

## Is Color a Language?

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### ABSTRACT

This research examined our hypothesized existence of Color Language, one that is anchored in color-emotion associations that carry specific meanings, is held by individuals and is used to communicate experiences, brand images, new product positioning and so forth. US-based gender-balanced subjects half of which were color professionals were given a questionnaire that presented twenty-nine emotion descriptors [joy, anger, love, etc] and ten color selections and asked for their associations. Overall we found consistency of colors – emotion associations across subjects with minor differences attributed to gender, age and professional background. Study results present initial yet promising support to the existence of Color Language and require a cross-culture expansion to determine the universality of this language.

### 1. INTRODUCTION

Target's Red Bull Eye logo, Volkswagen Green beetle, UPS Brown campaign, London's St. Martin's Lane Hotel with its room-with-color-per-your-choice ambience, and the Zone of PWC with color-in-meeting-room-per-participants'-business-challenge are all examples of businesses that have made a conscious decision to leverage color as an integral part of the business strategy and impact stakeholders in a desired pre-determined way. Implicit in these businesses' use of color is the notion that color impact people. While this is not a foreign assumption to members of the color community, the association of color and business results may very well be challenging if we're to employ traditional business matrices to measure such impact. This is especially true as the knowledge base that underpins the color-impact notion is only half-developed at best. Questions arise around the universality of color impact, the experiences and venues through which color impact is established, the reasons because such impact is created to begin with and so forth. Our study was set to examine a specific facet of the color impact notion, one that deals with the possible relationships between color and emotions to better understand the impact of color as a strategic lever.

The proposition that guided our inquiry offered that Color is a Language acting as an instrument of meaning creation and exchange by evoking *emotional* associations [aggression, passion, joy, etc.] in a consistent way. Note that we assume the *Color Language* to be emotional in nature. By that we mean that color is associated with emotions more so than any other mode of experience and expression. We looked for existing Color research that can support, or else refute our assumptions but found a literature that speaks in multiple voices, each of which is interesting in itself but together these studies that discuss color-emotion associations portray an overall fragmented picture [Kaya & Epps, 2004; Schaie 1961; Alschuler & Hattwick, 1947; Birren, 1974 & Sharp, 1979].

To make a claim that Color is a Language, universal or contextual, we first needed to attend to the question of what constitutes a language [Lechner & Harrington, 2003]. Merriam-Webster Online Dictionary defines **language** as a systematic means of communicating ideas or feelings by the use of conventionalized signs, sounds, gestures, or marks having understood meanings, or the suggestion by objects, actions, or conditions of associated ideas or feelings. Crystal [1997] offers that common purposes of language include emotional expression, social interaction, recording of facts, shaping reality, providing an instrument of thought and expression of identity. Color, we assumed is a language expressed through emotions. We asked if there is an underlying platform of emotional meanings to Color, one that remains consistent over time and context. Still, what specific emotions constitute this infrastructure turned to be a very difficult question to answer.

There are over 350 words for emotions appearing in dictionaries of the English language. Yet, while the research on emotion presents a diverse set of definitions and frameworks most researchers differentiate between Primary and Secondary emotions as well as Positive and Negative ones. For example, Plutchik [2003] was the first to introduce the concept of primary emotions as categorizing method similar to that of primary colors in physics where the combination of three primary colors can produce infinity of color. Along this line any and all emotions that have ever been experienced can be produced by the combination of only the few primary emotions produced by the brain. To establish a set of emotional associations to explore against colors, we decided to employ an accumulated emotion list from across various typologies used in the literature and map them along these aforementioned two dimensions [as shown in Table 1 below].

	Positive Emotions		
Secondary Emotions	Optimism Anticipation Awe	Joy Ecstasy Love Amazement Admiration Trust Surprise Interest Vigilance	Primary Emotions
	Pensiveness Boredom Distraction Apprehension Remorse Submission Annoyance Disapproval Contempt	Sadness Grief Disgust Anger Fear Loathing Rage Terror	
	Negative Emotions		

**Table 1:** Emotion Typology based on accumulation of existing emotion conceptualizations.

The purpose of the study was to test whether people hold constant color-emotion associations across gender, age and professional groups with the assumption that constant color-emotion associations will signify the existence of Color Language, one that carry implicit meanings that if better understood they can be tapped in a deliberate, strategic fashion

## 2. METHOD

We tested to see if certain emotions are associated with certain colors in a consistent way, to trace a possible structure of the color language. Our sample included gender-balanced color professional and non-professional respondents [ $n = 177$ ] representative of US population between the ages of 18 - 55. All subjects were pre-tested using the Ishihara Test for color blindness to determine their qualification to participate in the study. Participants answered a close-ended in-person questionnaire that asked them to associate a pre-determined set of twenty nine emotions and ten colors. All questions on the questionnaires provided an actual color sample [shown in Figure 1 below] to which respondents asked to refer when answering each question to maintain homogeneity in color presentation and common reference point across the sample. The Palette for this research was made of the following ten colors: red, orange, yellow, green, blue, and purple as well as neutrals black, white, brown and grey. These colors were selected, as they are consistent with colors used in other empirical studies that test color associations as well as expanding existing tested pallets to include neutrals as a point of contrast.



