Color Psychology and Business Applications

Samarth Jhunjhunwala

Abstract

It has long been known that the way people think has a longstanding relation with the colors they view. Colors dynamically possess implications on human-perceptions, beliefs and behaviors. Therefore, this study tries to find the impact of color on consumer behavior and use these findings to justify the need for color based research in brand marketing. Through the research, this hypothesis is proved to be correct since an analysis of various secondary sources corroborates the need to employ the right colors for effective display. The study concludes that each color has specific emotions associated with it. Further, different people have different perceptions of the same color. Finally, the study suggests that the understanding of these vectors finds its applications in advertising and branding a product.

Introduction

Color has a pervasive impact on human psychology, stimulating the way we think, feel and perceive our surroundings. Hues form the fundamentals of the lens through which mankind makes cognitive decisions, consciously or otherwise. In a world where color continually influences mindsets governing the masses, it has never been more important for businesses to base their strategies against a backdrop of color psychology.

The 'color revolution' amongst brands is a reality of the present and companies must strive to leverage the potential of understanding their consumers by the means of colors. It would not be wrong to say that color governs consumer behavior, likewise, their buying decisions and thus the accurate use of this visual tool forms the basis of forging relations with the customer. Based on these assumptions, a hypothesis is put forth, imputing that color has applications in the marketing processes brands employ. It is predicted in this research that brands must understand the implications of specific colors to make their products attractive for their consumers. The results obtained by compiling journals, studies and articles will comprehensively prove the need for brands to adopt a user-centered approach, primarily stressing on colors, in their marketing discussions.

Psychological impact of color

Think of all the colors we encounter and how they possess a subconscious affect on our emotions. Historically, colors have been found to influence one's moods and subsequently impact their behaviors and thereby arising decisions. Research reveals people make an involuntary judgment about a person, environment, or product within 90 seconds of initial viewing and that between 62% and 90% of this assessment is based on color alone.(Khattak et al., 2021)[1] Hues of red, have long been believed to be associated with antagonistic couplets of 'danger' and 'love'. Perhaps, commensurate to this tendency, red roses have evolved into a valentines day requisite while simultaneously stop signs on roads are accoutred with a similar shade. Likewise, over the years, each color has come to be representative of a set of ideas which at least to some extent transcend the barriers of geography. A study from 2020 that surveyed the emotional associations of 4,598 persons from 30 different countries found that people commonly associate certain colors with specific emotions. Results from the survey as portrayed in Figure 1 of appendix included 52% of respondents associating yellow with joy while 43% of them imputed the feeling of relief to white(JJonauskaite et al., 2020)[2].

Artistic use of color

Numerous studies based on the works of eminent artists have proven the hypothesis that the colors used by artists draw inspiration from the mental state prevalent in their lives. (Hussain, 2021)[3] It would thus be veracious to conclude that a work of an artist is a reflection of the psychology of the artist themselves. Picasso is said to have reflected his state of depression over a close aide's suicide and, sadness owing to persistent poverty by painting 'icy-blue' paintings revealing 'suffering' as is apparent in 'The Old Guitarist'(figure 2 in appendix). Gradually, however, Picasso's paintings brighten in what has been termed as the 'rose' period with the use of sprightly shades in 'Family of Saltimbanques'. (figure 3 in appendix)

Placebo Effect

While implicit, the Placebo Effect suggests that the color of a pill has an impact on the efficacy of the pill itself. In principle, this phenomenon deals with how colors affect the perceived action of a drug and thus seem to influence its effectiveness.. The color of drug formulations might cause different expectations in patients, and could therefore produce different therapeutic effects. Patients begin to believe that they are getting better simply owing to the positive feeling they associate with that color of the pill. A study conducted on the impact of colored drugs corroborated this hypothesis, finding that red, yellow and orange are associated with a stimulant effect, blue and green with tranquilizers and white with pain-killers. (de Craen et al.,1996)[4]

Audience Perception and Targeting

Gender

Though a propagation of stereotypes, society has actively assigned a set of colors to the conventional binary which has been highlighted through various researches conducted in the past. Further evidence comes from a developmental study (Burkitt et al.,2003)[5] which tested the color preference of 330 UK children, aged between 4 and 11 years old. Children were asked to point to their preferred color from a set of 10 colors (black, blue, brown, green, orange, pink, purple, red, white, and yellow), and continued pointing until all colors were chosen. It was found that girls significantly preferred pink, purple, and red more than boys. In contrast boys showed a greater preference than girls for black, blue, brown, green, and white. These findings verify the Gender Schema Theory propounded by Sandra Bem in 1981, which explains how gender-linked identifiers are transmitted to other members of a culture. However, more recently, with mindset shifts rapidly occurring in society, the gender schema is fading away. Today, blue stands as the favorite and brown stands as the least favorite color of both men and women as portrayed in figure 4 of appendix. (Rider, 2010)[6]

