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The Role of Design in Perceiving the Auto-Brand by the Visitor within the Auto-Showroom

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ABSTRACT

Although a car is considered as a classical mode of transportation, but it has exceeded its role to become a social and personality status symbols. Auto-showrooms play a vital role in showcasing the cars. The automotive brand had become a major theme to design the auto-showrooms exterior and interior environment, The study aims to determine the role of design (as a set of visual elements) to express the place identity within the interior spaces for showrooms, and how design affects the visitor's perception. The researchers developed the observational techniques in performing this study. The findings show that design plays a clear role on the visitors' perception of showroom identification via highlighting the automotive brands.

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1. Introduction

Three decades ago, there were a few brands for customers to choose from a few automotive companies. Those brands were well known for all, in characteristics, country of origin, value, quality and durability. The globalization leads to the rapid growth of trade, and mass markets which affects automotive field significantly. There are a lot of new multinational brands have been appearing in the market (Hanson, Mataloni, & Slaughter, 2004). They are compatible with

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well-established brands, by their attractive prices, high specifications and customer satisfaction services such as loan facilities and after-sales service.

All these factors led to customer confusion in choosing the suitable vehicle, in addition to the economic crises affecting the automotive industry. Automotive industry is the second affected sector after the real-state, where the biggest brands such as General Motors, Chrysler, Ford and Saab were victim of the crisis after 2008 (Sturgeon & Biesebroeck, 2010). The scope of this study focuses on the auto-showrooms as a field of study.

In this study the fundamental objective is to understand the role of showroom design in visual perception of the automotive brand and place identity (by the visitor), as Figure 1 shown.

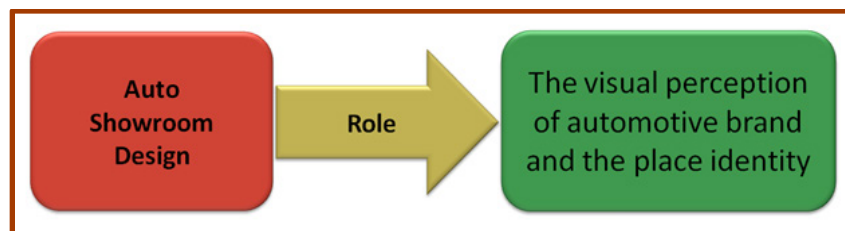


Figure 1: Study Objective

2. Overview

Based on previous studies the researchers shed light on the following three concepts: The auto-showroom design, the automotive brand and the visitor perception, as key themes to achieve the study objective.

2.1 Auto-showroom Design

The field of exhibition design is still in infancy stage and suffering from a scarcity of researches (Bitgood, 2002); therefore the motive behind performing this study is contributing to fill a gap in knowledge. According to Patterson and Bitgood (1988) there are a few factors which play a significant role in exhibiting success, such as: size, motion, aesthetic factors, novelty or rarity, sensory factors, interactive factors, and triangulation. Patterson and Bitgood strongly suggest that the large size of exhibits provides a significant effect on holding visitor attention and viewing time. The moving exhibits are more attractive than the stable exhibits; Melton (1972) had observed that running machine eg. gear shaper leads to increasing the number of the attracted spectators in Science and Industry Museum. The aesthetic value of exhibits is a significant factor to hold a visitor's attention. Melton (1972) and Martin and O'reilly (1982) have suggested that the

elements such as the colour, shape, and pattern of the exhibited objects, are elements to determine the time length of visitor viewing. Some of the exhibitions are attractive naturally regarding to the novelty or rarity of the exhibit element eg. large jewels, meteorites, and white tigers. The visual perception is the first sense used by humans, and the vision is the most important sense in exhibition usage. A lot of studies were done from the viewing time measure of the visitor attraction value. Koran, Koran and Longino (1986) noted that the exhibit with notable and touchable get a longer viewing time. The interactive exhibition is the exhibits which have an interaction between the visitor as a user and the exhibits device. The visitor takes longer time in this kind of exhibitions than the non-interactive exhibits. Whyte (1980) described the triangulation as a concept refers to the promotion of a person or an object for interaction among the spectators. The exhibits that promote that interaction will be a more attractive.

