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汽車廣告之品牌個性分析與品牌個性傳播之研究

The Study on Brand Personality of Automobile Advertisements and the Communication of Brand Personality

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摘要：本研究將 2006 至 2008 年十月台灣前三大汽車雜誌（一手車訊、超越車訊和汽車購買指南）的汽車平面廣告，以內容分析法與 Aaker（1997）的品牌個性尺度為分類準則，探討汽車廣告業主採用何種品牌個性來塑造品牌。本研究以內容分析發現汽車業者主要以教養、刺激和勝任的品牌個性來塑造品牌。本研究亦以實驗法，針對教養、刺激和勝任的品牌個性，探討不同的品牌個性應搭配何種程度外表吸引力的模特兒進行傳播。研究結果發現品牌個性與模特兒外表吸引力對傳播效果皆有顯著的影響。且以廣告態度而言，不論品牌個性為高刺激或低刺激、高勝任或低勝任、高教養或低教養，均適合與高度外表吸引力的模特兒搭配。以品牌態度而言，當品牌個性為高刺激時，高度與適度外表吸引力的模特兒無顯著差異；當品牌個性為低刺激時，適度外表吸引力模特兒邊際顯著優於高度外表吸引力的模特兒，其餘不論品牌個性為高勝任或低勝任、高教養或低教養，高度與適度外表吸引力的

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模特兒的品牌態度皆無顯著差異。

關鍵詞：內容分析；品牌個性；外表吸引力；配適假設；傳播效果

Abstract : This study uses content analysis to investigate the brand personalities of automobile advertisements according to brand personality scale (*sincerity, excitement, competence, sophistication*, and *ruggedness*) of Aaker (1997). The advertisements were selected from the top three automobile magazines in Taiwan (i.e., *Car News, Taiwan Motor,* and *Car Guide*) from January 2006 to October 2008. This study found that the dimensions of *sophistication, excitement,* and *competence* are more frequent than *sincerity* and *ruggedness* in brand personalities. In addition, the study uses experimental design to investigate the match-up between the levels of models' physical attractiveness and that of *sophistication*, *excitement,* and *competence* used to communicate brand personalities. This study found that brand personality and models' physical attractiveness have a significant impact on the communication effect. For attitude toward advertisement, no matter whether brand personalities convey high or low *excitement*, high or low *competence*, or high or low *sophistication*, highly attractive models are liked more than normally attractive ones are. For attitude toward brand, there is no significant difference between highly and normally attractive models when the brand personality conveys high *excitement*, while normally attractive models are marginally significantly liked more than highly attractive models when the brand personality conveys low *excitement*. For the remaining brand personalities, regardless of high or low *competence* or high or low *sophistication*, highly attractive models are more liked than normally attractive ones are.

Keywords: Content analysis; Brand personality; Physical attractiveness; Match-up hypothesis; Communication effect

1. Introduction

Branding is one of several marketing tools used by companies and businesses. A unique brand is memorable for consumers and makes a company's

products easily distinguishable and quickly recognizable in the market. The emphasis nowadays is for individuals to possess their personal styles. Similarly, when a company launches a product or service, it must be packaged with a symbol that represents the company's image and style, leading to the growing attention towards the concept of branding. In recent years, many researchers have even anthropomorphized brands, endowing them with individual personalities. Among the various contributing factors, advertisements definitely play an important role in the creation of brand personalities. Aaker (1997) considered advertisements to be a critical avenue through which brand personalities are established. Keller (1998) also highlighted advertisements as one of the most influential factors in the establishment of brand personalities.

Taiwan's automobile market became highly competitive upon its admission into the WTO in 2001. Up until 2005, the market remained fairly robust. However, it gradually declined in 2006, with the volume of domestically produced cars falling by 28.8% year – on – year. In 2007, the automobile market slumped to its worst state in two decades. Reports by the Industrial Development Bureau of the Ministry of Economic Affairs attributed the causes to market saturation as well as increases in international prices of oil and raw materials. Government intervention and rescue efforts in November 2008 not only failed to revive the ailing industry but also made matters worse. Despite the general malaise, automobile manufacturers spared no effort in promoting their brands of cars. A study of Taiwan's media market by Rainmaker XKM International Corp. revealed that car advertisements typically ranked in the top two in volume in all forms of media, including television, magazines, and newspapers, indicating the industry's heavy reliance on advertisements. This study has investigated the use of brand personalities in advertisements seeking to increase vehicle sales during the downturn of the automobile industry between January 2006 and October 2008.

Wimmer and Dominick (2002) believed that content analysis could be used to study and determine the authenticity of media content. This method uses reality as the criterion to check media descriptions of specific groups, phenomena, temperaments, or characteristics for consistency and accuracy. In this study, content analysis was used to analyze car advertisements placed in Taiwan's top

three automobile magazines and to classify different types of brand personalities in order to gain a systematic understanding of the automobile industry's brand personalities in marketing and communication.

It is common practice for advertising agencies to appoint attractive-looking models as product spokespersons. McCracken (1989) emphasized the importance of selecting an appropriate spokesperson as he or she can directly shape the brand's personality. Baker and Churchill (1977) believed that highly attractive models (HAMs) have an overall advantage over normally attractive models (NAMs) in creating positive attitudes towards the advertisements and products that they represent as well as the ability to instill in consumers the intention to purchase those products. This theory was supported by the findings of subsequent research, including studies by Caballero and Pride (1984) and Petorshins and Crocker (1989). Moreover, Kahle and Homer (1985) pointed out that a good effect would result from having a good fit between HAMs and the advertised products. Solomon, Ashmore, and Longo (1992) used the match-up hypothesis to prove the importance of matching the spokesperson's level of attractiveness with the products in advertisements. Till and Busler (2000) and Koernig and Page (2002) highlighted that when the spokesperson's image is congruent with that of the product, consumers would have positive assessments of both the product and the advertisement. Lee and Thorson (2008) also proved that celebrity endorsements were less persuasive when there was incongruence between the celebrity and the product or when the degree of fit varied. Overall, the communication effect of an advertisement is significantly influenced by the complementarity between the product and the spokesperson.

This study has discussed the brand personalities of car advertisements and what level of model attractiveness could match the different brand personalities of cars and generate good communication effects. The findings can be used as reference when brand personalities are being created in order to generate the desired communication effect. The next section of the paper is the literature review, which is followed by elaborations on the research assumptions, framework, and methodology. After sharing our research findings, we conclude

by discussing the management implications of the findings and providing recommendations for future studies.

2. Literature Review

The match-up hypothesis was used to investigate the best fit between different brand personalities and the level of attractiveness of spokespersons in order to achieve the communication effect (the main variable being studied). The paper then elaborates upon schema congruence and the match-up hypothesis, both of which are underlying theoretical bases for this study.

