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# REGIONAL VARIABLES IN COLOR PREFERENCES FOR SPACE DESIGN AND AN EVALUATION ON THEIR PRIORITIES

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## **Abstract**

Colors are one of the most important elements that guide us and affect our perceptions in every aspect of our lives. However, these effects vary from person to person and there are some parameters that cause this. The more accurately these parameters are taken into account, the more successful the effect desired to be created with colors on users will be. When it comes to space design, one of the crucial role affects to perception of color belongs to regional variables. While regional variables differ, the affect of a color on the user is changing a lot. In this study, the criteria under the heading of regional variables of the color selection criteria classification model created as a result of examining the studies on color selection criteria in the literature were examined. After this review, a group of interior architecture students and architects were given informational training on the effects of regional variables criteria on color selection and were asked to evaluate the priorities of the criteria among themselves. As a result of their evaluations, the priority rankings of regional variables are presented in this study to guide designers.

**Keywords:** Color preference, region and color perception, religion and color perception, culture and color perception, language and color perception

## 1. INTRODUCTION

Spaces have meaning through the companents and functions they have, and color choices in space designs shapes the spatial identity by creating psychological effects on its users (Alici & Göker Paktaş, 2020). Colors create a communication bridge between the spaces and their users and have an important role in creating the desired effect in terms of spatial perception. Therefore, color selection is a critical issue that the designer must handle carefully. Successful color selection can direct the space to different functions and encourage the user to perform desired actions. For example, if it is desired to increase the curiosity of users at the entrances of the venue and encourage them to progress

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within the space, users can be attracted by using the right colors in the right places. Colors are a powerful tool in setting the atmosphere of a space, and each color can cause different emotional responses. Calming, energizing or appetizing atmospheres can be created with the right color choices.

Colors are also used to create visual hierarchy within a space, highlight focal points, and highlight certain details. Choosing the right color can change the perception of size and volume of the space and affect users' perception of physical features. In commercial spaces, colors can reflect brand identity, increase recognizability and strengthen brand image.

As a result, colors are one of the most powerful and guiding design elements in a space. Therefore, choosing the right color is of vital importance in space design and this choice should be considered based on various criteria such as user profile, characteristics of the space and the perception desired to be created.

When the criteria that need to be considered when choosing a color are classified, it can be seen that one of the main headings which is regional factors has a crucial effect. Regional variables can be examined in a wide range from the socio-cultural backgrounds and beliefs of the people living in the region where the design will be applied, to the geographical location and climatic characteristics of the region. It is very important to classify regional variables correctly, to know how each variable affects color selection, and to choose colors by handling these variables correctly in order to give the desired perception to the user in the desired way.

## 2. REGIONAL VARIABLES IN COLOR PREFERENCES FOR SPACE DESIGN

Even though all the design and colors are the same in the same space, users with different sociocultural backgrounds may feel very differently. This means that there are criteria that need to be addressed in order to create the desired perception to the user. These criteria should be classified and discussed in detail, from individual variables to spatial variables. When the sources discussing these criteria were examined, it was seen that very different classifications were made. When the studies in the literature addressing the criteria for color selection are examined, how the criteria are classified in these studies is tabulated, and a unique classification model is created by interpreting all these classification methods, one of the most important topics in this model is regional variables (Bozbek, 2023). In this classification model, regional variables are discussed under 3 main headings: climate and geographical location, movements and period styles, and sociocultural variables. Sociocultural variables are divided into 3 subheadings: the influence of society's value judgments and beliefs, cultural and historical variables and linguistic effects (Table 1).

Table 1 Regional Variables in Color Preferences For Spacial Design

		Reg	ional Varia	bles			
Climate and Geographical Location	Movements and Period Styles				Socioc	ultural Variab	les
	Soc	ciety's Value I and Belief I	•		ral and Variables	Linguistic \	Variables
	Social Symbolic Meanings of Colors	The Meanings of Colors According to Social Value Judgments	The Meanings of Colors in Religions	The Meanings of Colors in Different Cultures	Historical and Political Meanings of Colors	Linguistic Relationship	Where The Colors Are Used in Language

# 2.1. Climate and Geographical Location

The influence of climate on color choice is complex and can be influenced by a number of variables such as temperature, humidity and other environmental factors. In general, research shows that people living in colder, drier climates tend to prefer cooler tones such as blue, green, purple, and grey. These colors have soothing effects, often associated with a sense of calm and tranquility in hot and humid conditions. On the other hand, people living in warmer climates often gravitate towards warmer colors such as red, orange and yellow. These colors can have relaxing effects associated with warmth and energy in cold and dark environments (De Bortoli & Maroto, 2001).

