How Immersive Technology Influences the Demonstration of Van Gogh's Artworks

Yuquan Liu *

China Academy of Art, Hangzhou, Zhejiang Province, China

* Corresponding Author Email: dao.sprefe@natains.org

Abstract. It seems that the whole world tries to compensate for all the sufferings Van Gogh experienced during his lifetime, and quarries of light are no exception. It uses immersive technology to bring life to Van Gogh's works, making these masterpieces even more impressive. This article explains the similarity between the features of Van Gogh's bedroom and the conception of 'Total Image', answering why Van Gogh's paintings like his bedroom are especially suitable for using immersive technology. The essay also gives guidelines about how to demonstrate famous artworks creatively with the help of modern technology. By searching the internet, the studies related to quarries of light are rarely seen, but resources about Van Gogh and his works are abundant. This paper combines immersive technology with Van Gogh's paintings, which provides an interdisciplinary approach to understanding the relationship between visual technology and art.

Keywords: Van Gogh, immersive technology, the bedroom, quarries of light, Total Image.

1. Introduction

Nowadays Van Gogh enjoys great posthumous fame around the world. Having Van Gogh's works would be an honor for museums and galleries, and adding elements from Van Gogh's paintings to product design is an effective way to attract consumers to a business. Van Gogh was not fortunate enough to witness all of this when he was still alive. In that conservative time, any attempts to change traditional art style would receive numerous critiques and fierce attacks. Even paintings of Manet were quite astonishing to the public of the nineteenth century. The works painted by Van Gogh with such rough brushstrokes must be an intensive shock for the audience at that time. For today's audiences, watching Van Gogh's paintings in galleries is not enough to arouse their strong enthusiasm, as there are too many eye-catching items in art exhibitions. And people can see Van Gogh's artworks everywhere like through textbooks and websites. Immersive technology is undoubtedly a good way to make those well-known artworks to be watched in another impressive way. And Quarries of Light is the place where artists began their experiments with immersive technology. Quarries of Light is based on a theory called "Total Image" which was brought forward by Albert Plecy. He hoped the audience could live a multisensory experience in a multidimensional world that was created by the image and sounds [1]. The image is projected over diverse surfaces [2]. In this way, Plecy can fully use the space to show the artwork. And the public can enjoy Van Gogh's paintings with different senses. It is "Total Image" that offers new opportunities to exhibit late artists' works differently.

2. Van Gogh's artworks and their re-creation in Quarries of light

2.1 Van Gogh's lifetime and how the bedroom series was created

Van Gogh was born in the Netherlands in 1853, and he was the eldest child in his family. Only ten years of his life can be seen as a career of an artist, though in this short period he was a prolific painter. Before he pursued his art, Van Gogh worked at various jobs. He was once an art dealer and he knew a lot about the history of art [3].

In 1880 Van Gogh was determined to answer the calling of being an artist. He not only drew what he met in his surroundings but also made copies of French painters' works which demonstrate peasant life. At that time, he was deeply influenced by Millet [4]. The way Van Gogh dealt with lights is quite similar to Millet's method. Van Gogh took outdoor lights which Millet showed in his paintings to

depict bedroom series. The Gleaners of Millet provides the audience with a scene where three female laborers are gleaning heads of grain on a special field in daylight, and the hue of the painting is a kind of beige. Compared to his painting The Winnower which shows an indoor scene, The Gleaner looks much brighter. Van Gogh's bedroom series demonstrates an interior space, but his bedroom is not dark at all. It seems that Van Gogh decided to treat the bedroom as an outdoor space, and the hue is just as light as in The Gleaners.

Van Gogh temporarily studied at the Antwerp Academy in Belgium, and then he left for Paris. During his time in Paris, Van Gogh greatly transformed his style due to the works he saw there. He was affected by Impressionists as well as Neo-impressionists such as Georges Seurat [5]. In Paris he lightened his palette and borrowed the pointillist technique, learning how to use fragmentary brushstrokes to embody lights and colors. His self-portraits painted there are evidence of these explorations. After two years in Paris, Van Gogh gradually got tired of living here. Paris was too noisy for himself, so he decided to leave for Arles. His later paintings especially those completed in Arles changed Seurat's pointillist technique into twisty short lines. It indicates that Van Gogh always kept exploring the most suitable way for himself to paint. These short and twisty lines give the audience a stronger feeling of movement than points. The public can even sense Van Gogh's emotion in every brushstroke of his artwork. Furthermore, Van Gogh's brushstrokes help people catch the movement of space. However, pointillism expresses a contrary feeling to audiences, as they usually build up a still and solemn atmosphere through numerous points in the paintings. And figures of humans usually appear in the works of pointillism. The existence of figures interrupts the continuity of the space.