2.1 Communication Effect

The effects of an advertisement can be manifested in terms of sales effect and communication effect (Lavidge and Steiner, 1961). Sales effect is measured by an actual increase in sales volume of the advertised product. Communication effect is the degree to which the information conveyed by the advertisement has been noticed, understood, and accepted by consumers, in turn causing a change in their attitude and/or behavior. The metrics for both types of effects have their respective pros and cons. In general, the ultimate goal of an advertisement is to increase sales volume, so advertisement effects are mainly rated by sales effect. However, sales effect is often affected by other factors, including competition and promotional activities, making it harder to measure compared to communication effect (Lin and Lin, 1994). Therefore, the main variable chosen for our study was communication effect, which is divided into the advertising and brand attitudes (Peng, 2000). Advertising attitude refers to the tendency of consumers to react positively or negatively to specific stimulation by an advertisement exhibited under specific circumstances (Lutz, 1985). Measurement of the attitude provides an understanding of consumers' evaluation of and response towards an advertisement. On the other hand, brand attitude refers to the sustained psychological tendencies that consumers have developed towards a specific brand (Lutz, Mackenzie, and Belch, 1986).

2.2 Schema Congruence and Match-up Hypothesis

2.2.1 Definition of Schema Congruence

Schema congruence occurs when the message in a stimulus is in line with the expectations of consumers' schema (internal standards). Conversely, there is schema incongruence when that message interferes with the schema. Mandler (1982) used the schema theory to explain how the degree of congruity between a message and consumers' schema affected the latter's emotional response and evaluation of the stimulus.

2.2.2 Effects of Schema Congruence

Mandler (1982) proposed that when consumers receive a stimulus, if it matched the cognitive structure of an existing schema, they would be able to quickly and easily categorize the message and then integrate it with the original schema to form a more complete schema, which would in turn produce a positive emotional assessment of the information: this is called "assimilation". However, if there was a divergence between the message and the existing schema, consumers would make adjustments to eliminate the inconsistency and resolve the difference. Consumers would usually have to expand their minds or modify their psychological structure in order to comprehend the incongruent message; this is called "accommodation."

Mandler (1982) proposed modes that would resolve different messages by customers: consumers would process different received messages differently, leading to an evaluation of the information in the stimulus and various degrees of emotional intensity. Fiske and Taylor (1991) pointed out that humans form schema through the learning process or past experiences and would have existing expectations of stimuli, messages, or events that would affect the way in which they deal with and judge a stimulus. Researchers applying the schema theory found that people could distinguish whether information was schema-congruent or not and tended to remember schema-related information while forgetting information that was unrelated. Under normal circumstances, established and good schema would lead to a preference memory for information in line with one's memories and expectations. Schema-congruent messages would be quickly

assimilated by consumers, leading to a rapid consumer evaluation and positive emotions (Hastie, 1981; Fiske and Taylor, 1991).

2.2.3 Definition of Match-up Hypothesis

The match-up hypothesis is that when a spokesperson's level of physical attractiveness matches that of the advertised product, the advertisement will be more effective (Kahle and Homer, 1985). Kamins (1990) explained that when the physical attractiveness of a spokesperson is related to that of the product, it would create a positive attitude in consumers and that the process could be explained by assimilation under the schema theory. Assuming that consumers originally have an established schema of the product, assimilation would take place when the schema of the spokesperson matches that of the product, and consumers would create associations between the spokesperson, the advertisement, and the schema of the product, resulting in positive attitude.

2.2.4 Literature on Match-up Hypothesis

Kahle and Homer (1985) and Kamins (1990) studied celebrities' level of attractiveness and found that highly attractive celebrities were able to increase the advertising effect of the products they endorsed, and vice versa. The effects of the MUH can also be applied to non-celebrities. Parekh and Kanekar (1994) also verified that when a model whose level of physical attractiveness matches that of the product, the advertisement would be more effective. Solomon *et al.* (1992) investigated the match-up effect between different types of aesthetics and products and found significant correlations between them. Bower and Landreth (2001) also found that for advertisements of beauty – enhancing products, HAMs exuded a greater degree of professionalism compared to NAMs and had better advertising effects.

The aforementioned studies focused on products, while Koerning and Page (2002) instead examined the application of the MUH to services. They found that when there is a match between a service and attractiveness, consumers find the service provider more physically attractive and become more willing to pay the price for the service. In summary, the MUH is indeed an appropriate explanation

for why consumers have a more positive assessment of a product or service and its advertisement when there is a match between the image of the spokesperson or service provider and that of the product or service.

2.3 Brand Personality

2.3.1 Definition of Brand Personality

Aaker (1997) defined a brand as a distinguishable name or symbol, for example, a logo, trademark, or packaging design, in order to distinguish the product or service of a seller (or a group of vendors) from that of its competitors, ensuring that consumers clearly know the source of the products and can recognize these products by their brand among similar products.

Brands, like humans, have their own personalities (Duboff, 1986; Carr, 1996). The majority of advertising agencies and brand managers also hold this view (Alt and Griggs, 1988). According to Aaker (1997), brand personality refers to a set of human characteristics or traits that can be attributed to a brand. It helps to create differentiation, giving consumers various substantial rights and benefits in different forms (Aaker, 2000). Wee (2004) found that brand personalities function like personality traits in humans, exhibiting stability over the long term. Yet, human and brand personalities are not entirely alike in how they develop. Human personality is influenced by cultural and family backgrounds, social class, attitudes, beliefs, genetics, and body type. Brand personality is not inherent in the product or the brand itself: it is an additional attribute that is shaped by the brand's marketing and promotional activities as well as by the reactions arising from consumers' interactions with the brand.

2.3.2 Dimensions of Brand Personality

Alt and Griggs (1988) were the first to propose four dimensions of brand personality: extroversion, social acceptability, virtue, and potency. Batra, Lehmann, and Singh (1993) came up with 14 dimensional pairs, including reliable-unreliable, technical-non-technical, interesting – non – interesting, etc.

Macrae (1996) divided brand personality into six types: ritualistic, symbol, heritage, exclusive, belonging, and legendary.

The brand personality scale (BPS) developed by Aaker (1997) is a combination of special features that can be used to measure and structure brand personalities (Table 1). Her study covered many product categories, while the five personality dimensions that she proposed - *sincerity*, *excitement*, *competence*, *sophistication*, and *ruggedness* - could explain up to 93% of the differences between all brands. Hence, the BPS is used as the criterion when constructing categories for content analysis.

Table 1

Brand Personality Scale (BPS) of Aaker (1997)

Dimension	Factors
sincerity	Down-to-earth: down-to-earth, family-oriented, small-town Honest: honest, sincere, real Wholesome: wholesome, original Cheerful: cheerful, sentimental, friendly
excitement	Daring: daring, trendy, exciting Spirited: spirited, cool, young Imaginative: imaginative, unique Up-to-date: up-to-date, independent, contemporary
competence	Reliable: reliable, hard working, secure Intelligent: intelligent, technical, corporate Successful: successful, leader, confident
sophistication	Upper: upper class, glamorous, good looking Charming: charming, feminine, smooth
ruggedness	Outdoorsy: outdoorsy, masculine, western Tough: tough, rugged

Source: Aaker(1997)

2.4 Physical Attractiveness

2.4.1 Definition and Degrees of Physical Attractiveness

Patzer (1985) defined physical attractiveness as "the extent to which the target is pleasing to the eyes." Smith (1985) highlighted the significant correlation between facial and overall attractiveness, implying that the face is the most important element of physical attractiveness. Richins (1991) thought that a beautiful countenance constitutes a high degree of physical attractiveness. As this study has focused on the attractiveness of spokespersons in print advertisements, Richins (1991) been adopted to define physical attractiveness based on the models' countenance.

