  $p < .001$ ). Thus, warmth appeal manipulation was successful.

**TABLE 6. Means, Standard Deviations, and Results for Ad Warmth in Study 1A**

	<i>Mean (SD, n)</i>	
	Non-warmth Appeal Ad	Warmth Appeal Ad
Strong Products (Extra-strength Allergy)	2.92 (1.48, n=30)	5.66** (.92, n=27)
Gentle Products (Children's Allergy)	3.64 (1.36, n=25)	5.81** (.86, n=27)
Total	3.25 (1.46, n=55)	5.73** (.89, n=54)

*Note.* \* $p < .05$ , \*\* $p < .01$

*Results of Study 1A.* A two-way analysis of variance was conducted to assess the influence of the two independent variables (i.e. warmth appeal and product category) on the perceived competence of the advertised brand and brand attitude. Warmth appeals included two levels (presence vs. absence of warmth advertising appeal), and the product category consisted of two types (a high need for strength vs. a high need for gentleness product category). Based on the two factors, this study hypothesized an interactive effect of warmth appeal and product category on perceived competence of a brand and attitude toward a brand. That is, in the case that strength-related attributes are most valued for a product category of a brand, perceived competence of the brand will be lower when a warmth appeal is used in an ad than when no warmth appeal is used (H1). On the other hand, in the case that gentleness-related attributes are most valued for a product category of a brand, perceived competence of the brand will be greater when a warmth appeal is used in an ad than when no warmth appeal is used (H2).

As for brand attitude, in the case that strength-related attributes are most valued for a product category of a brand, attitude toward a brand will be lower when a warmth appeal is used in an ad than when no warmth appeal is used (H3). On the other hand, in the case that gentleness-related attributes are most valued for a product category of a brand, attitude toward a brand will be greater when a warmth appeal is used in an ad than when no warmth appeal is used (H4).

*Brand Competence.* The means and standard deviations of perceived brand competence in each condition are presented in Table 7. The interaction effect was not significant ( $F(1, 103) = 1.17, ns$ ). Thus, H1 and H2 were not supported. The main effects

of warmth appeals ( $F(1, 103) = 1.62, ns$ ) and product category ( $F(1, 103) = 1.93, ns$ ) on brand competence were not significant, either.

*Brand Attitude.* The means and standard deviations of attitude toward a brand in each conditions are presented in Table 8. The interaction effect was not significant ( $F(1, 103) = .555, ns$ ). Thus, H3 and H4 were not supported. The main effect for warmth appeal was significant ( $F(1, 103) = 19.68, p < .05$ ), indicating that ads with warmth appeal ( $M = 6.10, SD = .74$ ) were rated as more positive in attitude toward a brand than ads without warmth appeal ( $M = 5.12, SD = 1.14$ ). The main effect for a product category was not significant ( $F(1, 103) = 7.12, ns$ ). Thus, H3 and H4 were not supported. Since there were no interaction effects of the independent variables on brand attitude, mediation analysis was not necessary. Thus, H5 and H6 were not supported, either.

**TABLE 7. Means, Standard Deviations, and Two-way ANOVA Results for Brand Competence in Study 1A**

Source	<i>MS</i>	<i>df</i>	<i>F</i>	Partial $\eta^2$
Warmth Appeal	1.67	1	1.62	.02
Product Category	1.99	1	1.93	.02
Warmth Appeal $\times$ Product Category	1.20	1	1.17	.01
<i>Mean (SD, n)</i>				
	Non-warmth Appeal Ad		Warmth Appeal Ad	
Strong Products (Extra-strength Allergy)	5.33 (1.42, n=30)		5.91 (.85, n=27)	
Gentle Products (Children's Allergy)	5.38 (.91, n=25)		5.78 (1.10, n=27)	

*Note.* \* $p < .05$ , \*\* $p < .01$

**TABLE 8. Means, Standard Deviations, and Two-way ANOVA Results for Brand Attitude in Study 1A**

Source	<i>MS</i>	<i>df</i>	<i>F</i>	Partial eta <sup>2</sup>
Warmth Appeal	15.08	1	19.68*	.16
Product Category	5.46	1	7.12*	.07
Warmth Appeal × Product Category	.43	1	.56	.01
<i>Mean (SD, n)</i>				
	Non-warmth Appeal Ad		Warmth Appeal Ad	
Strong Products (Extra-strength Allergy)	5.02 (1.34, n=30)		6.02 (.68, n=27)	
Gentle Products (Children's Allergy)	5.23 (.85, n=25)		6.18 (.81, n=27)	

*Note.* \* $p < .05$ , \*\* $p < .01$

## Study 1B

**Manipulation check.** To ensure that warmth appeal manipulation (a warmth appeal ad vs. a non-warmth appeal ad) was successful, an independent t-test was conducted (Table 9). As expected, an ad with warmth appeals ( $M = 5.75$ ,  $SD = 1.01$ ) were evaluated warmer than an ad without warmth appeal ( $M = 3.91$ ,  $SD = 1.48$ ,  $p < .001$ ). Thus, warmth appeal manipulation was successful.

