

Research on the Strategies of Music Creation and Application in New Media Artistic Works Taking the Work "Crows Are Chased Blossoming on Collision — Light in Space" as an Example

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ABSTRACT

Today, with the continuous development of interactive technology, the scope of new media art is also constantly extending, and the composition of music also needs to change according to specific conditions in the specific environment and genre. The music creation is not only required to have aesthetic value and function conducive to strengthening the realization of immersive music effect, but should also consider the background and connotation, which plays a very important role in the transmission of the overall concept of the work and the stimulation of emotion. By deconstructing and analyzing the music creation and production level of a new media art work, this paper mainly takes the time process as the research thinking context to discuss how music connects the visual and tactile elements and cognitive feelings in the work. From the analysis of creation concept, choice of sound materials, music design, digital audio technology processing and other aspects, it explores the promoting role of appropriate music creation and application strategy under the demand of immersive genre to the work as a whole.

Keywords: *New media art works, Immersive electronic music, Music review, Music creation and design.*

1. INTRODUCTION

For hundreds and thousands of years, people have been interpreting and asking questions about the "life" and "death" of human. As our lifestyles and ways change, more works of art try to make people abandon the material and representation, return to the original spiritual essence and desire of human beings, and feel us who belong to the natural life under the binding of the mechanical maze, so as to trigger the reflection on the relationship between ourselves and the world.

"Crows are Chased and the Chasing Crows are Destined to be Chased as well, Blossoming on Collision — Light in Space" (hereinafter referred to as "Crows", is a new media art work based on interactive digital installations. The visual elements of the birds are adopted, and the traces left by the birds after flying are expressed in the form of

spatial calligraphy. It is worth mentioning that the spatial calligraphy has been vigorously promoted by TeamLab for many years. This combination of calligraphy and three-dimensional space is the interpretation of three-dimensional space by the brush edges, ink dyeing and writing power in calligraphy, and the representation of the traditional dynamic beauty of calligraphy works experienced from the "plane finished products".

2. BACKGROUND OF CREATION

2.1 Background of the Creation Team

TeamLab is a Japanese art team that has been active since 2001 and has grown into a team of "Ultra Technologists" with over 500 members. This organization, which gathers painters, composers, mathematicians, architects, program developers, engineers and technicians from various fields, tries

its best to explore the intersection of art, design, nature and science and create a crossover new media art. Their new media art works emphasize discovering the beauty of the world and creating a future where the world can be changed.

Nowadays, many new media art works always focus on the "newness" of equipment or form, but TeamLab never takes technology as the first element of the works. They think that technology is only a means to broaden artistic expression, and the essence lies in the creation of works.

2.2 Analysis of the Background of Creative Idea

According to the data, eight birds is the "divine bird" in Japanese culture, which is characterized by three feet and YASAKANI hanging on the body. According to the "Nihon Shoki", Atemasu (the sun god) commissioned Hachio to guide the lost Emperor Kamiwu, thus having the meaning of the angel of the sun god who protects peace and guides victory. It is also used as the emblem of the Japan Football Association to bless victory.

In addition, due to the development and evolution of the Japanese bird belief from ancient times, birds and the human soul gradually have a connection and symbol, appeared in the birth and death of people's rituals. As long as there is death in the world, it will always exist, with the ability to heal any injury. Even the "death" can be reborn in the next generation, representing the boundlessness and cycle of life and death.

Therefore, in the work, the audience can not only see the crows with a "black image" flashing with light in the picture, which forms a strong contrast with the darkness of the background and is the symbolic performance of the bird, but also see its indomitable flying of the birds, where the image of its death is very positive and fearless, showing the symbolic rebirth of the birds and life.

3. DESIGN AND COMPOSITION OF WORKS

The music used in the analysis, "Crows are Chased and the Chasing Crows are Destined to be Chased as well, Blossoming on Collision — Light in Space", was selected from the version of Immersive Art Exhibition of Teamlab in 2016. The

following part takes the development of music as the scene of the story and divides the work into three parts to understand.

