

A Study of the Color and Form Language in Kucha Murals

Danqing Song^{1*}

¹ Mongolian Academy of Film Arts, Ulaanbaatar, China

Email Address

174459948@qq.com (Danqing Song)

*Correspondence: 174459948@qq.com

Received: 19 September 2025; **Accepted:** 23 October 2025; **Published:** 21 November 2025

Abstract:

Kucha murals are invaluable cultural treasures from the Silk Road. With their unique artistic style and rich and diverse cultural connotations, they occupy a significant position in world art history. This paper examines the color and form language of the Kucha Grottoes murals, hoping to reveal the role of plane form and color relationships in the mural creation process. By analyzing various aspects of the murals, including shape, line, composition, color selection, and color matching, this paper illustrates the significance of color and form language in understanding Kucha murals, providing a reference for subsequent related research.

Keywords:

Kucha Murals, Color and Form, Plane Form, Color Relationships

1. Introduction

1.1. Research Background

Kucha was one of the Thirty-Six Kingdoms of the ancient Western Regions. Its geographical location at a crucial juncture along the Silk Road made it a vital hub for cultural exchange between East and West. From the 3rd to the 8th century AD, Buddhism flourished in the Kucha region, leaving behind numerous cave temples and murals. These have become invaluable material for the study of Kucha culture. The Kucha murals, primarily found in Kizil Caves, Kumtura Caves, and Senmusem Caves, encompass stories of the Buddha's past lives, biographical stories, tales of karma, sutra transformations, and portraits of donors. They vividly portray the political, economic, cultural, and religious landscape of Kucha society at the time. These murals are considered outstanding examples of Buddhist art and serve as crucial resources for the study of ancient Central Asian history, culture, and art.

Kucha murals hold a crucial position in art history. They inherit traditions left by Indian Buddhist art while also incorporating artistic styles from regions like Greece and Persia, resulting in a unique Kucha artistic style. The artistic characteristics of Kucha murals can be primarily reflected in the following aspects: First, their rigorous composition and rich visual presentation; second, their vivid modeling, with the figures imbued with expressiveness; third, their vibrant colors, with striking contrasts;

and fourth, their flowing lines, imbued with a sense of rhythm. Kucha murals had a profound influence on the development of Chinese Buddhist art. Their artistic style was later inherited and further developed by Dunhuang murals, becoming a crucial source of Chinese Buddhist art.

1.2. Research Significance

The use of color and form in painting holds a crucial position. Through the use of flat shapes and color relationships, Kucha murals express the artist's inner thoughts and emotions, conveying cultural messages. As a significant form of artistic expression, Kucha murals, through their color and form language, contain rich cultural connotations, providing a crucial key to understanding Kucha culture.

2. Planar Shape Analysis

2.1. Planar Shape Characteristics of Kucha Murals

The planar shapes of Kucha murals are characterized by form, line, and composition.

Kucha murals display a rich variety of shapes, including circles, squares, triangles, ovals, and arcs. Among other shapes, circles are often used to represent the halos of Buddha statues and the heads of figures, symbolizing holiness and perfection. Squares are often used to depict buildings and objects, symbolizing stability and order. Triangles are often used to represent mountains and trees, symbolizing strength and growth. Ovals are often used to depict the contours of figures, symbolizing softness and fluidity. Arcs are often used to depict folds in clothing and the movement of figures, further enhancing the vividness of the painting. The use of these shapes demonstrates the Kucha artists' meticulous observation of natural forms and their precise and appropriate extraction, while also highlighting their skill and innovative approach to geometric form. (Figure 1)



Figure 1. *Flying Apsaras and black and white gray diagram of the front wall of the main room of Cave 8 of Kizil Grottoes.*

The lines of Kucha murals are characterized by fluidity and rhythm. They can be broadly categorized into contour lines, structural lines, and decorative lines. Contour lines are used to outline the forms of figures and objects, emphasizing their morphological characteristics. The variations in thickness of these lines are significant, creating a sense of strength. Structural lines are used to depict the internal structure of figures and objects. Their lines are relatively simple and crisp, highlighting the object's inner structure. Decorative lines adorn the surface of figures and objects, yet each possesses a strong sense of form and rhythm within the painting, enriching its abstract aesthetic. Kucha murals' use of lines clearly reflects the characteristics of their time and region, undoubtedly demonstrating the exquisite craftsmanship and

