

The Fusion Application of Intelligent Convergence and New Media Art Therapy: The Healing Potential of AI Painting

Xufeng Ma

School of Journalism and Communication, Tsinghua University, Beijing, 100084, Beijing, China.

Yang Han

Graduate School of Advanced Imaging Science, and Film, Chung-Ang University
Seoul, 06974, Seoul, Korea.

Jianhua Yang*

School of Arts and Media, Wuhan Donghu University, Wuhan 430212, Hubei, China.

felixma231122@163.com

Abstract: Painting has the function of emotional communication, therefore, it can be regarded as a medium of communication, to achieve the impact on people's emotions. With the development of society and the gradual improvement of economic level, people's life has been improved, and at the same time, the pace of life has become faster and the psychological pressure has become greater. In today's society, intelligent financial media and new media have entered people's lives, and the development space of digital painting has been expanded. Through AI painting, the healing of human emotions can be realized, so the healing and development potential of AI painting has gradually emerged. This paper analyzes the development status of art healing, Outlines the theoretical basis of art healing, analyzes the needs of AI painting healing system, and finally explores AI painting healing in the form of cases.

Keywords: intelligent financial media; New media; Art healing; AI

1. INTRODUCTION

With the development of science and technology, we have entered the era of new media and digital era, and the society is running at a high speed. The development of intelligent financial media and new media art shows a trend of integration, and has a certain art healing function. The integration of the two also provides a new direction for the development of art healing. Based on this, this paper studies the healing potential of AI painting from the perspective of color psychology on the theoretical basis.

2. ART THERAPY IS GROWING

Art Therapy, also known as art therapy, refers to the use of art as the

medium to achieve the role of healing. It originated in Europe and the United States and belonged to the field of psychology in the early stage. In 1969, the United States established an art therapy organization named "Art Therapy Association". It has not been widely used in Western developed countries. Therefore, art therapy is not popular in China, and many people have not been involved in the research in this field. After the outbreak of COVID-19 across the country in 2020, the term "art healing" gradually appeared in the art world. Subsequently, "healing aesthetics" began to become popular in China, and experts in art and psychology set up topics to conduct in-depth research on it. For our country, art therapy belongs to an emerging field, and the construction of theoretical system related to art therapy is still in the early stage of exploration. At present, art therapy has been applied to many fields, but there is still a shortage of highly professional personnel, and there is a large lack of systematization and continuity in the related research of art therapy. However, the development of Internet technology in our country is good, and the development of network has laid a foundation for the research and development of art therapy. We are in a digital era. Smart phones and tablets have gradually become popular in society and become the main way of information dissemination, covering almost all age groups. It is highly necessary to take intelligent equipment as the carrier, integrate the healing effect of intelligent financial media and new media art, and heal people's psychology through AI painting. Art therapy has also gradually developed. In recent years, China has paid great attention to it and has become the focus of research by personnel in related fields. From the beginning of its development, healing is treatment, mainly applied to the treatment of mental illness, the same is true of art therapy, the main function is to treat mental illness, and later it gradually integrated with a variety of art forms, such as music, film and television, painting and literary works. For example, in *The Consolation of Art*, Alain de Botton innovated the perspective of the function of art, that is, art can also be used as a way of healing, to discuss the problems existing in life and put forward effective improvement methods, so as to make people's life more stable (Alain & John, 2021). The purpose of art healing is to achieve healing through the form of art. Great works of art help to manage the life of students, so that people's nervous emotions can be relieved. Alain de Botton (Alain & John, 2021) believes that when people realize that there are troubles in life, they can understand the appreciation of good things. It can also be concluded that art has the function of healing. In the current society, the application of art healing is gradually expanding and becoming more and more important (Li, 2022).