3.1 Scene One (00:00–01:16)

As a collection of interactive and visual works, it has a large degree of immersive effect itself. Here electronic music takes on the role of a scene music and ambience music, and adds dramatic tension where necessary to deepen the immersive experience. Musically, the work begins with a low frequency tone, like the flapping of a bird's wings. The timbre of a modulated wooden wind instrument with a large reverberation serves as the main melody and the elements of ethnic instrument characteristics appear in the starry light and shadow around, paving the way for the following plot.

Dot-like short flickering percussive synthetic timbre and long line metallic electronic synthetic timbre are maintained as the laying environment layer. The random appearance of the dot timbre in the panoramic sound field strengthens the immersive effect of the starry sky, and the movement phase of the main melody timbre swirls around in a spinning way. Surreal elements composed of a large number of electronic sound materials appear reasonably in the scene of "Star River", which is not only mysterious but also "real" enough to conform to the audience's psychological cognition. In this paper, the realization means of cognitive immersion in immersive music effect is applied, and the hyperrealistic environment with the characteristics of virtual world is vividly reproduced through the hyperrealistic music materials with proper modulation and collocation. That is, "through the artistic description of specific visual blending of scenes, the recipient can be introduced into the artistic transformation of infinite imagination space"¹. As a narrative background, it plays a very important role in shaping the immersive effect of applied electronic music. In addition, the movement phase of the main melody is swirling around, which is inspired by the "circle phase" in Zen Buddhism and conveys the Zen doctrine of "perfection is epiphany" advocated by religious philosophy, and foreshadows the appearance of spatial calligraphy in the next scene.

1. Zhu Zhirong. Chinese Aesthetic Theories [M]. Beijing: Peking University Press, 2005, P173.

In a deeper understanding of the first part, if the audience is watching carefully, will not be aware that it actually takes up a longer length of 1 minute and 16 seconds as the introduction. It seems that the time here has stopped and the objective time is still flying away, reflecting the aesthetic thought that "music is the art of time"².

At 01:02, the electric piano sound with the sound of water drops appears as the accompaniment. Through the modulation of the spatial sound field and the attenuation of high frequency and ultra-high frequency, listening distance is very distant and obviously independent of original level. The cleverness of selecting piano sampling timbre lies in that "it can more accurately reflect the acoustic environment around the instrument when it is played"³. Right now all the timbres display an ethereal and transparent timbre effect. From the spectrum diagram of melody threshold of this section (as shown in the Example 1, "Figure 1"), it can be seen that the melody of the first half is simple, with more high-frequency overtones and stronger music penetration. The light and shadow picture at this time is also clear and simple thick lines (as shown in the Example 2, "Figure 2"), which presents a huge visual difference from the thick music and picture formed by the addition of multiple timbre later.

2. (Poland) Libelt. *Aesthetics, or the Science of Beauty* [M]. 1849, P107.

3. (US) Pejrolo, A., DeRosa R. *Acoustic and MIDI Orchestration for the Contemporary Composer* [M]. Post & Telecom Press, 2010, P46.