unique aesthetic taste of Kucha artists. Influenced by Gandhara art, the lines of Kucha murals also exhibit a certain degree of convexity and concavity, further enhancing the three-dimensional effect of the painting. In terms of composition, the Kucha murals used a large number of diamond grid compositions, that is, diamond grids were used as the basic four-square continuous units, which is unique among all the cave murals. Each diamond grid represents a Jataka story or a karmic story. At present, the academic community believes that the diamond grid composition expression form is based on the Sumeru Mountain in the Buddhist scriptures. These diamond grids not only cleverly divide the picture in terms of color blocks, but also serve as a painting frame to support the expression method of the huge picture, condensing the Buddhist Jataka stories into the composition, and finally forming a cleverly conceived cave mural. The diamond grids are painted using contrasting color matching method, and the background color of each diamond grid is a color block. The adjacent diamond grids form a sharp contrast in coldness, warmth and brightness, which is highly decorative. As an artistic expression form, the diamond grid composition is unprecedented in the field of Buddhist art with its ingenious conception and novel thinking, and has a great guiding significance for later Buddhist art. [1] The composition of Kucha murals can also be divided into symmetrical composition, balanced composition and scattered composition. Symmetrical composition is commonly used to depict Buddha and Bodhisattva images, emphasizing their solemnity and sacredness. The center of the painting is prominently positioned, and the left and right sides are symmetrical. Balanced composition is often used to depict stories of the Buddha's past lives and the Buddha's life, emphasizing balance and stability. The various parts of the painting echo each other, creating an overall harmonious atmosphere. Scattered composition is generally used to depict landscapes and flowers and birds, emphasizing their freedom and vividness. The elements are more randomly distributed within the painting, imbued with a natural atmosphere. The composition of Kucha murals adheres to certain rules while also allowing for a certain degree of flexibility, fully demonstrating the creative wisdom and artistic talent of Kucha artists. In some large-scale sutra paintings, Kucha artists also employ complex composite compositions, skillfully arranging multiple scenes within a single frame, thus creating grand and narrative scenes.

2.2. The compositional relationship between points, lines and surfaces in color and surface modeling

Points, lines and surfaces - points and surfaces, lines and surfaces in painting are also inseparable and complement each other. A larger "point" is a surface, and a smaller "surface" is a point. When we draw a line on a piece of paper, we are actually dividing the paper into two surfaces. The area between the two lines is the plane; the outline of the plane is the line. Especially in painting, points, lines and surfaces are the artist's infinitely changeable means of modeling. [2]

2.3. Variations of plane shapes under different themes in Kucha murals

Murals with Buddhist themes generally adopt a symmetrical composition method, in which the Buddha is in the center of the picture, surrounded by Bodhisattvas, disciples and donors. The Buddha's head is round in shape, which symbolizes wisdom and light; while the Buddha's body is oval in shape, which symbolizes compassion and solemnity. The gestures and postures of the Buddha have specific symbolic meanings and can express Buddhist teachings and ideas. The lines of the Buddha's

garments are remarkably fluid and dynamic, undoubtedly enhancing the vividness of the painting. The form is more solemn and composed, and the flat surfaces converge and diverge around the Buddha, creating visual tension. (Figure 2)



Figure 2. *Standing Buddha on the Main Wall of the Main Chamber of Cave 188, Kizil Grottoes.*

Murals depicting Jataka stories typically employ a continuous diamond grid composition, dividing a complete story into several distinct scenes, which are then presented sequentially. While the flat surfaces of these scenes vary, they all closely align with the story's theme, ultimately forming a cohesive narrative. Furthermore, the transitions between scenes are natural and fluid, allowing viewers to easily grasp the story's content. This repetitive diamond grid creates a strong visual impact, lending the Kucha murals their artistic appeal. (Figure 3)



Figure 3. *Kizil Caves Cave 17 Diamond-patterned Jataka Tales.*

Murals depicting sutra stories typically employ a comprehensive compositional approach, integrating multiple story scenes to form a complex visual landscape. The two-dimensional forms presented in each scene are both independent and interconnected, collectively constructing a vast Buddhist world. The numerous figures and complex scenes within the painting require careful observation to fully comprehend its content. The interplay of points, lines, and surfaces in form also plays a crucial role, enhancing visual connection and aesthetic interest. (Figure 4)



Figure 4. *Kumtura Caves Cave 13 Main Chamber Vaulted Ceiling Avatamsaka Sutra Transformation.*

2.4. Figure-ground Isomorphism in Planar Form

“Figure-ground isomorphism” refers to the use of complementary effects between figure and background within the composition of the painting. It utilizes the contrast of positive and negative shapes and the spatial construction of equal values to create a unique visual effect. This is similar to the principle of “using white as black” in freehand painting. “Figure-ground isomorphism” binds form and space together in a limited space, limiting its freedom of expression. It gradually degenerated and disappeared in the subsequent development of painting. However, as the core concept of form and space in Chinese painting, it has always existed, and as the relationship between Eastern form and space, it still exists. [3] (Figure 5)

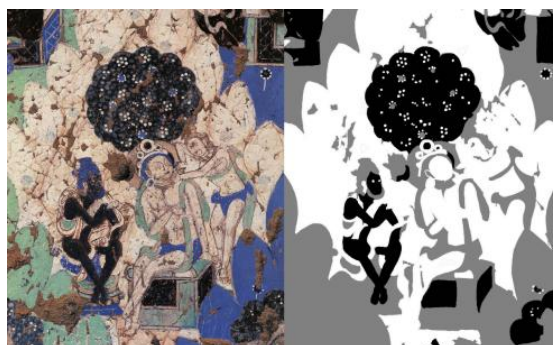


Figure 5. Kizil Cave 38, King Kuaimu Shiyan and flat black and white gray diagram.