Age

As a brand, understanding the demography of the population you are catering to becomes extremely important, because different age groups tend to prefer different colors and shades. Scientifically, for the elderly age groups, existent colors appear to become darker resulting in a preference for lighter shades. Young children often possess affinity with a variety of bright hues while young adults tend to prefer subtle pastels. (Rider)

Ethnicity and Nationality

People belonging to sundry cultural backgrounds might differ in their perception of a given color. This may be, because of contrasts in their religious and traditional connotations of the same hue. For instance, green is a symbol of sustainability to the Europeans while the same green is considered a representation of infidelity by the Chinese. These ripples have accurately been captured in the

Ecological Valence Theory put forth by Palmer and Schloss in 2010. This theory states that "preference for a given color is determined by the average affective valence of the objects which are associated with that color, when averaged across persons." (Casas et al., 2019)[7] To a layman, this would suggest that we attribute certain emotions to a given color because of the objects our culture often associated with that color. For instance, in India, red is representative of a sense of purity, which perhaps stems from the use of red apparels by the woman at a Hindu wedding ceremony.

Business Implications and Applications

Advertising

We have been able to establish that color has a profuse impact on consumer choices and their buying decisions. Therefore as a company, it becomes essential to understand the psychological impact of color on consumers while endeavoring into advertising and marketing campaigns. The adroit use of colors primarily imputes three advantages to the company:
a)   The ability to draw the consumers' attention to specific parts of the advertisement
b)   An increase in the likelihood of a viewer retaining the visual in their memory for a longer duration.
c)   Sensitizing with the desired audience by taking into consideration their gender, age and cultural backgrounds as previously accentuated. (Meredith Ballard, 2012)[8]

Case Study: Most of us resonate with red and yellow upon thinking about the logo of McDonald's. However, more recently, the company has adopted a green backdrop for the European setting as depicted in figure 5 of appendix. To adapt with the health and environmental consciousness gaining prominence all over Europe, they believe that the use of green will reposition the company with a 'healthier' and more 'eco-friendly' attitude. This is also in line with efforts to combat rising speculations that the company's products are contributing to child-obesity. This example establishes that a brand needs to dynamically evolve the colors it uses in advertisements to keep up with the variety prevalent in the cultural ethos across the globe.

Website Building

In the modern world of marketing, usage of the right colors on your website has a lot to do with the way consumers engage with your platform. Studies have proven that 'screen color' has an effect on one's perception of time thus influencing the quickness of perceived downloads. A research titled, 'Waiting for the Web: How Screen Color Affects Time Perception' (Gorn et al., 2004)[9] proves that the usage of blue as a backdrop to a website, has a quicker perceived sense of download as opposed to another adorning yellow. These findings work on the assumption that supports links between color and feelings of relaxation and between feelings of relaxation and time perception. In principle, blue is supposed to initiate a calming effect when compared with yellow. Convention denotes that when one is calm, time appears to pass quicker than a stressful state. This corroborates the findings as represented in their paper while also suggesting that the color of the website influences the likelihood of a user to remember the website and recommend it to others.

Brand Identity

In 1995, the SCOTUS ruled that colors or even shades of a single color can be trademarked by companies, thus demonstrating the importance the usage of a color has on building a stable brand identity. The incorporation of consistent color palettes is a necessity for stimulating brand-loyalty. For a long time now the usage of red has been an important facet of Coca Cola's business strategies. "The color red in marketing portrays power, excitement, energy and passion. It also stimulates the appetite, which makes it an excellent choice when branding food or drink." as quoted by a blog on Strategic Factory.[10] Once a brand establishes the consumer-appropriate color choices, they tend to be synonymous with that color itself. In fact, in Coca Cola's case this phenomenon was so much so, that they claim to be responsible for popularizing the modern day Santa Claus, adorning red as seen in the appendix. The loyalty towards

the brand is best portrayed through the 'Pepsi Paradox', wherein consumers preferred Pepsi over Coke in blind-tests, but produced contradictory opinions when the test was carried out with an exposure to the packaging of each company.