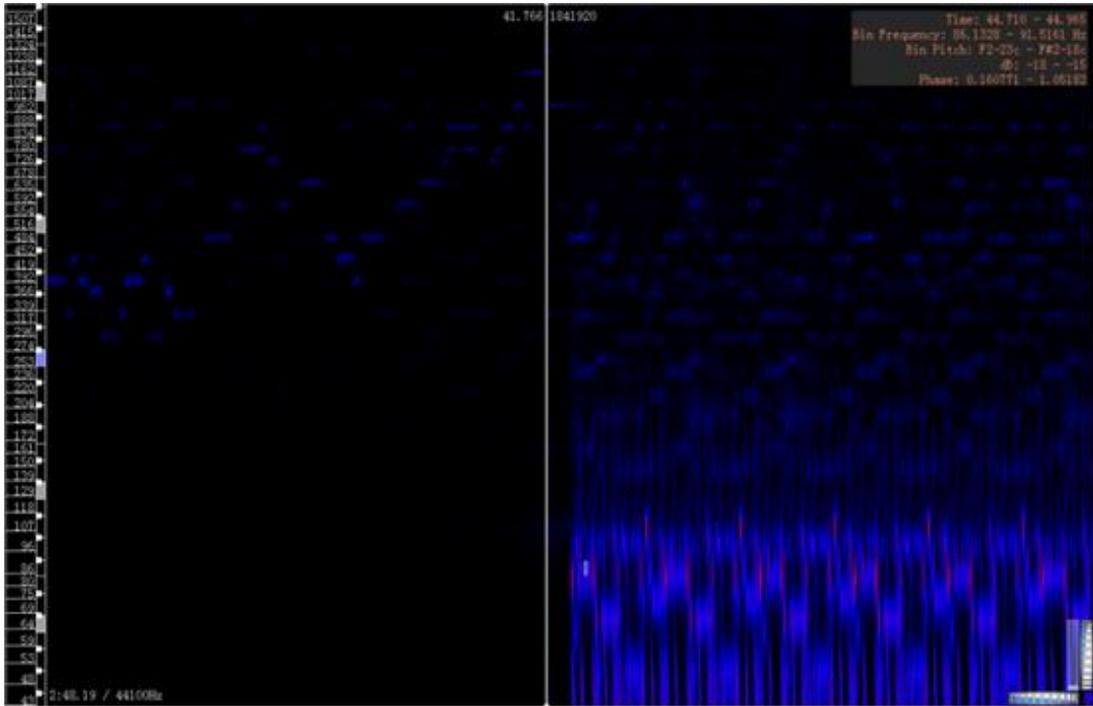


Figure 1 Example 1 Spectrum of selective threshold values.



Figure 2 Example 2 Selected exhibition screen schematic diagram.

3.2 Scene Two (01:17–03:03)

With the sudden advance of the sound of taiko and cymbals, a burst of positive beat percussion sound is connected with the sound of the rapid gliding. The crows that originally perched on the branches and slowly spread their wings in the picture soar into the sky at this time. With the addition of a percussion layer, the music suddenly

becomes majestic and intense. The main instruments are electronically-synthesized folk strings, while the percussion instruments are modulated gongs, taiko, cymbals and bells, etc. However, the strong electronic sense of interwoven electric bass timbre and other modulated timbre echoes the light track of the 3D spatial calligraphy in the picture. The traditional art based on science

and technology makes the perfect integration of electronic timbre and national musical instrument.

The visual immersion of the crows chasing each other's gorgeous figures is consistent with the melodious melody of the electronic composition of the national string music. The work, which covers an enormous area, is endowed by the audience with the right to walk freely in the infinite virtual space surrounded by light and shadow. The crows are

chasing each other in the air, and the melody lines in the music are also moving around in the three-dimensional space. This circular movement is based on the ink marks of the spatial calligraphy, which also conveys the Zen principle of "circle phase" in religious philosophy. Therefore, in the late stage of the synthetic string music of the theme, the processing of pitch bending is added, and the dynamic change of "circle" is obviously felt in the auditory sense.

