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Is the Effect of Colors on Human Beings Local or Worldwide?

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ABSTRACT

Introdaction One of the main challenges of an artist when creating a work of art is deciding what range of all human beings are supposed to be the specific audience of this work of art. Is the work of art a local work that only a very limited range of people in a limited ethnic group and neighborhood can relate to? We consider that, for example, some local poems, all the beauty and conceptual richness of which depends on the terms and type of tendency of that particular neighborhood, will be meaningless or insignificant for other people, and in most cases these poems cannot be translated and therefore These poems can be referred to as local literary-artistic works. Is the work of art considering an ethnic work or a national work? That all or a significant part of its content can be understood only by a particular ethnic group or individuals of a particular nationality.

Conclusion These and similar questions will never have a precise, definite and clear answer, and from one artist to another, this difference in attitude and the difference in facing this fundamental challenge will always be seen, but in any case, it brings us to a very important point.

Keywords Art; Nations; Color; Tendency

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Introduction

It also means that whenever we think of the audience, we speak of the audience, anticipate the needs of the audience, guess the tastes of the audience, and remember that we cannot use the word audience only as a typical person with mean certain coordinates and characteristics, but we have to accept that there is no similar and symmetrical situation on both sides of the artist-audience relationship, because on one side there is an artist and on the other side there are thousands of audiences, each of racial, ethnic, or tribal. They have different nationalities, religions, levels of knowledge, levels of understanding and tastes, and this makes it very difficult for the artist to pay for the work and consciously guide the elements of the work of art in order to achieve a specific structure [1].

For example, in the field of cinema, the films of the late Ali Hatami are considered a special Iranian national work. It is not exactly translatable, nor are non-Iranians unfamiliar with the thousands of subtleties of Iranian culture and history able to understand it [2]. And finally, is the work in question a universal work that speaks for all human beings in a common language? And is a completely universal work of art achievable in practice and in reality? And considering the deep cultural, historical, geographical, ethnic and national differences, can a common artistic language be invented?

From what has been said, we conclude that the audience of thousands of species of different nationalities, races, ethnicities, cultures and religions certainly cannot accept the same effect of color or have the same perception of it, and the difference between the effects and the perception of color in Different ethnicities and nationalities do not pass easily, and if we have a color photography order for specific audiences, it is necessary to recognize the intended audiences in terms of culture and ethnic, national and racial beliefs and norms [3].

Now we continue the discussion by asking the question that the effect of color on the audience and the perception of color by him depends on what?

General characteristics of human existence

Human beings, in spite of deep racial, ethnic, national, geographical and و differences, also have similarities and commonalities that mean that all human beings are human. Due to these common, similar and general characteristics of human existence, in any case, some similar effects of color can be observed on all human beings, and therefore, a positive emotional and psychological effect can be observed for some colors and emotional and psychological effects. Assumed not so positive for some other colors. The science of color psychology refers to the effects and type of color perception based on these common general characteristics, which we mentioned in detail in the section on the psychological effect of colors on this type of effects and perceptions [4-7].

Special features of human existence

Despite the existence of intrinsic traits common to all human beings, each individual has his own mental, intellectual and psychological independence, and therefore each color can have special effects on the number of human beings who are exposed to it. These special features are the result of the following features [8]:

A) Individual characteristics: Individual characteristics resulting from genetic traits, level of intrinsic understanding and perception, the amount of intelligence and how personal perceptions are also the result of cultural and geographical spaces in which the person is located and is also the result of personal experiences. Which he has dealt with throughout his life.

