

INFLUENCE OF COLORS ON CONSUMER BEHAVIOR “CONCEPTUAL AND THEORETICAL APPROACHES”

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***Abstract:** Design and in particular its color is often evoked by the consumer as a reason justifying the desire or not to consume the offered product. Colors are considered as a dominant component of design. They are one of the most immediate ways to deliver messages. Indeed, studies have shown that color can retain attention, affect consumer perception, stimulate emotional responses, and improve learning. This paper reviews the literature concerning the impact of colors of design on consumer behavior towards products. The review of several studies on colors and consumer behavior are meant to explain some authors' empirical works done and related issues that arise from such studies. We proposed a conceptual model and some hypotheses of research, which will constitute the basis for a quantitative research on a multicultural sample. Findings of the study are that marketers can use colors to differentiate products from competitors, increase appetite, enhance mood and form attitudes, among others.*

***Key words:** Design, Color, Consumer behaviour.*

JEL classification: M31, D47, M37.

1. Introduction

Color is ubiquitous and constitutes an important information's source for the consumer. As of its first visual contact with the packaging design, the consumer is attracted instantaneously by the color, thus it identifies the product and evaluates it. The consumer wants to have the choice, and the decisions concerning the color are often an essential component and major in the choice of a product by the consumer. Are we then influenced by colors? And if such is the case, what is its impact on our emotions, preferences as well as our beliefs and attitudes towards the packaging design which we choose?

As his former experiments of purchase, the consumer develops his preferences and his loathing for the designs of products according to several factors basically his age and sex, his culture and beliefs, his emotions and attitudes. For marketers, color has many uses. Many times it is the very first thing we notice. Color shapes the way we think in an immediate and visceral way. Color can be a primary tool in the hands of a marketer. In a society faced with information and stimulation overload, color communicates with refreshing simplicity and impact. Color has strong associative meaning, it can communicate quickly, and it can elicit a powerful subconscious response.

Many works insist on the fact that color is an essential variable in the information processing and the consumer's attitudes forming towards the product. Which is then the impact of the color on the consumer behavior? What role does it play in its choice of purchase? In the first part, we study the conceptual framework of this research by focusing on the colors of design and their influences on consumer behavior. The second part is devoted to the presentation of the future research direction.

2. Literature review

The sight is particularly requested by the consumer to understand the environment which surrounds him. This explains why the color is a dominant variable in its process of perception and that intervenes in a recurring way in the choice of products. Colors are one of the most immediate ways to deliver messages, they help the consumer to treat, retain and memorize the information more effectively than black and white. Color is often used as an indicator of a product's category and facilitates its identification by consumers. Colors stimuli work in synergy with all senses, they symbolize concepts and thoughts, they express imagination, recall a place and produce an emotional response.

In this article we approach three issues: the impact of the color in the information processing process; color dimensions and impact of preferences on consumer choices; and the link between the effects of the colors on the formation of the attitude towards the product.

2.1. The impact of the color in the information processing process

Color plays a role in the functions of alarm (attraction of attention), of attribution (coherence with the product universe) and congruence (coherence with positioning and brand personality). With regard to the

attention's attraction which is based on the physiology of the consumer, it seems clear that a packaging which differs from its neighbors will have a larger striking in shelves, and will capture more the consumers' attention (Devismes, 2000; Rouillet, 2006).

Color can influence perception's quickness. Indeed, colors do not have the same intrinsic capacity to draw attention (Rouillet, 2006). Some colors would draw more attention into linear than others, there would be the orange one in first position, follow-up of the red, blue, the green and finally of the yellow. Moreover, according to Cavassilas (2007) the use of a color background rather than a figurative background, presents interests of visual and cognitive ergonomics, according to this author, in addition of being spotted more easily from afar, a background of color causes a greater emotional impact since color is reputed to be a signifier that provokes an emotional reaction. The ability of colors to attract attention is important in marketing, especially for advertising communication, the visual identity system of brands and the choice of colors in packaging (Divard, 2001). However, colors can also distract attention, that is, draw attention to non-central elements of commercial communication. The eye perceives red more quickly than blue (Deriner, 2000), this aspect explains why red is frequently used in signage, but also in advertising, for media that need to be recognized from a distance or in promotions (Sohier, 2004). However, colors are likely to have a "parasitic effect" that reduces the cognitive capacities of information's detection (Dooley, 1970). Color helps us to better understand and memorize information when used appropriately and effectively.