**TABLE 9. Means, Standard Deviations, and Results for Ad Warmth in Study 1B**

	<i>Mean (SD, n)</i>	
	Non-warmth Appeal	Warmth Appeal
Strong Products (Pickup Truck)	3.56 (1.47, n=32)	5.90** (.92, n=29)
Gentle Products (Minivan)	4.30 (1.43, n=28)	5.59** (1.23, n=25)
Total	3.91 (1.48, n=60)	5.75** (1.01, n=54)

*Note.* \* $p < .05$ , \*\* $p < .01$

**Results of Study 1B.** Like Study 1A, a two-way analysis of variance was conducted to assess the influence of the two independent variables (i.e. warmth appeals and product category) on the perceived competence of the advertised brand and brand attitude. Warmth appeals included two levels (presence vs. absence of warmth advertising appeal), and the product category consisted of two types (high need for strength products vs. high need for gentleness products).



*Brand Competence.* The means and standard deviations of perceived brand competence in each condition are presented in Table 10. The interaction effect was not significant ( $F(1, 108) = 1.12, ns$ ). Thus, H1 and H2 were not supported. The main effects of warmth appeals ( $F(1, 108) = 2.34, ns$ ) and product category ( $F(1, 108) = .038, ns$ ) on brand competence were not significant either.

*Brand Attitude.* The means and standard deviations of attitude toward a brand in each conditions are presented in Table 11. The interaction effect was significant ( $F(1, 108) = 6.62, p < .05 ns$ ). However, the direction was opposite to what the hypotheses expected. Thus, H3 and H4 were not supported. The main effect for warmth appeal was significant ( $F(1, 108) = 6.23, p < .05$ ), indicating that ads with warmth appeal ( $M = 5.75, SD = 1.10$ ) were rated as more positive in attitude toward a brand than ads without warmth appeal ( $M = 5.28, SD = 1.07$ ). The main effect for a product category was not significant ( $F(1, 108) = .03, ns$ ). Since the results did not satisfy the H1 to H4, mediation analysis was not necessary. Thus, H5 and H6 were not supported, either.

**TABLE 10. Means, Standard Deviations, and Two-way ANOVA Results for Brand Competence in Study 1B**

Source	<i>MS</i>	<i>df</i>	<i>F</i>	Partial eta <sup>2</sup>
Warmth Appeal	2.58	1	2.34	.02
Product Category	.04	1	.04	.00
Warmth Appeal × Product Category	1.23	1	1.12	.01
<i>Mean (SD, n)</i>				
	Non-warmth Appeal Ad		Warmth Appeal Ad	
Strong Products (Pickup Truck)	5.26 (1.04, n=32)		5.85 (.89, n=29)	
Gentle Products (Minivan)	5.41 (1.43, n=28)		5.40 (1.03, n=25)	

*Note.* \* $p < .05$ , \*\* $p < .01$

**TABLE 11. Means, Standard Deviations, and Two-way ANOVA Results for Brand Attitude in Study 1B**

Source	<i>MS</i>	<i>df</i>	<i>F</i>	Partial eta <sup>2</sup>
Warmth Appeal	5.63	1	6.23	.06
Product Category	.30	1	.33	.00
Warmth Appeal × Product Category	5.99	1	6.62	.06
<i>Mean (SD, n)</i>				
	Non-warmth Appeal Ad		Warmth Appeal Ad	
Strong Products (Pickup Truck)	5.06 (.99, n=32)		6.06 (1.03, n=29)	
Gentle Products (Minivan)	5.53 (1.07, n=28)		5.39 (1.09, n=25)	

## **CHAPTER 8**

### **DISCUSSION**

#### **Summary and Contribution**

Warmth and competence are fundamental dimensions of social perceptions of people and social groups. These dimensions have been considered as a universal dimension across cultures and times in person perception and impression formation. Additionally, an interesting phenomenon has been observed, called a compensation effect between warmth and competence. This effect is considered as a unique phenomenon only between warmth and competence perceptions. Scholarly research has found that a compensation effect between the two is more likely to occur in a comparative context.

Marketing scholars attempted to apply these two dimensions to brands, and they conceptualized brand warmth and competence. Despite the growing interest in brand warmth and competence, there was no research on warmth appeals and the effects of them on brand competence. Additionally, there was no study on the effects of compensation on brand attitude even though some previous studies focused on the effects of brand warmth and competence on purchase intention and brand loyalty. More importantly, since warmth appeals have been widely used to enhance consumer-brand relationships without considering any negative effect, research on a compensation effect that can result in any unintended negative effect on a brand deserves academic research attention.

Drawing on the warmth and competence social perceptions and the Stereotyped Contents Model (SCM) and warmth and competence social perceptions, this study

proposed and tested a compensation effect between warmth and competence perceptions of a brand created by warmth advertising appeals. This study posited that warmth advertising appeals can attenuate competence perceptions of a brand in a high strength-related product category, which would lead to a negative effect on brand attitude. On the other hand, this study proposed that warmth appeals could enhance competence perceptions of a brand in a high gentleness-related product category and it would result in a more positive brand attitude. In other words, it was proposed that using warmth advertising appeals could facilitate attenuation of perceived brand warmth in a high need for strength product category, but increase of perceived brand warmth in a high need for gentleness product category.