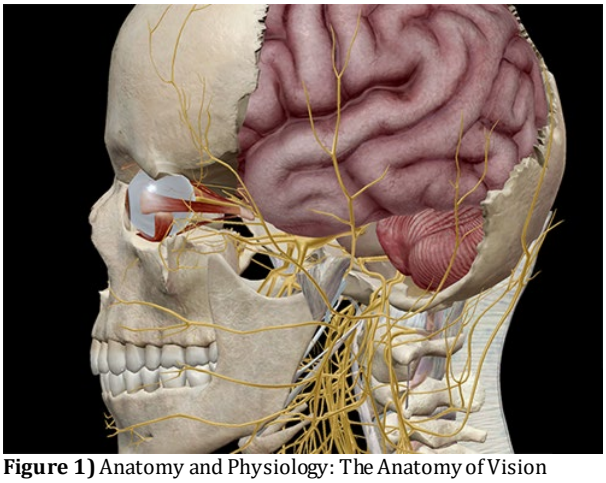

Figure 1) Anatomy and Physiology: The Anatomy of Vision

B) Ethnic-racial-national-religious characteristics: Myths, religious beliefs, collective memories and dreams, historical past, beliefs derived from climatic and geographical conditions, superstitions, good and bad experiences from the past, current and past economic conditions, and concepts and beliefs influenced by what culture together produce. It is called popular or folklore. Popular culture in every nation, race and nationality is a thick and open book that describes all the ethnic, racial, national and religious characteristics of people in certain regions of the world. Popular culture is different in every region of the world and in its heart, there are fundamental differences between human beings, accumulated in different areas.

Although the work of art should be used like a roaring river, every audience should use it to the extent of its existential and perceptual capacity, but in any case, the artist should know his target audience and have an opinion on the ethnic-national-religious characteristics of his audience. In order to make the art product as effective as

possible on these audiences, prepare a mechanism appropriate to the perceptual and psychological system of their intended audiences. Many examples can be given of the different effects of color and its different perceptions in different ethnic groups and nations, such as [9, 10]:

In our Iranian popular culture, green has a positive psychological effect and is a symbol of happiness and spirituality, and red is a symbol of cruelty. This kind of perception and impression is the result of the symbolism of the past years about the Ashura incident, which saw the saints in green and Ashqia in red [11].

In the Orient, people are interested in using warm and thick colors, especially yellow and gold, which show the passion of mysticism and enlightenment in these cultures, while the west is accompanied by the representation of cool colors, especially blue and purple, which indicate Wisdom is separate from spiritual experiences. In reconstructing such spaces in movies, the difference in colors in the scenes of the Orient and the West is taken into account. Representations of such colors can also be seen in Ernest Haas's photographs [7].

The color of mourning in our country and culture is black, but in other cultures it can be different, for example in India, the color of mourning is white.

Remember the strong interest of the Turkmen in red, which is a sign of the salinity they receive from the pristine nature around them.

And such cases, the photographer realizes that in choosing and placing a color in the frame of his image, along with all the attention to detail that has been described before, also pay attention to the fact that [4]:

First: What ethnic group, nationality and religion does the specific audience target?

Second: Know his beliefs about colors and be able to predict his influence on colors and how to perceive colors.

Third: in accordance with the specific characteristics of your audience, use different effects of colors in your image frame.

How colors affect the human being

One of the most popular categories in psychology is recognizing how colors affect the human being, to whom we have already devoted a chapter. This is enough because colors have two different presence in real life and vice versa, and therefore to understand how color reflects on the audience in the art of photography, although it is necessary to know the basics of the general psychology of colors, but also a more specific psychology that type of effect It takes into account the colors in the photo on the audience and explains the color feedback on the audience when confronted with the photo and the colors inside it (and not when confronted with ordinary life scenes and the colors hidden in it [12].