Each color has a meaning that varies from one consumer to another. It influences the way we view and process information. It improves the ability to remember words and images and it is considered as a vital factor in retention of memory. The consumer uses a different color to highlight each subject, to identify specific products by theme, by detail. This way, when he needs, he can close his eyes and imagine the color to help remember information more easily. A mental image is much easier to remember than its auditory or textual equivalent. Nicholson (2003) postulates that the color of an object would be stored in the visual memory. Indeed, based on these statements, it would appear that consumers form mental images of the products and the packaging that they are confronted with. When they face them, they memorize them as images, which will enable them to visualize the products when they have disappeared from their field of vision.

2.2. Color dimensions and impact of preferences on consumer choices

The color is composed of three dimensions: the hue is the position of the color on the chromatic circle. It is determined by the dominant wavelength of the color; then, the luminance which is the relationship to light. It is the dark or light character, due to the amount of light that the color reflects (Lichtlé, 2002b, p.24), and finally, saturation that is the degree of presence of color (Divard and Urien, 2001, p. 24). Compared to these different possible variations in color, several contributions have shown that individual variables such as age or sex influence consumers' preferences for choosing a color. According to Berlyne (1960), color preferences are built fairly early in life. These initial preferences are produced during childhood as a function of the stimuli of the environment. Generally, children have preferences for warm colors and their preferences are oriented not only by associative learning but also by the physiological changes inherent in the aging of the lens (Burkitt, 2003). The preference in color allows a segmentation of the population. Indeed, Ellis (2001) constituted a large sample (more than 5,000 people) and obtained different preference results on the basis of sex. If the men in their sample prefer blue (45%) in front of the green (19.1%), women seem to prefer hot hues (pink or purple), unlike men preferring cold colors.

Grossman (1999) argue that the preferences of individuals depend on two things: positive prior experience and associative learning. Either the preference for a color would come from a previous positive experience with this color, or the preference would come from learning that certain colors are more appropriate than others for such type of product. This associative learning would confirm the idea that consumers conform to standards in the choice of colors, and especially if purchases are perceived as risky.

Each color has a different effect on the consumer; it can be stimulating or calming (Fabrique, 2003). Some studies have shown that warm colors (red, yellow, orange) stimulate the sympathetic nervous system of individuals. Indeed, it would appear that red increases blood pressure, pulse rate and respiratory rate. Conversely, cold colors (blue, indigo and violet) would stimulate the parasympathetic nervous system because these colors reduce blood pressure, pulse rate and respiratory rhythm. These actions are essential to the relaxation response (Liu, 1995).

2.3. Effects of color on the formation of attitude towards the product

The effects of color on the formation of attitude towards the product strongly mobilized the interest of the researchers (Pantin, 2004; Pantin, 2009). As regards taste more specifically, color would have an

influence on the consumer's sensations as red for a strong taste, green for bitter taste, this underlines the immense potential of colors to infer sensory perceptions. Thus, the study by Ezan and Piris (2009) points out that the diversity of colors creates a perception of variety in the assortment of supermarkets. In general, this research emphasizes that color is a very important dimension in the perception and evaluation of products for children who also seek congruence between the color and the nature of the product. In a study conducted by Dichter

(1964), he taught a number of subjects, successively four cups containing the same coffee (unknown to the subjects) in front of four anonymous boxes of different colors (brown, red, Blue and yellow). The subjects were to express judgments of strength or lightness, richness or sweetness, associated with each of the coffees tested. According to the results: 73% of the testers judged the coffee placed in front of the brown box too strong, 84% judged the red richer, 79% judged the blue softer and 87% judged the yellow lighter.

Depending on the positioning and the marketing offers, it will be sought to induce by the packaging impressions of solidity, robustness and stability or, on the contrary, impressions of ease and lightness. However, the product must meet consumers' expectations, market norms and constraints, it must necessarily respect the culture, traditions, uses and references linked to color, risk of exposing oneself to economic disappointments (Clark & Honeycutt, 2000). Beyond the color of the product itself, packaging influences consumers' perceptions and attitudes (Pimentel & Heckler, 2003). Sohier & Brée (2004) studied the influence of the red and blue colors of bottles of mineral water. The blue bottle is considered more sophisticated and more exciting than the red bottle. The subjects were not really ready to buy a bottle of red water. Also, color is often used as an indicator of a product's category and facilitates consumer identification such as green for organic products, blue and white for lactic products. Color, while playing an important role in consumer perceptual space (Percy, 1974), can be considered as a peripheral or central index (Petty, 1983). Thus, a bluish package of coffee will present a central color index, because diagnosis of the category "decaffeinated".