There may be several reasons for these preferences. For example, in warmer and more humid climates, bright and bold colors may be appealing because they are associated with desirable qualities such as energy, warmth, and liveliness. In contrast, in cooler and drier climates, softer and less saturated colors may be preferred, which are associated with more desirable characteristics such as calmness, relaxation and serenity (Alici, 2019).

Physiologically, this preference may be due to the human eye being more sensitive to color in brighter light conditions and high humidity increasing the perception of color saturation. Additionally, the natural environment in different climates may influence the preferences of people who tend to associate with colors to which they are more frequently exposed in the environment in which they live. For example, those who live in regions with lush vegetation and bright flowers may tend to prefer bolder and more vibrant colors; Those living in arid desert regions may generally prefer earthy, soft tones. Likewise, in conjunction with climate, geographic location can also influence color preferences. While those living in coastal areas generally turn to shades of blue and green,

symbolizing the sea and nature; Those living in urban areas may prefer colors such as grey, black and white, which are often associated with modernity and brutalism. Those living in mountainous regions generally prefer brown and green tones, which are associated with nature and the environment (Schloss & Palmer, 2017).

## 2.2. Art Movements and Period Styles

Over the centuries, the colors that were fashionable in various geographies and time periods around the world, that is, the colors that were attractive to people at that time, have changed over time. As trends constantly change, some colors were attractive and preferred only for a certain period (Kodžoman et al., 2022). Period styles have a significant impact on color preferences. Different time periods and different fashion and design trends determine which colors are in fashion. For example, in periods when religion had a great influence on daily life, there were many symbolic connections between religion and color. For example, in the Middle Ages, the color purple symbolized nobility. (Alici, 2019). A wide variety of styles have emerged throughout the world over the centuries, and these styles have maintained their influence in certain geographies over a certain period of time, and after a while, they gave way to new styles. The popular colors that dominate the emerging styles of this period also change in the same way.

Some styles that have become fashionable around the world over the years and the colors used in these styles can be exemplified as follows:

Renaissance (1400-1600s): During the Renaissance, colors such as red, blue, and green were popular and often used in combination to create a sense of depth and richness (Figure 1). Metallic colors such as gold and silver were also among the colors frequently used in this period.



**Figure 1.** The use of color on the façade of the Ducal Castle, one of the buildings of the Renaissance Period (Chorowska & Legendziewicz, 2023).

Rococo (1730s-1760s): This design movement used pastel colors such as light blue, pink, and yellow, reflecting the movement's emphasis on luxury, elegance, and frivolity.

Victorian Era (1837-1901): During the Victorian era, black became a popular color for mourning, and its association with death led to it becoming a popular color for formal wear. Rich, jewel-toned colors such as deep red, purple and green also reflect the period's fascination with wealth and elegance.

Art Nouveau (1890s-1910s): This design movement embraced pastel colors such as soft greens, pinks, and blues, reflecting the movement's emphasis on natural forms and beauty (Figure 2).



**Figure 2.** The use of color on the facade of Jubilee Synagogue, a product of the Art Nouveau movement, Wilhelm Stiassny, Prague (World Monuments Fund, n.d.).

Bauhaus (1920s-1930s): During this period, vibrant shades of colors such as red, blue, and yellow were widely used to emphasize movement and functionality.

Art Deco (1920s-1930s): In this period, contrast and bright color tones were predominantly used, and colors such as mint green, pink, bright gray and golden yellow were preferred.

Mid-Century Modernism (1940s-1960s): This period is the post-World War II period. It is the period when colors such as orange, yellow and turquoise, which bring out optimism and excitement in order to erase the traces left by the war, are in fashion.

Grunge (1990s): In this period, more natural colors such as brown, olive green and dark red were used as a reaction to the use of bright, so-called artificial colors in the previous periods.

