

The Psychology of Color:

The Element of Mystery

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When asked to analyze the “mood” of a piece of artwork, many will base their answer from artists’ use of particular colors. If there is an abundance of blues and cool colors, one might say that the work has a gloomy or sad mood or feeling. On the contrary, if the work is overflowing with reds and warm colors, one might state that the work promotes a joyous or happy mood. Thinking along the lines of warm colors meaning happy, and cool colors defining sad is not necessarily an incorrect line of reasoning. However, to some individuals, the meaning of colors can be totally opposite to another person’s definition for color. Differences have been thought to range based on variables such as ethnicity, gender, culture, experiences, climate, politics, and even religion. Although, these particular variables have not hindered some psychologists from searching for universal definitions of each color. Leonardo himself tried to make the definition of color simple by saying that, “We shall set down for white the representative of light, without which no color can be seen; yellow for earth; green for water; blue for air; red for fire; and black for total darkness” (Frank, 2006, p.61) However, his definitions were not widely accepted. But before anyone can define the different colors, one must first know what color is.

According to Dr. David Meyers (2005), “What strikes our eye is not color but pulses of electromagnetic energy that our visual system experiences as color. What we see as visible light is but a thin slice of the whole spectrum, of electromagnetic

radiation” (p. 146). The red rubber ball isn’t really “red”, but the object is absorbing every color except red. Thus, a person’s eye will be stimulated by the red light waves being reflected off the ball and the individual will see a red rubber ball. However there are other things that determine the color that a person “sees.” The “particular wavelength of spectral color to which one gives a name, such as yellow and green,” (Frank, 2006, p.63) are called hues. When the hue becomes lighter or darker (such as with the addition of white or black) then one would see different values of color. The addition of black to any hue is referred to as a shade. For example, maroon is a shade of red because it is composed of red and a little black. Additionally, the addition of white to any hue is referred to as a tint of that color. For example, pink is a tint of red because it is composed of red and a little white. Not only does the value of the hue affect the color that one sees, but so does the intensity of the color. “Intensity or saturation refers to the purity of the hue. A pure hue is the most intense form of a given color; it is the hue at its highest saturation, in its brightest form” (Frank, 2006, p. 63).

No matter what the value or saturation of the hue, each color affects an individual emotionally and even physiologically. Although, when brightness and saturation remain constant no matter the color, researchers have noticed that both men and women prefer colors with shorter wavelengths, such as blue and green, instead of reds and yellows. Although, science has found that there is a general order of preference across the spectrum. Blue is the most liked color, but is followed by red, green, violet, orange and yellow (Sharpe, 1978, p.54). Some may

attribute this to the experience or emotion that occurs when exposed to a particular color.

The color red is an emotionally intense color which can evoke feelings of war, danger (such as red lights on alarms), strength and power. Although in the United States, when most people think about the color red, the popular holiday, Valentine's Day, is brought to mind. With this thought, many think about red roses and hearts which can make red represent feelings of passion, desire, and love. On the other hand, physiologically, red has been found to increase metabolism, increase respiration rate, and increase blood pressure. It can also be over stimulating, which when people have prolonged exposure to large amounts of red, they can feel overwhelmed or annoyed (Color Wheel Pro, n.d, para 1-2).

Orange is a color that combines the energy of red and the joy and happiness of yellow. The color of carrots, cantaloupe, and oranges has been found to increase oxygen flow to the brain and increase mental activity. It is a very hot color that gives a sensation of heat. This may explain why many small children use the color orange when coloring a picture of a campfire. This mixture of red and yellow has been used to represent the sun and has been said to represent happiness, creativity, determination, attraction, success, and encouragement. However, when some people see the color orange, the thought of construction on the interstate and delays come to mind, making the color orange a sign of warning (Color Wheel Pro, n.d, 5-6).

