

Psychology of Colors: How People Relate Emotions to Colors

By: Allison Walsh

The world is a kaleidoscope of colors changing every day. As these colors change, moods change with them. Psychologists believe that this is the reason for things such as seasonal depression in the winter months and the feeling of renewal and energy in the spring. Color psychology is the investigation into what causes colors to elicit these specific emotional responses. There are a multitude of factors that affect the ways in which color is perceived, and no two people will likely view all colors identically. Whether in clothing, advertisements, or room décor, color psychology is vastly important to the function of society. Most people's minds respond to stimuli in unique ways, and the study of the effects that colors have on the psyche is abundantly fascinating.

Throughout the past one-hundred years, various psychological studies have been conducted in the attempt to find commonalities between and explanations as to why colors evoke specific emotional responses. Although it is probable to find a color that elicits a particular response among a majority of people, factors such as past experiences and cultural background will, at some point, skew the data. However, an inclusive study over a large group of people may accurately depict a parallel between responses. This paper will attempt to examine which colors elicit a consistent emotional reaction among a majority of people. A survey has been conducted, and the results from various sources will attempt to determine which emotional responses are most commonly associated with certain colors. In conjunction with five other articles, the principal source that will assist in evaluating color psychology is "A Note on Adults' Color-Emotion Associations." This survey took place among students at the University of New South Wales in Sydney, Australia. Published in 2001, this article provides a detailed insight into the theory of the psychology of colors.

Seven college students were interviewed by the writer of this paper in order to get a small glimpse into the different ways by which colors can be perceived. This survey, conducted at Thiel College in Greenville, Pennsylvania, consisted of four females and three males. In "The Thiel Survey," the participants were shown each of the colors from the Appendix on a phone screen and prompted to describe the first emotion or state of being that entered their mind. Red, orange, yellow, green, blue, purple, brown, black, and white were the colors used for examination in this case study. To maintain a common variable, each participant was shown the same shade of each color. To provide additional insight, two international students were included in the survey. One, a female from North Korea, and the other, a male from Brazil, had both spent a year studying abroad in northwestern Pennsylvania at the time of their participation in the study.

It is notable that at the time "The Thiel Survey" was conducted in November 2020, COVID-19 was a dominant part of life. Due to the widespread psychological effects of the pandemic, the results of this survey may not directly match those found in surveys analyzed hereafter. For the purposes of this paper, the participants' results will be categorized either as



positive or negative emotions. Although there is no assurance that all individuals will agree with this categorization, it is being done in conjunction with how they were sorted in the articles that examined them. Emotions such as envy, confusion, and authority, and words such as “filth,” had negative associations. Restfulness, comfort, surprise, and excitement were presented in the articles as positive emotions and should be regarded in the same way for this purpose. When discussing the results from “The Thiel Survey,” please note that numbers in parentheses signify the number of participants who reported that emotion.

Six articles, each discussing a separate survey conducted on this topic, were used to examine the results of “The Thiel Survey.” The color red was incorporated in five of these surveys. In a paragraph about presentation media, *A Pocket Guide to Public Speaking* suggests that people be conscientious of color use because perception of certain colors can vary among professions. The chapter compared control engineers and financial managers, stating that while the first would expect danger when they see red, the latter would visualize unprofitability (O’Hair 151). Underscoring that same sense of negativity, “Influence of Color” also reported that red “facilitate[d] recognition of anger” (Ikeda). “A Note on Adults’ Color-Emotion Associations” and “Universal Emotions of Color” both contained results that were skewed between negative emotions of anger and positive feelings of love and excitement (Hemphill and Jonauskaitė). This largely reflects the results that were received in “The Thiel Survey,” which recorded five negative responses and two positive responses (see Appendix, Figure one).

An interesting comparison between the above-mentioned results and those of “Investigation of Color-emotion Associations,” is the relation of the positivity of responses compared to the gender of the participants. While this article reported red to have “the most positive perception” and to have “changed according to gender” (Demir), “The Thiel Survey” did not reflect such conclusions. Three women and two men had negative responses (i.e., danger [1], harshness [1], anger [1], and pain [1]) (see Appendix, Figure one). The two remaining people who had reported the feeling of love were not of the same gender (Walsh). Across all articles, the data were consistent with the results found in “The Thiel Survey”; most participants responded negatively to the color red while the remainder responded positively to the same color.

