

Analysis of the Form and Style of Plant Colors in Artworks

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Abstract Plant colors play a significant role in artistic works, and their forms and styles are of great significance to study. Through in-depth analysis of the different forms, characteristics, and applications of plant colors in artistic works, a better understanding of the overall style and intrinsic meaning of the artworks can be achieved. This study takes the works of John Constable, Vincent van Gogh, Claude Monet, Paul Gauguin and Henri Matisse as specific cases to explore the selection, combination, and expression of plant colors in art. By doing so, it aims to investigate the relationship between the forms and styles of plant colors in artworks, and reveal their importance and patterns of representation, providing valuable insights for art creation and appreciation. Delving into the application of plant colors not only expands the expressive techniques in art creation but also enriches the aesthetic experience of the audience, contributing new perspectives and thoughts to the research and development of the field of art studies.

Keywords Plant colors; Formal expression; Artworks; Visual effects; Emotional resonance

The close connection between plant colors and human life and culture is undeniable. Plant colors hold a significant position within artistic compositions, contributing not only to the aesthetic appeal and vitality of the works but also serving as a means to convey the emotions and sentiments of artists through the application of color. Plant colors, as diverse manifestations in the natural world, encompassing elements such as trees, leaves, flowers, and fruits, exhibit a wealth of color and morphological characteristics. By employing plant colors, artists can craft unique and vibrant artistic representations (Lee, 2007).

The utilization of plant colors in artworks extends beyond mere pursuit of aesthetic beauty. More importantly, it involves the selection and combination of colors to convey the emotions and meanings intended by the works. Different plant colors carry distinct symbolic meanings and emotional expressions. For instance, green symbolizes vitality and hope, red embodies passion and strength, and yellow represents sunshine and joy. Artists leverage the richness and expressiveness of plant colors to create a diverse array of artistic forms and emotional resonances (Elsadek et al., 2013).

Plant colors play an equally crucial role in shaping the form and style of artworks. Different plant colors can create varying visual effects and artistic styles through diverse applications and intensities. For instance, in impressionist paintings, artists utilize bright and rich plant colors, employing pointillist brushstrokes to portray the effects of light, resulting in a lively and vibrant visual impact. On the other hand, in realist works, plant colors are more often employed for depicting imagery and conveying intricate expressions, contributing to the creation of a genuine and composed atmosphere.

In art history, numerous renowned paintings have showcased the impact of plant colors on artistic form and style. For instance, the French painter Claude Monet's series of works titled "*Water Lilies*" employs rich and soft plant colors to create tranquil and mysterious aquatic scenes. The Dutch artist Vincent van Gogh's "*Sunflowers*" series conveys a passionate love for life and hope through its vibrant and bright yellow hues. In van Gogh's "*The Starry Night*", the deep blue and bright yellow plant colors contrast with each other, resulting in a dreamy and cosmic ambiance within the artwork. These masterpieces eloquently demonstrate the distinct charm and expressiveness of plant colors in artistic compositions.

The objective of this study is to delve into the formal and stylistic expressions of plant colors in artworks, as well as their impact on viewers' visual experiences and emotional resonances. Through the analysis of the forms and styles of plant colors, a better understanding can be gained of how artists utilize these colors to craft works with varying degrees of expressiveness and emotional impact. Simultaneously, this research contributes to broadening the comprehension of the role of plant colors in artistic expression, enhancing viewers' appreciation and understanding of artworks.

1 Form Expression of Plant Colors in Artworks

1.1 Color selection and plant morphology

In artistic works, the distinctive morphological features of different plants exert an influence on the expression of colors. The morphological characteristics of certain plants, such as lush and abundant flowers or densely-packed leaves, often lead to more vibrant and diverse color expressions. For instance, the lush and distinct petals of a rose (*Rosa* spp.) often result in color choices that lean towards vivid and intense hues like red, pink, and yellow. In contrast, the elongated and delicate forms of some plants, like aloe (*Aloe vera* L.) and willow (*Salix babylonica* L.), tend to employ softer and more subdued colors for expression.

Plant colors contribute to the shaping of forms within artworks. Artists utilize different plant colors to create distinct forms. A wide array of color choices allows artworks to exhibit varied forms and changes, thereby enriching their expressiveness and visual impact. Artists can emphasize the vitality and liveliness of plants by employing bright and vivid colors, or they can generate a soft and tranquil ambiance through the use of gentle hues (Zhang et al., 2023). The selection and application of plant colors directly influence the formal attributes of the artwork, enabling it to vividly and powerfully convey the artist's intentions and emotions.