Bitgood (2010) suggested, that the exhibition design should consider, how the visitors gradients their attention sequentially into exhibits. He claimed that the exhibition designers have a number of tools to be applied to help in capturing and focusing attention. Lighting effects make the objects more noticeable, as well as the objects isolation. The focusing devices also have an important impact on drawing visitor attention such as the plastic tube usage as a focusing device in “Desert Botanical Garden in Phoenix”. The focusing techniques can be tested to ensure the elements of attention are becoming efficiently noticeable. In this study the Auto-show concepts and some themes have been sequenced and organized rationally. Some of these themes required a deep explanation and comprehensive description of literatures. This section discusses the atmospherics concept as an umbrella of the design elements.

Catherine (2010) used in her study the term of “Atmospherics” to denote the process of manipulating the elements of the internal environment of a showroom such as colour, lighting, sound, design and odor, that affect customer behaviour (Eroglu & Machleit, 1993). The Atmospherics is the ability to change the buying habits of the customer within the five senses (sight - hearing - smell - touch - taste) which are the main driver of human desires. Through the manipulation of the physical environment units within the showrooms can generate positive feeling leads to attract customers and improve sales. Catherine claimed that the showroom atmospherics require controlling the indoor environment in order to generate maximum effects of visitor emotion

in order to make the interior space of showroom more enjoyable.

2.2 Automotive Brand and Identity

The brand has become a new decision maker, in today's world (Kunde, 2002). This simple statement interprets clearly the emotional effect of the brand value on the customer satisfaction; so that the branding image is defined as a social system based on economic, aesthetic, political, and social distinctions (Giesler, 2003). According to Morel, Preisler and Nyström (2002) the postmodern world branding became more than just produces advertising; The traditional concept of branding is a tool of marketing communication, such as a visual and verbal gun held by marketers and consultants. The key challenge is how to maintain the trust of consumer on the brand in order to achieve the loyalty stage. Morel, Preisler and Nyström (2002) developed a Brand Activation Model based on the interaction through the products and services, employees, identity, till communication as Figure 2 shown. They claimed that this model will gain the customer trust and loyalty, within a fruitful relationship between brands and the community.

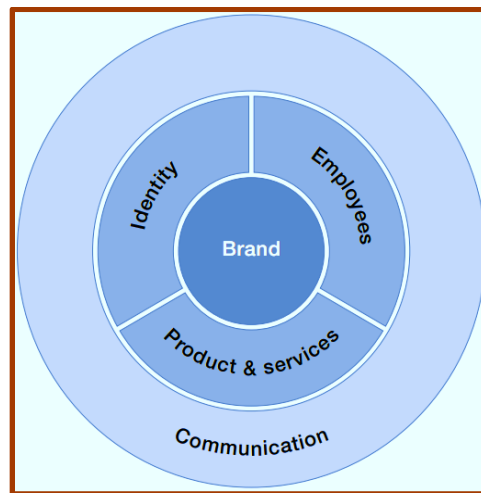


Figure 2: The Brand Activation Model (Morel, Preisler & Nyström, 2002).

Nistorescu and Barbu (2008) investigated the enhancing image brand by using service company techniques in retail stores, and analysed the aspects of environmental store design that link to the model of customer-based brand equity. The marketing environment design has high impact on the purchasing behaviour by; showing the quality and nature of service that presented via transmitting the message to the public, showing the difference of services among competing companies, and as a driver pushing towards objectives by using colours, sound, materials and other effects.

Smith (2006) claimed that the manipulation of lighting effects plays a vital role in perceiving the architectural design (interior and exterior alike), in other words, the new lighting techniques alter the visual perception of space and form.

Frank Gehry and Daniel Libeskind, presented an example, by laying new approach to understanding the role of light in defining the exterior architectural surfaces, as well as considering the dramatic light movements, and the vision changes through the sun-movement. BMW developed this approach conceptually within automotive design “flame surfacing”, through the combining of convex and concave surfaces, and waves under the lighting effect. The surfaces have been broken to give an acceptable form of vehicle.

Bitgood (2010) claimed that the building architecture, sounds, temperature, sights, have a significant impact on a visitor's attention within all stages of visitor observation. The features of architect such as multi-doors exhibition space may play a negative role in circulating through the exhibition as well as the temperature (cold), lighting (dim) helps to visitor encourage visitors quickly pass through the exhibitions.