3. THEORETICAL BASIS OF ART HEALING

From poetry to narrative, from song to dance, art can always have a positive impact on people with mental illness, so it can be seen that art has a high importance. In the early stage, art therapy was the embryonic form of art therapy. In 1922, Hans Prinzhorn published *Pictures of Mental Patients*, in which he proposed the concept of "art therapy" for the first time. In the process of his research, he collected a large number of portraits of mental patients to explore primitive art forms from the state of mental patients. In addition, he also conducted in-depth analysis and comparison of Van Gogh and other artistic works. Mental patients have the impulse to paint, which can be traced back to the early development of human beings. The research of Hans Prinzhorn laid the foundation for the combination of art and psychology (Yu & Chen, 2023). With the development of society, Margaret Namberg, a specialist in mental illness, refined the concept of art therapy in 1940 and applied it to psychotherapy. From the perspective of patients with mental illness, if the patient is compared to a wound, then art is the flower that opens on the wound. Mental illness has certain visual manifestations, which can represent its own struggle with the disease, compromise and so on. For example, the famous Dutch painter Van Gogh created the oil painting *Portrait of Doctor Gachet* in 1890, as shown in Figure 1 below.

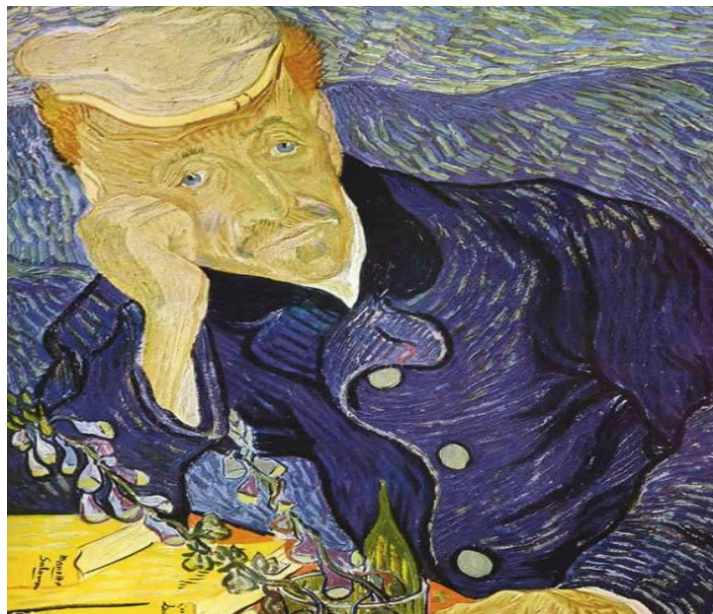


Figure 1: Portrait of Dr. Gachet

At the time of the painting, Van Gogh had been diagnosed with a mental illness and was under the care of Dr. Paul Gachet in a psychiatric hospital. In the *Portrait of Dr. Gachet*, it describes Dr. Gachet and a foxglove plant.

Foxglove is a kind of medicine, which is a kind of cardiotonic agent and is mainly used for the treatment of heart diseases. In the oil painting, Van Gogh compares Dr. Gachet to all doctors and establishes the image of the doctor. The body posture is at a strange Angle, slightly tilted forward, and it can be seen that Dr. Gachet looks sad. The overall color is blue, the table top is yellow and red, and the colors of the face and hands form a sharp contrast with the table top. Through the picture, people can see Dr. Gachet's irritability (Kim & Chung, 2023). Since 1949, those involved in art therapy have said that art has a positive effect on healing. After the end of the Second World War, professional therapists trained soldiers through artistic means to guide them to recover from psychological and spiritual trauma (Qi & Li, 2023). The outbreak of COVID-19 in 2020 has caused mental diseases in many age groups in the society, and the method of art therapy can treat them and help them recover their psychological and spiritual health, which can effectively realize the "healing of people's hearts" through art therapy (Vermesan et al., 2022).

4. ANALYSIS OF AI PAINTING HEALING SYSTEM

4.1 The impact of AI painting on emotions

Painting is a relatively common art form, which can bring great abilities to people. In ancient times, people were able to express things through colors and use different colors to achieve communication. From the perspective of emotions and emotions, painting can have a direct impact on human emotions (Zhang, 2018). For example, darker and darker colors can bring depressed emotions to people, bright red colors can make people feel nervous, and green and blue can make people feel relaxed. In art galleries, paintings painted by artists with various colors can affect people's emotions and trigger resonance between people and paintings. A good work will make people stop and think, and people's brains will quickly respond to colors. In addition, the internal environment of the human body can also interact with the external painting works. For example, when people see their favorite painting works, their breathing rate will accelerate, and when they see the soothing colors, they will feel calm and peaceful emotions. Therefore, painting can regulate people's emotions, and painting contains huge energy (Zhang & Zhou, 2023).