Yellow is the color of joy, happiness, and freshness. People often link the color yellow to Easter, baby chickens, or a young child's rubber duck. Exposure to the color yellow can stimulate mental activity and generate muscle energy. However, cross culturally it has been noticed that infants tend to cry more in a yellow room. Often times men will associate the color yellow with children, although, most children around the world do not chose yellow as a favorite color (Color Wheel Pro, n.d, para8- 10). In Austrian German, yellow actually describes a state of envy or jealousy (Frank, 2006, p.62). This leaves one to assume that the phrase 'green with envy,' would not be understood well in Austria.

The next color in the spectrum is said to be the most natural color and most restful for one's eyes. Being surrounded and exposed to this color can sometimes improve eyesight. Green has become a symbol for growth, freshness, harmony and fertility. On the contrary, the darker greens can evoke feelings of jealousy, greed, and envy because it makes people think about money (Color Wheel Pro, n.d, para. 12- 13). In the United States the phrase, 'green with envy,' would make sense to more people.

Every color has multiple and sometime contradictory meanings. One color that has completely different meanings depending on country is the color blue. In the United States is considered the color of the sea and sky, as well as the representation of depth and stability (Color Wheel Pro, n.d, para. 15). Physiologically, exposure to blue has been noticed to decrease metabolism, lower pulse and respiration rates below normal levels (Frank, 2006, p.61). The phrases 'blue moon' or

'I'm so blue' have come to be statements of sadness in the U.S., which shows an emotional tie to the color. Interestingly however, in North India the color blue represents sexual passion, but in Austrian German it means intoxication or drunkenness (Frank, 2006, p.62). Psychologists have struggled to determine what causes these different meanings and why there isn't a universal definition or meaning for the color blue.

For years, one color has become the symbol of royalty and wealth. In ancient times, the dyes needed to create this color were highly expensive and rare. However, when one thinks about a king or queen, the color purple comes to mind. Maybe this is why purple is a favorite color of young children. Purple has been associated with royalty, power, nobility, luxury, ambition, wisdom, dignity, independence, and creativity. Additionally, purple has been viewed as the color of mystery and magic (Color- Wheel Pro, n.d, para 20- 21).

Every color has a meaning, and can cause emotional and physiological effects. Although, the two "colors" of black of white also have individual effects. Black is the absence of all color because when an object appears black, it means that all light waves are being absorbed. Contrasting the color black is white because when something seems white, it means that all light waves are being reflected. Both of the "colors" have come to have separate meanings. In the United States the color white has become synonymous with weddings and the symbol of purity, light, innocence, and virginity. White has also been used to symbolize safety and protection, possibly due to the fact that doves are white and have been known as a

representative of peace. However, black has become the color to represent elegance, formality, mystery, and also, death and evil. Most associate black with mourning because it is the color that most people wear to funerals (Color Wheel Pro, n.d, para 24- 28).

However, does a few physiological effects and meanings of a color single-handedly determine if an individual will like the color, or does environment and social influence play a role in color choices of an individual? Scientists and psychologists alike noticed that adults have “color- mood associations,” such as those previously mentioned with the meanings or representations of individual colors of the spectrum, but both were unclear about whether or not those associations were scientifically based or the result of culture conditioning. Researchers Lawler and Lawler decided to conduct a study to see if the same associations would appear in children, a group that is considered minimally conditioned by the culture. A group of nursery age children were selected (approximately the same number of boys and girls) and divided into two equal sized groups. One of the groups was told a very sad story and the other group was told a very happy story. Two colored crayons, brown and yellow, were given to each child. Then the story tellers gave them a sketch of the girl from the story and told the children to color her dress. Most of the children that heard the sad story, colored the dress brown and most of the children that had heard the happy story colored the dress yellow. The study concluded that children had no color- mood associations and could be culturally conditioned (Sharpe, 1978, p.56)

Although, there have been attempts to tie color usage between cultures. Martin Lindauer selected 139 independent nation's flags from six different geographical areas and compared the colors that were used. The six areas were Africa, Asia, Europe, Latin America, the Middle East, and Other (this group included the United States). Lindauer found that each of these flags used an average of about 2.14 colors and ninety-seven percent of these flags selected used red, blue, green and yellow, in that particular order. Seventy-eight percent of the selected flags used white. Surprisingly, forty-seven flags had one dominant color and forty-nine percent of the time the color was red. Maybe this is because historically, red was the color of courage and bravery. In this study, Lindauer noted that "the use of red, blue, and yellow in flags did not vary from geographic areas, however, there was a disproportionate use of green noticed in African flags" (Sharpe, 1978, p.33-34).

