

AN ANALYSIS OF THE EFFECTS OF VISUAL INDUCTION ON PAINTINGS

Mingzhe Han^{*}, Pibool Waijittragum^{**}

Faculty of Fine and Applied Arts, Suan Sunandha Rajabhat University, Bangkok, Thailand

E-Mail: s65563832005@ssru.ac.th^{}, pibool.wa@ssru.ac.th^{**}*

ABSTRACT

This article focuses on the core concept of visual induction and analyzes its theoretical basis and effects in painting. It explores the application of visual induction in painting creation and its impact on the artwork. This study draws on previous research and starts with the relationship between visual perception and painting, as well as the relevant concepts of visual induction. It systematically analyzes the theoretical concepts, types, principles, and functions of visual induction, and discusses the causes, effects, and general patterns of visual induction from various perspectives. It also analyzes the actual use of visual induction in artwork.

This research adopts a combined qualitative and quantitative research method to observe and analyze artworks that employ visual induction. Data is collected through questionnaire surveys and analyzed to gain a deeper understanding of how visual induction is implemented in painting. The study analyzes the impact of visual induction on the psychological state of the painter and the interaction between the audience and the artist. The research results indicate that there is a mutual influence and connection between visual induction, artistic expression, and the audience. It can capture the audience's attention and interest, promote interaction between the audience and the artwork, enhance the attractiveness, dissemination, and influence of the artwork, and have a positive impact.

Keywords: visual induction, painting expressiveness, painter, audience, interaction

INTRODUCTION

Starting from the 1960s, abstract and surrealist painters were among the first group of conscious artists to utilize visual induction. They created works with visual impact and aesthetic appeal by exploiting visual illusions and distortions.

Visual induction refers to the process of stimulating viewers' visual perception and eliciting psychological reactions through specific visual stimuli, in order to achieve certain goals or effects. "Visual induction" emphasizes the impact and inducing effect on the visual system through external stimuli, altering the viewers' perception of the image or artwork. "Visual illusion," on the other hand, highlights the creation of visual effects through visual deception and illusions, resulting in false or inaccurate visual experiences. The term "visual induction" in Chinese encompasses the meanings represented by these two terms.



Fig.2.Untitled (3 paragraphs) bridget riley
<https://arthive.com/>

As a visual art form, painting uses basic elements such as color, shape, line, and texture to construct images and convey the artist's thoughts and emotions (Palmer, S. E., & Schloss, K. B., 2010). The expressive power of a painting lies in its ability to captivate the audience's interest, attention, imagination, and emotional resonance. This expressive power depends on the artist's skills and style, as well as the visual induction phenomena designed by the artist to engage the viewers' visual perception.

There are existing cases of research and application of visual induction in the field of painting and visual arts. "Research on Visual Induction in Weiss's Works" (Ma Yue, 2018) analyzes the manifestation of visual induction in painting and explores the various forms of visual language in Weiss's works and their inducing effects on visual perception. "Visual Induction in Chinese Historical Figure Paintings" by Zhang Chunxin and Cao Tianyan, using Chinese historical figure paintings as examples, expounds on the visual instructiveness and psychological application of visual induction in painting (Zhang Chunxin & Cao Tianyan, 2014). Visual induction is not a recent concept; artists have consciously or unconsciously employed visual induction in their works throughout the development of visual arts, such as the print series "Impossible Constructions" by M.C. Escher, the famous Dutch artist. Through the concept of visual induction and visual illusions, Escher presents the transformations and manipulations of impossible constructions, showcasing different spatial dimensions.



Fig.3.Escher "Belvedere"
<https://www.duitang.com/>



Fig.4.Our Lady of Port Lligat
Salvador Dali oil painting
<https://baijiahao.baidu.com>

Painting has experienced a slow development in recent years. This can be attributed to outdated creative concepts and methods, making the research of ideas and creativity more important. Exploring the interrelationship between painting and visual induction, analyzing the principles and methods of incorporating visual induction in painting creation, could potentially provide new possibilities and opportunities for the development of painting, thus facilitating the exploration of diverse artistic effects.

RESEARCH PROBLEMS

Visual induction is an effective way for artworks to influence the psychology of the audience, and different forms, styles, techniques, colors, etc. all have an impact on visual induction. Therefore, this study primarily explores the following questions: What are the key factors that influence visual induction? What is the relationship between visual induction and the effective conveyance of the artist's thoughts, emotions, attitudes, and values through paintings? Can visual induction effectively evoke resonance, empathy, and reflection in the viewers within the artwork?