1.2 Impact of color on composition and combination

Plant colors play a significant role in the composition of artworks. Through well-structured compositions, artists incorporate plant colors into their works to achieve visual effects and emotional expression. Plant colors within compositions can serve as focal points or subjects, capturing viewers' attention and conveying specific emotions or imagery. In a painting, placing vibrant flowers at the center or in symmetrical positions can attract the viewer's gaze, highlighting the beauty and significance of the flowers.

The way plant colors are combined influences the overall form of an artwork. Different combinations of colors can create various visual effects and emotional expressions (Neale et al., 2021). Complementary color combinations (such as red and green, blue and orange) produce strong contrast effects, making the artwork more vivid and vibrant. Additionally, analogous color combinations (such as different shades of green, yellow, and orange) can establish a soft and harmonious atmosphere. Through adept utilization of color combinations, artists can shape the overall form of their works, creating distinctive artistic effects and evoking emotional resonances (Elsadek and Fujii, 2014).

Through the study of the formal expression of plant colors in artworks, a deeper understanding of the role and significance of plant colors in composition and combination can be achieved. This research unveils the impact of different plant forms and color selections on shaping the formal aspects of artworks. Such insights will assist artists in more accurately utilizing plant colors to convey their creative intentions, while also offering viewers a richer and more profound artistic experience.

2 Plant Colors and the Association with Artistic Styles

2.1 Plant colors and the realism style

2.1.1 Authentic expression of plant colors in realist artworks

In the realm of realism style, which pursues faithful depictions of objects, plant colors play a pivotal role. Artists accurately capture the color attributes of plants and faithfully portray them within their works. For instance, through delicate shading and precise color application, various shades of green in leaves, vibrant hues of flowers, and the nuanced layers of tree trunks are reproduced. Such color expression endows the artworks with a strong sense of authenticity, enabling viewers to directly experience the vitality and presence of plants.

In his artwork *"The Hay Wain"*, British painter John Constable demonstrated the subtle beauty of the natural world through precise color application and delicate painting techniques (Figure 1). Through the use of intricate brushstrokes and transparent colors, he vividly depicted details such as the branches and leaves of trees and the texture of the straw. The lush trees and the expanse of straw, these elements of vegetation, recreated the pastoral scene of the British countryside.



Figure 1 *The Hay Wain*, John Constable, 1821

2.1.2 Influence of color on visual effects and emotional resonance in the realism style

In realist artworks, plant colors serve a dual purpose not only to achieve authenticity but also to create significant visual effects and emotional resonance. Through the utilization of vibrant flower colors or lush plant greens, artists can capture viewers' attention and create strong visual impact. Simultaneously, by adjusting color saturation, artists can manipulate light and shadow within the artwork, further enhancing its three-dimensionality and realism.

Furthermore, the selection of plant colors can convey specific emotions and imagery, such as warmth, harmony, tranquility, and more (Jang et al., 2014). Through precise manipulation of color, artists can cultivate distinct emotions and atmospheres, delivering a potent visual experience to the viewers. Artists have the ability to evoke emotional resonance towards plants within the hearts of viewers, allowing them to gain a deeper understanding and connection to the themes and emotions conveyed by the artwork.

In Vincent van Gogh's artwork *"Sunflowers"*, the vibrant yellow sunflower blossoms exude enthusiasm, providing a bright and joyful visual experience while also conveying admiration and delight for the beauty of nature (Figure 2). As symbols of life, the warm colors evoke a profound sense of love and longing for life deep within us, as plant colors transmit the essence of life's energy. Under van Gogh's brush, the sunflowers, with their bright yellow and abundant forms, capture people's gaze. Each sunflower radiates a unique vitality and liveliness, resembling embodiments of the sun itself. Through the use of warm hues, van Gogh seamlessly integrates the beauty of the plant and the power of life into his artwork.

2.2 Plant colors and the impressionist style

2.2.1 The role of color in creating light and atmosphere in impressionist artworks

Impressionist artworks are characterized by their emphasis on light, shadow effects, and instantaneous perception, in which plant colors play a significant role. Artists capture and depict plant colors to generate rich light and shadow effects and a sense of immediacy. The color variations in leaves, flowers, and fruits of plants, as well as the shifting color gradations that change with varying light, bring forth dynamic inter plays of light and shadow within the artwork. Furthermore, plant colors contribute to the creation of the artwork's atmosphere. By selecting soft and delicate colors, artists can establish tranquil and comfortable atmospheres, enabling viewers to perceive the beauty of plants and the inherent power of nature within the artwork.