Martin and Kennedy (1993) and Bower and Landreth (2001) classified attractiveness into highly attractive and normally or moderately attractive. A highly attractive person has a not only has beautiful countenance but also shapely physique (Striegel – Moore and Rodin, 1986; Bower and Landreth, 2001). On the other hand, the looks and physique of a normally attractive person are more general and akin to that of most people (Bower and Landreth, 2001). For the purpose of this study, a highly attractive model is one who has a beautiful countenance, while a normally attractive model has a less beautiful countenance than a highly attractive model with significant differences between the two.

2.4.2 Stereotypes about Physical Attractiveness

Pendry and Macrae (1994) believed that people often classify others based on their external appearances. Following the classification, one would have psychological expectations, which are then used to evaluate others (Hosoda, Stone-Romero, and Coats, 2003). Many studies have revealed the tendency for humans to form certain stereotypes based on physical attractiveness. For example, Dion, Berscheid, and Walster (1972) pointed out that it is generally thought that those who look physically attractive also tend to have successful careers. Cash and Gillen (1977) thought that highly attractive people were generally regarded as being more outgoing. Eagly *et al.* (1991) found that those who are better looking tend to be thought of as being more kind-hearted, highly attractive people are

often regarded as possessing better social skills but a lower level of intellect and compassion, and attractive-looking people give others the impression of being vain and conceited. Langlois *et al.* (2000) found that highly attractive persons are deemed to have a more positive personality. Many studies also highlighted the consistency between physical appearance and the likelihood of being responsible or outgoing (Passini and Norman, 1966; Albright, Kenny and Malloy, 1988; Watson, 1989).

2.4.3 Match-up between Models' Physical Attractiveness and Brand Personality

Cash and Gillen (1977) and Langlois *et al.* (2000) reached the same conclusion that highly physically attractive people are generally regarded as being more outgoing than most people are. This impression of being outgoing corresponds to the characteristic of the *excitement* dimension, as proposed in BPS of Aaker (1997) (Table 1). Hence, a highly attractive model is more compatible with a high *excitement* brand personality. Conversely, a normally attractive model is often seen to be less outgoing than a highly attractive model. According to the match-up hypothesis, to create better advertising effects, a high *excitement* brand personality should be matched with a highly attractive model; and a low *excitement* brand personality, with a normally attractive model. Based on the aforementioned arguments, the following hypotheses are made:

H1-1: A better advertisement attitude will be generated when a high *excitement* brand personality is matched with a highly attractive model or when a low *excitement* brand personality is matched with a normally attractive model.

H1-2: A better brand attitude will be generated when a high *excitement* brand personality is matched with a highly attractive model or when a low *excitement* brand personality is matched with a normally attractive model.

It was stated earlier that Dion *et al.* (1972) had found that physically attractive people tend to be viewed as having successful careers; hence, a highly attractive person possesses more characteristics of a successful person. This impression of being successful corresponds to the characteristic of the *competence* dimension, as proposed in BPS of Aaker (1997) (Table 1). Hence, a highly

attractive model is more compatible with a high *competence* brand personality. Correspondingly, a normally attractive model is often seen as having fewer characteristics of those who are successful compared to a highly attractive model. Based on the match-up hypothesis, a brand personality with low *competence* should be matched with a normally attractive model for a better advertising effect. These viewpoints have led to the following hypotheses:

H2-1: A better advertisement attitude will be generated when a high *competence* brand personality is matched with a highly attractive model or when a low *competence* brand personality is matched with a normally attractive model.

H2-2: A better brand attitude will be generated when a high *competence* brand personality is matched with a highly attractive model or when a low *competence* brand personality is matched with a normally attractive model.

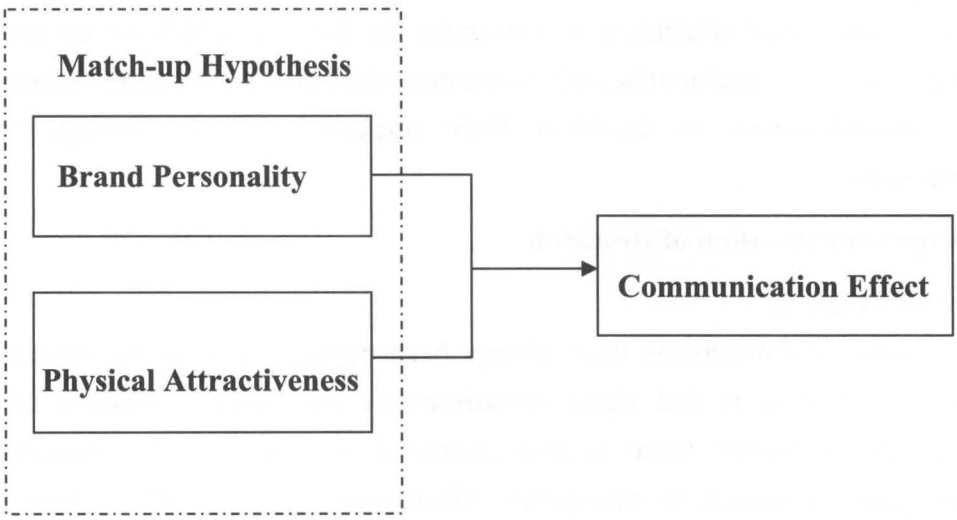
Patzer (1985) viewed physical attractiveness as the extent to which the target is pleasing to the eyes, while Richins (1991) thought that a high degree of physical attractiveness means having a beautiful countenance. Hence, a person who is highly attractive is often better looking and has nice features. The impression of being good looking corresponds to the characteristic of the *sophistication* dimension, as proposed in BPS of Aaker (1997) (Table 1). Hence, a highly attractive model is more compatible with a high *sophistication* brand personality. Moreover, a normally attractive model is often viewed as less good looking compared to a highly attractive model. Again, using the match-up hypothesis, a brand personality with low *sophistication* should be matched with a normally attractive model for a better advertising effect. The hypotheses listed below were derived from the aforementioned arguments:

H3-1: A better advertisement attitude will be generated when a high *sophistication* brand personality is matched with a highly attractive model or when a low *sophistication* brand personality is matched with a normally attractive model.

H3-2: A better brand attitude will be generated when a high *sophistication* brand personality is matched with a highly attractive model or when a low *sophistication* brand personality is matched with a normally attractive model.

Based on the literature review, a research framework for Study 1 – 3 of this research was developed, as shown in Figure 1.

Figure 1
The Research Framework for Study 1-3



3. Methodology

The current study was divided into two stages: content analysis was carried out during Stage 1, while experimental design was used for analysis in Stage 2. Details of the two stages are elaborated upon in the following sections.