The problem of the current study was examined by considering consumers' categorization mental activity and inferential processes of warm advertisements against a product category of a brand. However, the results revealed that a halo effect was more likely to occur in most conditions rather than a compensation effect. More specifically, warmth appeals generated greater perceived competence and greater brand attitude even in a strong product category where a compensation effect was expected. This means that warmth appeals may generate positive effects on brands in general.

Although hypotheses were generated based on comprehensive literature review on warmth and competence in person perception, this study failed to support all hypotheses. Thus, this chapter also focuses on discussing possible explanations for why the experiment failed to support the proposed hypotheses. Identifying reasons of the failure in social science research is important for several reasons. Identifying reasons for failure

of an experiment can provide researchers with opportunities to conduct more comprehensive and precise research in the future. In social science research, it is true that “learning what doesn’t work is a necessary step to learning what does” (Kluger, 2014). Thus, one most important and necessary thing in this study is to identify why the experiment failed to show the meaningful results and to find any possible flaws or missing points in terms of the method and theoretical framework. The following sections discuss general positive effects of warmth appeals on brands first, then focus on the possible methodological considerations and theoretical explanations that may have affected the outcome of the experiment.

### **General Positive Effects of Warmth Advertising Appeals**

As shown in the results, warmth appeals showed positive effects on brand competence and brand attitude for both strong and gentle product categories in Study 1A, and for a strong product category in Study 1B. How can this halo effect be understood from a perspective of advertising research? One possible explanation is that ads with warmth appeals generally can make viewers feel good and happy, and those positive emotional responses could influence their judgments. The Affect Infusion Model supports this notion by suggesting that affect created by stimuli can influence consumers’ judgments indirectly (Forgas, 1995). For example, when people feel good and happy after seeing an advertisement, they are more likely to evaluate the advertised brand as positive influenced by positive affect. In other words, consumers often use their feelings evoked by an advertisement as information to evaluate the advertised brand (Geuens et al., 2011). Applied to this study, ads with warmth appeals can evoke viewers’ positive feelings and

emotional responses. In turn, these evoked positive feelings can positively influence evaluations of perceptions of the brand and attitude toward the brand. Additionally, Holbrook and Batra (1987) demonstrated that consumers' emotional responses after viewing an ad mediated the relationship between advertising content and attitude toward the brand. The authors showed that ads evoking positive emotions generated more positive attitude toward the brand compared to ads that did not evoke such positive emotions.

Another possible explanation for general positive effects of warmth appeals is that ads with warmth appeals in strong product categories (i.e. extra-strength and pickup truck products), were different from consumers' existing knowledge and their expectation of general advertising messages in the product categories. In a strong product category, superior product functions and functional benefits of products may be expected in advertisements in general. For example, for an extra allergy relief product, consumers could expect the generic messages focusing on how quickly it relieves allergic symptom, and for a pickup truck, they could expect certain messages emphasizing large cargo space and a powerful engine of the car. However, when warmth appeals are used for these product categories, it could be incongruent with consumers' pre-existing knowledge and expectation from ads. This incongruence and unexpectedness could positively influence consumers' attitude toward the ads and evaluation of the advertised brands. Lee and Schumann (2004) suggested that advertising messages that are incongruent with consumers' expectation and existing knowledge learned from previous ads in the same product category were more likely to lead to positive attitude toward the ad and the

brand. Consumers have pre-existing schema about messages of generic ads in a certain product category. If a target ad is not congruent with consumers' schema and their expectation, the ad can enhance consumers' interest and attention as they attempt to understand the incongruent message. After they successfully translate the incongruent message and understand why the ad is different from other general ads, positive emotional responses are evoked just as people feel happy when solving a puzzle. This positive emotional reaction can positively influence evaluation of the brand (Lee and Mason, 1999; Stern 1990).

In this regard, attitude toward an advertisement could be considered as a variable to examine in future research to test this explanation. When consumers view an ad with warmth appeals, they can feel happy and warm, and these positive emotional responses can influence attitude toward the ad based on Affect Infusion Model. In the meantime, a number of studies have suggested that positive attitude toward an ad positively influences attitude toward the brand (Mackenzie, Lutz & Belch, 1986; Homer, 1990). Thus, if positive emotional responses are evoked through ads with warmth appeals and this leads to positive attitude toward an ad, it is likely that the positive attitude toward the ad leads to positive attitude toward the brand (Holbrook & Batra, 1987).

### **Methodological Issues in the Experiment**

First, one time simple exposure of an advertisement may not be enough for participants to form warmth and competence perceptions of a brand. This study seeks to manipulate brand warmth and brand competence by using one advertisement with warmth appeal. Due to this reason, previous studies on the effect of an advertising



message or appeal on brand personality perceptions used not one time exposure of an ad, but multiple exposures of similar ads to manipulate particular perceptions of a brand (Aaker, Fournier, Brasel, & Brasel, 2004). The authors exposed specific advertising appeals multiple times to manipulate brand personality to participants during the long term period. Additionally, they used various information sources (e.g., a brand's web site, and an email) in addition to an advertisement. This implies that it is hard to imbue particular intended images or perceptions with an unknown or fictitious brand through one-time exposure of an ad.