4.2 Emotional expression of AI painting

Painting, as a kind of art form, has the function of emotional expression

and emotional transmission. Painting integrates many elements in one, such as color, line and so on, which can convey rich emotions and affect the audience's emotions. From the perspective of the expression mechanism of AI painting and the factors affecting people's emotions, the expression mechanism of AI painting related to emotions mainly includes the characteristics of painting and human psychology, among which the characteristics of painting refer to the combination and interweaving of color and other elements, which together constitute a harmonious picture. Different color combinations, image arrangement, etc., will produce different emotional expression effects. In addition, the main factors that can affect people's emotions are the style of painting, cultural background and so on. AI painting style mainly refers to the types of painting art, forms of expression and so on. Different types of styles can convey different emotional effects. For example, bright colors can make people feel happy. Soft colors can make people feel quiet. AI painting can identify people's emotions and match appropriate AI painting (Rudolf, 2024). When the emotions expressed by users and AI painting are matched with each other, they can resonate, thus making the emotions more intense (Yin, 2022). For example, when users are in a bad mood, they can regulate their emotions by watching AI animations of positive emotions. Cultural background mainly refers to painting habits and emotional expression methods based on different cultures. Users with different cultural backgrounds will have different emotions even in the face of the same AI painting (Yang, 2023).

4.3 Emotion regulation of AI painting

Painting can not only express emotions, but also play the role of emotion regulation. Through the emotion regulation function of AI painting, people's emotions can be improved. In this paper, the process of AI painting research, mainly from the painting emotion regulation function, emotional influence factors and other aspects of specific development. The emotion regulation of AI painting can function in the human nervous system. Studies have shown that different types of painting can stimulate different psychological and physiological reactions of human beings. For example, lively colors can promote people's heart rate, so that people's spirit to maintain a more excited state, on the contrary, more soft colors can reduce the heart rate, so that people's tension, anxious mood can be relieved. In addition, there are many factors that can affect human emotions (Kostopoulos, 2018). AI painting playback rhythm, interactive interface, use of media, etc., will affect people's psychology and physiology. For example, when people see healing colors through smart phones, their

psychological pressure can also be relieved; on the contrary, when people see sad paintings through mobile phones, their mood will also become depressed (Tan, 2023). It has been repeatedly proposed above that AI painting can express emotions, such as joy, sadness, excitement, resistance and so on. There will be certain differences in the psychology and emotions corresponding to different emotions. Finally, the function of AI painting emotion regulation, its application value is very extensive, in daily life, AI painting can play a role of emotion regulation, help people relieve pressure, relieve mood, so as to achieve the ultimate goal of physical and mental health. In terms of spiritual healing, painting is widely used as a healing method, and its effect in mental regulation is significant. Therefore, based on the development of AI technology, AI painting has development potential in the field of healing (Xia, 2023).

4.4 Emotion assessment and recognition

In the AI painting healing system, emotion assessment and emotion recognition are relatively important links. Therefore, it is necessary to add an emotion measurement scale to the system. Users can truthfully fill in the emotion measurement scale according to their own feelings, and then the system can score users' emotions, behaviors, cognition and other aspects according to the user's filling in. In the process of research, this paper adopts PAD model, namely three-dimensional emotion model, to simulate users' emotions. In PAD model, P represents the degree of pleasure, A represents the degree of arousal, and D represents the degree of control. In the scale, these three dimensions can evaluate and identify users' emotions. In the AI painting healing system designed in this paper, after the user logs in, the user first uses the scale to test the emotion, and only needs to choose under the corresponding questions. Among the three dimensions, the P dimension is mainly to understand the emotion of the user's emotional development and judge its positive emotion and negative emotion. When the system judges the user's positive emotion, it will display "+", otherwise, If the user sentiment is judged to be negative, "-" will be displayed. This is a self-measurement and self-reporting method, and users can measure their true emotions by filling in the information (Hiran et al., 2024).