Herbst and Maisch (2009) outlined many facts depending on the relationship between the branding image, and architecture in the field of automotive by presenting some of the automotive companies' efforts. These efforts devoted to giving their brand futuristic touch via architect and design techniques, based on unique company identity; and to avoid the fading of brand image under the high effect of architectural perspective of the automotive buildings. They highlighted this matter by focusing on two concepts (Architect's Brand VS Company Brand). The integration between the two concepts overlap in term of branding image which led to loses the company identity, and how to attract visitors to the company brand and exhibits. In addition to the significant relationship between the mental image and consumer behaviour by the vividness and the likeability, Herbst and Maisch (2009) claimed that the architectural design had a significant impact on the mental image of automotive companies “emotions are an engine for learning”. They focused on the German automotive industry where sheds light on the relationship between the design and brand loyalty.

Audi: is one of the brands that stand in the forefront, for the reason of function characteristics adoption, the aesthetic value, functional efficiency and technical innovations. The three-dimensional form embodied in Audi brand from, where it was characterized by avant-garde, rational and progressive, which combines the aesthetic and functional values. Audi has succeeded in translating these properties and shorthand this issue within the brand architecture. The showrooms were set up before 2007 as a technical feature by using the glass and steel structures for buildings and showrooms, as well as the characteristics of the Audi logo with (Audi) characters see Figure 3.



Figure 3: Architecture of the Audi centres (Herbst & Maisch, 2009).

Audi introduced the term terminals as a substitute for the car dealerships by mandating Allmann Sattler Wappner the architect firm to give a glimpse modern excellence for the Audi automaker (Herbst & Maisch, 2009). In 2008 the first terminal was open in Munich and was planned to reach 350 terminals end of 2012. These terminals are not just spaces for display, but architectural edifices which adopted the three-dimensional approach to achieve the aesthetic and functional requirements for customer service and selling products to give customers more fun in Audi worldwide. Herbst and Maisch raises a statement architecture as a presentation platform, and classified to the temporary and permanent, places for brand staging, by hand and try to give this classification an emotional dimension to the visitors (target group) especially with the permanent case. The architecture provides a temporary platform for brand staging through the relationship between the space and mass design; however the brand discloses by attracting the emotions. They claimed the terminal design, should be fulfilling of three requirements: In order to attract the media coverage the design of staging should be an impressive and unusual, the design should be clear enough to ensure the idea is connected in a creative way, and express the brand to be stuck in the target group minds.



Figure 4: BMW World, Museum and Headquarter by Karl Schwanzer (Herbst & Maisch, 2009)

Over the past few decades BMW has succeeded within an early stage in term of constructing the formative feature of urban architecture, made for itself a monument in Munich, the company's headquarter, museum and BMW Welt. Herbst and Maisch prefaced analysing the construction, from BMW tower known as a four-cylinders form, which coincided constructing during the Olympic Games 1972, by Karl Schwanzer, the Austrian architect. The four-wheel design of the tower cylinders was inspired as an expression symbolizes the motor cylinders. Close to the company's headquarters the BMW museum had been built by Schwanzer. The museum provided futuristic feature through the huge logo of BMW on the top of the museum roof Figure 4. In 2007 BMW-Welt was as a complementary building, built by a team of architects "Coop Himmelb(l)au". The main feature of this establishment was appointed to be a platform for the BMW group, where it delivers around 45,000 cars annually, to new owners.

The high-level of experience and performance-faithfully through the link between the elements of architecture and the customer satisfaction, led to achieve an emotional contact between

the client and BMW's brand. In addition to the architectural value of BMW Welt; there are three functions performed: BMW product promotions, display the skills and technological expertise, and provide space for all types of internal and external activities.

The project of BMW-Welt aimed to translate the brand message “Freude am Fahren”, in English “Pleasure to Drive”, or “The Ultimate Driving Machine” to the BMW experience as an identity of this giant company. The three buildings of BMW are the most attractive edifice of the Germans visitors, and tourists alike, and imparted a distinction to Munich city. Since opening on 17 October 2007 more than 3 million visitors, this made BMW is the most popular place in Munich. In contrast of Mercedes-Welt, which was opened in Berlin 2000 didn't get that success in spite of its location in the centre of Berlin, but didn't rise to the level of ambition in term of the attracting the attention by the emotional value of Mercedes-Benz brand.