The color orange was presented in “The Thiel Survey”; however, no articles were found which utilized this color in their research. Despite there being no previous data from which to compare the results of this survey, it is worth noting these results anyway. Every participant took significantly longer to relate an emotion to this color. This fact, alongside the lack of discussion about this color in any of the other articles, questions its prevalence in daily life. Orange is commonly used in America for road construction, though that is one of its only uses. It may be this scant presence that leads to the difficulties of relating the color orange to a specific emotion. After much deliberation, the participants of “The Thiel Survey” reported the feelings they most closely associated with this particular shade of orange (see Figure two) to be “cozy (1), nostalgic (1), comforting (4), and curious (1)” (Walsh). It is probable that these similar results were in conjunction with the particular shade of orange as it is not a vibrant hue. The feeling of curiosity was felt by the man from Brazil, and it is unclear whether his divergent response was ethnically

driven or purely coincidental. Despite the participants having difficulty responding and there being no article source to support it, “The Thiel Survey” was conclusive in representing orange to provide the positive feeling of comfort and such related emotions.

Although yellow was only mentioned in two articles, the results that were found matched each other. “What Color Do You Feel” illustrates that “yellow hues were systematically associated with joy” (Jonauskaite). “A Note on Adults’ Color-Emotion Associations” also reported yellow to commonly correspond with feelings of happiness. The survey cited in this article discovered that children tended to “color with a yellow crayon after hearing a happy story,” which provides evidence that even from a young age the color yellow is associated with happiness (Hemphill). Between the knowledge that children associate happiness with the color yellow and both articles drawing the same conclusion about yellow relating to positivity, it is accurate to say that this conclusion is true.

The results of “The Thiel Survey” were the same as those found in “What Color Do You Feel” and “A Note on Adults’ Color-Emotion Associations.” The specific emotions that the participants reported feeling after being shown Figure three included “joy (1), excitement (1), happiness (3), peace (1), and surprise (1)” (Walsh). In “The Thiel Survey,” yellow was one of the only colors in which all responses coordinated. It is also the only color that directly matched the results found in the articles that utilized it. For this reason, it can be firmly declared that yellow evokes positive emotions among a substantial majority of people.

“Influence of Color,” “A Note on Adults’ Color-Emotion Associations,” and “What Color Do You Feel” all included the color green in their surveys. Although each article found green to elicit a positive emotion, the specific words which were presented to describe those emotions differed. “Influence of Color” made the claim that, overall, “green facilitate[d] [the] recognition of happiness” (Ikeda). In order to get a better understanding of the participants’ reasons for relating green to positive emotions, “A Note on Adults’ Color-Emotion Associations” asked their respondents to explain why they associated the two. This response showed that “green was consistently associated with the environment: forests, trees, and nature” (Hemphill). Similarly, the survey participants in “What Color Do You Feel” associated “green hues with relaxation” (Jonauskaite).

Unlike the results found in the three preceding articles, those from “The Thiel Survey” were scattered. Though most kept with the positive theme and reported the feelings of “refreshing (2), natural (1), excitement (1), and calm (1),” Figure four prompted two participants to feel “sickness (1) and envy (1)” (Walsh). The male who responded with “sickness” explained that it was because in children's books and television shows, sickness is commonly portrayed by the character turning green. The female who responded with “envy” described that this emotion came to mind based on the phrase “green with envy.” It can then be questioned whether the participants' responses to colors have more to do with their own personal feelings or external phenomena such as media and popular phrases. All things considered, emotional responses to the color green can be best categorized as being positive.

Another color that has an emotional phrase related to it is blue. “Feeling blue” is a popular phrase in America that is used to address feelings of sorrow. The Highmark Caring Place is an organization that helps families who are grieving the loss of a loved one, and the main color of the walls are blue because studies reveal it as a calming color. It is interesting that a color used to describe sadness is painted on the walls of an institution trying to make people less sad. Contrastingly, the two articles that included this color in their discussion, “A Note on Adults’ Color-Emotion Associations” and “Investigation of Color-emotion Associations,” recorded blue to have “the most positive responses than any other color” (Demir). “A Note on Adults’ Color-Emotion Associations” explains that the reason blue was associated with happy feelings was because “participants associated blue with the ocean or the sky, [which] were [both] seen to be limitless, calm or serene” (Hemphill).

