COLOR MEANINGS, COLOR PREFERENCES AND EMOTIONAL CONNOTATIONS OF COLOR; USING COLOR AS A STRATEGIC MARKETING TOOL

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Objectives of the Study

I. Determine color preferences among a large group with diverse ethnic representation

II. Elucidate the relationship between emotional feelings and color

III. Establish how our increased understanding of color would improve marketability of new products, such as textiles
Images/concepts that influence color preferences
Overview

Systematic Study of Perception and Emotional Connotations of Color:

• Selection of Observer Panels
• Interview Process
• Color Matching
• Analysis of Results
• Conclusion
Observer Panels

• 47 total observers
• Even distribution of males and females
  – 25 females
  – 22 males
  – Age range 18-61 (average age 25.5 years)
• Five ethnic groups represented
  – African Americans (5)
  – Hispanics (3)
  – Whites (21)
  – Middle Eastern (8)
  – Asian (10)
• Each observer was tested for normal color vision$^1$

Interview Procedure

- Semi-structured interview\(^1\)
- Each observer described their feelings for eleven color names in the English language\(^2\): red, orange, yellow, green, blue, purple, pink, brown, gray, black and white
- The same three questions were asked for the 11 colors:
  1. What does the color (red, orange...etc.) make you feel?
  2. Do your feelings change if the shade or the hue changes, if so how?
  3. Are there any other experiences or associations that have influenced your feelings for this color?

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Color Matching

• Each observer selected a range from The Munsell Book of Color as well as a specific chip for every color

• After selection of each chip, the observer was asked how confident they felt about their selection in that it matched the color they had been visualizing

• It was important that the observers did not look at the samples while describing their feelings about that color so they would not be influenced by other colors
Color Matching

Munsell® Book of Color

Chroma

Lightness

Hue description

10GY
Analysis of Results-I (Hue Range)

Determined an overall range for each hue on a Munsell hue circle
Analysis of Results-II (Hue Selections for Color Names)
Color Matching

Chip Selection
Analysis of Results-II (Dominant Chips)

Frequency

Dominant Chip Color

- Red 7.5R/4/16
- Orange 2.5YR/6/16
- Yellow 5Y/8.5/12
- Green 1.25GY/5/12
- Blue 2.5PB/3/10
- Purple 5P/3/10
- Pink 5RP/7/10
- Brown 5YR/3/6
- Gray N 6.25
- Black N .5
- White N 9.5
Analysis of Results-I (Highest Confidence Ratings/mental matching)

Red
- Very Confident: 35%
- Confident: 57%
- Neutral: 5%
- Not Confident: 3%

Black
- Very Confident: 65%
- Confident: 25%
- Neutral: 5%
- Not Confident: 5%

Pink
- Very Confident: 40%
- Confident: 33%
- Neutral: 5%
- Not Confident: 2%

White
- Very Confident: 75%
- Confident: 16%
- Neutral: 5%
- Not Confident: 1%
## Analysis of Results-I (Emotional Connotations of Color)