3. Analysis of Color Relationships

3.1. The use of color in Kucha murals

The use of color in Kucha murals has distinct characteristics, which are mainly reflected in the two aspects of color selection and matching.

The colors commonly used by painters in Kucha murals are ochre, earth red, blue, green, and white, especially blue and green, which form the decorative color characteristics of Kucha murals. Since there are many naked and semi-naked figures in the Kucha murals, ochre and cinnabar are used in large quantities in the paintings. In paintings with fewer figures, turquoise is the main color; when there are more figures, the cold and warm colors of turquoise and ochre form a strong contrast in the painting. It is worth noting that the Kucha murals use different blocks of color in a cross- and intermittent manner, which is more obvious in the diamond grid composition. The diamond grid is compact, and the background colors are mostly turquoise, green, vermilion, and white. Between the cold turquoise, the warm vermilion is occasionally used to separate them, forming a complementary relationship between white, turquoise, and vermilion, creating a visual effect of sharp contrast between cold and warm but harmonious unity. [4] (Figure 6) Kucha murals show a very strong contrast in color matching. They often use contrasting colors such as red and green, blue and green, and white and black, thereby creating a very vivid visual effect. Kucha murals similarly emphasize the harmonious unity of colors, often using intermediate and transitional colors to enrich and soften the colors. The color combinations employed in Kucha murals create both a strong visual impact and a harmonious artistic beauty, fully demonstrating the Kucha artists' skill in color and their artistic creativity. The color combinations in Kucha murals are also influenced by Indian Buddhist art, embodying the solemnity and sacredness of Buddha statues.



Figure 6. Kizil Grottoes, Cave 14, Dragon Saves the Merchant.

3.2. The Impact of Color Relationships on Planar Form

The impact of color relationships on planar form is primarily manifested in two aspects: the interaction between color and shape, and the visual effects of different color combinations.

Color and shape interact: color can influence the visual appearance of a shape, creating variations in size, distance, and weight. For example, warm colors (such as red and yellow) can make shapes appear larger, closer, and lighter; whereas cool colors (such as blue and green) can make shapes appear smaller, more distant, and heavier. In Kucha murals, artists skillfully exploit this interplay between color and shape, significantly enhancing the painting's sense of form and space. (Figure 7)



Figure 7. Kizil Grottoes Cave 188 Offerings to the Celestial Beings.

The fundamental technique of Kucha murals is color-based modeling. The murals emphasize coloring with color, paying particular attention to the composition of color blocks throughout the painting, often using a combination of warm and cool colors. The use of overlapping layers of color is meticulously crafted. For example, the blue of lapis lazuli applied to a black base maximizes the sense of layering, while the interplay of various grays creates rich and subtle color variations. The combination of multiple flat layers, the overlapping of heavy color layers, and the careful manipulation of the color relationships between layers create a vivid, harmonious, and thematically distinct artistic experience. [5] Different color combinations produce different visual effects. For example, combining contrasting red and green can create a strong visual impact, while combining harmonious colors can create a softer visual effect. In the Kucha murals, artists choose different color combinations based on different themes and contents, thereby creating unique atmospheres and emotions.

4. Conclusions

This paper examines the color and form language of Kucha murals, exploring their complex and figurative language in detail. The aim is to uncover the role of planes and color relationships in mural creation, as well as the cultural symbolism they embody. The complex and form language of Kucha murals is a crucial avenue for understanding Kucha culture. A detailed study of this language offers insights into the aesthetic tastes, cultural beliefs, and artistic creativity of Kucha artists. While demonstrating the exquisite craftsmanship of Kucha artists, the complex and form language of Kucha murals also contains a wealth of cultural and religious information, making it an indispensable resource for the study of ancient Central Asian culture.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

Funding

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

References

- [1] Wang, T.; Liu, W.Z. A brief discussion on the application of mural art language in rock painting creation - taking Qiuci murals as an example. *New Beauty*, 2023, 04.
- [2] Hu, M.Z. Color and surface shaping - the formal skeleton of rock painting. 1st edition. Publisher: Higher Education Press, Beijing, China. 2017; pp. 41.
- [3] Ye, L.; Gao, H.P. A brief analysis of the artistic characteristics of “color and surface shaping” in ancient Chinese murals. *Art Observation*. 2025, 02.
- [4] Ding, Y.Y. An analysis of the artistic language of Qiuci murals. *Art Sea*. 2021, 02.
- [5] Cui, C.C. On the color surface modeling in mineral color painting. Master’s thesis. Hebei Normal University, Shijiazhuang, China, 2015.



© 2025 by the author(s); licensee International Technology and Science Publications (ITS), this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (<http://creativecommons.org/licenses/by/4.0/>)