In Claude Monet's "*Water Lilies*" series, he employed color to depict the leaves of water lilies and the reflections of light on the water's surface, creating a soft and ever-changing interplay of light and shadow, immersing viewers in the gentle atmosphere of a breeze brushing over the water (Figure 3). Additionally, Monet ingeniously utilized bright and muted greens, employing color contrast to generate a three-dimensional sense for the lotus flowers. Simultaneously, he introduced touches of pink and white to accentuate the flowers' delicacy and purity. Monet's precise application of color effectively captures the natural beauty of the lotus, bringing it to life within his artwork.



Figure 2 *Sunflowers*, Vincent van Gogh, 1888

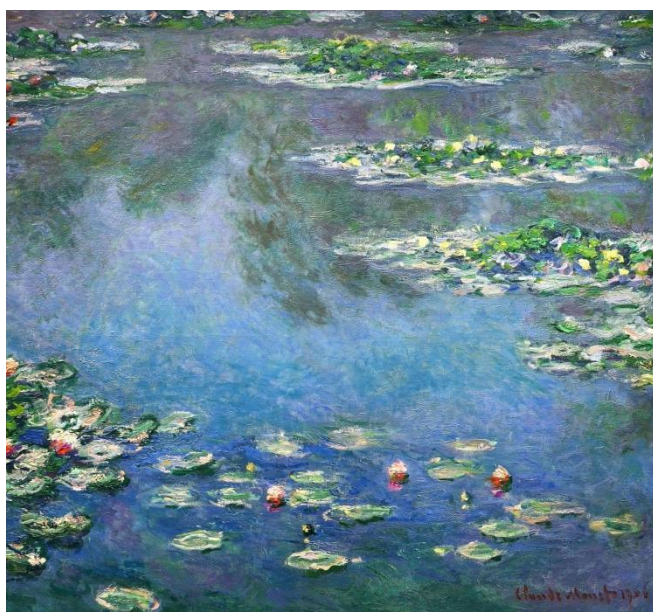


Figure 3 *Water Lilies*, Claude Monet, 1906

In addition to color, Monet employed contrasts of light and shadow to create the effect of illumination, imparting a three-dimensional and tactile quality to the lotus flowers within the composition. Through the refraction and reflection of light, the artist adeptly depicted the interplay of light and shadow on the lotus leaves and petals, imbuing the lotus flowers in the painting with vividness and authenticity. The variations in light and shadow also lend a sense of dynamism to the lotus, as if they are in a perpetual state of evolution and growth (Zhang, 2013).

2.2.2 Symbolic significance and expressive forms of plant colors in the impressionist style

In impressionist artworks, plant colors are not merely used to depict natural landscapes; they also possess profound symbolic significance. Artists convey expressions of nature, life, and emotions through their selection and combination of plant colors. Bright flower hues can symbolize joy, vitality, and hope, while soft greens can symbolize tranquility, harmony, and serenity. The forms of expression for plant colors are also diverse, ranging from clear and vibrant brushstrokes to soft, blurred color blocks, evoking a dreamlike visual experience for the viewer.

In Paul Gauguin's artwork *"By the Stream, Autumn"*, the utilization of bright yellow and vivid red tones accentuates a robust visual sensation, infusing plant colors with deeper symbolic significance (Figure 4). The application of bright yellow and vivid red hues highlights the vegetation within the composition, particularly the plants of autumn, such as red leaves and flowers. These colors symbolize passion and strength, harmonizing with the essence of the fall season. Yellow represents warmth, light, and vitality, while red embodies enthusiasm and passion. The application of these colors imbues the plants within the artwork with a fervent and vibrant sense of life.

Furthermore, the expressive forms of plant colors in the impressionist style add to the artistic allure of *"By the Stream, Autumn"*. Impressionist artists are renowned for their unique brushwork techniques and approaches to color, focusing on capturing momentary light and color changes. In *"By the Stream, Autumn"*, Gauguin employed bright and vivid colors, using pointillist or patchy brushstrokes to outline the contours and details of the plants. This approach bestows a blurred and hazy sensation upon the composition, simultaneously intensifying the vibrancy and visual impact of the plant colors.



Figure 4 *By the Stream, Autumn*, Paul Gauguin, 1885

Through the study of the correlation between plant colors and artistic styles, the examples of these renowned paintings illustrate that the forms of expression and visual effects of plant colors in artworks play a pivotal role in shaping both the Realist and Impressionist styles. This research allows us to gain a deeper understanding of how plant colors influence the forms of expression and visual effects within artworks of different styles. It provides artists with richer array of resources for their creative endeavors and, in turn, offers viewers a more profound and captivating artistic experience.