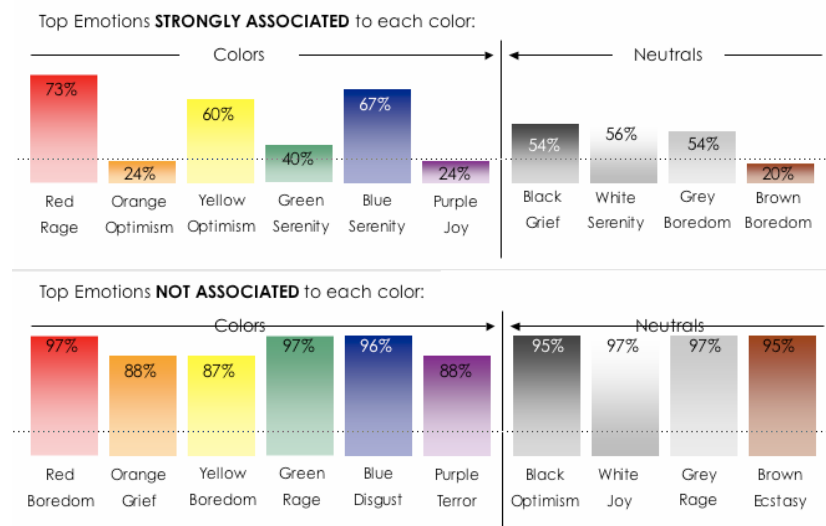
**Figure 1:** Color Palette Employed

### 3. RESULTS

Among the key findings are:

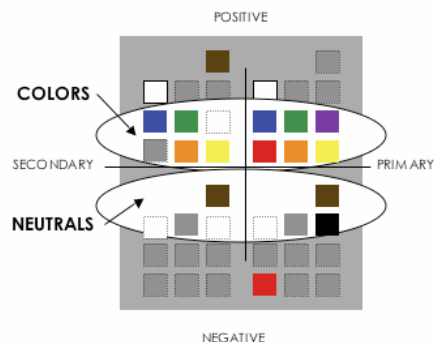
1. There is evidence to suggest that Color is an emotional language that both professionals and non-professionals speak in a consistent and for the most part similar way. The key upon which this argument of Color as a Language is built is the consistency of emotion association per color found in this study. Overall, people ascribe emotional associations to Red that are different from those assigned to blue for example, but are consistent across a significant body of respondents within the US culture sampled in this study. As the definition of a language talks about the systematic quality that language possesses to communicate ideas or feelings by the use of conventionalized signs, sounds, gestures, or marks having understood meanings we see Color as adhering to this definition's characteristics.

2. Some colors have stronger emotion links than others and overall there is a stronger consensus on what a color is "not associated" with than what it is "associated" with. This aspect of the data that shows additional level of consistency of color-emotion association strengthen our suggestion to view color as a language:



**Figure 2:** Findings of Color-Emotion associations and no-association

3. 'Colors' are associated with positive emotions while 'Neutrals' (with the exception of white) are associated with negative emotions. Moreover 'Colors' appear on the Positive Side of the grid, while 'Neutral' appear on the Negative side. Finally 'Neutrals' live below the line in the negative emotion space, except for White. These findings too point to the consistency of 'meaning structure' in the proposed Color Language.



**Figure 3:** Differences in Color-Emotion association between 'Colors' and 'Neutrals'

4. Some colors are age, gender and educational/professional sensitive while others are not.

-Age: Red and Purple are viewed more positively by respondents over the age of 29. Orange is seen as more peaceful by respondents under 29. Yellow, Green and Blue show no age relationship.

-Gender: Red, Yellow and Orange are perceived more negatively by men than by women. Blue is viewed as more emotionally “active” by men. Black is viewed more positively by men than by women. Green, Purple, White, Grey and Brown show little gender differences.

-Professionals: Orange and Yellow are viewed as being more passive by non-professionals. Blue is viewed as being more passive by the professionals. Green and White are viewed more positively by professionals. Purple, Black, Grey, and Brown exhibit little to no difference in associations for professionals versus non-professionals

#### 4. CONCLUSIONS

Our research provides preliminary support to the existence of Color Language by identifying a consistent association-base of color and emotions, an association that corresponds to the definition of Language as a systematic means of communicating ideas or feelings by the use of signs, sounds, gestures, or marks having understood meanings, or the suggestion by objects, actions, or conditions of associated ideas or feelings. While our findings enjoy statistical significance and theoretical validity, their generalizability is challenged given that our data was generated using a US based sample that may be socially-clustered and thus relatively homogenous especially when compared to populations across the world. To establish that color is a language is to assume that the color-emotion links are universal, or else, it requires that we identify the different dialects of such language and the sources of differences that may very well be social and influenced by cultural values and norms. A related issue that serves to demonstrate this point involves color preferences as by now we have enough evidence that suggests that preferences are culture specific and so we need to be careful in making untested claims with regard to the universality of Color in general. Further research should examine similar Color-Emotion associations across cultural contexts to determine the extent to which a color language is a universal phenomenon or culturally contingent one.

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