3.1 Stage 1: Content Analysis

3.1.1 What Is Content Analysis?

The use of content analysis originated in Sweden in the 18th century and became popular in the 1930s with the development of propaganda analysis and communication research. In the recent half-century, content analysis has become one of the important research methods in academic dissemination and other social sciences; it is often used to explore the significance of messages. A unique feature of content analysis is its ability to describe and analyze events that happened far away or in the past and people's innermost thoughts (Wang, 1999). Wimmer and Dominick (2002) indicated that content analysis is helpful in describing

disseminated contents, viewing characteristics of messages, comparing media content and the real world, assessing the image of particular social groups, and establishing research on media effects. As this method can be used to analyze the nature of disseminated contents and to examine the forms in which the contents are expressed, it was used in this study to examine the brand personalities adopted by car manufacturers to establish their respective brands through car advertisements.

3.1.2 Scope and Duration of Research

a. Scope of Research

Magazine advertisements have always been popular subjects for research analysis. One reason is that static advertisements are easier to observe than dynamic advertisements: there is also greater design freedom for magazine advertisements compared to newspaper advertisements (Liu, 1992). Another reason is that more information is contained in and presented by magazine advertisements compared to other forms of print advertisements. Therefore, magazine advertisements are used in this study for analysis.

To select the magazines, this study referred to the *Government Information Office 2007 Yearbook*, which stated that the top and second bestselling automobile magazines in 2006 were *Taiwan Motor* and *Car Guide* respectively. A survey by Rainmaker XKM International Corp. on the readership of automobile magazines in Taiwan for the 2nd quarter, 2006, placed *Car News* at the top (0.2%). Joint runner-ups were *Taiwan Motor* and *Car Guide*, with a readership of 0.1% each. Hence, the car advertisements in these three popular automobile magazines were studied. In addition, a survey conducted by the Industrial Technology Research Institute in 2007 found that Taiwan's automobile market was still dominated by smaller passenger cars. The output value of these cars amounted to NTD93 billion, accounting for 63.99% of the total output value for automobiles. Hence, the focus of this study was on general passenger cars, excluding larger vehicles, such as sport utility vehicles (SUVs) and trucks, to remove the impact of different vehicular types on advertising content.

b. Duration of Research

The annual sale of automobiles in Taiwan reached a peak of 560,000 vehicles in 1994, but gradually declined year-on-year afterwards. With its admission into the WTO in 2001, the Taiwanese automobile market became highly competitive. This robust scenario lasted until the end of 2005. In 2006, the output volume of domestically produced cars fell by 28.8% year-on-year. According to a 2007 market report on the state of the automobile industry published by the Industrial Development Bureau of the Ministry of Economic Affairs, this decline to a 20-year-low was caused by market saturation as well as increases in the international prices of oil and raw materials. This led to the government's decision to intervene and rescue the automobile market through various measures. Unfortunately, the news was leaked prematurely, causing consumers who had intended to purchase cars to instead adopt a wait-and-see attitude. Those who were anticipating preferential schemes even decided to cancel their earlier orders. Consequently, vehicle sales in November 2008 were adversely affected, which was an unexpected development. Therefore, the duration of the study was from January 2006 to October 2008, during which 102 issues regarding the malaise in Taiwan's automobile industry and the brand personality strategies used in advertisements were discussed.

3.1.3 Construction of Categories and Reliability Analysis

The core task of content analysis is the construction of categories. Categories are the basic units of content analysis and refer to the standards by which contents are classified. The categories adopted for this study are *sincerity*, *excitement*, *competence*, *sophistication*, and *ruggedness*, based on BPS of Aaker (1997). The characteristics associated with the various categories are shown in Table 1.

Reliability analysis when using content analysis refers to the ability of the adopted categories and units of analysis to withstand the test of different coders, that is, whether different coders classify the contents being analyzed into similar categories to achieve a consistent result. The higher the consistency in content classification by different coders, the more reliable the content analysis. Wang (1999) proposed a formula to measure the degree of agreement and reliability

during CA and advocated a minimum benchmark of 0.8 or greater as the reasonable standard. Wang's formula, as adopted for this study, is elaborated upon as follows:

Mutual Agreement = 2M / N1 + N2

Reliability = (N × Average Mutual Agreement) / [1+ (N−1) × Average Mutual Agreement], where

M: Number of categories that are in full agreement

N1: Number of categories in full agreement that Coder #1 should have

N2: Number of categories in full agreement that Coder #2 should have

N: Total number of coders

3.2 Stage 2: Experimental Design

3.2.1 Experimental method

In Stage 2, the experimental design was used to investigate the advertising effect created by matching three brand personality dimensions - *excitement*, *competence*, and *sophistication* - with the level of models' physical attractiveness. Specifically, factorial design was used and three experiments were carried out, Study 1-3. In Study 1, *excitement* was manipulated as high and low and then matched with a highly attractive model and a normally attractive model, respectively. In Study 2 and Study 3, similar manipulations and matching were done with *competence* and *sophistication*, respectively.

3.2.2 Preparation of experimental materials

a. Selection of Models

i. *Potential Models*

Photographs of models were selected from men's magazines that currently sell well in the Taiwan market, including *Men's Health*, *Men's Uno*, and *GQ* (Taiwan). Photographs with unclear or blurred images were excluded. It was further verified that the models in the photos had not previously endorsed any products professionally, nor had they been exclusive spokespersons for any

particular brands. Photographs of five male models, labeled 1-5 sequentially, were chosen for pretest.

ii. *Scales*

Two questions, "The model was good looking." and "The model was very attractive." were devised for the measurement of the physical attractiveness of the models, in accordance with Bower and Landreth (2001) and Tsai (2006). The 5-point Likert scale was used for rating.

iii. *Selection Process*

Undergraduates from I-Shou University participated in the selection process. To prevent sequence effects, participants were randomly assigned to one of five groups, with each group being represented by a male model as labeled above. Participants had 5-10 minutes to complete a questionnaire after looking at the photograph, and all questionnaires were collected immediately upon completion.

iv. *Selection Results*

For each model, the points rated by the participants to the two questions were added up. The average score was the level of attractiveness for that model. Model No. 1, with the highest score of 3.500, was considered the highly attractive model. For the selection of normally attractive model, t-test was conducted to rate the scores of the other models against that of Model No. 1. The *p*-value for Models No. 4 and No. 5 was 0.177 and 0.075 respectively, indicating a lack of significant difference. The *p*-value for both Models No. 2 and No. 3 was less than 0.05 (0.000 and 0.020 respectively), indicating a significant difference in physical attractiveness between Model No. 1 and these two models. The average score for Model No. 2 was 2.667, which was lower than the median value of Model No. 3. Considering that advertisement models are generally not unattractive, Model No. 3 was selected as the normally attractive mode. The photographs of the highly attractive mode and normally attractive mode are shown in the appendix.

b. Selection of Automobile Brands

The frequency of the various brand personalities of cars, as determined by content analysis, is listed in Table 2. *Sophistication* had the highest count (247), accounting for 40% of brand personalities, followed by *excitement* (230, 38%) and *competence* (229, 37%). The remaining two dimensions had substantially

lower counts: *sincerity* had 74 counts (12%), while *ruggedness* had only 39 counts (6%).