Millennium (2010s): A soft shade of pale pink called millennium pink, a shade of blue called cyan, metallic colors such as gold and silver, and neon colors began in the early 2000s and are called the Millennium Age. It was frequently used during the period.

Cottage Core (2020s): This fashion and design trend embraces soft, muted colors like sage green, lavender, and pale yellow, emphasizing the movement's return to natural, organic forms and simplicity and originality.

## 2.3. Socio-Cultural Variables

Sociocultural variables are examined under three headings: the impact of society's value judgments and beliefs, cultural and historical variables and linguistic variables.

# 2.3.1. Value Judgements of Societies and Effects of Belief

- Social Symbolic Meanings of Colors

Color and form have meanings and symbols that change from society to society and from age to age. In every society, the meanings expressed by colors, the objects and concepts they remind are different. Although there are some similarities, components such as the history of the countries, their culture, and the historical events they witnessed have been synthesized over the centuries to create today's social symbolic meanings. The reason why the social meanings of colors and the shapes, objects and concepts they evoke are similar in some societies may be that they come from a common past or a similar culture and belief. For example; While the color yellow evokes success in India, elegance and nobility in Egypt and Arab countries, it means warning and cowardice in the USA and European countries. While it brings to mind summer in Italy, it brings to mind the concepts of philanthropy in Ukraine and jealousy in Germany (About Colors, n.d.). While the color red triggers happiness and celebration feelings in China as shown in figure 3, it triggers anger and danger in Japan (Özdemir, 2005).



**Figure 3.** An image from the celebrations in China (IStudy China, n.d.).

Since the social symbols and meanings of colors can evoke different feelings to the user, it is important to know which society or societies the user group is a member of and to make color choices accordingly.

According to some countries, the meanings expressed by colors, the objects and concepts they evoke are listed in the table below (Table 2).

Table 2 Meanings and Symbolic Connotations of Colors by Country (De Bortoli & Maroto, 2001)(Genç, 1997)

Region / Country	Country Colour Meanings It Expresses		Examples of Symbolic Connotations		
	Red	Power, authority, government, visibility, moodiness	Mailboxes, redheads, buses, phone booths		
	Yellow	Visibility	Raincoats, Plastics		
	Blue	Calm, dignified, decent	Scottish war paint, formal wear		
	Green	Environment, Catholicism, quality	Four-leaf clover, dwarf genie		
United Kingdom	Brown	World, honesty, manual power	Soil		
	Gold	Royal	Royal Items		
	Purple	Royal	Royal Items		
	Black	Mourning, death, dignity	Clothing, taxis		
	White	Leisure, sports, peace	Sportswear, linen, lace		
	Orange	Sophisticated, elegant, traditional, delicious, power	Concrete, clothing, industrial city		
	Red	Blood, passionate love, lust	Lipstick, clothing		
	Yellow	Summer, joy	Fruit, mailboxes		
	Blue	Water, reliability, trust	Street signs, jewelry		
France	Green	Outdoor	Park benches, roofs		
	Gold	Decoration, light, luxury	Champagne is known as the "City of Lights" in Paris.		
	Orange	Soil	Pottery, figurines		
	Red	Blood, passion, dedication, strength	Payphones, paint,		
	Yellow	Sunlight, nature	Flowers, clothing, gardening		
	Orange	Love, happiness	Clothing		
	Purple	Kingdom	Flowers		
Japan	Pink	Spring, femininity, youth, health	Lingerie, flowers, clothes		
	Brown	Earth, strength, durability	Wooden		
	Gold	Decoration wealth, prestige	Jewelry		
	Black	Absence, night, unknown, mystery, anger	Electronics, clothing		
	White	Death, mourning	Cars		
Turkey	White	Purity, innocence,	Peace, wedding, funeral		

	cleanliness		
Red	Love, passion, energy, independence	Ottoman Empire, flag	
Yellow	Happiness, fun, power, warmth, summer	The center of the Earth, the sun	
Blue	Peace, calmness, evil eye	Tile, evil eye bead, sea	
Green	Nature, religion, balanced diet, affirmation, opening	Agriculture, forest, traditional patterns, ceramics, islam, army	
Black	Mourning, death, sophistication	Mosaic, headscarf, lesson board	