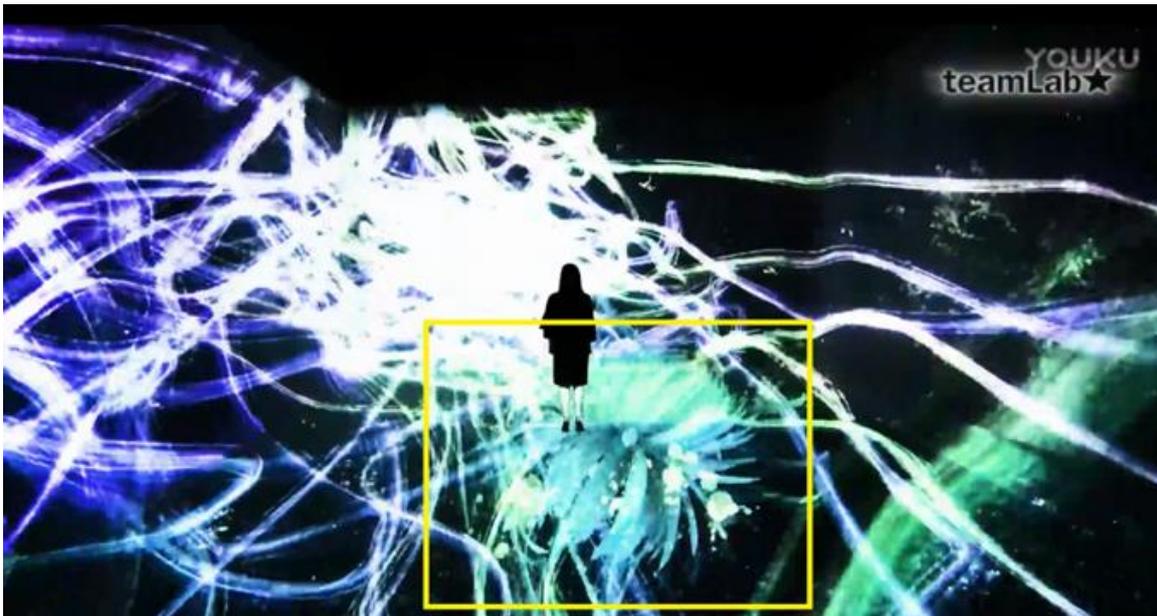


Figure 3 Example 3 visual screen corresponding to the synthetic timbre made by sand hammer.

In addition, although the crows try to avoid the audience, but the high-speed flight is like the fleeting time of light and shadow, where there is always something unstoppable will happen. Crows may also collide with each other or with spectators, bursting into brilliant flowers (it can be seen from "Figure 3", the marked circled part is the flower formed after the collision). At the same time, there is a stimulating music when the flower is blooming, which is composed of the fade with the electronic sense of the sand hammer to adjust the timber. The crows flying like a bamboo are used to express the "tireless" life in the world. Different from which is similar to Tagore's poem "death is like the quiet and beautiful autumn leaves, neither flourishing nor panicking, with an air of smoke"⁴, the "Crows" depicts a passing that blooms like a summer flower.

From spectrum analyzer below (see the Example 4, "Figure 4") it can be seen that the prominent five longitudinal lines (one with the tag circle) is the birds died after collision under the interactive design of sound performance. Instead of being stable duration and rhythm patterns, they are accidental, which means that the audience's behavior participates in the creation and expression of this new media art work. In this behavior, the artist's creativity is extended. This extension is based on the relevant progress of the work itself, which not only strengthens the audience's sense of participation, but also strengthens their immersive experience of the work so that they can get a better understanding. Through such experience, the audience as if had witnessed the fierce competition between time and life and death, which although people try to avoid mentioning but cannot stop any way.

