

# Impact of Colors on Design

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## Abstract:

Interior design is a complex task that requires many steps from the development of notions to application of designs. The design of an area is influenced by numerous factors. Color is one of the intrinsic quality factors for such an interior configuration. The complicated nature of the colors has been generally examined and the impact on art, cultural identity, philosophy and religion. Color is often seen as a core component in our visual perception. Most theories and assumptions have now been developed concerning the stylistic comfort offered by colors and the influence we have on the human psyche.

While on the study of experiments conducted, conclusions are drawn on the light use of public spaces. Their impacts will be shown on productivity and worker disposition, patient recovery in institutions and student work in schools.

## Introduction:

Interior design represents a considerably important factor which affects the users of the space, both in functional and esthetic and psychological terms. Colors are an integral part of the world we live in and their impact on the human perception of the environment is irrefutable. Also, they are one of the most important elements of an interior, so they represent a key factor in formation of a suitable space for living and working. Numerous researches proved that colors have an intensive psychological and physiological effect on people, for which reason it is important to know how different colors affect the space users. It is similar to the way how cheerful a person feels when it is sunny; and also how unhappy a person feels on a rainy day. Color has the energy to influence both emotions and cognitive processes [1]. When designing an interior space, it is necessary to have experience in working with colors. An architect or interior designer must understand the impact of colors, psychological effects caused by certain colors in people, and so must know where it can be implemented to obtain a combination appropriate for each situation. Combining colors and using them in an interior can result in a positive or negative impact on a viewer. A space can exude comfort and serenity, while on the other hand, colors can cause a feeling of annoyance and discomfort. Due to the previous assertions, the paper specially addressed effects of color on the users of specific spaces. The effect of color choice is discussed, both within the housing and within public spaces. The psychological effects of various designs of office, hospital and classroom interiors are discussed separately.

## Color types:

Color can be defined as “different sensations on the eye as a result of the way objects reflect or emit light” [2]. In 17th century, the famous mathematician and physicist Sir Isaac Newton conducted a number of experiments to prove that a rainbow consists of all the existing colors. He darkened the room, letting the light only through a small hole and placed a prism in front of it. He succeeded in reflecting all seven colors on a white background. By moving through the color wheel, harmony between neighboring colors can be seen. The colors that are next to each other are called harmonious colors. Colors in a circle facing each other are called complementary or opposite colors. Moreover, The wheel is partitioned into colors which are either cool and warm.. Warm colors stimulate the nervous system, so under their influence, the hearth rhythm and blood pressure may be increased, as well as the breathing.