Table 2

The Frequency of Brand Personalities of Automobiles

Sophistication		Excitement		Competence	
1.Protonlotus	41	1.Protonlotus	32	1. Protonlotus	68
2.Volkswagen	26	2.Mazda	27	2. Volvo	26
3.Porsche	21	3.Honda	26	3.Suzuki	21
4.Lexus	21	4.Volkswagen	15	4.Honda	19
5.Honda	20	5.Benz	13	5.Benz	19
6.Audi	19	6.BMW	15	6.Renault	17
7.Volvo	17	7.Lexus	12	7.Volkswagen	16
8.Benz	16	8.Audi	11	8.BMW	14
9.Renault	11	9.Ford	11	9.Daihatsu	10
10.Infiniti	11	10Infiniti	10	10.Ford	6
11.BMW	8	11.Skoda	8	11.Alfa Romeo	6
12.Mazda	7	12.Toyota	7	12.Lexus	7
13.Peugeot	6	13.Peugeot	7	13.Skoda	3
14.Jaguar	6	14.Renault	7	14.Peugeot	3
15.Ford	5	15.Smart	7	15.Infiniti	2
16.Suzuki	5	16.Daihatsu	6	16.Toyota	2
17.Skoda	4	17.Mini	6	17.Nissan	2
18.Buick	3	18.Suzuki	4	18.Porsche	1
19.Masersti	3	19.Fiat	3	19.Youlon GM	1
20.Toyota	3	20.Alfa Romeo	3	20.Flat	1
21.Yulon GM	3	21.Volvo	2	21.Audi	1
22.Daihatsu	3	22.Jaguar	1	22.Buick	1
23.Nissan	3	23.Nissan	1	23.Mitsubishi	1
24.Lancia	2	24.Mitsubishi	1		
25.Mitsubishi	1	25.Citroen	1		
26.Chrysler	1	26.Porsche	1		
27.Citroen	1	27.Marserati	1		
28.Hyundai	1				

It can be seen from Table 2 that Proton Lotus was ranked high while Mitsubishi was ranked low in terms of *excitement*, *sophistication*, and *competence*. Both automobile brands were excluded from the study because they each embodied more than one brand personality. Considering consumers' awareness of the various automobile brands, Mazda and Nissan were selected as the representatives for high and low *excitement* respectively. High and low *competence* were represented by Volvo and Audi respectively, while high and low *sophistication* were represented by Volkswagen and Hyundai respectively.

3.2.3 Experiment

Following the selection of automobile brands, four full-colored advertisements were designed for each of Study 1 – 3. Besides the variable being manipulated for each study, all other variables remained the same.

a. Scale Design

The scales included ratings of the model's attractiveness and the communication effect of the advertisement, encompassing the two elements of advertisement and brand attitude. The two questions for rating the model's attractiveness were similar to those used in the pretest according to Bower and Landreth (2001) and Tsai(2006). For advertisement attitude, six questions were designed based on Holbrook and Batra (1987) and Liang (1992). The five questions related to brand attitude were made with reference to Leclerc, Schmitt, and Dube (1994). All questions were rated using a 5-point Likert scale.

b. Participants and Process

Considering that office workers are likely to have the economic capability to purchase a car, and for the sake of convenience, employees of the Kaohsiung Oil Refinery were recruited as participants. Study 1-3 each had four experimental groups, with 30 participants in each group, making a total of 360 subjects. Respondents were assigned randomly to one of the units and conducted a simple briefing before the experiment to explain the rules. The subjects were asked to complete a questionnaire immediately after viewing the advertisement copy assigned to their group. The questionnaires were collected after being duly completed. The entire experiment process lasted approximately 5-10 minutes.

4. Results

4.1 Results of Content Analysis

Through content analysis, it was found that between January 2006 and October 2008, 604 car print advertisements appeared in *Car News, Taiwan Motor*, and *Car Guide*. Among these automobile magazines, *Car Guide* had the most car advertisements (261), followed by *Car News* (189), and lastly, *Taiwan Motor* (154).

4.1.1 Reliability Test of Content Analysis

A total of 48 car advertisements from the previous one and a half years were used in a pre-test to establish the consistency level between the three coders, A – C, the more consistent the coding, the higher the degree of reliability. After the coding results were entered into the formula proposed by Wang (1999), a reliability rating of 0.9196 was derived. The rating was higher than the benchmark of 0.8 set by Wang (1999), and thus, was deemed reliable. The three coders then officially began to separately analyze the brand personalities in the 604 car advertisements. The brand personality scores analyzed by Coders A, B, and C were 1044, 1072, and 1012 respectively. Table 3 shows the number of brand personalities that are in full agreement between any two coders as well as the degree of agreement between the two. The results were inputted into Wang's formula, deriving an overall reliability rating of 0.93859.

Table 3

Frequency in Full Agreement between Coders and Mutual Agreement

	Coder A	Coder B	Coder C
Coder A	—	—	—
Coder B	863(0.815689)	—	—
Coder C	894(0.869649)	857(0.869649)	—

Note: In Parentheses are Mutual Agreements between Coders

4.1.2 Frequency of Brand Personality Dimensions

To completely present all the brand personalities used in the car advertisements, whenever two personalities were identified in the same advertisement, both would be included in the analysis. Furthermore, as the analyses of the three coders were not identical, all discrepancies were eliminated and only those findings for which all three coders were in agreement were eventually compiled. The majority of the car advertisements (247) showcased the *sophistication* dimension of brand personality. It was followed by *excitement* (230), *competence* (229), *sincerity* (74), and *ruggedness* (39).

4.2 Results of the Various Studies

4.2.1 Reliability and Validity

From the three studies, the Cronbach's alpha of physical attractiveness, advertisement attitude, and brand attitude are listed in Table 4. Since all the reliability values are greater than 0.7, it can be established that the scales used in this study were reliable (DeVellies, 2003).

To test for validity, factor analysis was separately performed on the three factors of physical attractiveness, advertisement attitude, and brand attitude (Table 4). For each construct, only one factor was extracted based on the criterion of its eigenvalue being larger than 1. This was to confirm the singularity of the construct. The factor loadings of the various construct measures and the percentages of variation extraction were relatively high, indicating that the scales used in this study had convergent validity. The discriminant validity between physical attractiveness, advertisement attitude, and brand attitude are shown in Table 5. According to Fornell and Larcker (1981), there is discriminant validity between two constructs when the percentage of variation extracted from them separately is greater than the square of the correlation coefficient between them. Hence, based on Table 5, it can be concluded that the scales used in this study had discriminant validity.