Franken Architekten presented a unique pattern of visual expression or a visual storytelling, in the trade display of BMW Group design, IAA (Internationale Automobil-Ausstellung) in English “International Automobile Exhibition” in 2009. The objective of IAA project is an architectural expression of the essence of BMW car, that highlighting by environment how BMW is friendly car, excellence in driving and energy-saving. Franken Architekten succeeded in interpreting the value of BMW brand, by architecture design of the exhibition as a bubbles form Figure 5.



Figure 5: Bubbles” presentation by BMW at IAA in 1999 (Herbst & Maisch, 2009).

The iconic form of the showroom reflects the impression of safety driving with clean energy. The transparent cortex by glass and steel structures provides the futuristic design and it reflects an

emphasis on visual approach as well as highlighting the innovations and technological ability of BMW firm. The concept of permanent places for brand staging, which represented by the Automobile Museums, such as Mercedes-Benz Museums that constructed in 2006, and Porsche Museum that opened in 2009, and Volkswagen Autostadt were examples for permanent display pattern. Volkswagen Autostadt: is a giant project, entrusted to Ferdinand Piëch. It contained some of brands such as Skoda, Seat, Audi, Bentleys, Bugattis and Lamborghinis. The Autostadt project aimed to enable the customer to perceive the concept of Volkswagen brand and learn about the rich history of Volkswagen products. Gunter Henn Architecture, proceeded to create a space of more than 25 hectares included an integrated urban system where the wings and waterways, bridges, lakes, cliffs, hills, green meadows. as Figure 6 shown.



Figure 6: Volkswagen Autostadt by Gunter Henn (Herbst & Maisch, 2009)

One of the most important features of Autostadt is the 48 meter height tower that can be seen from far distance. The Autostadt presents all the vehicle aspects for each brand under the Volkswagen umbrella, within specific pavilions.

2.3 Visitor Perception

According to Bitgood (2002) there is still argument about the visitor studies has become a field

of knowledge for those who study the environmental design within the visitor perspective especially in museums. In this section there are some concepts related to the visitor's perception will be discussed.

2.3.1 Psychological Performance

Bitgood (2002) emphasizes, the environmental factors such as lobby, exhibitions, amenities, and macro-architecture in addition to the three variables plays a significant role in psychological performance such as the demographics and leisure values; social influence; and pre-knowledge and attitudes.

2.3.2 Visitor Behaviour

Rounds (2004) claimed that the curiosity is the basic motivation for the visitor behaviour. He added that the curiosity is a different kind of motivations, where the curiosity poses abnormally analyses for the rational choice, based on the assumption that the value of information should be the basic factor effects on the visitor behaviour.

2.3.3 The Role of Exhibition Design in visitor Attention

According to Bitgood (2010) the museum architect has a significant impact on the psychological performance. Melton (1935) referred that the exhibition architecture is: what is usually called “exhibit design”. Bitgood (2002) has suggested three of attention principles help in understanding the reactions of the visitor to the exhibits:

- 1- “Attention to exhibits is selective”
- 2- “Visitors must be motivated in order to focus their attention on exhibits”
- 3- “The resources for attending to exhibitions have a limited capacity and are depleted by mental and physical effort” (Bitgood, 2002, p.8).

2.3.4 The Perception

The perception of the world and understanding information is based on the physical stimuli. The process of vision come through containment components in the retina that contribute to the re-assembled according to previous experiences and information to be synchronized with world perception (Boyce, 2003). Figure 7 demonstrates that with the lighting effects, past experiences have the power to perceive the form.

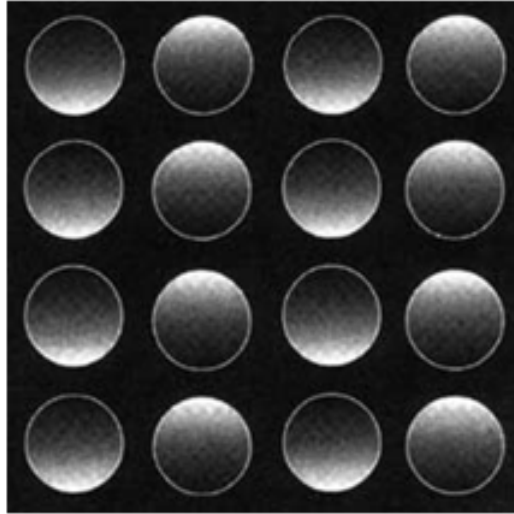


Figure 7: The light direction on surface (Smith, 2006)