Unlike Paris, Arles was a much more peaceful place where he could focus on himself and assimilate what he learned in Paris. And it was in this small town in southern France that Van Gogh painted his bedroom series. This series includes three paintings. One of the works was collected in the Art Institute of Chicago, and the others are from the collections of the Van Gogh Museum and Orsay Museum. Three artworks contain the same items, but the details, as well as tones of them, are slightly different.

2.2 Formal analysis of Van Gogh's artworks

In the bedroom of the Chicago Art Institute which is identical in scale yet distinct in colors and tones from other ones of the bedroom series, Van Gogh used deep contour lines to represent the shapes of those basic items of life, giving the viewer a sense of solidity. These rough brushstrokes convey the texture of the paints, leaving the audience with an intense impression of the bedroom. Like many other Van Gogh paintings, the use of color in this work is also exaggerated. However, contrary to presenting the interior tumultuous feelings, he gave the bedroom a sense of quietness, depicting it as a place to rest one's mind or imagination. The comparison between cool tones and warm tones is extremely apparent. Here Van Gogh used several couples of complementary colors. For example, the main furniture was painted with warm colors like orange but the walls, clothes, and vessels were colored with a type of blue, probably a pale violet. But their styles of them are unified. The composition of the furniture indicates that this is a scene of a normal tidy bedroom. Everything was organized harmoniously in the painting. The painting is three-dimensional because the items in the picture have volumes and Van Gogh used scenography to paint the whole bedroom. But it seemed that there is no obvious focal point in this painting. As for the lights, Van Gogh presented them with bright colors like yellow whereas there are no shadows in the painting. He presented the whole picture with abundant colors, and he disregard the impression of depth, focusing on exploring the color and light.

This bedroom paint was complicated in 1889, and the size of this painting is not very large, since the length and the width of this painting are both less than 1 meter. Compared to historical paintings, it can even be regarded as a small one. In such a painting that includes a normal scene in daily life, Van Gogh reached a kind of simplicity that is similar to what people can notice in Seurat's works. From these non-natural depicts, the influences which Impressionism left on Van Gogh can be noticed.

Van Gogh put his emotion into every stroke of paint, and he created a wonderful rest place for his passionate soul.

Turn to another artwork which was painted by Van Gogh. Wheat Field with Crows is probably Van Gogh's last work which demonstrates the scenery of a large wheat field. There are three wandering roads in the painting which divided the gold wheat field into two parts. Above the field are a vast blue sky and a group of flying crows. When people give a glance at the painting, they may first notice the disordered brushstrokes which construct the scenery. In the last two months of his life, Van Gogh became extremely anxious and fretful as his mental health was getting worse [6]. At the same time, he was concerned about his brother Theo's financial condition [7]. He was guilty to become Theo's financial burden. His unstable emotion can be detected in those disjointed brushstrokes of the painting. Despite the dynamic short brushstrokes which compose the middle road in the painting, other brushstrokes seem to become a little bit powerless. As if Van Gogh felt his mental disease was going to be out of control, he devoted himself to painting and tried to burn himself out before his life ended. Turbulence, sadness, and loneliness were expressed to the audience through Van Gogh's powerful or not powerful brushstrokes in this artwork. The group of crows, which gradually fades into the dark blue sky, can be seen as the vanishing of Van Gogh's life because the crow is the symbol of death in Western cultures.

2.3. How immersive technology demonstrates Van Gogh's bedroom series in another impressive way

Quarries of light are a container to show artworks with special methods which differ from traditional ones. This space had been built by quarry workers and was noticed by some architects and artists who wanted to transform it into a building that can give the audience a multidimensional experience [8]. Albert Plecy helped it become a performance place only with light. After that Peter and Alison Smithson as well as Jean Cocteau determined to film in the quarries. This reveals the multiple potentials of the quarries and gives Plecy hopes to test his idea of "Total Image" [9]. The images can be projected onto the rock walls, and the sounds can also be played to exaggerate the space. So that the public can not only use their eyes to watch the projected picture but also use their other senses like hearing and touch to feel the paintings. Five senses can be fully used in this process.