Second, print or display ads may be a weaker medium to manipulate brand warmth and competence compared to TV commercials or other types of video ads. Previous studies on warmth in advertising used TV commercials to measure warmth in advertising because some scholars defined warmth in advertising as emotional responses involving physiological arousal, and TV commercials had more impact than other media for advertising persuasion (Aaker & Bruzzone, 1981; Aaker, Stayman, & Hagerty, 1986). Additionally, ad warmth in the previous studies were considered as a positive emotional response, not simple and short-term impression based on consumers' cognition only (Chowdhury, Olsen, & Pracejus, 2008; Escalas & Stern, 2003; Geuens et al., 2011).

Furthermore, TV commercials have been considered as media that have more impact on persuasion by using motion pictures rather than a still image of a print ad. TV commercials or video ads may be more likely to elicit viewers' responses compared to a print ad because it has more amount of information, and it includes another important sensory information source, sound (Lindstrom, 2005). Thus, one possible flaw in the

experiment may be a medium to present warmth advertising appeals through. TV commercials may be the better stimuli ads to manipulate warmth and competence perceptions of a brand.

Third, the level of ad warmth for ads with warmth appeals in this study was relatively lower than expected. Ad warmth for the test stimuli with warmth appeal indicated the mean below 6.0. For example, ad warmth for a minivan ad was  $M = 5.59$  ( $SD = 1.23$ ). Considering that the minivan product category holds far warmer perceptions than the strength-related product categories, the level of ad warmth appeared not to be enough to evoke participants' warmth from the ad. Although there was significant difference in ad warmth for ads with warmth appeal and ads without warmth appeals, the gap between the two types of ads may not have been large enough to render effects on the outcome measures.

Fourth, from a similar but opposite perspective, the level of ad warmth for ads without warmth appeal was relatively higher than expected. In non-warmth ad conditions, levels of ad warmth for most non-warmth ads were higher than the mid-point, 3.5. For example, ad warmth for a pickup truck without warmth appeal was evaluated as higher than 3.5 ( $M = 3.56$ ,  $SD = 1.47$ ). Ad warmth for a minivan ad without warmth appeal was larger than that,  $M = 4.30$  ( $SD = 1.43$ ). This means that ads without warmth appeal indicated higher warmth than expected even though there was a significant difference in ad warmth for ads with warmth appeal and ads without warmth appeal. This higher ad warmth for ads without warmth appeal may be due to higher warmth perceptions of a

product category and other products in the same product category, which have already existed.

In this study, high gentleness-related products showed relatively high warmth perceptions of a product category. Thus, even though no warmth appeal was used for the warmer product category, perceived warmth of an advertised brand and ad warmth could be higher than it actually is due to high warmth of the product category and transference of it to the brand level. For example, in the condition of a non-warmth appeal for a children's allergy relief product, perceived warmth of the brand was higher than expected. This transferred warmth perception from a product category to a brand level could prevent non-warmth appeal ads from holding a lower level of perceived warmth of a brand.

This argument raises another question: how can we manipulate much less warm brand perceptions by using advertisements, and what level of ad warmth could be enough to manipulate higher ad warmth (or lower ad warmth for ads without warmth appeal), and generate higher perceived warmth of an advertised brand?

As for these issues, previous studies in person warmth and competence provided some hints and clues. Previous studies on a compensation effect in social psychology have used the stimuli describing people's cold (rather than less warm) behaviors. For example, a picture of an angry person in a stimulus described a cold personality trait of that person or it describes a man as very mean (Holoien & Fiske, 2013; Kervyn et al., 2009; Kervyn, Yzerbyt, & Judd, 2010). For example, Holoien and Fiske (2013) found and employed negative languages to imbue a person with low warmth traits in their

experiments. The authors employed “stupid,” “lousy,” “nasty,” “deficient,” and “repugnant” to manipulate low warmth in impression of a person.

However, it may not make sense that ad warmth or brand warmth are manipulated by negative advertising appeals evoking the extreme low level of warmth because the coldness or extreme low level of warmth may imbue negative perceptions and impressions with a brand, which may violate the basic assumption of the purpose of advertising and branding because advertising and branding exist basically for the purpose of promoting a brand and to enhance positive brand perceptions. The only exception may be a comparative advertisement. For example, a comparative advertisement often describes a competitor as negative such as dishonest and distrustful (James & Hensel, 1991; Muehling, Laczniak, & Ehrich, 2013).

Another example of an ad using a cold or extremely low warmth personality of a person may be a political advertising campaign. Political advertisements often use negative messages to describe competitors as negative politicians such as dishonest, distrustful and irresponsible politicians (Stevens, 2012). For example, John Kerry was a victim of a negative advertising campaign created by his competitor in the 2004 presidential election and he was described as a dishonest and distrustful person in the negative ad (Devlin, 2005). However, advertisements whose purpose is to promote an advertised brand may have many limitations to indicate the extremely low level of warmth. Because of that, although an extremely low warmth ad is possible, it may not provide a meaningful implication for marketers and advertisers. Some advertisements used somewhat cold and less warm creative approaches such as a recent advertisement of

BMW X3 showing an angry and mean man character who appeared to lose a golf game. However, creative approaches in those advertisements are usually combined with humor approaches. They can be understood from a perspective of humor advertising rather than cold or low warmth advertising.