It is possible that some explanations and descriptions of the effect of colors in these two types of psychology may be different or contradictory; Although it is not contradictory, it is not contradictory and it is definitely different. This appearance is apparently different due to the difference in the presence of color in these two areas: in life and in the work of art (photo). The reasons and explanations for this difference in presence are [13-17]:

1- When a person is confronted with a scene from real life and is confronted with different objects and phenomena of different colors, his perception is not merely visual but he understands the scene with all his being. He hears sounds, inhales odors, and may even be able to touch certain objects, and above all, the presence of his soul on the scene is effective and unforgivable, regardless of the five superficial perceptions. Hence, his perception of space is specifically and partly a complex perceptual color, and therefore it can be said that the effect of color on the audience is not only related to the color itself, its color and its brightness or saturation, but other The attributes of the scene (time, type and dimensions of place, geographical location, temperature, sounds, scene, texture of objects, light, etc.) and the mental states of the observer are complex in this perception and are effective in this effect of colors. Do colors come to our eyes in exile as they do in our homeland!?

At night, will the effect of the colors be like the day of separation?! Are the colors and the pleasure or suffering of understanding them for the person who is pure in spirit and has a pure intention when he is present on the stage, like the evil-minded person who has set foot on the stage in pursuit of transgression?! Can a scene that is so beautiful and full of all kinds of attractive color accompaniment be easily tolerated while the stench pervades the whole scene?! Does the pleasant melody of the poetic and provocative play make the colors richer and stronger or the sound of annoyance!? Is seeing the blue of the sky on a cold morning a commitment like seeing it at noon in the summer!?

Thus, it can be said that in the picture, colors have a more independent and singular presence than in real life. Although other non-visual features of the scene do not help its presence and appearance, but they will not reduce their effect.

2- Objects in real life have a mainly functional role and not just decorative. The type of use of objects is strongly involved in our perception of whether their color is pleasant or unpleasant. However, the objects and phenomena in the photo have a purely decorative function. Therefore, one can make different judgments about whether their color is right or wrong. It may happen in a photo and in a special type of composition that the placement of a red shoe in the frame gives an image with a strong, pleasant and effective graphic system, but the

redness of the shoe in real life depending on the type of application and how true and pleasant does the record he has in the minds of the masses of the people seem? This is also why the color tastes of more people in the field of image (artwork) can be judged definitively and not in real life. If we ask a person, what color do you enjoy the most in real life and which color do you like the most, he will not be able to give a definite answer (if he also specifies a color, he is definitely wrong) because lemon yellow is a good color for a towel or T-shirt. But it is unlikely that anyone can find a shoe that likes this color. Brown is a good color for old men's shirts, but is there a girl who chooses this color for her wedding dress? It is only in the realm of the image that objects have an abstract, non-functional, and purely decorative presence, and seeing objects and phenomena in colors that are unusual and different from what they are in real life is often not only unpleasant and strange and not habitually incorrect. Rather, it is a new effect and can be expected to have a different effect, so you can ask people what color you like the most in the photo or what is the dominant color of the image that will impress you the most.

Nature of color

Now, by accepting the assumption that colors do not have the same presence and function in life and in art, and that the way we are affected by color in real life is different from when we look at art, we will explain how color feedback to the audience in photography. And in this way, in order to avoid misleading eloquence and tedious rhetoric, we briefly bring the following points to the number. These points, if carefully and carefully, like the pieces of a puzzle, will form a complete picture at the end of how color feedback to the audience in the art of photography [18-20]:

1- One of the perceptual characteristics when viewing an image is the perception of the visual weight of the image elements. A thin horizontal line has less visual weight than a thick horizontal line. Therefore, placing a thin horizontal line in the middle of the frame can add a sense of lightness and suspense to it, but if we place a horizontal and thick line at this point, it will feel like it is falling. Thus, in composition, it is important to pay attention to the visual weight of each image element and it is effective in balancing or unbalancing the final composition. Likewise, colors have different visual weights. Research dating back to 1907 has shown that people agree on the visual weight of colors, with red appearing to be the heaviest color. Then there is orange, blue and green, which are all homogeneous, followed by yellow and finally white, which is the lightest. If we place two color spots that are similar in shape and size in such a way that the heavier color is placed on top of the lighter color, the composition will be unstable. In general, colors, in addition to their effects on the audience, will also affect the audience through their visual weight.