Colors help us to process, remember and memorize information more effectively than black and white. This is one of the most immediate ways of conveying messages. Color stimuli work in synergy with all senses, symbolize concepts and thoughts, express imagination,

recall a moment or place and produce an emotional response. (Umamaheswari, 2013). Colors are associated with affects, emotions or moods; they can facilitate or hinder memorization processes. They are mobilized as a diagnostic index of memorization and preference judgments (Lekeu, 2002). Hemphill (1996) proclaim the importance of the brightness of the color in the affective associations, for him the clear colors generate positive responses while the dark colors evoke negative answers. Conroy (1992) found that men and women have different emotional responses to product-specific colors, but that these differences are not the same for all products. These emotional responses have an influence on the formation of an individual's color preferences for an object. Rouillet (2006) expresses the fact that the color would vary the activation (degree of awakening, degree of vigilance) of the individual. Jacobs (1979) analyzed the effects of the color of placebo drugs, "preparation devoid of any prescribed active ingredient in place of a drug for its psychological effect on the patient", by asking 100 subjects to classify 6 kinds of capsules of different colors according to three categories of drug effects. Blue and black were associated with tranquilizers and depressants, while red and yellow were associated with the class of stimulants and antidepressants. White and green were not tied to any particular class.

The following table, resume a list of research and methods on the influence of colors on consumer behavior.

Table No. 1. Example of research and methods on colors influence

Authors	Research area	Independent variables	Dependant variables	Methods
Dichter (1964)	Influence of coffee packaging' color on perception and judgment of taste (strength, lightness, softness, aroma).	Used Colors : red, yellow, blue and brown.	Perception and judgment of taste	Experiment
Jacobs&Nordan (1979)	Effects of placebos medicines' color on consumer judgments towards drugs.	Black, Blue, Red and yellow	Consumer judgments	Experiment
Wheatley & Chiu (1977)	Perception of quality	Colors (dark and light)	Perception of quality	Experimenta Questionnai
Roulet&Droulers (2005)	Influence of the color of a drug package on beliefs and attitudes to drug content.	Colors (dark and light)	Beliefs and attitudes	Experiment
Funk & Ndubisi (2006)	Choice of product	Color as a concept	Colors significations ; attitudes towards colors ; color' attraction ; color' preferences.	Questionnai
Kauppinen-Räisänen & Luomala (2010)	Packaging	Particular Colors (yellow , red,blue, & green).	Significations of colors	Interviews
Lotto (2011)	Physiological effects of color	colors	Perception of time	Expérimenta
Labrecque & Milne (2012)	Consumer Perceptions	Particular Colors (colored logos, colored packaging)	Brand personnality	Expérimenta Questionnai
Saito (2013)	Color' preferences	Particular Colors (77 colors of different hue and chroma)	Color' preferences	Interviews

Source: Kiehela, 2014, p.37

3. Future research direction

The general framework of the research is that proposed by Figure 1. It is from these relations that the hypotheses will be formulated.