Figure 7 presents the convex and concave elements on the surface, are perceived due to our experience on the light direction. The visual sense is the major form of understanding of the surrounding environment (Lam, 1977). Without light the form is not perceptible, as well as, without form the light is not perceptible (Millet & Barrett, 1996). The light is one of the fundamental design tools. In-fact, the reflection by car surfaces into our eyes resulted from the light resource; otherwise we can't perceive the vehicle shape without light. Christian Norberg Schulz, the famous architect critic claimed "The additive spatial structures of the renaissance demand a uniform illumination, while Baroque structures based on dominance and contrast a more 'dramatic' illumination." (Norberg-Schulz, 1968), therefore it can draw similarities between (Bauhaus) the most contemporary and the Constructivism (DeCon) schools of architecture. Bauhaus, and Postmodern doctrines states that the form should reflect the social importance initially, by the rational approach "the form follows function" in design. Mies van der Rohe presented a clear example in Farnsworth House, as well as the Audi TT in Figure 8, the elements of these form structures reflect the environmental lighting dramatically, by the form surfaces.

Smith (2006) claimed that both the automotive and architecture are concerned in an aesthetic sense, perceivable via reflection light across exterior surfaces. He added that the visual perception of the Farnsworth house form, based on the light response on the exterior structure. As well as the interior form is perceivable by the presence and flow of light. The DeCon school avoided "the form

follow function" ideology, despite the modernist school of thought. Projects like Disney Centre in Los Angeles and Bilbao Guggenheim by Frank Gehry emphasizes the great effect of this approach, as in Figure 9. From sunrise to sunset the lighting effects design plays a vital role in visual perception and demonstrate dramatic changes in perceived form (Smith, 2006). Chris Bangle in (Smith, 2006, p.21) claimed that some of the cars stand out “they stand out because they marked a turning point in car design away from pure rationalism into rationalism-based emotionalism.”



Figure 8: Audi TT, and Farnsworth House (Smith, 2006)



Figure 9: Disney Centre in Los Angeles by Frank Gehry Figure (Smith, 2006)

2.3.5 The Rule of Design Element in Visual Perception

According to Berdan (2006) there are five elements of visual design: line, shape, form, colour (light or dark), and texture. Others claimed that the design elements are seven, including those five plus the space and value (Gatto, Porter, & Selleck, 2000). Polakowski (1989) claimed the physical design elements, which employs in the visual arts are line, form, colour, texture, space, value, direction, and size.

However, there is an argument about the elements of interior design. Countryman & Jang (2006) claimed that the atmospheric elements such as lighting, colour, layout, furnishings, and style can affect the physical environment. He suggested that three of these elements are affected significantly on the visual perception within the physical environment. The three elements are colour, lighting, and style.

Others have detailed definition of the interior design elements by dividing this concept according to the interior design multiple compounds aspects: walls, ceiling and floor aspect; in addition to the cover materials; the store lighting effects, the background, sound, affective factors, temperature, and space arrangement. These interior design aspects are important to create a positive image for the company brand. Some of those elements affect on the human behaviour and emotions (Nistorescu & Barbu, 2008).

2.3.6 Photo Album Test

The researchers developed Photo Album Test as numeric scale to measure the impact of colour as a design elements on the auto-showroom visitors (Al-Helly & Fuziah, 2012). By using ANOVA test the findings showed, the colour has a significant impact on the visitor within the interior space of auto-showrooms. The photo album test and this paper are parts of an in-depth study entitled "The Impact of Colour as a design element on Visitor Attention in Proton Showroom, Malaysia".

3. Conclusion

This study reviewed some of automotive brands as examples, such as Audi, BMW and Volkswagen, which focuses on the architecture and design in order to attract the visitor's attention, maintain the client's trust and loyalty, and to avoid the fading of brand image. Designers and architects emphasize that the automotive construction reflects the power of the auto-firm, and play a vital role in strengthening the identity of the automotive brand. The design elements play a significant role in visual perception of automotive brand and place identity. The literature reviewed in this study is in line with the study aims in investigating the relationships between the showroom design and the visual perception of automotive brand and place identity.

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