Case Study: Every year, ahead of Valentines' Day, Saudi Arabia places an embargo on 'all things red' terming the celebration to be a non-muslim activity(Blake Hounshell, 2008)[11]. What's interesting to note, however, is that the government places a ban not on 'roses' or 'cards' specific to the event rather on the color associated with it. This example puts forth learnings for businesses to emulate the success of red in representing the entire concept of Valentine's Day while making their decisions on a branding front.

Methodology

This research paper includes a combination of essential quantitative and qualitative data to provide a comprehensive insight to the reader to view color psychology from facets of business. Secondary sources have framed the premise for presentation of quantitative data, which have duly been acknowledged and cited to justify the accuracy of the statistics depicted. The qualitative data has been portrayed with the help of interactive tools including case-studies of modern concepts, diagrams and pertinent theories propounded to strengthen the concepts put forth. The paper justifies its hypothesis from a logical viewpoint, by first establishing the influence of color on human psychology and making use of this foundation to elucidate its use by businesses. Visuals added to the appendix to the end of the paper enable a well-rounded perspective to be developed. While there are other papers which speak on a similar subject, this research displays a holistic approach to the topic while including relevant viewpoints to ensure understanding. The first study (Khattak et al.) presents numeric data on the influence of visual aspects on perception, which enables a link to be framed between color and its effects on mindset-development. The second study (JJonauskaite et al.), the results of which have been displayed in the appendix, provides statistics on primary colors and their conventional implications. It helps us understand through quantitative data how people tend to associate certain emotions with specific colors. The third study written by Hussain A.R. presents to us the theory that artists depict their emotions through the colors they make use of in their artworks, which further draws attention to the cognitive aspects of color choices. The fourth study (de Craen et al.) presents the implications of the placebo effect. The fifth study(Burkitt et al.) and the next research by RM Rider puts forth the perception of color by different audience segments. An explanation of the Ecological Valence Theory is highlighted by the following source(Casas et al.). The eighth study(Meredith Ballard) explains applications in advertising while the one which succeeds(Gorn et al.) provides interesting implications of color on website-time perception. The last two sources corroborate their examples and case-studies respectively.

Conclusion

Through this study, my hypothesis can be deemed correct, as a comprehensive analysis of various journals and surveys accentuates the importance of colors used by brands in governing consumer behavior. The paper first proves the psychological impact of color in governing mindsets and uses this premise to establish the relation between colors and consumers. The study finds that different colors have conventionally been associated with different emotions by the masses. Appending to this result, the study further finds the difference in the perception of a given color by different audiences based on distinctions in their gender, age and cultures. It partially contradicts its initial findings, suggesting that though certain colors have specific emotions attributed to them, with variety in context, these implications might vary to consumers of diversity. The study goes on to prove that color has three primary uses by brands. First, they may use colors tactically to stimulate attraction towards their advertisements and packaging. Second, the right colors increase consumer-engagement and interaction with websites. Third, those colors form the basis for a brand to formulate its identity which eventually builds loyalty amidst the consumer base.

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Appendix

Figure 1: General perception of different colors

- **Black**: 51% of respondents associated black with sadness
- **White**: 43% of people associated white with relief
- **Red**: 68% associated red with love
- **Blue**: 35% linked blue to feelings of relief
- **Green**: 39% linked green to contentment
- **Yellow**: 52% felt that yellow means joy
- **Purple**: 25% reported they associated purple with pleasure
- **Brown**: 36% linked brown to disgust
- **Orange**: 44% associated orange with joy
- **Pink**: 50% linked pink with love

Source: JJonauskaite et al., 2020

Figure 2, 3: Works of Pablo Picasso and the hidden implications of color psychology
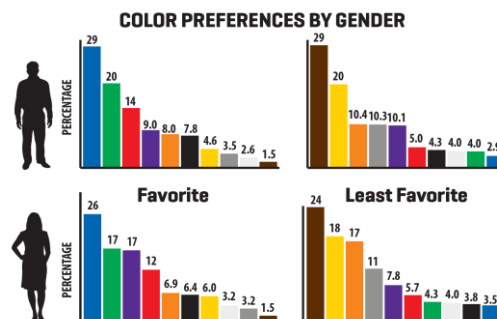

The Old Guitarist   Family of Saltimbanques

Figure 4: Weakening of the Gender Schema in color perception

Source: 2017 survey by Scott Design Inc

Figure 5: Mc Donald's Logo in USA vs Europe

Europe Logo   USA Logo

Source: https://www.marca.com/en/lifestyle/2022/10/05/633dba00268e3efa588b45b7.html

Figure 6: Development of modern day Santa Claus through Coca Cola

Source: https://www.chron.com/business/article/This-is-how-Coca-Cola-invented-Santa-Claus-16727869.php