# - Meanings of Colors According to Social Value Judgments

Colors have great importance in various societies around the world and their meanings can vary depending on social values. For example, in some societies a particular color may be associated with religious or cultural traditions that carry deep meaning and significance. In some societies, a color may be associated with a political ideology or movement. Societies can attribute meaning to colors based on their history and cultural experiences (Özer, 2012). For example; Individuals of societies with a great war in their past may identify the color red with patriotism, while individuals of societies that are very attached to religious traditions may identify it with spiritual values and death. We can say that according to the spiritual values that are the priority in the structure of the society, the meanings attributed by societies to colors and the feelings that colors evoke in individuals may change. These spiritual values are; It is shaped by the culture, historical background and social situation of the society. For example, in traditional societies, it is considered strange for middle-aged people to wear bright red clothes because this situation is not welcomed by the society in these societies, considering that people who wear colors such as red, orange and yellow have a desire to be remarkable (Özdemir, 2005).

# - The Meanings of Colors in Religions

Colors have great meanings in almost all of the belief systems that have been adopted around the world and in history so far. Colors have been used for a variety of religious purposes, such as communicating sacred ideas, creating spiritual atmospheres, and creating a sense of devotion. Each religion has its own color symbolism, and in each religion, different colors can symbolize different things. In some beliefs and religions, colors can mean similar things, usually because the culture at the origins of those belief systems came from similar geography. If we give an example of the sacredness of colors in religions; In Islam, green is considered a sacred color and associated with life, while black symbolizes death. In Christianity, white is a color that symbolizes purity and goodness. It is used for the Christmas and Easter seasons, as well as baptisms, weddings, and other religious

ceremonies. Red; Sacrifice is associated with blood and fire. In Judaism; blue is associated with the divine being and the sky. It is also sometimes used to represent holiness, purity, and loyalty. Red; It is associated with sin, blood, and sacrifice. In Buddhism; yellow and orange; it is usually the same as the Buddha himself, as it represents the color of his robe. It also comes with generosity, morality, and wisdom. Therefore, Buddhists are wearing orange clothes especially in religious ceremonies (Figure 4). Red; It is linked to passion, desire, and connection. It also represents the transformativeness of the Buddha's teachings and the vitality of life. Blue; It symbolizes eternity and the calming of faith (Albayrak, 2008).



Figure 4. An image from the Buddhist ceremony (Wikimedia Commons, 2023).

## 2.3.2. Cultural and Historical Variables

## - The Meanings of Colors in Different Cultures

Cultural differences are one of the factors influencing color preferences; Because colors have different connotations and meanings depending on the histories, traditions and environments of different cultures. The effect of colors on people has been known since ancient times, and people have expressed what they experience and feel by reflecting them on colors. Although all emotions are in the structure of all people in the world, the culture they are born into has created an environment for these emotions to be conveyed in different ways. For this reason, colors have been used to mean different things in different cultures. For example, while the color blue is associated with masculinity in western cultures, it is associated with femininity in Chinese culture (Colors Explained, n.d.). In addition, the meanings of colors according to cultures may change over time with the differentiations

and events that occur in that culture. For example, while the color purple was once associated with royalty and luxury in Western cultures, it began to become a color that evoked more feminism after the feminist movement that occurred in the 1960s.

It is said that the first color perceived by humans during the first emergence of humanity was red (Çalışkan and Kılıç, 2014). Neanderthals sprinkled red pigments on the bodies of the dead, which they believed symbolized hope of restoring life and blood flow (Eriksen Translations, 2020). During the Anglo-Saxon period, they would paint objects and animals red because they believed they protected them from danger and evil; Australian Aborigines painted their axes red because they believed that red symbolized power. In China, wedding dresses and veils are red. When a child is born, those who come to see him are given a pair of red eggs as a gift. Red in Chinese cultural traditions (Yu, 2014).

In most cultures, yellow symbolizes life energy and the flow of life given by the sun; Some cultures even saw the sun as the god of life and worshiped it. In Greek mythology, Helios is the sun god and wears yellow clothes. In Chinese culture, it is believed that yellow is the preserve of life and that humans were created in yellow clay.