Despite both “A Note on Adults’ Color-Emotion Associations” and “Investigation of Color-emotion Associations” receiving sweeping results of positive emotions, “The Thiel Survey” presented an opposing conclusion. “Anxiety (1), depression (2), coldness (2), sadness (1), and happiness (1)” were the participants’ responses to being shown Figure five (Walsh). “Happy,” the deviating response, was that of the participant from Brazil; he further explained that he responded this way to the color blue because it is his favorite color (Walsh). Although nobody surveyed brought up the phrase “feeling blue,” the majority of participants related blue to strong feelings of sadness. By far, blue had the most inconclusive results when relating the data from the articles to those from “The Thiel Survey.” Though there are inconsistencies between the results from “The Thiel Survey” and those from the previously mentioned articles, it can be concluded that blue either gives people a sense of serenity or sorrow.

“Universal Emotions of Color,” “Investigation of Color-emotion Associations,” and “A Note on Adults’ Color-Emotion Associations” all included purple in their surveys. “Universal Emotions of Color” reported the color to have “the greatest variety of emotional associations” amongst survey respondents (Jonauskaitė). “Investigation of Color-emotion Associations” and “A Note on Adults’ Color-Emotion Associations” both exhibited the trend of the results “chang[ing] according to gender” (Demir). Women, according to “A Note on Adults’ Color-Emotion Associations,” “were far more positive toward purple than men were” (Hemphill). Neither article had any explanation as to why there would be a distinction between gender and emotional responses toward the color purple.

Unlike the articles, the results found in “The Thiel Survey” were relatively uniform. Although all participants had difficulty relating an emotion to Figure six, the results still tended to reflect feelings of negativity. Feelings of “depression (1), sorrow (1), and anxiousness (3)” were reported by the majority (Walsh). The two responses that varied included feelings of “relaxation (1) and joy (1),” exhibiting emotions directly opposite to those of the other participants (Walsh). Although the two positive responses came from men, it is difficult to say whether this mirrors the conclusion drawn in “Investigation of Color-emotion Associations” because the other male in “The Thiel Survey” reported the feeling of anxiety (Walsh). Due to

scattered results, it is difficult to say which emotions are most commonly associated with the color purple.

Similarly to orange, brown was not a common color among surveys of this nature; the only article that included brown was “A Note on Adults’ Color-Emotion Associations.” The color was mentioned quite a few times throughout this article. Contrasting with the information mentioned about the color yellow, the survey in “A Note on Adults’ Color-Emotion Associations” found that children colored “with a brown crayon after hearing a sad story” (Hemphill). The adults in this survey had also reported associating feelings of sadness with the color brown. It was concluded that the negative reactions to brown were due to the fact that it is a darker color and can be comparable to black or grey (Hemphill).

Just as with orange and purple, it was difficult for the participants of “The Thiel Survey” to relate an emotion to Figure seven. Because of this, the results that were reported, which were “comfort (1), warmth (1), calming (1), filth (2), disgust (1), and confusion (1),” were inconsistent (Walsh). These data were divided relatively evenly between positive and negative, which somewhat correlated to the results found in “A Note on Adults’ Color-Emotion Associations.” Many of the respondents of “The Thiel Survey” mentioned that the first association they had with the color brown was feces and dirt. They explained that although they could easily think of objects to relate to this color, thinking of an emotion to match it to was much harder. However, after examining the data, it can be declared that most people relate the color brown to positive emotions of comfort, while some will relate it to negative emotions such as filth.

As mentioned in *A Pocket Guide to Public Speaking*, “western societies don black for funerals, while [other cultures, such as the] Chinese, wear white” (O’Hair 151). For Americans, this means the color black is most naturally associated with negative things, such as death. Showing concurring data, “A Note on Adults’ Color-Emotion Associations” reported that among both adults and children, black was associated with negative emotions (Hemphill). This survey also found that, specifically, “black has been associated with anxiety” (Hemphill). “Investigation of Color-emotion Associations,” which also recorded negative perceptions among participants, reported that the emotional responses to the color black “change[d] according to gender” (Demir).