Table 4

Reliability and Validity of Study 1-3

	Items	Factor Loadings			Cronbach's Alpha			Percentage of Extracted Variation (%)		
		S1	S2	S3	S1	S2	S3	S1	S2	S3
Physical Attractiveness	The model was good looking	0.965	0.971	0.958	0.925	0.938	0.909	93.092	94.331	91.755
	The model was very attractive	0.965	0.971	0.958						
Ad Attitude	I liked the ad	0.896	0.912	0.905	0.948	0.964	0.951	79.443	84.915	80.459
	The ad was great	0.913	0.944	0.907						
	I felt positively about the ad	0.889	0.914	0.882						
	I preferred the ad's presentation	0.862	0.934	0.885						
	The ad was very interesting	0.885	0.921	0.901						
	The ad attracted people's attention	0.904	0.904	0.903						
Brand Attitude	I liked this brand of car very much	0.755	0.847	0.905	0.874	0.888	0.887	67.765	69.212	69.277
	The quality of this brand is good	0.902	0.883	0.907						
	I feel positively towards this brand	0.867	0.852	0.848						
	This brand gives me pleasure	0.848	0.796	0.845						
	I am very attracted to this brand	0.732	0.778	0.796						

Note: S1-3 is the Abbreviation of Study 1-3, Respectively

Table 5

Discriminant Validity of Study 1 / Study 2/Study 3

	Physical Attractiveness	Ad Attitude	Brand Attitude
Physical Attractiveness	0.930/0.943/0.918		
Ad Attitude	0.726/0.845/0.790	0.794/0.849/0.806	
Brand Attitude	0.113/0.143/0.141	0.153/0.141/0.177	0.678/0.692/0.693

Note: The Diagonal is the Percentage of Extracted Variation, and the Remaining is Square of the Correlation Coefficient

Table 6

The Result of ANOVA-Study 1

Source	Dependent Variable	SS	df	MS	F	p
Physical Attractiveness	Ad Attitude	90.133	1	90.133	375.169	0.000**
	Brand Attitude	0.225	1	0.225	0.458	0.500
Brand Personality	Ad Attitude	0.181	1	0.181	0.7558	0.387
	Brand Attitude	3.745	1	3.745	7.608	0.007**
Physical Attractiveness × Brand Personality	Ad Attitude	0.093	1	0.093	0.385	0.536
	Brand Attitude	0.261	1	0.261	0.385	0.468
Error	Ad Attitude	27.867	116	0.492		
	Brand Attitude	57.107	116	0.492		
Total	Ad Attitude	118.274	119			
	Brand Attitude	61.339	119			

Note: * $p<.05$; ** $p<.01$

4.2.2 Manipulation Test

For Study 1, the average score of the highly attractive model group was 3.883, while that for the normally attractive model group was 2.475. The *t*-test resulted in a *t*-value of 11.983 and a *p*-value of 0.000 < 0.05. For Study 2, the average score of the highly attractive model group was 4.067, while that for the normally attractive model group was 1.850. The *t*-test resulted in a *t*-value of 18.673 and a *p*-value of 0.000 < 0.05. For Study 3, the average score of the highly attractive model group was 3.967, while that for the normally attractive model group was 2.225. The *t*-test resulted in a *t*-value of 14.857 and a *p*-value of 0.000 < 0.05.

For all of the three studies, the average scores of the highly attractive model group were consistently and significantly higher than that of the normally attractive model group. Hence, the manipulation of physical attractiveness in the three studies can be deemed successful.

4.2.3 Results of Study 1

a. Multivariate Analysis of Variance

MANOVA was carried out to investigate the impact of physical attractiveness and brand personality on communication effect. The results show that the Wilks' lambda (Λ) of physical attractiveness was 0.232 ($p = 0.000 < 0.01$), indicating that physical attractiveness had a significant impact on communication effect. The Λ of brand personality was 0.938 ($p = 0.024 < 0.05$), again indicating a significant impact on communication effect. There was no significant interaction effect between physical attractiveness and brand personality ($\Lambda = 0.993$, $p = 0.683$).

b. Analysis of Variance

ANOVA was used to investigate the effect of physical attractiveness and brand personality on advertising attitude (Table 6). The results show that physical attractiveness had a significant impact on advertising attitude (F (1, 116) = 375.169, $p = 0.000 < 0.01$). Furthermore, it can be seen from Table 7 that the

impact of a HAM on advertising attitude was significantly greater than that of a NAM (3.805 versus 2.939). However, brand personality had no significant impact on advertising attitude. Neither was there any significant interaction effect between physical attractiveness and brand personality with regard to advertising attitude. Physical attractiveness had no significant impact on advertising attitude, but brand personality did (F (1, 116) = 7.608, p = 0.007 < 0.01). The impact of a high *excitement* brand personality on brand attitude was 3.790, which was significantly greater than that of a low *excitement* brand (3.437). There was no significant interaction effect between physical attractiveness and brand personality with regard to brand attitude.

c. Simple Main Effect Test- Advertisement Attitude

The average scores of the advertisement attitude of the various groups are listed in Table 7. Through simple main effects test, it was confirmed that for both high and low *excitement* brand personalities, a highly attractive model was significantly more suitable as a spokesperson compared to a normally attractive model; the scores were (F (1, 116) = 152.63, p = 0.000 < 0.01) and (F (1, 116) = 137.26, p = 0.000 < 0.01) respectively. Hence, H1-1 is only partially supported.

d. Simple Main Effect Test - Brand Attitude

The average scores of the brand attitude of the various groups are listed in Table 8. Through simple main effects test, it was confirmed that for a high *excitement* brand personality, there was no significant difference regardless of whether a highly attractive model or normally attractive model was used (F (1, 116) = 1.12, p = 0.292). However, for a low *excitement* brand personality, a normally attractive model was marginally more suitable than a highly attractive model (F (1, 116) = 3.03, p = 0.085 < 0.10). Hence, H1-2 is only partially supported.

Table 7

Ad Attitude for each Group of Study 1

Brand PersonalityPhysical Attractiveness	High Excitement	Low Excitement	Main Effect-Physical Attractiveness
Highly Physical Attractiveness	3.872 (0.506)	3.739 (0.378)	3.805
Normally Physical Attractiveness	2.083 (0.555)	2.061 (0.504)	2.939
Main Effect-Brand Personality	2.978	2.900	

Note: In Parenthesis is Standard Deviation.

Table 8

Brand Attitude for each Group of Study 1

Brand PersonalityPhysical Attractiveness	High Excitement	Low Excitement	Main Effect-Physical Attractiveness
Highly Physical Attractiveness	3.880 (0.555)	3.433 (0.784)	3.657
Normally Physical Attractiveness	3.700 (0.696)	3.440 (0.749)	3.613
Main Effect - Brand Personality	3.790	3.437	

Note: In Parenthesis is Standard Deviation.

4.2.4 Results of Study 2

a. MANOVA

The Λ of physical attractiveness was 0.074 (p = 0.000 < 0.01), indicating that physical attractiveness had a significant impact on communication effect. The Λ of brand personality was 0.895 (p = 0.002 < 0.01), indicating a significant impact on communication effect. There was no significant interaction effect between physical attractiveness and brand personality (Λ = 0.981, p = 0.332).

b. ANOVA

The ANOVA results (Table 9) show that physical attractiveness had a significant impact on advertisement attitude (F (1, 116) = 14.061, p = 0.000 < 0.01). Table 10 shows that the impact of a highly attractive model on advertisement attitude was significantly greater than that of a normally attractive model (4.044 versus 2.881). Brand personality similarly had a significant impact on advertisement attitude (F (1, 116) = 11.237, p = 0.001 < 0.01). The brand attitude of a high *competence* brand personality was 2.778, which was significantly lower than that of a low *competence* brand personality (2.983). There was no significant interaction effect between physical attractiveness and brand personality with regard to advertisement attitude.

