

The Effect of Colour on Human Body and Psychology

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Abstract: The concept of colour is one of the biggest concepts in our life. Every colour has different effects on our psychology and sometimes colour can be used as treatment for mental illnesses. Why do we feel anger when we see the colour red? Or why does the colour blue has a calming effect? The effects of colour on human psychology is used in advertisements, brand logos, design, and many different areas.

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The colours are used all around the world in order to associate different concepts. According to George C. Brainard, the receptor system of the brain for detecting light has been found to be different for every single metabolism (Brainard 6405). As we know that the appearance of a color is connected to the reflected light's wavelength, it is proven that certain wavelengths of light may have specific impacts (Irlan 4-7). For example the human circadian system may be sensitive to short wavelength light, and blue light may improve brain's cognitive performance (O'Connor 229). For Angela Wright, the author of the book *The Beginner's Guide to Color Psychology*, colour psychology can be defined as "the effects of the electro-magnetic radiation of light on human mood and behavior - a universal, psychophysical reaction, which is not as heavily influenced by culture, age and gender as is generally thought (Wright)." These reactions of human brain are generally used by the advertisers to attract their customers, by the politicians to catch the voters' attention, and by the artists to show the sub-meanings of a painting. As an example, red can be read in a painting as lively and friendly, but at the same time it can be perceived as aggressive and demanding. (Colour Emotion Guide) The different reactions that human brain gives to different colours are also used as treatments. For instance red is believed to regulate blood pressure with its activating effect (Logan-Clarke 32). This is called colour therapy, and used by people for ages. There are myriad examples for colour therapy and colour psychology. Colours have great forces on human psychology that can be differ with the harmonies of the colours, and these forces are used by experts to have an effect on their audience. This paper is written to present the different ideas about the effects of colour on human psychology, to state the difference between colour psychology and colour symbolism, and to present the colour therapy.

Colour tricks are used all around the life by the people who are experts about colour psychology. For example, when people go into a place, does the colour of the walls or the furniture affect them? The answer should be yes, because human brain involuntarily gets affected by the atmosphere of the place the person gets in, and reacts according to these effects. As an example, interior architects use colours like blue, gray or black in a small hotel (or a café, store etc.) to make the image of the place in human brain seem bigger and deeper. Just like that, bright colours like yellow or red are used to make a place hot and friendly (Color Emotion Guide). Colour tricks are also very important for advertising and marketing. Neil Patel says "Colour is 85% of the reason you purchased a specific product (Patel)." Although some scientists say that the reaction of the brain depends on the person, it cannot be unseen that colours are used by brands to attract their customers. For example, gray is considered to be neutral and calm (Wright 98). It brings balance to mind, therefore Apple and Wikipedia use gray as the colour of their logos to calm their audience. Orange is called to be a friendly colour, companies like Nicledeon and Fanta use it as their main colour. However, this does not mean that if a brand's colour is blue, it simply gives the message of trust and strength to its customers. If this brand's personality does not match with the colour they chose, the effect that this colour creates in human brain will not be persuasive enough for the customer. Gregory Ciotti explains this in these words:

It's the feeling, mood, and image that your brand creates that play a role in persuasion. Be sure to recognize that colors only come into play when they can be used to match a brand's desired personality. Without this context, choosing one color over another does not make much sense, and there is very little evidence to support that 'orange' will universally makes people purchase a product more often than 'silver' (Ciotti).

Colour psychology is not the same as colour symbolism. Colour symbolism is the beliefs about colour that culture, religion or history determines. For instance purple symbolizes royalty for some reason, but it is creativity, imagination and wisdom for colour psychology. All in all, colour psychology does not include the historical or cultural meanings of colours, it includes the meanings of colours that human brain determines. As it is known, the colour people see is the light that is reflected by the object. In retina, the light waves are converted into electrical impulses that pass to the hypothalamus (Wright). Hypothalamus is the control center of body's biological clock. The biological clock can shape your emotions and mood. According to Angela Wright, people's perception on a colour depends on their mood, which is directly concerned with their hypothalamus, and the harmony of colours can easily change your perception (Wright). For example a person's reaction to a gray sky differs from day to day: if there is a gray sky on a colorful flowered farm, human brain perceives it as a negative thing, but it perceives the gray sky positively when there is bright white snow under it. To sum up, it is the combination of colours, not a colour alone that triggers the response given by the human brain.

The most common colours that colour psychologists examine are red, blue, yellow, green, violet, orange, pink and black. As it was discussed before, there are positive and negative psychological effects of colours that can change according to the other supporting colours. Wright says "red's effect is to stimulate body and raise the pulse ... (Wright)." and it gives the person the impression that time is passing faster than it is. Red's this affect is used all over the world with traffic lights, giving the drivers the impression of fast time. It represents physical courage, strength and basic survival in colour psychology, while it can be perceived as an aggressive colour. Blue is the colour of intellectuality, trust and intelligence for colour psychology, but it can be negatively perceived as coldness and unfriendliness with the effect of its supporting colours. It is usually used in banks' logos to recall trust. Pfizer, Ford and Facebook are good example for the brands that use blue to recall trust in their customers' mind. According to colour psychologists, yellow is the colour of emotions. Its positive effects are optimism, emotional strength and confidence, but it can also be perceived as anxiety, depression and suicide. Brands like McDonalds and Ikea use yellow to be perceived as an optimistic brand by their customers (Color Emotion Guide).

"Colour therapy is an of holistic methodology that uses colour and light to treat illness and disorders, alleviate physical ailments and pain, prevent illness and maintain good health" (Yahalomi). The energy relating to each of the seven spectrum colours of red, orange, yellow, green, blue, indigo and violet, resonates with the energy of each of the seven main chakras/energy centres of the body. To the balance of the body, each chakra needs to be working with the others. Colour therapy can help these energy centres to re-balance themselves by applying the right colour to the body. Colour is absorbed not only by the eyes, but also the skin, therefore every cell of human body needs light energy (Logan-Clarke). Under the colour-chakra theory, every colour is linked to a chakra and these colours are associated by body functions within each chakra area. According to this theory, red is used to activate the circulation system and benefits the senses, blue raises metabolism and is used to stabilize the heart, and green strengthens bones and muscles. These are linked to the elements water, fire and earth. It was a belief system that the elements heal the body that continued through the Renaissance (O'Conner 232). Aside from the ancient belief systems, there are different modern suggestions about colours' effects on human body and psychology. For example Kopacz suggests:

Red is believed to sensitize the taste buds and sense of smell, increasing the appetite ... all this occurs because the heart rate instinctively quickens, which causes a release of adrenalin into the bloodstream raising blood pressure and stimulating the nerves (Kopacz 76).

... the sight of the colour blue causes the body to release tranquilizing hormones when it is surveyed, particularly a strong blue sky and many believe (blue) can lower blood pressure, slow the pulse rate and decrease body temperature (Kopacz 79).

There are myriad of different external factors that can affect human brain and human psychology either negatively or positively. Colour is one of these external forces, which has both positive and negative effects. The effects of colour on human psychology are used all around the life to impress people, to get their attention and to gain more customers by the

people who are experts in colour psychology. Apart from this usage, colour is used by people to heal human body and psychology for centuries. It is strongly believed that human body can be healed with the effect of the wavelength of a light, which is known as the colour, affecting the chakras. Every wavelength has a different effect on a different chakra in human body, and by applying the colour, body can be healed. All in all, colour is an important force for human psychology and body, and it is used a lot in people's life to persuade them by using their psychology and also to heal their diseases.

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