4.5 AI painting healing system scheme

To sum up, this paper proposes a method of AI painting healing system, which is divided into two parts: one is data collection part, the other is data

processing part, among which, data processing part is mainly applied in user emotion recognition and AI painting data selection (Huang, 2023). The third is the front end display part of the healing system, and the fourth is the user data information feedback module. Through the measurement of user emotion scale, the system is fully used in AI emotion recognition technology and PAD measurement model, so as to accurately identify users' emotions and lay a foundation for further user healing. In the healing module, this paper designs eight emotions to interact with AI animation, so as to carry out specific healing for users' emotions. As mentioned above, we are in the background of the information age, and the development of information technology is changing with each passing day. The integrated application of intelligent financial media and new media art healing can play a positive role in promoting AI painting and healing. Therefore, in the process of research in this paper, the combined application of intelligent financial media and new media is also based. The platforms of AI painting healing application have diversified characteristics, such as smart phones, tablets and so on. Users can carry out healing based on AI painting through various platforms such as intelligent financial media and new media, which brings great convenience to users (Wilson, 2003).

5. CASE OF AI PAINTING HEALING UNDER THE BACKGROUND OF INTELLIGENT FINANCIAL MEDIA AND NEW MEDIA

Intelligent financial media and new media are technical forms generated under the interaction of multiple factors such as information technology, media technology, cultural industry and social demand. It not only integrates the advantages of traditional media, but also can make use of digital technology, network technology and other high and new technologies to promote information dissemination faster, wider and deeper. Based on intelligent financial media and new media, AI painting healing is carried out. This paper analyzes the requirements of AI painting system, and then designs an immersive AI painting healing system. The system designs three interactive functions, one is to obtain the user's emotional information; Second, to identify the user's emotions, output the final results; Third, users are matched to the AI painting space module to bring immersive AI painting treatment to users. A login page is designed on the mobile client. Users enter the page manually with their account number and password, and then provide emotional data for the software

by filling in the emotional scale. The system analyzes the data according to the test results of the user scale and guides users into the healing space. Can perform AI-style healing experience. The system classifies human emotions into eight categories: joy, relaxation, dependence, gentleness, boredom, contempt, anxiety, and depression. Different emotional analysis results can guide users to different emotional healing pages. In different emotional Spaces, users can conduct interactive analysis with users and carry out specific healing. Take repressed emotion as an example. When the system judges that the user is depressed emotion, it enters a dark and barren scene. The page is mainly dark purple, symbolizing the user's repressed emotion.

In the initial page, there are elements such as trees, flowers and plants, and each element can interact with the user. When the user drags the tree element, the tree can grow leaves. After the user increases the wind speed, the leaves turn with the wind, and the page becomes a little chaotic, which symbolizes the user's nervous mood and anxiety. When the user drags the flower element on the page, the otherwise dark flower will glow bright yellow, adding life to the otherwise deserted scene. The user adjusts the wind speed again, and the flower element flutters with the wind. The bright flowers swish and shine, making people gradually relax. Then the user continues to adjust the wind speed, the wind gradually stops, and the elements on the page are quiet.

The sky gradually brightened from dark purple, and the whole picture is bright, quiet and clean, which makes people relaxed and psychologically relieved. The user can adjust the time, and the scene in the screen gradually becomes daytime. The blue sky, white clouds, lush grass and lush trees bring positive emotions to the user, which can heal the originally depressed emotions of the user. To sum up, art therapy originated in Western countries and was first used for the treatment of mental diseases. With the development of society, the application scope of art therapy has been gradually expanded under the background of the combination of intelligent financial media and new media, and its effects have been obvious in emotional regulation and other aspects.

In this paper, in the form of a case, the AI painting healing system is designed to study the AI painting treatment scheme, which is innovative to a certain extent. Previous studies can conclude that art healing does have a positive effect on mental illness. With the development of technology, AI painting healing is applied to various scenes, and there is a large space and potential for development.

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