Somewhat reflecting the above-mentioned results, “The Thiel Survey” found that although a majority of responses were negative, the specific words used to describe the respondents’ emotions to Figure eight were rather different. Having no relation to gender, the responses were “authoritative (1), fear (1), evil (3), emptiness (1), and restfulness (1)” (Walsh). Though mostly negative, no participants indicated feelings of sadness or death, as would be expected. It is also notable that none of the responses related to anxiety, as suggested in “A Note on Adults’ Color-Emotion Associations.” “Restfulness,” the outlier, was the response of the man from Brazil, where black is traditionally worn to funerals. He did not associate black with death because he has never been to a funeral. Despite a few outlying answers, the color black is proven to elicit negative feelings in most people.

A Pocket Guide to Public Speaking states, as previously mentioned, that “western societies don black for funerals, while [other peoples, such as the] Chinese, wear white” (O’Hair 151). The same information was reflected in “Universal Emotions of Color,” which found that “a common association is white with relief, but in China, where white is traditionally worn at funerals, white is also associated with sadness” (Jonaskaite). Although it is important to note that perceptions of the color white vary between cultures, many studies have concluded that in America, white routinely elicits feelings of happiness. These findings can be backed up by “Investigation of Color-emotion Associations,” which explains white as “having the most positive perceptions” amongst participants (Demir). The study in “A Note on Adults’ Color-Emotion Associations” made the same conclusion.

Just as in the cases of the four previously mentioned articles, the results found in “The Thiel Survey” were congruent. The responses, which all included positive emotions, included “purity (4), hopefulness (1), glory (1), and kindness (1)” (Walsh). These responses resulted in white being one of the few colors that had consistent data between participants in “The Thiel Survey” and those in the articles that mentioned the color. The conductor of “The Thiel Survey” found it notable to include that those who took part in the survey related an emotion to Figure nine much faster than any of the other colors. Taking all of this into consideration, it can be confirmed with confidence that in America and in similar cultures, white has a consistent connotation of positivity.

My results in “The Thiel Survey” tended to stray from those of the rest of the group. Figure one, which instilled feelings in the other participants of “danger (1), harshness (1), love (2), anger (2), and pain (1),” gave me feelings of stress. While the respondents reported feelings of comfort and curiosity when shown Figure two, I, divergently, felt anxious. Unlike the case with orange, Figure three gave me a sense of happiness, which matches the answers of the rest of the participants. The emotion that came to my mind when I saw Figure four was sickness, which one other participant reported. The results for the color orange, in which my negative feelings differed from the other participants’ happy ones, were reversed for Figure five; I felt excitement while the other participants (aside from the man from Brazil) recorded negative emotions. This same trend is visible when analyzing the results from the color purple. While most experienced feelings of anxiety and sadness, Figure six gave me, along with two others, the feeling of tranquility. Figure seven elicited emotions of “comfort (1), warmth (1), calming (1), filth (2), confusion (1), and disgust (1)” amongst the survey respondents. I felt an overwhelming sense of coziness, which matches relatively well with the rest of the data. Generally, the color black proved to carry an aura of negativity, which was proved both by the articles and “The Thiel Survey.” My response to Figure eight was serenity, which is due to the fact that I associate black with dark rooms and comfort. The final color, Figure nine, gave me a feeling of purity, which is in unison with the rest of the participants’ results. Though I occasionally had the same results as the other participants, my results deviated a majority of the time.

While there may be some detractors to the theory of the psychology of colors, I hope most readers will see the efficacy of researching this fascinating topic. After reviewing all of the

aforesaid data, the extent by which colors affect people's emotions is glaring. Although the human mind is far too vast to link a single emotion to each color, the culmination of various data proves that a majority of people experience strong emotions towards colors. While general conclusions have been made detailing the relation of certain emotions to a specific color, far too many variables exist to narrow the verdict. Color psychology offers a glimpse into the complex inner workings of the human psyche. The ways in which people perceive color affects how we interact not only with our surroundings, but also with each other. Examining the theory of color psychology can alter our comprehension and interpretation of the environment around us and permit us to recognize how intertwined our perceptions of the world truly are.