In sum, it was difficult to manipulate warmth and low warmth through one-time exposure of a print ad, and a cold or an extremely low warmth appeal that would have greater potential to generate the predicted compensation effect on perceived brand competence and brand attitude by not make much sense in an advertising context.

### **Theoretical Issues**

There may be several theoretical issues that may be able to explain the failure of the experiment. First, a necessary condition for a contrast effect as discussed in Chapter 4 may not be fully considered and employed in this study. According to literature on a contrast effect, a contrast effect is more likely to occur when the distinctive attributes between a parent category and a target object are made salient. However, this study did not fully make the product category of a brand salient and make the product category of a brand much distinctive from a target brand in an ad even though the product category was clearly shown in the stimuli. In other words, no additional manipulation work was conducted to make a product category salient and distinctive to participants in the experiment. One possible way to make a product category more salient and distinctive from a target brand may be to ask participants about the warmth perceptions of a product category before showing the test stimuli in order to make a product category or warmth perceptions of a product category salient. In this case, warmth perceptions of the product

category may serve as a moderating variable and this approach may test whether that variable can strengthen the impact of warmth appeals on perceived competence of a brand. For example, participants who perceive a strength-related product category as less warm than other participants may be more likely to show lower perceived competence of a brand. This may lead participants to make more inferences about perceived competence of a brand based on warmth appeals (given information) by comparing brand warmth created by warmth appeals with warmth perceptions of a product category. In this case, a product category may be more likely to be used as a standard of comparison when consumers judge competence perceptions of a brand.

Second, preferences of product categories were not considered. Previous studies revealed that consumers have different preferences of various product categories and this can influence persuasion of an advertisement and brand evaluation in an ad (Coupey, Irwin, & Payne, 1998). Thus, there may be a possibility that preference of a product category in this study was transferred to perceptions of a brand and attitude toward a brand along with ad warmth in the test stimuli.

Third, consumers' impression formation process toward a brand can be different from their impression formation process toward other people. Recently, a study in neuroscience and neuropsychology demonstrated that consumers' information process and perceptions of brands are somewhat different from their information processes of perceiving people (Reimann, Castaño, Zaichkowsky, & Bechara, 2012). In spite of that, numerous studies in branding and advertising have simply applied human relationships to consumer-brand relationships. Fournier (1998) suggested that consumers interact with

brands just as they do with other people. Thus, human relationship is applicable in the branding context based on the human relationship metaphor. Anthropomorphization or personification of a brand has also supported this notion of consumer-brand relationship. As discussed in Chapter 2, this is one of the key concepts and important theoretical background to this study. This assumption motivated the author to attempt to apply warmth and competence concepts in person perception research to advertising and branding contexts. Impression formation of others in person perception has been also considered as applicable to consumers' image formation of brands. Associations with a brand can be described as human personality traits and these traits have been used to manage and enhance brand image and consumer-brand relationship (Aaker, 1997).

However, this study proposes that it needs more comprehensive research on whether simple application of person perception concepts to the branding and advertising context. Specifically, a possible question in this regard may be whether warmth and competence person perceptions are simply applicable to brands. Based on social psychology and evolutionary social psychology, warmth and competence perceptions are fundamental social perceptions for human survival (Fiske, Cuddy, & Glick, 2007). However, it needs more research on whether brand warmth and competence are fundamental and unique dimensions in the advertising and branding context, and whether it is simply applicable to consumers' impression formation of a relatively new brand and brands from various product categories.

Consumer-brand relationship assumes that there has been a relatively long-term relationship between consumers and brands (Fournier, 1998b; MacInnis, Park, & Priester,

2009). Marketing scholars applied this relationship to brand warmth and competence and suggested that brand warmth and competence is justified based on consumer-brand relationship. However, when a new brand is introduced to consumers, they do not have any existing relationships with that brand. In this case, consumers' perceptions of a brand rely more heavily on simple impression of a brand from some cues such as a brand name or other products in the same category. In this regard, some scholars suggested that brand warmth and competence can be more applicable to corporate brands, not individual brand levels (Fournier & Alvarez, 2012; MacInnis, 2012). The authors argued that consumers have "utilitarian knowledge of brands, no relationship at all" for individual brands in general. Thus, they suggested that application of warmth and competence to brands would be better to corporate brands than individual product brands.

### **Limitations and Future Studies**

There are many limitations in this study. First of all, more individual differences should have been considered. This study employed only one individual difference, affect intensity, and it was controlled in the main analysis. However, considering that perceived competence of a brand is based on consumers' inference making process and their information processing, need for cognition should have been considered or controlled in this study. A number of papers in advertising and marketing have used need for cognition as one important moderating variable (Haugtvedt, Petty, & Cacioppo, 1992; Roy & Sharma, 2015; Zajonc, 1980). Previous studies have suggested that need for cognition influenced viewers' information processing and their inference making processes. Applied to this study, considering that consumers' competence perceptions of a brand is



only based on brand warmth information in an ad, and they make inferences about missing or unfeatured information, those who have high need for cognition may be more likely to make inference about brand competence, thus a compensation effect may be more likely to occur to those people compared to those who have low level of need for cognition.