Van Gogh's Wheat Field with Crows is an extremely special painting that can help people understand how "Total Image" works. In Wheat Field with Grows, no horizontal lines or vertical lines can be seen in the painting. That causes deformation of the space. Dissimilar from pointillism's solemn and harmonious works, Van Gogh's brushstrokes gave his paintings a sense of flow, and numerous paintings accomplished in Arles have such a feature. What immersive technology brings to the audience is the same: dramatizing the space. Meanwhile, Van Gogh simplifies the elements of the painting. Wheat Field with Grows includes wheat fields, a sky with clouds, three roads, and crows. There is not even a single person in this picture. The appearance of humans dissevers the natural space and omitting the person from the painting can protect the integrity of the space. It is Van Gogh's abundant use of lines and brushstrokes that made elements have possibilities to become simple.

One key point of installation art is the integrality of the work won't be damaged when people walk into the space. It's impossible to apply immersive technology to reflect Alphonse Mucha's works, as his works usually demonstrate stereo figures which cannot be separated into different parts. Van Gogh's painting helps people who in that scene merge into the space. Audiences themselves are the parts that provide the most sense of movement in the quarries. They are the centrifugal viewers on the spot.

Quarries of light divided the picture into different parts, projecting them to several screens. People can watch this artwork from diverse dimensions. The screen in the center of the hall only shows the middle road which is suddenly stopped. The brushstrokes of this road are powerful and not desperate at all, so the screen provides the audience with the moment which shows the disappearance of dynamic, for the road, is cut abruptly. This is the vision point that unfolds the disappearance of power before people's eyes. The crows which were originally still in the painting can move, rise and vanish

through design. These flying crows bring back the dynamic, and the audience can feel that the power of this artwork disappears but again comes back. Designers added the sounds of breeze and fluttering of crows' wings, so the audience can watch Van Gogh's painting with their hearts. These sounds amplify the sense of movement. The space has become a vessel of the moment and was re-identified by the fading instant. Therefore, quarries of light emphasize the feature of post-impressionism, which is to conserve temporary movements in an everlasting canvas.

In all installations, the integrity of the work should not be compromised when the audience's figure enters the space. It is impossible to use the immersive technique in Moucha's work, as a textured portrait would be out of place. Van Gogh's simplified, symbolic brushwork gives ample space to the people on display. The figures can blend into the gallery, and the people are the most dynamic part of the whole picture, accentuated by Van Gogh's work as centrifugal viewers who are both present and absent. The broken road is cut out and placed in the center of the large exhibition hall. The brushwork of the broken road is not at desperate as it seems. It does come to a screeching halt, somewhat in that sense, and the broken road does fit the sense of Van Gogh's curling brushwork: all the strokes are powerful and have not lost their force. But elsewhere the strokes do seem to be too fine and lack incoherence. The strokes are still finely used; only the paths are powerful. The twists and turns are full of power. The other stagnant strokes cut off the powerful paths. The central display shows the moment when the power disappears in front of the viewer, and the point at which the power comes to an abrupt end is chosen for the center of the gallery. The crow moves with a series of actions like rising, hiding, displacing, and disappearing. The designer notices the point of view in the painting where the power disappears and feels that the power cannot disappear like that, the crow gives tension to the space and reintroduces a sense of dynamism. This dynamic experience is part of the visualization.

The sense of movement is a component of the visualization process. Van Gogh used quickly executed brushstrokes to capture something about how light moves and every brushstroke is dynamic. The hidden energy in the painting left a deeper impression through immersive technology on the public. Wheat Field with Grows should be a painting expressing the sense of the disappearance of power and a feeling of great sorrow. However, in quarries of light, images and sounds make the audience feel that the dynamic melts away but appears again, just like Van Gogh's life extinguished and re-burned once more. In this way, viewers can understand Van Gogh's fragile and lonely soul better. Wheat Field with Grows in quarries of light is a monument to commemorate the ending of Van Gogh's life and his career as an artist. That's why no painting can attend with a better result than Wheat Field with Crows. This artwork suits every condition of showing in quarries of light. Combined with immersive technology, the effect of this painting is inspiring.