3 Case Analysis and Visual Effect Evaluation

3.1 Analysis of artworks by renowned artists

3.1.1 Vincent van Gogh's "*Sunflowers*"

"*Sunflowers*" is one of Vincent van Gogh's representative works, widely regarded as his masterpiece in expressing plant colors (Figure 2). Vincent van Gogh opted for bright and saturated yellow and orange tones to depict the sunflowers, as these colors symbolize sunlight, warmth, and vitality (Welsh-Ovcharov, 1998). The application of these colors imbues the sunflowers with a sense of liveliness and vigor. Additionally, the contrast between the yellow and orange hues enhances the vibrancy and visual impact of the composition, capturing the viewer's gaze.

Furthermore, van Gogh employed strong contrasts of color and bold brushstrokes, utilizing both chiaroscuro and chromatic disparities to enhance the prominence of the sunflowers' contours and details. This heightened contrast imparts a sense of dimensionality and texture to the sunflowers within the composition, while also conveying van Gogh's reverence and pursuit of vitality and natural force. Simultaneously, van Gogh's thick and forceful brushstrokes endow the sunflowers with texture and texture, imbuing the artwork with strength and expressive power. This technique not only reflects van Gogh's emotional connection to plants but also provides insight into his inner world.

"*Sunflowers*" vividly portrays the vibrancy and vitality of sunflowers through its bright and saturated yellow and orange tones. Additionally, the artwork employs strong color contrasts and thick brushstrokes to express an emotional pursuit of vitality and natural force. Beyond being a mere depiction of botanical colors, this painting serves as Vincent van Gogh's emotional expression of life and nature, showcasing his distinctive artistic style and inner emotions.

3.1.2 Claude Monet's "*Water Lilies*"

Claude Monet's "*Water Lilies*" series is renowned for its portrayal of water landscapes and botanical colors (Figure 3). These works capture the reflections and play of light on water lilies through the use of soft and rich colors. Monet's color choices and brushwork technique evoke the changes in light and the ripples on the water's surface, creating a tranquil and dreamlike visual atmosphere (Roy, 2007). In his artworks, botanical colors become a vital element for representing nature and conveying emotions.

He utilized a plethora of vibrant colors, such as blues, greens, and purples, to depict the flowers and leaves of the water lilies. These vivid hues infuse the artwork with vitality and dynamism, while also conveying Monet's love and awe for nature. His swift and delicate brushstrokes create the effects of changing light and ripples on the water's surface. This brushwork technique allows viewers to perceive the flow of the water and the reflection of light, further enhancing the authenticity and visual impact of the piece.

Through meticulous observation and depiction, Monet conveyed the beauty and mystique of water lilies to viewers, with form and color playing crucial roles. Simultaneously, water lilies also serve as symbols for expressing his inner emotions and sentiments. The water lilies in his works often embody gentle, serene, and enigmatic imagery, evoking resonance and contemplation in the audience. In Monet's art, plant colors become essential elements for portraying nature and conveying emotions. These artworks not only showcase Monet's unique style as an Impressionist painter but also stand as classics in the history of art.

3.1.3 Henri Matisse's "Red Interior"

Henri Matisse's artwork "Red Interior" is renowned for its bold use of color and unique expression (Figure 5). This piece is dominated by vibrant shades of red, encompassing elements such as plants, furniture, and interior decor. Through contrasts and richness of color, Matisse created a strong visual impact and sense of dynamism, immersing viewers in his distinctive artistic world (Sweet, 1952). The incorporation of plant colors within this artwork blends harmoniously with other elements, collectively crafting the overall visual effect and emotional experience.

In "Red Interior", the presence of plant elements plays a significant role. Henri Matisse contrasted the green of the plants against the red background, creating a striking visual conflict within the composition. This contrast enhances the visibility of the plants, making them a captivating focal point in the artwork. Furthermore, he employed various shades of green, ranging from light to deep, to create a multi-layered vegetation arrangement. This richness allows viewers to sense the vitality and lushness of the plants, while also adding fullness and depth to the piece.

The integration of plant colors with other elements collectively forms the overall visual effect of "Red Interior". The green of the plants contrasts vividly with the red background, while also harmonizing with the interior furniture and decorations. This interplay of colors, resonance, and contrast creates a strong and distinctive visual experience, allowing viewers to sense the emotions and themes conveyed by the artwork (Güneş and Olguntürk, 2020).



Figure 5 Red Interior, Henri Matisse, 1947

3.2 Visual effect evaluation and emotional resonance analysis

Through the in-depth analysis and visual effect assessment of three renowned paintings, Vincent van Gogh's "Sunflowers", Claude Monet's "Water Lilies", and Henri Matisse's "Red Interior", this study explored the impact of plant colors on viewers' emotional resonance.