Second, this study used fictitious brands instead of existing brands, which may not provide more meaningful managerial implications. Although a study uses fictitious brands, it also has a practical implication because it can be applied to a common marketing situation that a new brand is launched in the marketplace. Consumers have no information about a new brand, thus they probably are more likely to rely on overall impression of a brand including warmth and competence based on contextual information and simple informational cues. However, using existing brands could provide more meaningful implications and may show more interesting findings. For example, Malone and Fiske (2013) attempted to apply brand warmth and competence to real brands in the U.S. and to find meaningful managerial implications in terms of brand management and brand strategy. Although this book focused only on why brand warmth and competence is important and how they are correlated with purchase intention and brand loyalty, it could provide marketers and advertisers with many interesting and meaningful directions for their marketing and advertising strategy development.

Third, this study mainly used advertising visuals to manipulate ad warmth rather than warm advertising claims in text. The visuals are associated with advertising creative approaches and executions. Although warmth advertising claims were partly used in the

test stimuli (e.g., “Always with your family” for a large size car category), more advertising claims could have been used to further manipulate warmth perceptions of the brand. Even though the warmth claims can be perceived as too obvious, it could be a method for further strengthening the level of ad warmth in the stimuli.

As a future research topic, the information process level can be considered and used as a moderating variable. Considering that warmth and competence perceptions are generated through people’s cognitive process, different levels of consumers’ information process could offer meaningful results and implications.

First, as part of the information process level, the consumers’ involvement level in a target product or product category can be incorporated as a moderating factor. Prior research suggested that a competence advertising message was more effective than a warmth message when consumers had high involvement in a target product, whereas a warmth message was more effective than a competence message when they had low involvement (Zawisza & Pittard, 2015). Likewise, consumers with low involvement would be more likely to show positive attitude toward the brand when the ad uses warmth appeals compared to when an ad without warmth appeal is used. Additionally, future research could use an ad with competence appeals along with warmth appeals, and compare the effects of competence appeals with those of warmth appeals under the different involvement level conditions. For example, if consumers plan to buy a target product within a month, their involvement level is relatively higher than those who do not plan to buy it. In this case, ads with competence appeals could be more effective than ads with warmth appeals for high involvement consumers.

Secondly, consumers' cognitive load can also be considered and used for advertising or branding research on warmth and competence. Considering that perceptions of brand competence based on warmth appeals is based on consumers' inferences, cognitive load may decrease the degree to which a compensation effect occurs between a warmth appeal and brand competence. In other words, cognitive load may serve as a moderating variable in this case. Prior research on information processing and inferential processes suggested that consumers who have more available cognitive resources are more likely to make inferences about unfeatured information of the advertised brand after viewing the ad. Gilbert, Pelham, & Krull (1988) suggested that making inferences requires more cognitive resources than categorizing and characterizing the actor's behavior. Based on their study, there are three processes in person perception: 1) categorization ("what is the actor doing?"); 2) characterization (what trait does this action mean or imply?); and 3) correction through inference ("what situational constraints may have caused the action?"). The authors demonstrated that correction by making inferences is a less automatic form of information processing, and it requires more cognitive resources. Applying this, when consumers view an ad, they will first see what this ad says (i.e. categorization: "What does this ad say about the brand?"). Second, they will think about what the message or appeal in the ad means (i.e. characterization: "A warmth appeal in the ad means that the advertised brand is warm."). Lastly, they will think more about the ad and the brand by comparing the ad with the situational contexts given to them (e.g., a product category or the type of benefit for the product) and make inferences about unfeatured information of the brand and why they do this. Thus, if

consumers have more cognitive resources to process the ad, they are more likely to make inferences about unfeatured information of the brand (i.e. perceived competence of the brand) compared to when they have less resources to process the ad.

Eisend (2010) also supported this notion by suggesting that consumers with more cognitive resources (e.g., when they are given no additional cognitive load) are more likely to make inferential processes than those with less cognitive resources (e.g., when they are given more cognitive load). In his study, when consumers view an advertisement, they first attribute the message of the ad to disposition of an actor, i.e. the advertised brand. For instance, when they see a warmth appeal, consumers acknowledge that the advertised brand is warm and perceive the advertised brand as warm. Then, consumers proceed to the next stage: They focus on contextual information in the ad (i.e. a product category or the type of benefit) to understand the message more thoroughly. This subsequent inferential process requires more cognitive resources than the former stage. Thus, applied to the future research, when consumers see a warmth appeal in the ad, consumers with more cognitive resources may be more likely to make inferences about the inverse nature of the brand's competence perceptions (compared to the brand's warmth) than those with fewer cognitive resources.

Another area for future research is to compare the effects of the warmth appeal in an advertisement with those in social media. Recent study on brand warmth in social media suggested that consumers were more likely to endorse (i.e. like on Facebook) a nonprofit brand than a for-profit brand even though two brands used the same warmth appeal (Bernritter, Verlegh, & Smit, 2016). Their study showed that the type of medium

influenced an impact of the warmth appeal in social media and consumers' intention to endorse a brand that is perceived as warm. Considering that consumers' endorsement of a particular brand in social media is disclosed to others, consumers may endorse a warm brand using the warmth appeal than others brands with little warmth and they may be more likely to endorse a warm brand in social media than in other media. The topic of the warmth appeal and warmth perceptions of a brand has the potential to be extended to the different media contexts and it would offer many important implications to advertisers and marketers in the era of social media.