2- The image elements that determine the final composition of the image have coordinates that each affect the audience in some way and in general form the type of feedback effect on the audience. One of the important coordinates of image elements is their visual size. If we take pictures of the sun at sunset, in order to achieve a more successful composition, as in all photographic cases, it is necessary to translate the objects and phenomena in front of our camera into basic graphic elements and summarize them.

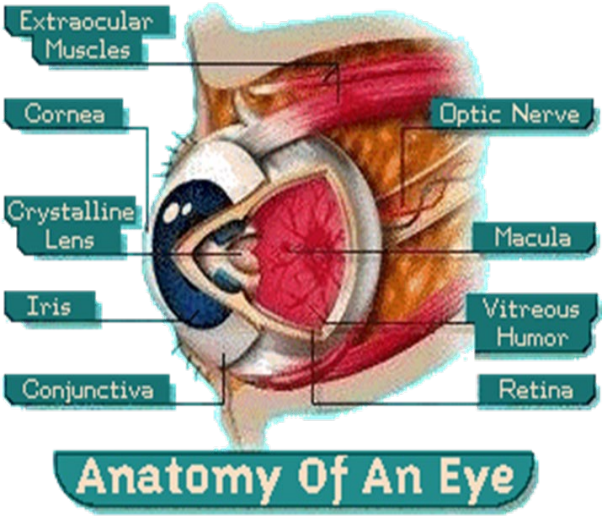

Figure 2) Anatomy, Physiology & Pathology of the Human Eye

In this example, the sun is considered as a circle (as one of the graphic elements of the image) and the horizon as a horizontal line (as another graphic element) and these two elements can be arranged in different ways in the image frame and He obtained different combinations, for example, one way is to place the sun in the center of the frame and the horizon line at the bottom of the frame, and the second way is to place the horizon line at the top of the frame in such a way that it intersects the sun and represents it only in a semicircle. But while thinking about the location of the image elements, we must also think about their visual size. Using a wide-angle lens, we can capture a wide view of the scene in front of the camera in such a way that the sun as a small point is the only small element in the heart. The area is significant or you can use a telephoto lens to capture the image of the sun as a large circle that covers all or most of the frame. Certainly, when the visual size of the image elements changes, their importance and validity in the whole effect changes and their effect on the audience also changes. Of course, it is necessary to point out this seemingly obvious point, and that is the difference between real size and visual size. Material objects and subjects actually have a certain size that can be measured and fixed with certain parameters such as

meters and their divisions, but this size can be reconstructed differently in the image frame by using lenses with different focal lengths and by changing the distance from the camera to Subject and by changing the angle of the camera, images with different sizes can be obtained in objects and in fact the size of the object in the image frame is called visual size.

Finally, it can be said that color also changes the visual size of objects. Colors that look heavy can also be seen small. If we consider colored squares of the same size, the red square looks like the smallest square, the blue square looks bigger and the white square looks like the largest square. This effect of color on the size of objects and elements is also seen in natural vision and in real life and is not limited to the field of image. The French tricolor is usually designed in the form of three vertical stripes of blue, white, and red, all three of which have the same width, but the type of flag used at sea and on the heights of ships does not include colored beams at all, but these beams. Colors are designed and made with a 33:30:37 aspect ratio, which from left to right belong to blue, white and red, respectively [21].

Therefore, when this type of flag is seen from a distance, the effect of color on the width of the beams disappears and all three beams are the same size. So, in short, it can be said that image elements, in addition to their various coordinates, also affect the audience through their size. The visual size of the image elements also depends to a large extent on their color, so we must pay attention to this important point in preparing the image [15].