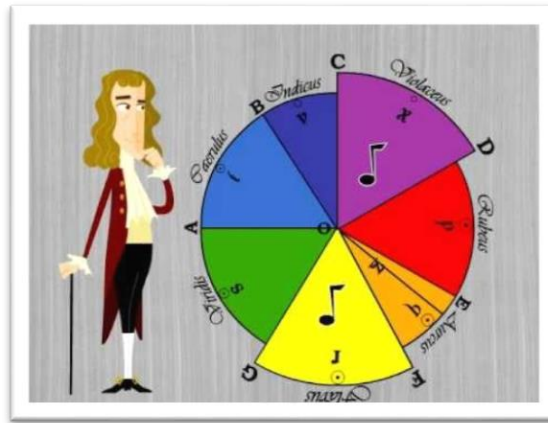


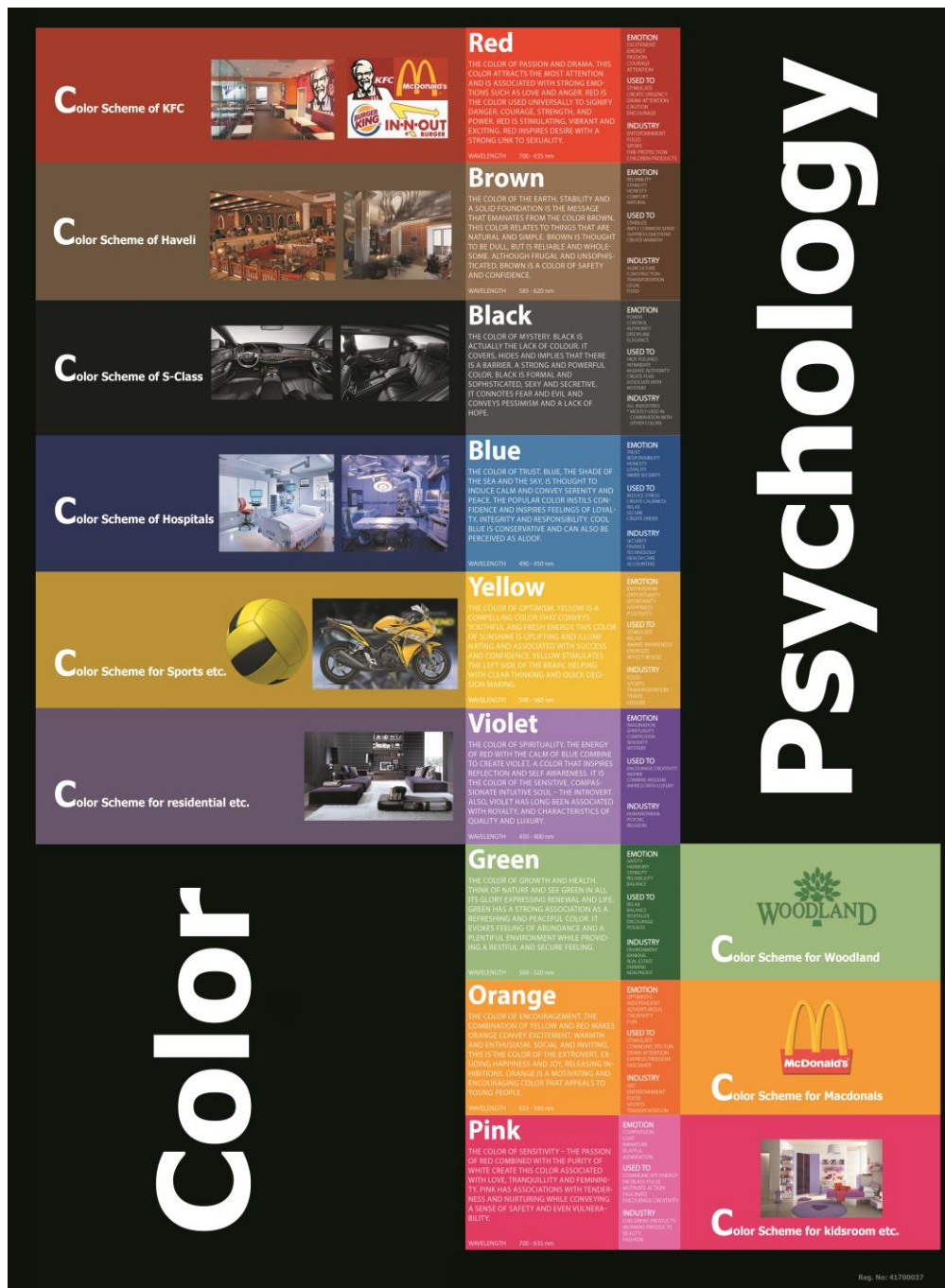
Figure-1 : Sir Newton Designed Color Wheel

In certain hospitals, there were experiments with the so called blue rooms which have a calming effect. White, black and grey are considered to be neutral colors.

### Colors psychological effects:

Colors directly affect the mood of a man, and therefore play an important part of his life. Man is greatly a visual creature. He gets about 87% of all sensory information through the world of colors. It has been proven that a person reacts differently to certain colors and that colors can cause different emotional states in humans. Colors have a powerful impact on people and to a great extent colors directly affect their habits and life in general. Each man has his own range of favorite colors that reflect his personality

Psychologists concluded that colors can be related to certain emotions in people. Feelings are an important element when it comes to design of living and working spaces. When designing interiors it is very important to know what effects and emotions are caused by certain colors. In the text are listed some of the primary colors used in designing, and their relation to feelings and symbolism is explained.



**Figure:2** Layouts shown in Figure-2 is a showcase and an extract from many researchers and scholars' who have studies about various colors and came up with conclusions, that one or the other way the color has an equal impact positively and negatively. For example, if we talk about only color red here, red reflects the rage and on the other side it reflects love. Similar case we witness with other colors. Lot of Logo designing as well as automobile coloration has been processed considering these points.

## Use of color in spaces with a residual nature:

Housing spaces play an important role in the everyday life of a person. The way space we live in is designed has a definite impact on an individual. In addition to the appropriate functional solution and choice of furniture, the colors implemented in the interior design may change the overall impression. Also, the purpose of a space may define the choice of suitable colors. Thus, usage of certain colors should be adapted to the day and night zones of a housing unit.

There are numerous factors affecting the choice of colors in the housing space interior. The used color patterns may depend on the climate. For instance, usage of patterns dominated by the warm, cool or neutral hues can depend on the climate, orientation and degree of activities. So, warm colors are more acceptable in cooler climates, while cool tones are more used in the hot climate areas. Orientation of rooms also needs to be taken into account; for instance, if a room is facing north it is recommended to use warm colors, while for a south-facing room, it is recommended to use cool colors. As previously mentioned, colors affect mood of people and activities performed.

Experiments conducted in order to better understand the effects of colors on the space users. They were conducted during the last 20 years in a controlled environment of an indoor office space so that the effects of colors on the employees' organisms, productivity and disposition could be precisely determined. One room was colored red and other one in blue and the same but though office were at different location at a distance of 30 km. but layout of the room and the design was purely identical to get the best result. Same task was assigned with the no increment in hiring of people. The People who were working in the red office, they were more proved more active and met the targets before the deadlines at times but problems they faced were the quality in the working. Quantity in working they can handle well enough but they proved lacked in quality. On the other hand those who were working in the blue office. They missed out deadlines sometimes but quality of work was rich. Their personal behavior was also more humble.



[3]



[4]



## Conclusion:

For millennia, the color paradox has been spent years studying. Because the interpretation of colors and sensory comfort are innumerable myths, they really don't have any doubt an impact on our mood and productivity. In the world of design and architecture, colors play an important role, they are referred to different applications of space and have an important impact on human life. Designers must be familiar with the various color effects. Some basic color models and their importance are portrayed in different situations in the paper. Emblematic and psychological significances of color and its interior decoration are presented. Public spaces are discussed in addition to residential spaces, and satisfactory color combinations. Experiments, observations on positive and negative color influences on participants of this zone have been drawn using several sources.

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