OBJECTIVES

The aim of this study is to explore the connections between painting and concepts and theories such as Gestalt psychology, psychological induction, and visual perception. It further analyzes the concepts, types, principles, and applications of visual induction, seeking to understand the relationship between visual induction and the expressive power of artworks. The study focuses on paintings, painting enthusiasts, and professionals as subjects and analyzes the mutual relationship between visual induction and painting.

METHODOLOGIES AND PROCEDURES

This study employed qualitative research methods to observe artworks that utilize visual induction and analyze them in conjunction with theoretical literature. Additionally, quantitative research methods were utilized by designing a survey questionnaire to investigate the understanding of visual induction among individuals of different ages, genders, and income levels, as well as their perspectives on the relationship between visual induction and painting. A total of 180 questionnaires were distributed, and 169 valid responses were collected.

RESULTS AND IMPLICATIONS

Through the analysis of 169 valid questionnaires, it was found that there is a significant positive correlation between visual induction and painting, indicating that visual induction can effectively enhance the expressive power of artworks. Among them, lines and shapes play important visual roles in paintings and are key factors influencing visual induction. The characteristics of lines and the combination of shapes can evoke viewers' visual interest and attention (Sørensen, M., & Alvarez, G. A., 2016). Visual induction can have a different impact on viewers based on factors such as the form, content, style, technique, lines, and colors of the artwork, attracting the gaze of the audience. Colors strongly influence viewers' emotions and cognition (Ou, L. C., et al., 2004). Under the visual induction of lines and shapes, colors and tones, the expressive power, aesthetics, and creativity of artworks are enhanced. The features of lines and shapes, colors and tones mediate viewers' evaluation of the artwork and perception of its attractiveness (Locher, P., et al., 2001).

Table 1 Correlation Analysis Results

| | attractiveness of paintings | lines and shapes | colour and tone | Painters painting expressiveness, beauty and creativity |
|---|-----------------------------|------------------|-----------------|---|
| attractiveness of paintings | 1 | | | |
| lines and shapes | 0.779** | 1 | | |
| colour and tone | 0.812** | 0.751** | 1 | |
| Painters painting expressiveness, beauty and creativity | 0.804** | 0.822** | 0.738** | 1 |

* $p < 0.05$ ** $p < 0.01$

The survey found that trained painters can consciously employ specific visual elements or techniques in their artworks to achieve certain desired effects. On the other hand, untrained painters may generate visual induction effects unintentionally, driven by their emotions, mentality, and subconscious. Visual induction is not only a tool that artists can leverage; viewers can also perceive visual induction from paintings and gain insights into the artist's thoughts through it. Key factors influencing viewers' attention include color and lines.

Table 2 Conclusion

| Hypothesis | Whether established |
|---|---------------------|
| H1: There is a positive relationship between the induction of lines and shapes in paintings and the attractiveness of paintings. | set up |
| H2: There is a positive relationship between the induction of colors and tones in paintings and the attractiveness of paintings. | set up |
| H3: Painting expressiveness, beauty, and creativity mediate the relationship between line and shape induction and the attractiveness of paintings. | set up |
| H4: Painting expressiveness, beauty and creativity play a mediating role between the induction of colors and tones and the attractiveness of paintings. | set up |

The research demonstrates that there is a mutual influence and connection between visual induction, painting expressiveness, and the audience. Visual induction can stimulate the attention and interest of painting viewers, promote interaction between the viewers and the artwork, enhance the attractiveness, dissemination, and impact of the painting, and create positive and constructive effects.

CONCLUSIONS

Painting utilizes visual symbols and imagery as a form of visual language to convey information and meaning. It possesses characteristics such as immediacy, imagery, and ambiguity, enabling direct expression of the artist's subjective feelings, showcasing creativity, and stimulating viewers' imaginative space. However, these characteristics also introduce ambiguity, uncertainty, and ambiguity into the visual language. These factors can affect the transmission of information between the artwork and viewers, leading to the loss of intended meanings and misinterpretations. Painting can utilize visual induction to capture the viewers' attention, interest, associations, and emotional resonance. The painting's effectiveness is influenced by the skills and style of the painter as well as the application of visual induction techniques. Visual induction stimulates the viewers' visual perception and psychological responses, serving as an effective communication strategy between the painter and the audience and can be developed as a means of artistic expression. The widespread use of visual induction in painting and design helps artists highlight key elements, enhance the tension of the artwork, effectively convey its meaning, and create desired effects. Visual induction influences painting from multiple dimensions and can serve as an effective tool for viewers to interpret and understand artworks.

ACKNOWLEDGMENTS

With immeasurable gratitude to the Faculty of Fine and Applied Arts at Suan Sunandha Rajabhat University, this research would not have been completed without their support.

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