Independent studies have disputed this study by saying that color does vary greatly among cultures and that the flag data was inaccurate. Some have said that "the flag color data may be attributed to the possibility of the ad hoc treatment of flag data...and also from examining isolated colors out of context. There also appears to be a universality of color meaning as relating to flags" (Sharpe, 1978, p.34). Some psychologists, anthropologist and sociologists alike have stated that colors of a flag mean different things than the colors people use in clothing and everyday life. For example, the United States very own, "Old Glory;" when looking at red, white and blue together, it can be viewed as patriotic, but separate the colors can take on a very different meaning.

Color preferences have been noticed to be somewhat controlled or determined by the culture that surrounds an individual. When a researcher by the name of Winick studied the color preferences of different cultures, he did find differences. He wrote a questionnaire that included “questions of critical incidental nature in which the subject was asked to recall, if possible, an incident of a disapproved color that had created an unpleasant situation” (Sharpe, 1978, p.49) His “questionnaire interview” concluded that “there was a reinforcement of self perception as well as national identification” based solely on color. When interviewing children, Winick found differences depending on the country. For example, in Israel, kindergarten children preferred the color red the most, however blue and yellow were included in the top three. However, in Madrid, the favorite color of the kindergarten children of Israel was actually the third favorite color of children from ages five to fourteen years old. The favorite color for this age group in Madrid was blue, followed by yellow, red, and green. After looking at the data that Winick collected in China, the favorite color of young children was white, and then blue, red, yellow, green, black, orange, violet and gray (Sharpe, 1978, p.49). The wide variety of colors that were mentioned in China was quite different from the three to four colors mentioned in Israel and Spain. Winick, thus concluded that the culture had to have played at least a minor role in what colors children liked.

Although, there are colors that based on their meaning, use, or connotation in a particular country or culture, are “disapproved” colors. In Africa, the “color” black is very unpopular. Winick thought that this may have had something to do

with the weather or possibly the symbolism or the association of the color black (Sharpe, 1978, p.49). Most associate the color with darkness, corruption, and death. In Europe, eleven of the eighteen countries do not approve of black for similar reasons as the people of Africa. These reasons for the disapproval of black are also seen in many countries throughout Asia, especially in areas with large Hindu or Buddhist populations. In each of these belief systems, black is seen as “Tamas- reference to persons who have low moral and intellectual capacity or who have become demons” (Sharpe, 1978, p.50). Purple is another color that is disapproved of in six different Asian countries. In the Middle East, Iran disapproves of the color gold, but the countries of India, Ceylon, Burma, Cambodia, and Laos actually show a preference to the color gold. Green, on the other hand, is a preferred color in both Iran and other Middle Eastern and Asian countries, such as Iraq, Pakistan, Indonesia, the Sudan, and Jordan. Interestingly, green is not disapproved in any Arabian country. The well-known red rising sun of World war two is actually disapproved of in Australia, probably for the historical reference (Sharpe, 1978, p.50). Although, a yellow, blue or green rising sun is not seen as offensive or disapproved of in the country. Many have tried to speculate why these countries or areas reject or disapprove of the use of these colors. Why would an entire group of people not like a certain wavelength in the visible light spectrum? According to Deborah Sharpe (1978), “Politics appears to lie at the root of many color- disapprovals..some do not want the colors of their flag to be used in anything but the flag, and some reject colors used by previous rulers or enemies in battle” (Sharpe, 1978, 51). She goes on

to mention that religion is also a big factor in color approvals and even climate can play a role. Usually when people are in warm climates, the people tend to prefer light colors, however, the opposite tends to be true in colder climates.