Lastly, this study assumed that a compensation effect occurs in an explicit comparative context (i.e. when two ads are compared simultaneously), thus hypotheses in an explicit comparative context were not proposed in this study because it is simple applied research in the advertising context. However, as noted earlier, impression formation process toward a brand could be different from impression formation process toward a person. Thus, it could be meaningful to test a compensation effect in an explicit comparative context and compare the result with the result in this study. In this regard, another area for future research is to test whether a compensation effect occurs when two ads with different levels of warmth appeals are given and compared simultaneously.

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APPENDIX 1.



– Test Stimuli –

Study 1A.

WE EASED THEIR ALLERGY SYMPTOMS  
AND YOU MADE IT THE BEST  
PLAY DATE EVER 

**Wellsprings' Children's Allergy Relief**  
WE CARE ABOUT YOUR FAMILY

▶ Just one dose of **Wellsprings for Kids** lasts  
all day and all night



Ad with the warmth appeal for a children's allergy relief

**INDOOR & OUTDOOR ALLERGIES**  
**INTRODUCING WELLSPRINGS'**  
**CHILDREN'S ALLERGY RELIEF**



**Wellsprings' Children's Allergy Relief**

Ease Your Children's Allergy Symptoms

- ▶ Just one dose of *Wellsprings for Kids* lasts all day and all night

**Wellsprings**

Ad without warmth appeal for a children's allergy relief

**WE EASED YOUR ALLERGY SYMPTOMS  
AND YOU MADE IT THE BEST  
PLAY DATE EVER** 🦋



**Wellsprings' Extra-Strength Allergy Relief**  
WE CARE ABOUT YOUR FAMILY

▶ Just one dose of **Wellsprings Extra-Strength** lasts all day and all night



Ad with the warmth appeal for an extra-strength allergy relief



**INDOOR & OUTDOOR ALLERGIES**  
**INTRODUCING WELLSPRINGS'**  
**EXTRA-STRENGTH ALLERGY RELIEF**



**Wellsprings' Extra-Strength Allergy Relief**

Ease Your Allergy Symptoms

- ▶ Just one dose of **Wellsprings' Extra-Strength** lasts all day and all night

**Wellsprings**

Ad without the warmth appeal for an extra-strength allergy relief

Study 1B.

**Always with your family**  
**Add love to your car**

- ▶ New design, new safety features, more cargo space
- ▶ Perfect minivan for families

Try the New  
Minivan Ride  
*Labo*

INTRODUCING  
THE TYSLER  
MOTOR COMPANY

Ad with the warmth appeal for a minivan



## Introducing the New Tysler Minivan

- ▶ New design, new safety features, more cargo space
- ▶ Perfect minivan for families

Try the New  
Minivan Ride

*Labo*

INTRODUCING  
THE TYSLER  
MOTOR COMPANY

Ad without the warmth appeal for a minivan



**Always with your family  
Add love to your car**

- ▶ Up to 800 lbs. lighter but more powerful
- ▶ Works like a truck, rides like a family car

Try the New  
Pickup Ride  
*Labo*

INTRODUCING  
THE TYSLER  
MOTOR COMPANY

Ad with the warmth appeal for a pickup truck



## Introducing the New Tysler Pickup Truck

- ▶ Up to 800 lbs. lighter but more powerful
- ▶ Works like a truck, rides like a family car

Try the New  
Pickup Ride  
*Labo*

INTRODUCING  
THE TYSLER  
MOTOR COMPANY

Ad without the warmth appeal for a pickup truck

## **APPENDIX 2.**

– Questionnaire for the Main Study –

[Consent Form]

You are invited to be in a research study of advertising effects.

**Background Information:**

The purpose of this study is to gain a better understanding of advertising effects.

**Procedures:**

If you choose to participate, you will first be asked to complete a short questionnaire, view an advertisement, then complete a second questionnaire about the ad. Lastly you will answer short questions about yourself. Thus, this session will take about 15 minutes to complete. If you leave during the survey, you will not get credit.

**Risk and Benefits of being in the Study:**

This study does not involve any risk to the participant.

**Confidentiality:**

The records of this study will be kept private.

**Voluntary Nature of the Study:**

Participation in this study is voluntary. At the end of the survey, you will receive a code to get credit for taking our survey.

By clicking the blue arrow button below, you are agreeing that you have read the information above and voluntarily wish to participate. If you do not agree with the information above and do not wish to participate, please exit out of the survey now.

---- PAGE BREAK ----

On the next several screens, you will be shown a series of statements regarding yourself.

---- PAGE BREAK ----

The following statements relate to how you would think about yourself (your personality, traits and characteristics, etc.).