Green is universally the color of natural life in most cultures and represents growth and maturation. It is a symbol of spring and reawakening in Chinese culture. It symbolizes the immortality of the gods in ancient Egypt and is considered a sacred color in Islamic culture.

In ancient Egypt and India, the beards and body colors of gods and kings were depicted as blue, and blue was a sacred color for these cultures (Figure 5). In Christian culture, it is the color of the Virgin Mary as a symbol of peace and purity; Jesus is depicted in blue clothes. In Turkish culture, it is believed that blue neutralizes the evil eye (Batagoda, 2018).



Figure 5. Depiction of a god in a wall drawing from the ancient Egyptian period (Bernadine, 2019).



In many cultures, white clothes are clothes worn by religious people who are symbolically associated with purity and truth. Newly baptized Christians wear white robes, and Judgment Day paintings depict the souls of those who will go to heaven in white clothes. The white clothes of the Pope symbolize metamorphosis and magnificence White; It is worn by brides in western countries (Eriksen Translations, 2023).

## - Historical and Political Meanings of Colors

Colors also play an important role in politics, as they can convey powerful messages and evoke certain feelings or ideas. Political parties and movements; It often uses certain colors to represent its values, ideologies and the messages it wants to convey to the public, for example, it is chosen in accordance with the emotion desired to be evoked in the citizens used in the logos and banners of political parties.

Throughout history, colors have been used as the representative of many political movements and ideologies, and many political events and revolutions that have left traces in the minds of the world have been associated with some colors in the minds. For example; The color red has been associated with left-wing political movements since the 19th century. In the early 20th century, the Bolsheviks in Russia adopted the red flag as a symbol of their socialist revolution. Many socialist and communist parties around the world today still use the color red to represent their ideologies. Since the 19th century, the color blue has been a color that represents the politically conservative and right-wing section. In the United States, the Democratic Party has used the color blue in its banners and emblems. The Republican Party, on the other hand, used the color red. Similarly, in Turkey, the Republican People's Party uses the color red.

Since the middle of the 20th century, green has been associated with concepts such as sustainability and ecological sensitivity, environmentalism, and groups working on these issues have used these colors on their banners and logos. Founded in Germany in 1980, the Green Party focused on issues such as protecting nature and the ecological balance of the world and used green in its logo.

The color black has been the color used by groups reacting to racism and police brutality in the United States. Yellow, on the other hand, was used as a symbol of the yellow vest movement that started in France and the movements defending democracy in Hong Kong as a reaction to the injustice and the pressure created by politics in society (Figure 6).



**Figure 6.** An image of the yellow vest movement marches in France (Trt Haber, 2021).

The color white is used to symbolize the adoption of peaceful and reliable policy in state administration. The Suffragettes, who defended women's right to vote in the United Kingdom, used the color white to be visible. In the U.S., the color purple is used to symbolize multinationalism, as it is a combination of red and blue. For example, the Suffragettes in the United Kingdom used white to represent their demands for women's suffrage. In the United States, purple is often associated with bipartisanship and unity, as it is a combination of red and blue. In the Orange Revolution movement that started in Ukraine in 2004, the color of the groups that united and protested for the demand for fair election politics and democracy was orange (Figure 7).



**Figure 7.** An image from the orange revolution movement in Ukraine (Prandin, 2021).

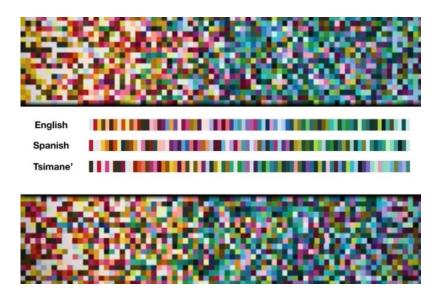
In the Netherlands, the centrist and liberal democrats 66 party uses orange as its main color. The color pink has been used in politics to represent feminist and LGBTQ+ movements. In 2017 and 2018, pink hats were used as a symbol of women's rights and equality demands in Women's Marches held around the world.