Color choices affected not only by culture, but individuals experiences has been a study of many psychologists. In fact, color choices based on mental states and experiences is a big part of Art therapy. Art therapy is defined as, “an established mental health profession that uses the creative process of art making to improve and enhance the physical, mental and emotional well-being of individuals of all ages. It is based on the belief that the creative process involved in artistic expression helps people to resolve conflicts and problems, develop interpersonal skills, manage behavior, reduce stress, increase self esteem and self awareness, and achieve insight” (AATA,2006, para. 1). For over sixty years, psychologists and therapists have been using this method to help individuals to get over traumatic or difficulties in their life. When a therapist goes over a piece of artwork with a client, they look at color choices made by the individual. According to Tova Rosenbloom (2006) from Bar- Ilan University, “Color is the number one element of expression in both art and art therapy” (p.229). Over time, there have been color- use patterns noticed in people with similar problems. Children suffering from post- traumatic stress disorder tend to use the colors of red, black and white in their works, while adults with depression tend to use the color brown in their artwork (Rosenbloom, 2006, p. 229). But, this new therapeutic field in which colors are tied to emotions and experiences, has not always existed.

After the results of a study, Rosenbloom (2006) stated “color was found to have an enormous influence on people’s emotional states, on the brain system, and on the physiological functions” (p.230). Researcher Frank Jackson even stated that there were two facts about color. One was that color was a property of all material things and the second was that “color is subjective in that it qualifies mental items,” (Hibert, 1987, p.1) Unfortunately, these ideas weren’t always as obvious or accepted as they may seem to be with more recent psychologists and researchers. An early case of studying art in psychiatric patients happened during the time after World War One. Dr. Hans Prinzhorn was both a doctor and an art historian who “pioneered an interdisciplinary approach” (Prinzhorn University, 2006, para.8). He started collecting works out of psychiatric facilities with the help and support of Karl Wilmanns, the head of the Psychiatric Department in Heidelberg. Prinzhorn’s study was to answer a cultural anthropology question that would answer “the origin of the artistic impulse, or the ‘schizophrenic sense of existence’ [which] he witnessed in contemporary Expressionistic Art” (Prinzhorn University, 2006, para.8).

The official start of art therapy or the study of art in individuals participating in therapy actually was started by Margaret Naumburg, who believed that art expression was a good form of therapy. Although she mostly focused on adults in her practices, she encouraged them to create works and then have them associate their pictures to something (Wadson, 1980, p. 13). Right after her was her fellow colleague in the field, Edith Kramer, who worked mostly with children. Unlike Naumburg, Kramer focused on the healing power in the creative process, which

includes no verbal reflection (Wadeson, 1980, p. 13). In her book titled Art Psychotherapy, Harriet Wadeson started why art therapy is not the creation of future masterpieces of the art world, but instead about the creative process, when she said, "Creativity is not the same thing as art. Not everyone is capable of becoming a great artist. But all are creative no matter how limited" (Wadeson, 1980, p.4). Maybe this is a reason that art therapy is increasing in popularity as another option in managing behavioral or psychological obstacles instead of over medicating patients into correction. However, without the pioneers who first made the obvious connection between color and emotions or experiences, this treatment would not be available today.

Harriet Wadeson pointed out that art is a solitary experience in which one can examine personal experiences, emotions, and thoughts. Although sometimes the reasons for the colors one uses gets influenced by politics, religion, or the climate in the area that an individual inhabits. Sometimes ones own creativity and path to self discovery or healing is affected by "disapproved" colors or stereotypical meanings that have all but taken away the room for personal definition. Especially in the United States, there are many people that try to tell others what to think including, the meaning of symbols and colors. Whether it occurs with the propaganda of classrooms exploding with the colors of red, pink and white on Valentines Day, or the when a young child might get pinched by a fellow classmate for not wearing green on March 17th. Personal definition of color is something that is not acknowledged as much in the everyday world. Although, it is apparent

whether it's the clothes someone wears or the color of someone's bedroom. Many people have a favorite color, and have reasons why whether they say they do or not. Colors can only be defined by the person and that's why when some people look at a piece of art cover in reds, oranges, and yellows, they would say that the art is happy, but other may say that it is angry. Color is the element of mystery because it truly is in the eye of the beholder.

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