1. Please rate how strongly you disagree or agree with each of the statements below about yourself.

	Never	Almost Never	Occasionally	Usually	Almost Always	Always
When I accomplish something difficult I feel delighted or elated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I feel happy it is a strong type of exuberance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My emotions tend to be more intense than those of most people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My happy moods are so strong that I feel like I'm "in heaven."	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sad movies deeply touch me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My friends might say I'm emotional.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I do something wrong I have strong feelings of shame and guilt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I am excited over something I want to share my feelings with everyone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

---- PAGE BREAK ----

2. Please rate how strongly you disagree or agree with each of the statements below about yourself.

Please rate how strongly you disagree or agree with each of the statements below about yourself.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
If I reflect on my past, I see that I tend to be afraid of feeling emotions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that I need to experience strong emotions regularly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotions help people to get along in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find strong emotions overwhelming and therefore try to avoid them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that it is important to explore my feelings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would prefer not to experience either the lows or highs of emotion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not know how to handle my emotions, so I avoid them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important for me to be in touch with my feelings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important for me to know how others are feeling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotions are dangerous – they tend to get me into situations that I would rather avoid.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

---- PAGE BREAK ----

On the next several screens, you will see a magazine advertisement or display advertisement that you could see when flipping through a magazine or surfing the Internet. To ensure you have enough time to view the ad, the "next" button will not be visible until 20 seconds have passed.

---- PAGE BREAK ----

Please, look at the ad carefully because you should answer questions about the ad after that. Once you look at the ad, you can continue on the next screen.

[See the Stimulus Ad]

---- PAGE BREAK ----

The following statements relate to how you would think about the advertisement that you just saw.

3. Please rate how strongly you disagree or agree with the statements below about the advertisement.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I think the ad is cozy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think the ad sends out warmth.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think tone of the ad is affectionate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think the ad is warm.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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4. Please rate the advertised brand on the following attributes based on the ad you just saw.

"I think the advertised brand, Brand [X] is \_\_\_\_\_."

not warm at all	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	very warm
not effective at all	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	very effective
very strong	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	very gentle
not competent at all	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	very competent
not kind at all	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	very kind
not generous at all	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	very generous
very powerful	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	very soft
not efficient at all	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	very efficient
not friendly at all	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	very friendly
not capable at all	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	very capable

5. Please rate the advertised brand on the following attributes based on the ad you just saw.

“I think the advertised brand [X] is \_\_\_\_\_.”

bad	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	good
unpleasant	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	pleasant
unappealing	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	appealing
negative	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	positive
unfavorable	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	favorable
inferior	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	superior
low quality	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	high quality

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6. Please indicate the probability that you will try this brand, Wellsprings if you were going to buy this product, and the brand becomes available.

Very unlikely	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Very likely
Improbable	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Very probable
Impossible	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Possible
Never try this brand	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Willingly try this brand

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7. How familiar are you with the advertised brand name, Brand [X]?

“I am \_\_\_\_\_ with Brand [X]”

Not familiar at all	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Very familiar
I have never heard of it	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I have heard about it a lot

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8. Please rate the advertisement on the following attributes.

"I think the advertisement is \_\_\_\_\_."

Unbelievable	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Believable
Untrustworthy	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Trustworthy
Not credible	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Credible
Unreasonable	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Reasonable
Dishonest	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Honest
Questionable	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Unquestionable
Inconclusive	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Conclusive
Not authentic	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Authentic
Unlikely	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Likely
Not convincing	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Convincing

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9. What do you think about the picture in the ad you just saw? For each of the following items, please check the proper one that reflects your opinion.

Not consistent with the message	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Consistent with the message
A good fit for the message	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Not a good fit for the message
Not congruent with the ad	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Congruent with the ad
Compatible with the ad	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Not compatible with the ad

---- PAGE BREAK ----

10. How much do you disagree or agree with the following statements about the advertisement?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
The information in the ad is easy to process.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information in the ad is difficult to understand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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11. We need you to judge a children's allergy relief product category against a series of descriptive scales according to how you perceive the product category.

"Product category [X] (is) \_\_\_\_\_."

Unimportant	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Important
Of no concern to me	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	of concern to me
Irrelevant	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Relevant
Means nothing to me	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Means a lot to me
Uninterested	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Interested

---- PAGE BREAK ----

12. Please list here all the thoughts that went through your mind while you were seeing the ad. Please list each individual thought on a separate line (please be as specific as possible).

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13. Have you eaten dinosaurs? (This is just to screen out random clicking)

	Never	Sometimes	Very Often	Always
"I ____ eat (or have eaten) dinosaurs"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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14. What is your age? \_\_\_\_\_

---- PAGE BREAK ----

15. What is your gender?

- Male (1)
- Female (2)

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16. Please mark one or more boxes to indicate what you consider your race to be. How would you describe yourself? (Choose one or more from the following racial groups)

- American Indian or Alaska Native (1)
- Asian (2)
- Black or African American (3)
- Native Hawaiian or Other Pacific Islander (4)
- White (5)
- Hispanic or Latino (6)

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17. What is the highest level of education you have completed?

- Less than High School (1)
- High School / GED (2)
- Some College (3)
- 2-year College Degree (4)
- 4-year College Degree (5)
- Masters Degree (6)
- Doctoral Degree (7)
- Professional Degree (JD, MD) (8)

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18. What is your annual income range?

- Below \$20,000 (1)
- \$20,000 - \$29,999 (2)
- \$30,000 - \$39,999 (3)
- \$40,000 - \$49,999 (4)
- \$50,000 - \$59,999 (5)
- \$60,000 - \$69,999 (6)
- \$70,000 - \$79,999 (9)
- \$80,000 - \$89,999 (7)
- \$90,000 or more (8)