Colors classification

In a very popular classification, colors are divided into hot and cold. These two words, which are used to describe how color affects the audience, are highly misunderstood. On the one hand, in real life, research shows that painting a place with so-called cold or warm colors has an effect on our judgment of Its temperature has no place. On the other hand, in the field of image, the two terms hot or cold do not have a precise and clear description of the effect of colors on the audience. It may even be confused with the topic of color temperature and cause misunderstandings because blue is divided. This classification is called cold, while it has a high color temperature, or red is considered warm in the division in question, while it has a low color temperature. In general, in describing the type of color feedback to the audience, it is better not to use the two words cold and warm, or if they are used, to combine them with other attributes and words so that they are ultimately enlightening or questionable [22-24].

In the introduction of this chapter, we stated that in ordinary life, it is not possible to say with certainty which color is preferable to other colors in each person's opinion, and we have listed the reasons for it, but in the field of image, each person can be more certain about the advantage of one or Multiple colors comment on other colors. Interestingly, several experiments have shown that people surprisingly agree on what color they like best. When different color spots are displayed on a neutral gray background, people generally prefer the blue family colors (green-blue to blue-purple). Similar experiments have shown that when two colors are placed side by side [25].

Ordinary people prefer this juxtaposition with maximum contrast, meaning that the more colors the two are placed next to each other, the more obvious the hue (e.g. red next to green or red next to blue) is attractive to people. They will have more, and if the two colors next to each other are similar or from the same family, most people will prefer that these two colors have a noticeable difference in brightness. Saturation (for example, garlic red with pale red) and in general it can be known from the results of experiments that the least popular among people is yellow-green, and basically all colors when brighter. What abstract color designs (for example, as seen in paintings or abstract photographs) can be interpreted and predicted to the audience by referring to the same reaction of people to monochromes or color pairs. Some psychologists believe that people's feelings about preferring certain colors and preferring them to other colors have biological roots and can be traced, and people's criticism of the complex color combinations in photographs can be justified on the basis of these biological reactions [19].

Of course, these assumptions about the type of color feedback on "people" are not 100% certain, although in most cases it can be cited because people themselves include different groups, branches and ethnicities with the level of scientific knowledge, historical background and mythology. Religious beliefs, artistic information, and finally with different levels of taste that make a difference in the way colors are affected. For example, ordinary people who do not have a very perfect artistic taste prefer contrasting color combinations, while in most cases certain people who Art cognition and taste prevail, preferring monochrome images or softer color combinations [8].

Colors perception

Perception of colors, like the perception of other elements of the image, is often done by comparison, which means that the effect of colors in the viewer's eyes will change when adjacent colors or background colors change, for example, a gray circle when on the background. The white background is darker than when it is on a dark background or an orange circle, it is perceived as more orange (with more saturation) when it is on a blue background

than when it is on a colored background. It is orange. Therefore, the collision and feedback of the color on the audience, apart from the color itself, also depends on its coexistence with other colors [26].

All people, regardless of race, place of residence and ethnicity to which they belong or their nationality, have similar reactions to colors. For example, in describing this reaction and similar feedback, it can be said that in most cultures white, gray and yellow colors They are known to be weak and passive, while red is almost always known as strong and active. Almost everywhere blue is considered a good color. But despite this similar effect of colors on human beings, it cannot be overlooked that cultural differences, differences due to geographical differences of place of residence and ethnic and national history and mythological background sometimes make differences in the type of colors in countries and Either between different ethnic groups, for example, white is much more respected in Asia than in the West, or yellow is more valuable in Thailand than in other parts of the world because of the connection between yellow and spirituality in Buddhist culture [27].

Although white belongs to the young Russians and the color indicates happiness and purity and this is the case in most countries, but in some countries the color of mourning is surprising. Another example that refers to the type of effect appropriate to the geographical location of the color is that in regions and the dry and barren countries of the world, green color has more prestige and value than other colors. Therefore, in explaining the type of color feedback to the audience, both similar and pervasive human reactions to colors should be considered, as well as specific ethnic and regional reactions [28].

What we have been trying to do in this chapter and other chapters of this dissertation is to try to explain the type of the audience's encounter with colors. Explaining the physics of light and color, explaining the physiology of color perception, explaining the psychological effects of colors, and defining the symbolic function of colors have all been attempts to answer such questions:

What is color? What is the difference in colors? How do colors affect the audience?