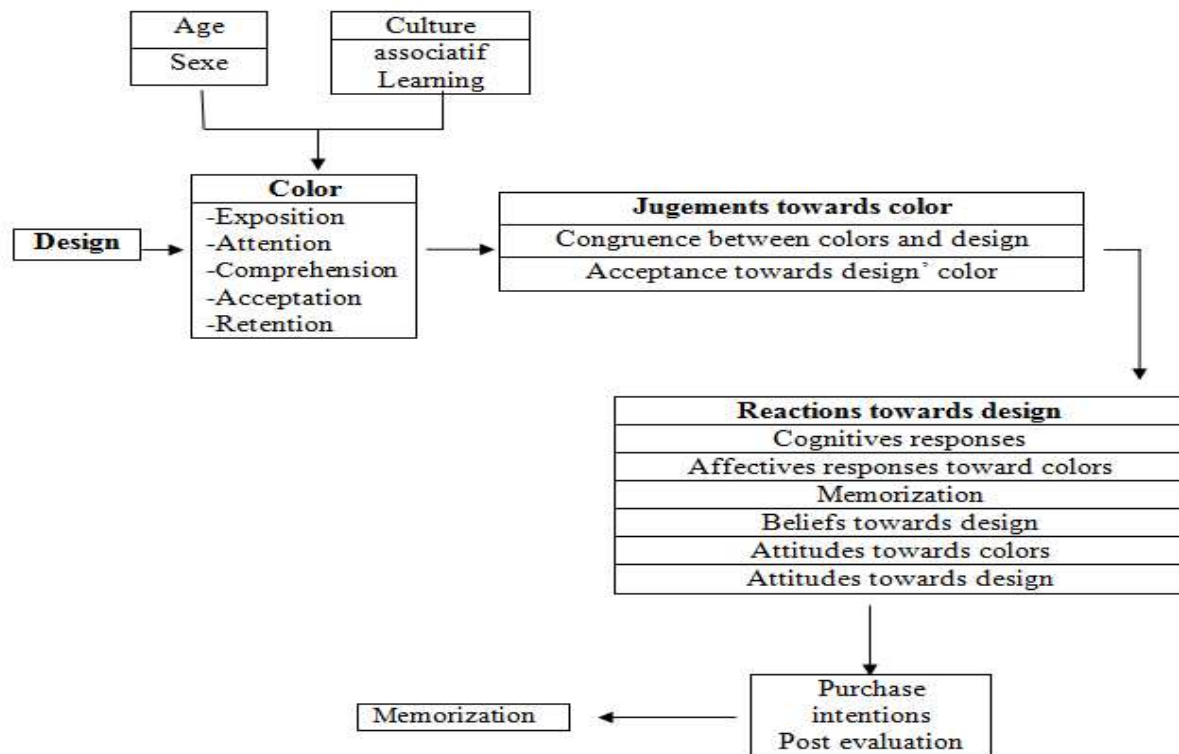


Figure No. 1. Proposed theoretical model of research.

Many hypotheses have been elaborated. Those hypotheses will in fact allow us to affirm or refute the proposed theoretical model. Thus, a questionnaire has been elaborated to carry out our survey. The main purpose of the questionnaire is to measure: the different attitudes towards design; emotional responses to color; purchase intentions towards the product; perceptions and memorization process towards design's colors. The questionnaires will be administered online to collect results on a multicultural sample of different age and groups.

The research' hypotheses proposed are the following:

- H1: Color' preference influences the choice of packaging design.
- H1.1: Color preferences vary by gender.
- H1.2: Color preferences vary by age.
- H2: Consumer' associative learning determines his choices for colors
- H2.1: Color preferences vary according to culture.
- H3: Color has an effect on the cognitive responses of the consumer.
- H4: Color has an effect on memorization.
- H5: Color influences the consumer's emotional state.
- H5.1: Warm colors are more exciting than cool colors.
- H5.2: Cool colors are more relaxing than warm colors.
- H6: Color influences consumer perceptions.
- H6.1: Color influences the taste.
- H6.2: Color influences perception of quality.
- H6.3: Color influences the perception of price.
- H7: The color has an effect on attitude towards the design.

The aim of this section was to present the future research direction. The proposed theoretical model, the hypotheses of the research and the proposed questionnaire highlight the influence of the color on consumer behavior.

4. Conclusions

According to the informations collected in the literature, we have been able to determine that products with a strong aesthetic dimension (design products) are appreciated very differently according to the individuals who evaluate them. It would seem that such individual differences are related to personality

or socio-demographic factors. The more the dominant color of design product is liked, the more consumers appreciate that packaging, however, little research has been done on the color of design-packaging and its effects on the consumer.

The consumer has expectations, needs, desires and affective reactions more or less marked in relation to design's colors but it also has influences such as age, gender or culture in the face of innovations. All these influences take into account in its mental process of choice and decision making; making it very complex mixing emotions and rationality. The preferences as well as the responses of the consumers to the different colors are related and vary according to their countries, cultures, sexes, ages and their psychological states. It is therefore necessary, in marketing, to attribute more importance to this primordial element of design. The colors of the packaging should correspond to the targets for which these products are intended. Extensive research should take place before the launch of any product as a bad choice will have consequences for the brand itself. Color not only serves to identify the product or brand immediately, but also to evaluate its quality and its price.

Colors are controversial. Some feel that human responses to colors are stable, therefore applicable to everyone, whereas others disagree, asserting that responses and preferences to colors vary across culture, gender, and, age, among others. So, the implication for marketing managers is that they should be aware of the perceived importance of colors and their interpretation in a particular geographic area. Packaging' colors can drastically affect their sales. Managers have an option of exploiting these differences to their advantage while laying out design for their products. Depending upon their target audience (gender-specific products, kids products, etc.), they should choose colors for products. Research relating to choice of colors should be conducted and concluded before launching a product, as the wrong color choice can have negative impact on the image of the product and the company.

The purpose of this study was to evaluate the influence of the color of packaging design on consumer perception, evaluation and choice of purchase. Literature data show the impact of design's color on the perception of attributes in terms of taste, quality and price, on evaluation, in terms of color / product adequacy, and on consumer choice. The simple fact of seeing the color of the packaging influences the perception of the product. The congruence between the color of the packaging and the intrinsic characteristics of the product as well as the previous experiences of the consumer prove to be relevant concepts in the understanding of consumer choice.

From a theoretical point of view, this research contributes to fueling knowledge about the impact colors have on consumer by focusing on a variable that has been little studied in marketing. We can affirm that the color of packaging plays a role on their evaluation and their choice by consumers. Indeed, color has an impact on the evaluation of the product and its overall assessment. It also has the ability to create a sense of concern and cause product refusal.

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