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Appendix

* + indicates a positive association to the color

* - indicates a negative association to the color

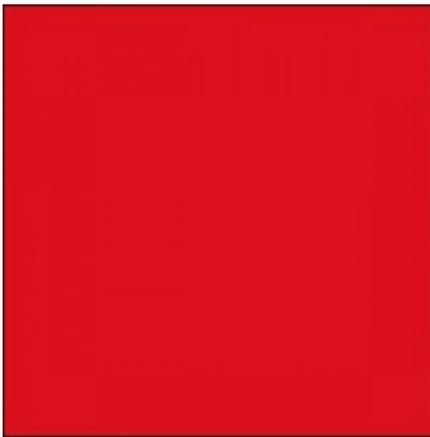


Figure one

+ two
- six



Figure two

+ seven
- one

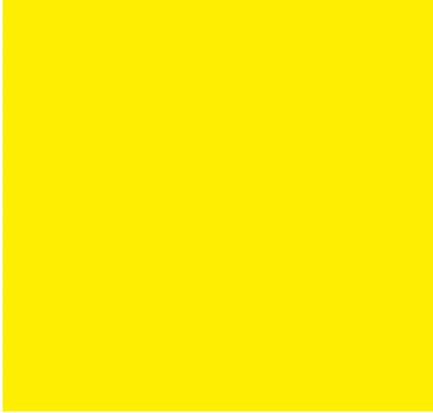


Figure three

+ eight
- zero

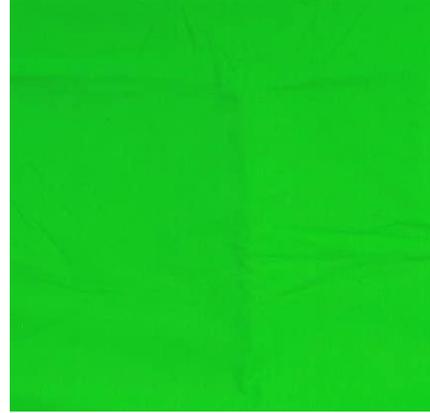


Figure four

+ five
- three

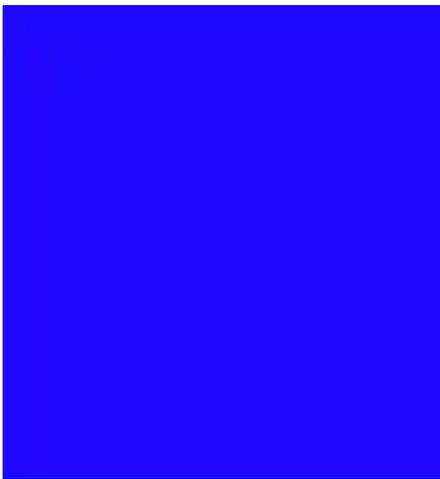


Figure five

+ two
- six



Figure six

+ three
- five

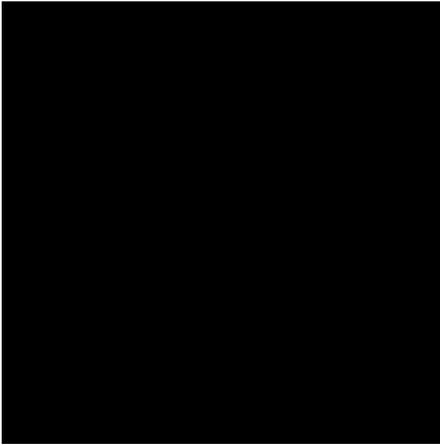


Figure seven

+ four
- four



Figure eight

+ two
- six

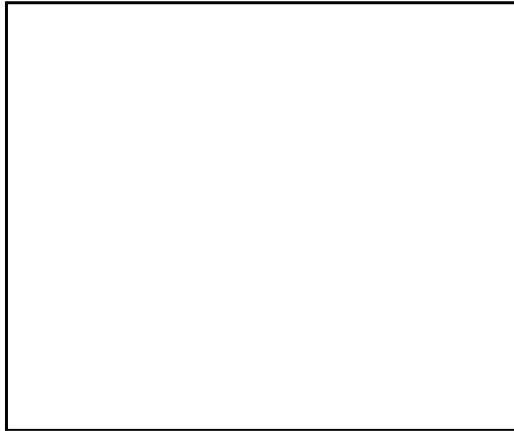


Figure nine

+ eight
- zero

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