"*Sunflowers*" is one of van Gogh's most famous works, vividly portraying the vibrancy and vitality of sunflowers through bright yellows and oranges. van Gogh employed strong color contrasts and intense hues to create a visual impact and dynamism. The combination of these intense colors and rich brushstrokes evokes a strong emotional resonance in viewers, allowing them to perceive the beauty and natural power of sunflowers.

The "*Water Lilies*" series by Claude Monet stands as one of his masterpieces in expressing plant colors. Through the use of soft and rich colors, Monet created the reflections and play of light on the water's surface, portraying the water lilies. This color application allows viewers to sense the changes on the water and the vitality of the plants, generating a serene and dreamlike visual atmosphere. When appreciating these works, viewers often experience emotional resonance, feeling harmoniously connected to nature.

"*Red Interior*" is a distinctively colorful and unique piece by Henri Matisse. He employed vibrant red tones along with complementary colors to craft a powerful visual impact and dynamism. This bold and vivid color selection elicits strong emotional resonance in viewers, enabling them to feel the vibrancy and passion conveyed by the artwork.

Through the evaluation of the visual effects and emotional resonance of these renowned artworks, we can ascertain the significant influence of plant colors in art pieces. Vincent van Gogh's "*Sunflowers*" conveys vitality and natural force through vibrant hues. Claude Monet's "*Water Lilies*" series creates a tranquil and dreamlike ambiance with soft colors and play of light and shadow. Henri Matisse's "*Red Interior*" radiates energy and enthusiasm with bold color choices. These artworks evoke strong emotional resonance with viewers, deepening their connection to plant colors and enhancing their experience of the beauty of nature and emotional depth (Feltrin et al., 2020).

The analysis and assessment of these cases provide us with a deeper understanding, enabling us to better comprehend the visual effects and emotional expression of plant colors in art pieces. This serves as valuable guidance and inspiration for artists to skillfully employ plant colors in their creative process, resulting in awe-inspiring works and enriched viewing experiences.

4 Discussion and Insights

Through the analysis of plant colors in art pieces in terms of form and style, this study has yielded valuable insights and findings. Firstly, plant colors play a significant role in artworks, serving as powerful tools to convey emotions and express themes, going beyond mere visual elements. Secondly, various plant forms and characteristics have a profound impact on color expression, such as the color of tree trunks, leaves, flowers, and seasonal changes. These aspects offer artists a diverse range of color choices and modes of representation. Lastly, the influence of plant colors on composition and arrangement cannot be underestimated, as they can affect the overall form and visual impact of an artwork.

Based on the revelations and findings from the analysis of form and style, it is evident that plant colors hold immense potential for innovation and application in artworks. Firstly, artists can shape distinct and creative pieces by employing innovative color selections and combinations, coupled with unique representations of plant forms. Secondly, plant colors within artworks can evoke emotional resonance among viewers, generating deeply impactful visual experiences. Thirdly, the innovative application of plant colors can drive the advancement of the artistic field, offering audiences a more diverse and enriched array of visual artworks.

While this study has conducted an in-depth exploration of the form and style of plant colors in artworks, there are still certain limitations and potential directions for future research. Firstly, the scope of this study mainly concentrated on the field of painting, with limited investigation into other artistic forms like sculpture and photography, among others. Therefore, there is room for further expanding the scope of research. Secondly, even though the analysis encompassed works by a few celebrated artists, there is potential to broaden the sample size to include a more diverse array of artists and their creations, in order to yield more comprehensive research

outcomes. Additionally, while this study predominantly centered on the form and style of plant colors, there's an opportunity to explore other themes related to plant colors, such as their symbolic meanings and cultural contexts.

Possible future research directions could include, but are not limited to, the following aspects: First, further exploration of how plant colors are expressed in different forms of art. Second, in-depth investigation into the associations between plant colors and aspects such as culture, history, and society. Third, exploration of innovative applications and practices of plant colors in contemporary art. Fourth, empirical studies involving experiments and surveys to examine the impact of plant colors on viewers' cognition and emotions. Through these potential avenues of research, scholars can gain a better understanding of the significance and influence of plant colors in artworks, as well as the importance of their impact on viewers' emotions and aesthetic experiences.

Through these practical efforts and future research endeavors, a better understanding and application of plant colors in the forms and styles of art can be achieved, driving the development and innovation in the field of art. Plant colors, as a crucial element in artistic creation, will provide viewers with richer, deeper, and more meaningful visual experiences. Additionally, there is anticipation to further explore the application of plant colors in other artistic domains, such as design, photography, etc., offering a broader scope and possibilities for artistic creation and visual expression.

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