<table>
<thead>
<tr>
<th>Color</th>
<th>Positives</th>
<th>Negatives</th>
<th>Associations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Passion, love, hot, warm, excited, hungry, happy, power, excitement, bright, victory</td>
<td>Fury, angry/anger, fire, aggressive, caution, loud, embarrassed, violence, blood, danger, agitation, evil, uncomfortable.</td>
<td>Hearts, Valentine’s Day, tomatoes, food, NCSU Wolfpack, school spirit, stop signs, stop lights, Korea, Spain, corvettes, matadors, Tiger Woods, Ferrari, Christmas, apples, Stop sign</td>
</tr>
<tr>
<td>Orange</td>
<td>Hot, bright, cheerful, excited, happy, joyful, invigorating, awake, fire, lively, sunny, active,</td>
<td>Obnoxious, angry, upset, loud</td>
<td>Fruit, sour, thirsty, fall, pumpkins, Halloween, tropical, Hawaii, freshness, sports, basketball, sun, summertime, bricks, culture, friendship, cool aid</td>
</tr>
<tr>
<td>Yellow</td>
<td>Happy, cheerful, calm, relaxed, bright, positive, energetic, inspired, glory, content</td>
<td>Uncomfortable, unstable, jealousy, headache, unhealthy</td>
<td>Sun, smiley face, summer, beach, bees, tropical, kings, royalty, fruit and food, baby pastel colors, McDonalds, highlighter, baby chicks, traffic signals</td>
</tr>
<tr>
<td>Green</td>
<td>Energized, relaxed, pleasant, silent, healthy, strong, young, life, serene, calm, anxious, vibrant, peaceful, intelligence, confidence, recycle</td>
<td>Scary</td>
<td>Nature, woods, environment, grass, money, vegetables, Christmas, being sick, Al Gore, Saint Patrick’s Day</td>
</tr>
<tr>
<td>Blue</td>
<td>Calm, relaxed, comfortable, cool, free, pure, peaceful, fresh, invigorating, nostalgic</td>
<td>Sadness, gloomy, depressed/blue</td>
<td>Sky, sea, water, boys, sports teams and rivalries, religion</td>
</tr>
<tr>
<td>Color</td>
<td>Descriptions</td>
<td>Emotions</td>
<td>Associations</td>
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<tr>
<td>Purple</td>
<td>Happy, pretty, feminine, outgoing, bright, passionate, lively, fun, glory, girly</td>
<td>Selfish, incompatible, trouble, uncomfortable, over-ripe, moody</td>
<td>Royalty, Barney, Mardi Gras, children/childlike, Minnesota Vikings, egg plant, grapes, wine, religious robes in Guatemala</td>
</tr>
<tr>
<td>Pink</td>
<td>Girly, cute, pleasant, feminine, cheerful, bright, warm, friendly, mild, innocent, young, delicate</td>
<td>Annoyed, yuck</td>
<td>Girly/female/feminine, youth, beauty, Victoria’s Secret, women and breast cancer, Valentine’s Day, Paris Hilton, sororities, tropics, Barbie, underwear, lipstick</td>
</tr>
<tr>
<td>Brown</td>
<td>Nature, calm, warm, confident, safe, maturity, intelligence</td>
<td>Dirty, distasteful, aggressive, muddy, sad, death, boring</td>
<td>Wood, earth, dirt, rocks, leather, shoes, life, food, old men in their study, chocolate, cigars, hair, poop, coffee, Thanksgiving</td>
</tr>
<tr>
<td>Gray</td>
<td>Neutral, formal, official, institutional, old, cool, warm, peaceful, unbiased</td>
<td>Depressed, sad, gloomy, stormy, violent, not fun, uninspired, lazy, boring</td>
<td>Rainy, getting older, TV, metal, silver</td>
</tr>
<tr>
<td>Black</td>
<td>Dark, bold, mysterious, formal, confident, sexy, outgoing</td>
<td>Silent, strict, torture, trouble, death, scary, secluded, dreary, bad, void</td>
<td>Funerals, hell, vacuum, space, black dress, nighttime, uniforms, rubber tire, mourning, beans, Batman</td>
</tr>
<tr>
<td>White</td>
<td>Clean, pure, pleasant, happy, majestic, bright, crisp, refreshed, neutral, anticipation, comfortable</td>
<td>Upset, bad, fear of getting dirty, daunting, dingy, boring</td>
<td>Angels, snow, death, food, smile, moon, brides and white dresses, basics: socks, t-shirt, dress shirt, clouds, sugar, paper</td>
</tr>
</tbody>
</table>
Color as a marketing tool

- It has been proven that color is the primary purchasing consideration among consumers and research reveals all human beings make a subconscious judgment about a person, environment or item within ninety seconds of initial viewing and that between 62%-90% of that assessment is based on color alone.

- Evidently color plays a key role in the marketing strategies of new products and is one of the many marketing tools that global managers use to create, maintain, and modify brand images in customers’ minds. Many studies have been focused on general color preference, but there is information lacking in understanding differences in consumers’ perceptions of colors based on their cultures. If researchers can conduct studies that give clear indications of color preferences for specific demographic consumer groups, then new products can be better suited to fulfill consumer wants and needs. Color and decisions made for a new product is something that is considered throughout every step of the (NPD) process. In the testing phase, new products are test marketed among actual consumers who provide feedback that is used to validate the product so it can move on to the next phase. If the test market feedback is poor the necessary changes are addressed before the product is launched.

- Color is important in the marketing of textile products and with a better understanding of the emotional connections people have with different colors, additional novel products can be developed and more effectively marketed once the product reaches the market.
Conclusions

• Using information similar to what has been found in this study in combination with test marketing for new products could reveal useful information for specific consumers. Potential consumers who have agreed to be involved in the test market are already similar in their demographic and psychographic characteristics and could identify what specific colors mean to them. A perceptual map could be produced for each customer and that map would communicate to the new product development team certain meanings of the specific colors tested. Then, once all of the perceptual maps have been created for all the customers in the test market, an overall representation could be determined based on the individual information. Patterns can be easily identified to determine what the most liked and disliked colors are. This could be a powerful tool that would validate the test market results. This could reduce time that is spend on creating the marketing strategy for the new product and determine whether or not the product has met all the criteria to move on to the next step in the NPD process. Or it could become clear that the product needs to return to a previous step or be reconsidered altogether. Conducting test market research is time consuming and costly and any method that could help reduce one or both of those factors would be well received.

• If color studies can contribute to better knowledge of the ways in which people respond to color, then new products should be able to more effectively meet consumers needs, reduce the costs involved with new product development and manage the product throughout its life cycle once it enters the market.
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Acknowledgments

• AATCC
• All the observers who participated
• Dr. Renzo Shamey