Brand personality had a significant impact on brand attitude (F (1, 116) = 3.087, p = 0.082 < 0.10). According to Table 11, the brand attitude of a high *competence* brand personality was 3.337, which was significantly lower than that of a low *competence* brand (3.570). Physical attractiveness had no significant impact on brand attitude. Neither was there any significant interaction effect between physical attractiveness and brand personality with regard to brand attitude.

c. Simple Main Effect Test - Advertisement Attitude

Table 10 shows the average scores of the advertisement attitude of the various groups. Through simple main effects test, it was found that for both high and low *competence* brand personalities, a highly attractive model was significantly more suitable as a spokesperson compared to a normally attractive model. The scores are (F (1, 116) = 225.42, p = 0.000 < 0.01) and (F (1, 116) = 185.41, p = 0.000<0.01) respectively. Hence, H2–1 is only partially supported.

Table 9

The Result of ANOVA-Study 2

Source	Dependent Variable	SS	df	MS	*F*	*p*
Physical Attractiveness	Ad Attitude	162.556	1	162.556	1441.061	0.000***
	Brand Attitude	0.901	1	0.901	1.703	0.194
Brand Personality	Ad Attitude	1.268	1	1.268	11.237	0.001***
	Brand Attitude	1.633	1	1.633	3.087	0.082*
Physical Attractiveness × Brand Personality	Ad Attitude	0.156	1	0.156	1.387	0.241
	Brand Attitude	0.385	1	0.385	0.728	0.395
Error	Ad Attitude	13.085	116	0.113		
	Brand Attitude	61.379	116	0.529		
Total	Ad Attitude	64.299	119			
	Brand Attitude	64.299	119			

Note: * $p<.10$; ** $p<.05$; *** $p<.01$

Table 10

Ad Attitude for each Group of Study 2

Brand PersonalityPhysical Attractiveness	High Excitement	Low Excitement	Main Effect-Physical Attractiveness
Highly Physical Attractiveness	3.906 (0.383)	4.1833 (0.311)	4.044
Normally Physical Attractiveness	1.650 (0.275)	1.7833 (0.364)	2.881
Main Effect-Brand Personality	2.778	2.983	

Note: In parenthesis is standard deviation.

Table 11

Brand Attitude for each Group of Study 2

Brand PersonalityPhysical Attractiveness	High competence	Low competence	Main Effect-Physical Attractiveness
Highly Physical Attractiveness	3.480 (0.647)	3.600 (0.515)	3.540
Normally Physical Attractiveness	3.193 (0.713)	3.540 (0.962)	3.453
Main Effect-Brand Personality	3.337	3.570	

Note: In parenthesis is standard deviation.

d. Simple Main Effect Test - Brand Attitude

Table 8 lists the average scores of the brand attitude of the various groups. The simple main effects test revealed that for both high and low *competence* brand personalities, there was no significant difference regardless of whether a highly attractive model or normally attractive model was used. The scores are (F (1, 116) = 2.33, p = 0.130) and (F (1, 116) = 0.10, p = 0.750) respectively. Hence, H2–2 is not supported.

4.2.5 Results of Study 3

a. MANOVA

The Λ of physical attractiveness was 0.284 ($p = 0.000 < 0.01$), indicating that physical attractiveness had a significant impact on communication effect. The Λ of brand personality was 0.945 ($p = 0.040 < 0.05$), again indicating a significant effect on communication effect. There was no significant interaction effect between physical attractiveness and brand personality with regard to communication effect ($\Lambda = 0.996$, $p = 0.801$).

b. ANOVA

Table 12 shows the ANOVA results, which indicate that physical attractiveness had a significant impact on advertising attitude (F (1, 116) = 289.683, $p = 0.000 < 0.01$). Furthermore, the impact of a highly attractive model on advertisement attitude was significantly higher than that of a normally

attractive model (3.881 versus 2.990). Brand personality had no significant effect on advertising attitude. Neither was there any significant interaction effect between physical attractiveness and brand personality with regard to advertising attitude. However, physical attractiveness had a significant impact on brand attitude (F (1, 116) = 3.916, p = 0.05 < 0.1). Table 14 shows that the impact of a highly attractive model on brand attitude (3.837) was significantly higher than that of a normally attractive model (3.718). Brand personality had a significant effect on brand attitude (F (1, 116) = 4.577, p = 0.035 < 0.05). As seen in Table 14, the brand attitude of a high *sophistication* brand personality was 3.847, which was significantly higher than that of a low *sophistication* brand (3.580). There was no significant interaction effect between physical attractiveness and brand personality with regard to brand attitude (Table 12).

c. Simple Main Effect Test - Advertisement Attitude

The average scores of the advertising attitude of the various groups are shown in Table 13. Simple main effects test showed that for both high and low *sophistication* brand personalities, a highly attractive model was significantly more suitable as a spokesperson compared to a normally attractive model. The scores were (F (1, 116) = 199.82, p = 0.000 < 0.01) and (F (1, 116) = 175.77, p = 0.000 < 0.01) respectively. Hence, H3-1 is only partially supported.

d. Simple Main Effect Test - Brand Attitude

The average scores of the brand attitude of the various groups are shown in Table 14. Through simple main effects test, it was found that for both high and low *sophistication* brand personalities, there was no significant difference regardless of whether a highly attractive model or normally attractive model was used. The scores were (F (1, 116) = 0.98, p = 0.324) and (F (1, 116) = 0.11, p = 0.742) respectively. Hence, H3-2 is not supported.

Table 12

The Result of ANOVA-Study 3

Source	Dependent Variable	SS	df	MS	*F*	*p*
Physical Attractiveness	Ad Attitude	95.111	1	95.111	289.683	0.000***
	Brand Attitude	1.825	1	1.825	3.916	0.050*
Brand Personality	Ad Attitude	0.752	1	0.752	2.291	0.133
	Brand Attitude	2.133	1	2.133	4.577	0.035**
Physical Attractiveness × Brand Personality	Ad Attitude	0.067	1	0.067	0.204	0.653
	Brand Attitude	0.108	1	0.108	0.232	0.631
Error	Ad Attitude	38.086	116	0.328		
	Brand Attitude	54.072	116	0.466		
Total	Ad Attitude	134.016	119			
	Brand Attitude	58.139	119			

Note: * $p<.10$; ** $p<.05$; *** $p<.01$

Table 13

Ad Attitude for each Group of Study 3

Brand PersonalityPhysical Attractiveness	High sophistication	Low sophistication	Main Effect-Physical Attractiveness
Highly Physical Attractiveness	3.983 (0.607)	3.778 (0.456)	3.881
Normally Physical Attractiveness	2.156 (0.678)	2.044 (0.527)	2.990
Main Effect-Brand Personality	3.069	2.911	

Note: In parenthesis is standard deviation.

Table 14

Brand Attitude for each Group of Study 3

Brand PersonalityPhysical Attractiveness	High sophistication	Low sophistication	Main Effect-Physical Attractiveness
Highly Physical Attractiveness	3.940 (0.520)	3.733 (0.474)	3.837
Normally Physical Attractiveness	3.753 (0.714)	3.427 (0.927)	3.718
Main Effect-Brand Personality	3.847	3.580	

Note: In parenthesis is standard deviation.