# 2.3.3 Linguistic Variables

## - Linguistic Relationship

According to Benjamin Whorf's Language Relativity Hypothesis, an individual's language determines and limits his experiences. In some languages, certain concepts cannot be fully expressed. This language barrier can affect an individual's perception of color. For example, the Shona language of Zimbabwe and the Boas language of Liberia do not have a specific word that distinguishes red from orange. Therefore, language limitations may prevent people from perceiving different colors. When comparing color terminology across different cultures, it appears that most languages have a similar order of discovering and naming specific colors. Many languages define black and white first. When a third color is identified it is usually red; Then comes yellow and green. The sixth color is blue and the seventh color is brown. Finally, gray, orange, pink and purple colors are determined in a certain order (De Bortoli and Maroto, 2001).

The human eye can perceive millions of different colors, but in languages the number of categories used to group these colors is much more limited. While some languages use only three color categories (such as black, white, red), languages used by industrialized cultures may use up to 12 color categories (Trafton, 2017). There are many cultures in the world, including the Ancient Greeks, who did not have a word for the color blue. In fact, blue is a relatively new color in the English language. For example; The language of the Hinda tribe in Namiba and the languages of Ancient Greece are languages without the color blue. In the ancient Greeks and the Hinda tribe, blue is a variant of green. In a study, when people from the Hinda tribe were shown shades of green and blue, they had difficulty distinguishing between green and blue. When the British were shown the color wheel, they could easily distinguish between green and blue, but later, when they were shown a slightly different shade of a color given to the Himba people, the people of the Himba tribe could easily distinguish the difference between these colors, while the British had difficulty distinguishing them. Therefore, our perception of color is related not only to the colors we see, but also to the words we give to colors. As another example; In English, there is a distinction between light red and dark red. Light red is called pink in English, but in Russian there is no such word distinction. In Russian, there are also two different color designations for light blue and navy blue, but in English they are all called blue. As a result of this; While Russians can distinguish blue tones more easily than the British, the British can distinguish red, red tones and pink more easily than Russians (Insider Tech, 2014). The figure below shows the order of colors that are most efficiently transmitted in communication in English, Spanish, and the Tsimane languages, a non-industrialized society, from left to right (Figure 8).



**Figure 8.** Ranking of the Most Efficiently Transmitted Colors in English, Spanish, Tsimane Languages (Trafton, 2017).

## - Where Colors Are Used in Language

The use of colors in language also affects the perception of color, and in the same way, the social perception of color shapes the use of colors in language. Colors are included in many idioms. The French phrase "etre dans le noir" (to be in the land: to be in an incomprehensible, inextricable situation) is the expression "n'y voir que du bleu" (to see nothing but blue: to see nothing, not to understand, to be deceived); The phrase "seeing the world in pink", the adjective "disgraceful", and the expression "black love" in Turkish can be given as examples (Bozbek et al., 2022). The use of colors in such idioms in different languages is both a reflection of the meanings expressed by the colors in the culture where that language is spoken, and their use in the language constitutes their meanings in that culture. In other words, the meanings of the expressions used in a language containing color terms reflect the meaning of color in the culture where that language is spoken, and at the same time, as these expressions are used, they also affect the approach of people who use these languages for years. In short, culture and language are mutually reinforcing concepts, and this is reflected in the emergence and change of the meanings expressed by colors (Topcu, 2001).

If we give examples of expressions that use color terms in different languages; In Polish, the phrase "to send on the green grass" means to fire. In Mandarin Chinese, "wearing a green hat" is used for people who have been deceived. In Swedish, "white week" means a week without drinking any alcohol. In Romani, there is the phrase "turning pink from anger", and in Russian the phrase "black cat passed through them" is used to express the situation of people in a dead end (Fink, n.d.).

## 3. EVALUATION ON THE PRIORITIES OF THE CRITERIA

When making color choices in space design, it is not possible to make a design that completely meets the requirements of each of the criteria under the heading of regional variables affecting color selection. For this reason, considering certain criteria as a priority will be a way that facilitates the work of designers in the selection of colors. The priorities of these criteria can be assessed in a variety of ways.

## 3.1 Method

In this study, in order to evaluate the priority of the criteria under the heading of regional variables affecting color selection, a survey was conducted on the students who took the Color Theory and Applications course in the Department of Interior Architecture and Environmental Design of Altınbaş University and the students who had training on the effects of each of the criteria on color perception and architects who had studies and knowledge about color. The purpose of the survey was to determine the criterion priority values. In determining these values, the Likert scale measurement method, which uses the scoring system between 1-5, is used. A total of 31 people participated in the survey.