The exterior scene under Van Gogh's painting brush like a wheat field has already provided the audience with the tension force of the space. Natural scenery could easily have such an effect. But Van Gogh's bedroom is an interior space. Like Wheat Field with Crows, the elements of the bedroom are considerably simplified. In a small room, there are several daily furnishings including two chairs, one desk and one bed [9]. The items hung on the walls are simple as well: six frames and some hooks. Nobody was depicted in this painting despite some portraits. It offers an opportunity for the public to become a part of the painting, too. Van Gogh's mental condition at this time was much better than in 1890. So the brushstrokes of the bedroom are much more ordered than in Wheat Field with Crows. Different from the madness and desperation of his last works, the atmosphere of the bedroom is cozy and quiet [10]. When people try to merge themselves into the painting, they would feel comfortable and relaxed as if they were at home. The integrity of this work is stronger as well so it's harder to break it into pieces. Thus the bedroom cannot show the unlimited continuity like Wheat Field. Extra sounds are with no need for adding to the exhibition in the quarries of light, as what the painting itself offers is silence. The most proper way to demonstrate this painting probably is to show the different corners of the bedroom, for each part of this painting is tight and well-balanced. No trail of movement can be found in this work. The effect of this painting is not striking as exterior scenes. In the same process of immersive transformation, the content of the original picture together with the author's will

to make the inner speculation clinging to Van Gough his spiritual world may be countered and re-identified as a device or horizon, which is full of interpretative opportunities for audiences. This mode of transformation, once established, is no longer held by the artist alone. The participatory identity will eventually take the authoritative position for the meaning creation mechanism of the whole series of art.

3. Conclusions

Van Gogh had a frenzy of creation to paint every interesting thing in his life, even those humble, restful and homely items. The fierce emotions he tried to convey to us are moving as well. Even if he wasn't accepted by most of the people at that time, he is unquestionably one of the most important post-impressionists in the history of art. And he taught us an impressive lesson: expressing the correct representation is not the only aim of painting. It is Van Gogh's symbolic brush strokes that show the transformation of space, helping the audience integrate into the scene. No matter whether his brushstrokes are ordered or orderless, the spaces created by him are moving. Plecy's concept of "Total Image" promotes the demonstration of Van Gogh's painting becomes more impressive, adding enduring potent effects to audiences' senses.

References

[1] Haberstich D. Grammaire élémentaire de l'image (Elementary Grammar of the Image) by Albert Plécy [J]. Leonardo, 1970, 3(4): 474-475.

[2] Innis R E. Between signification and communication [J]. Review of Georges Mounin, Semiotic praxis: studies in pertinence and the means of expression and communication, trans. Catherine Tihanyi and Bruce Wise, 327-342.

[3] Chipp H B, Selz P. Theories of modern art: A sourcebook by artists and critics [M]. Univ of California Press, 1968. 26

[4] Gombrich E H. The story of art [M]. London: Phaidon, 1995. 544.

[5] Jones K. Vincent van Gogh Teaching Program [M]. Washington: National Gallery of Art, pp.12.

[6] Monico L, Janssens K, Vanmeert F, et al. Degradation process of lead chromate in paintings by Vincent van Gogh studied by means of spectromicroscopic methods. Part 5. Effects of nonoriginal surface coatings into the nature and distribution of chromium and sulfur species in chrome yellow paints [J]. Analytical chemistry, 2014, 86(21): 10804-10811.

[7] Maurer N E, Maurer N M, van Gogh V, et al. The pursuit of spiritual wisdom: the thought and art of Vincent Van Gogh and Paul Gauguin [M]. Fairleigh Dickinson University Press, 1998.

[8] Van Gogh V. The letters of Vincent van Gogh [M]. Penguin UK, 2003.

[9] Palinhos J, Maia M H. DRAMATIC ARCHITECTURES. places of drama-drama for places [C]. Conference Proceedings. Porto, 2014.

[10] [10] Nagera H. Vincent van Gogh: A psychological study [J]. the American Psychological Association, 1967.