5. Conclusion and Discussion

5.1 Conclusion and Contributions

5.1.1 Content Analysis

Content analysis was performed on 604 car print advertisements found in Taiwan's three bestselling automobile magazines, over a period of 102 weeks (January 2006 - October 2008). The advertisements were categorized according to the five dimensions of the BPS proposed by Aaker (1997): *sincerity*, *excitement*, *competence*, *sophistication*, and *ruggedness*. The dimension that appeared the most times was *sophistication* (247), followed by *excitement* (230), and *competence* (229). *Sincerity* and *ruggedness* were used significantly less, appearing in only 74 and 39 advertisements respectively.

5.1.2 Experimental Method

Three studies were conducted, and it was found that both physical attractiveness and brand personality had significant impacts on communication effect. However, there was no significant interaction effect between physical attractiveness and brand personality with regard to communication effect.

The results of Study 1 show that a highly attractive model had a significantly higher impact on advertisement attitude compared to a normally attractive model, while brand attitude was significantly higher for high *excitement*, rather than low *excitement*, brand personality. In terms of impact on advertisement attitude, a highly attractive model was significantly more suitable as a spokesperson for both high and low *excitement* brand personalities. Hence, H1-1 is only partially supported. For brand attitude, there was no significant difference between using a highly attractive model or normally attractive model for a high *excitement* brand personality. However, a normally attractive model was marginally more suitable for a low *excitement* brand personality. Hence, H1-2 is only partially supported.

The results of Study 2 similarly show that a highly attractive model had a significantly higher impact on advertisement attitude compared to a normally attractive model. For a high *competence* brand personality, the advertisement and

brand attitude were both significantly lower than for a low *competence* brand personality. In terms of impact on advertisement attitude, a highly attractive model was significantly more suitable as a spokesperson for both high and low *competence* brand personalities. Hence, assumption H2-1 is only partially supported. With regard to brand attitude, there was no significant difference between a highly attractive model and normally attractive model for both high and low *competence* brand personalities. Hence, H2-2 is not supported.

The results of Study 3 show that for both advertisement and brand attitude, a highly attractive model scored significantly higher than a normally attractive model. The impact of a high *sophistication* brand personality on brand attitude was significantly higher than that of a low *competence* brand personality. With regard to advertisement attitude, a highly attractive model had a significant impact for both high and low *sophistication* brand personalities. Hence, H3-1 is only partially supported. For both high and low *sophistication* brand personalities, there was no significant difference between a highly attractive model and normally attractive model with regard to brand attitude. Hence, H3-2 is not supported.

The main contribution of this study is its investigation of the types of brand personalities adopted by car manufacturers for communication. The findings allow practitioners and academia to have a more complete understanding of various brand personality strategies adopted by the market. These findings can also serve as a reference for car manufacturers when deciding upon a brand strategy in the future.

In the past, studies on the physical attractiveness of models have been confined to how to enhance advertising impact, but have rarely been applied in the communication of brand personality. On the other hand, research on the match-up hypothesis has tended to focus more on the match-up between advertising models and product types, but has rarely considered the match-up of advertising models and brand personality in brand personality communication. In terms of theory, this study expands the scope of interpretation in relation to the match-up hypothesis and the physical attractiveness of advertising models. From a practical viewpoint, the scope of application for the match-up hypothesis and

the physical attractiveness of advertising models are also further extended through this study.

5.2 Discussion and Management Implications

Keller (1998) highlighted that, of the various factors, advertisements are the most influential and important in the formation of brand personality. Intense competition exists among the various brands in the current automobile market. Enterprises often make use of advertisements to effectively convey product information to consumers and to create and shape the personalities of their brands. The use of content analysis led to the discovery that in brand personalities, car manufacturers commonly make use of the dimensions of *excitement*, *sophistication*, and *competence*, and to a lesser extent, *sincerity* and *ruggedness*. This could be due to the study's focus on general passenger cars, after having excluded the advertisements for larger vehicles such as trucks and SUVs. The brand personality strategies adopted by manufacturers of passenger cars nowadays were unveiled. In the future, to achieve product differentiation, car manufacturers could instead consider using the brand personality dimensions of *sincerity* and *ruggedness*.

Experiments conducted during this study show that regardless of the brand personality strategies adopted, match-ups with highly attractive models would always achieve better effects when it comes to advertisement attitude. This could be because highly attractive models are more pleasing to the eyes (Patzer, 1985), causing subjects to have generally positive feelings towards advertisements in which these models are featured. Consequently, H1 – 1, H2– 1, and H3– 1 were only partially supported. Therefore, if a business wishes to improve the advertisement attitude of consumers, a major factor of consideration remains the deployment of highly attractive models.

In the literature (Baker and Churchill, 1977; Caballero and Pride, 1984; Petorshins and Crocker, 1989), it was highlighted that highly attractive models had a better advertising impact. However, when it comes to brand attitude, most of the hypotheses made in this study have not been supported by the findings. Besides a better match-up between normally attractive models and a low

excitement brand personality, the level of physical attractiveness of the models used in advertisements did not have any significant impact on the other brand personalities. Hence, it is more appropriate and effective for businesses that have low *excitement* brand personalities to make use of normally attractive models when building their brand attitudes. We deduced that the reason for this finding was the experimental materials, which involved car brands that are available in the market. Since the subjects are generally familiar with the various car brands, there was brand familiarity, which in turn affected brand attitude (Machleit and Wilson, 1988).

5.3 Limitations and Recommendations for Future Research

For the content analysis, this study made use of print advertisements only. Future researchers may extend the scope to include other advertising formats including television, radio, and the Internet, which may lead to an all-encompassing understanding of the brand personality strategies adopted by car manufacturers. Furthermore, since the study has focused only on general passenger cars, future research could consider other types of vehicles or investigate brand personalities of other categories of products.

During the second stage of this study, experiments were carried out to examine the communication effect produced by matching different levels of physical attractiveness with various brand personalities. As presently very little research focuses on the match-up between those two factors, the hypotheses for this study were deduced based on stereotypes of physical attractiveness. Future researchers may conduct direct and in-depth interviews with members of the public in order to obtain their views on models with different levels of physical attractiveness and various brand personalities. An alternative is to adopt the perspective of the schema theory (McDaniel, 1999) to investigate the various schemas that people generally have on physical attractiveness and brand personalities. This would help to further explain the reasons for our findings.

In terms of brand personality dimensions, this study had focused on *excitement*, *competence*, and *sophistication*. Future studies may incorporate the dimensions of *sincerity* and *ruggedness*. Fictitious models were used in this study

because it was a concern that our experimental subjects might have personal preferences and existing impressions of real models. Future match-up studies may make use of real models and existing brands or directly reflect the real market situation. Despite our best efforts, given the limited professional technical support available for this study, we were unable to create mock advertisements of a quality that totally matched those produced by corporations. Future researchers may wish to seek appropriate professional technical support to create more professional-looking and refined advertisements for the future studies.

Appendix

The Legends of Highly/Moderately Physically Attractive Model

	
Highly Attractive Model	Normally Attractive Model

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