## 3.2 Evaluation of Results

In this study, the data obtained as a result of the priority scoring of the color selection criteria (1: not important, 2: slightly important, 3: moderately important; 4: very important, 5: extremely important) over 5 points are shown under this heading with tables and graphs (Table 3).

Table 3
Priority Scores of Regional Variables Criteria Affecting Color Selection

	Average
	Priority
	Value on Average Priority Value
Subheadings	the Basis on the Basis of
	of Subheadings /5
	Criteria
	/5

	Climate and geographical location			4,10	4,10
	Trends and period styles			4,39	4,39
Regional variables	Sociocultural variables  Cultural history	Society's Value Judgments and Belief Influence	Social symbolic meanings of colors	4,03	
			Meanings of colors according to social value judgments	3,71	
			Meanings of colors in religions	3,52	_
		Cultural and historical variables	Meanings of colors in different cultures	3,81	3,55
			Historical and Political Meanings of Colors	3,58	_
		Linguistic variables	Linguistic- scientific relationship	3,19	
			Where colors are used in language	3,03	

According to the results of the survey, when we look at the priority scores of the regional variables criteria; climate and geographical location subheading 4.10 points; Movements and Period Styles subheading 4.39 points; The sociocultural variables sub-heading, which includes the sub-criteria of the social symbolic meanings of colors, their meanings according to social value judgments, the meanings in religions, the value judgments of the society and the belief effect criterion, the cultural and historical variables criterion, which includes the sub-criteria of the meanings of colors in different cultures, historical and political meanings, and the sociocultural variables sub-heading, which includes the linguistic variables criterion, which includes the sub-criteria of linguistic relations and places where colors are used in language, received 3.55 points (Table 3). When we look at all these results; Among the regional variables affecting color selection, trends and period styles were evaluated as the most priority criteria, while the criteria of places where colors were used in the language were evaluated as the lowest priority criteria (Figure 9).

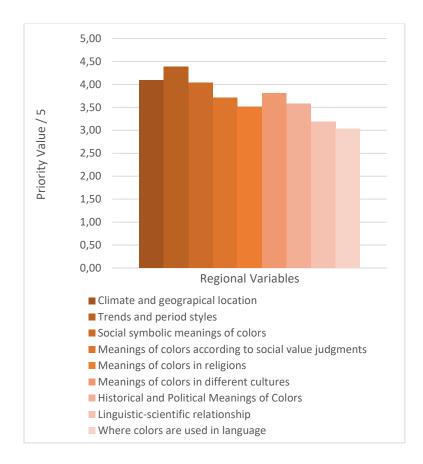


Figure 9. Priority values of regional variables.

# 4. CONCLUSION

Based on the comprehensive evaluation of the color selection criteria, the findings reveal nuanced insights into the priorities assigned by participants. The data, assessed through a scoring system ranging from 1 to 5 (1: not important, 2: slightly important, 3: moderately important; 4: very important, 5: extremely important), is presented in tables and graphs to illuminate the nuances of the results.

A deeper analysis of the results underscores that among the regional variables influencing color selection, trends and period styles were accorded the highest priority. This recognition suggests a keen awareness among participants of the dynamic nature of design preferences, emphasizing the significance of staying attuned to contemporary styles. In contrast, the criteria related to places where colors are used in language received the lowest priority, shedding light on the nuanced and context-dependent nature of linguistic variables in color perception.

In conclusion, this meticulous evaluation provides valuable insights for designers navigating the complex terrain of color selection. Recognizing the varying degrees of importance assigned to

different criteria, designers can now navigate the intricate balance between regional variables, ensuring their designs resonate with current trends and sociocultural nuances. These findings not only enrich our understanding of color selection dynamics but also offer a practical guide for designers seeking to create spaces that seamlessly integrate with their cultural and temporal contexts.

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## **Conflict of Interest Declaration**

The authors declare no conflict of interest.

# **Contribution Rate Declaration Summary of Researchers**

The authors declare that they have contributed equally to the research.

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