Although many laboratory and clinical trials and researches have been done to respond to these years in the last hundred years, and although many books and articles have been written in this field and many different people from physicists, psychologists and philosophers to linguists to achieve An accurate and clear view of this phenomenon and how it affects and justifies the color feedback on the audience, many efforts have been made, but perhaps the most important attraction in this area is that we will definitely never be able to give definite, clear, accurate and unquestionable answers. Extensible to all situations. The more we think about this issue, the better, more complete and newer points we will find. But really why is this: Following his speech on the book "On Colors" by Ludwig Wittgenstein, Babak Ahmadi refers to the lack of definitive results in explaining the effect of the work of art and recognizing the nature of the work of art [29].

"Among what are called works of art, there are many works that have nothing in common with each other, but each has similarities or elements in common with other works. Apart from the possible similarities between some works, we must admit that we cannot use a common adjective or a specific sign that can be used as a reason or criterion of art and can be generalized to all works and therefore be considered a comprehensive and logical definition of a work of art [2, 30].

Of course, everyone can set their own criteria and judge according to it, and most people do the same, but not everyone agrees with each other in these cases, and personal selection of the criterion cannot be widespread, but still as a personal perception that It is not practical, intellectual or theoretical, or very little in the way of communication, it remains. "Such a general and common definition of a work of art, and of art, cannot be found".

Thus, when it is not possible to provide a clear definition of art and work of art and clearly and definitively explain how it affects the audience, it is natural that color feedback to the audience can only be done through descriptions and experiments and side definitions (Figure 3). And it only provided an overview of how colors work, because color is one of the most complex and "slow-moving" concepts in existing phenomena. Ludwig Wittgenstein says of man's inability to describe colors and their effects: "If we are asked what 'red', 'blue', 'black', 'white' mean. "We certainly show things directly that are in these colors - and that is all we can do: our ability to define meanings is no more."

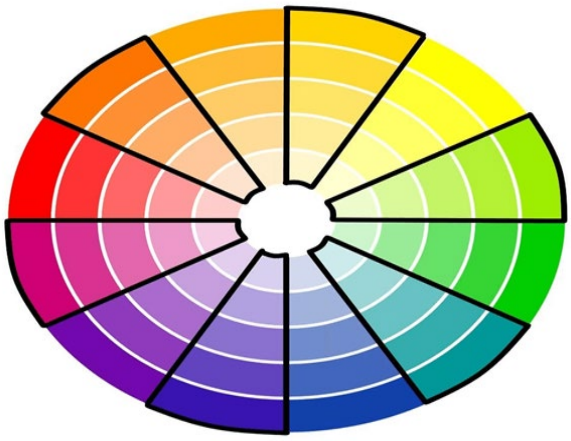

Figure 3) The ultimate color combinations cheat sheet to inspire your design

Conclusion

From all the statements in this dissertation, it can be concluded that the photographer has to accept the

eight important things in order to choose the right colors, create the right meaning through the colors and have a controlled impact on the audience:

1- Know the theory of color.

2- Consider the effects of the juxtaposition of colors together, the contrasts and similarities resulting from this juxtaposition.

3- To know the mechanism of faithful or unfaithful reconstruction of color in the image by understanding the concept of color temperature.

4- To know how colors are perceived by the visual system (eyes + mind)

5- To know the psychological effects of colors on human beings.

6- To know what concept or reminder each color symbol is in world culture.

7- Recognize that the type of symbolic presence of color, how color affects and how colors are perceived are different in different ethnic groups and nations.

8- Understand the presence of color in the composition system and interactions.

And after that, it should be able to create a color image that is appropriate to its specific audience and appropriate to the idea it has in mind, as great photographers have done, in which colors are not random, irregular and ineffective, but selected, regular and effective.

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