4. Tagore. *Stray Birds* [M]. Zhejiang Literature & Art Publishing House, 2014.

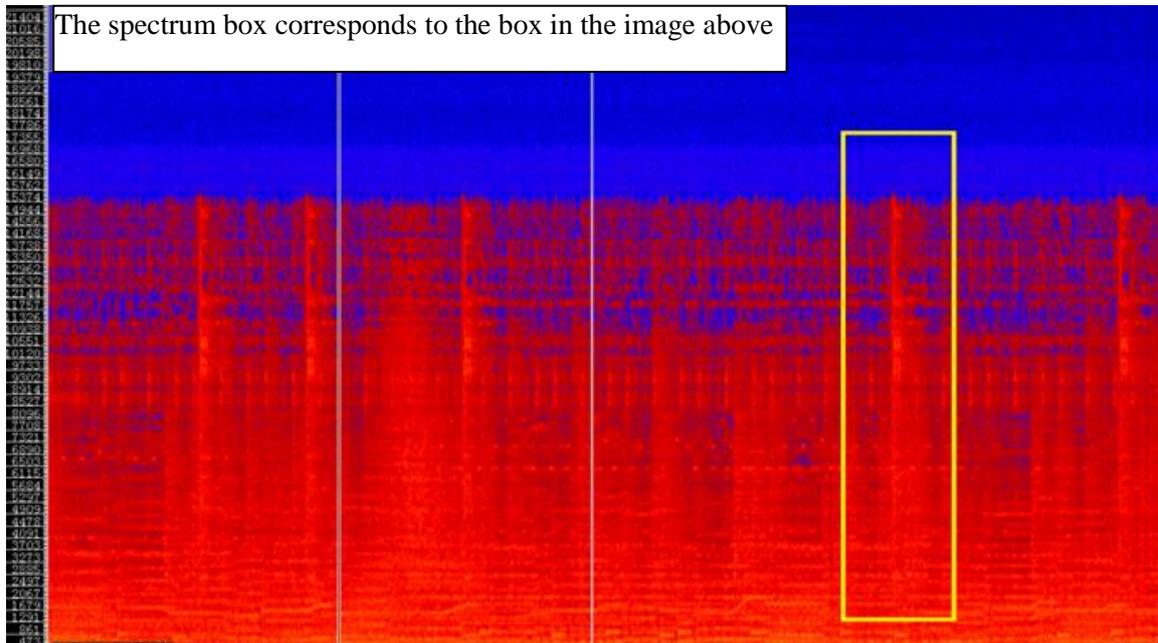


Figure 4 Example 4 Spectrum example of sand hammer synthetic tone.

3.3 Scene Three (03:04–04:02)

This section begins with the music returning to an atmosphere as the Pad lays low, and the ethereal sound effects of metal percussion instruments play irregularly everywhere in the panoramic sound field, creating the spatial effect and atmosphere of immersive music. Percussion instruments cooperate with the picture fading out at a very slow speed, while designing an effect that floats away into the distance until the music ends. This musical dilution that avoids strong emotional expression is handled very skillfully. "Simple Angle and unexpected score can express the emotion of the film without letting the audience lose what they should experience"⁵.

At this time, audience with different values have different understandings: life will eventually return to dust however fearless and high-hearted it once was; life is inheritance and development, so the perish of body is not the end, and people can live just in another form of existence such as summer flowers living in the memory of someone else; for some people who hold the stereotyped view as "being broken is being destroyed", can they touch the "ominous" in the traditional impression

with respect and hope? In the face of shattered flowers formed after the collision of crows, they may also have a different state of mind. It is interesting that TeamLab, as a global tour exhibition, does generate different perceptions in different cultural backgrounds. For example, in Mexican culture, death is the highest meaning of life, and life and death complement each other to complete a life cycle, will they feel full of the joy of perfection after watching the work "Crows"?

4. CONNECTING THE MULTI-SENSE ATMOSPHERE TO SHAPE THE SUPER SUBJECTIVE SPACE

"The essence of new media art is an immersive experiential art or interactive media art, in which the audience can realize real-time interaction with digital art works through the senses of sight, hearing, touch and smell, so as to fully integrate, experience, immerse and communicate emotionally."⁶ Such art forms emphasize the interactive experience between people and space. When the boundary of art is broadened, the audience can be more flexible in the space and have the ability to choose or shape the space. A great deal of electronic timbre and the modulation and

5. Fred Karlin. On the Track [M]. Post & Telecom Press, 2017, P157.

6. Li Shida. An Introduction to Digital Media Arts [M]. Beijing: Tsinghua University Press, 2015, P67.

application of traditional musical instruments in the work "Crows" are sampled with the sounds and original musical instruments in real life, which can not only create a space environment in line with the audience's cognition, but also give a lot of inspiration. It endows music with a great sense of modernity and national trend. Under the interaction of multiple senses, it shows the unique virtual reality shaping ability of new media art.

New media art emphasizes the interactive experience between people and space. When the boundary of art is broadened, the audience can be more flexible and have the ability to choose or shape the space. When the audience chooses to shape this space — Ultra Subjective Space — a series of variations can be made based on different interactive choices while maintaining the artistic charm. The physical space is measured by acreage, and the expression means of new media art has the characteristics of infinite ductility and spatial adaptability, so that the audience's psychological area spreads to many places that cannot be seen from the vision, and more flexibly shapes the virtual and immersive nature of the space. In other words, the virtual spatio-temporal relationship in "Crows" is shaped. The combination of different elements in different times and different dimensions disrupts people's real feeling of time and space.

5. CONCLUSION

By breaking through the barriers of music, art, calligraphy and science, the work cares about people's five senses and hearts, inherits and innovates the connotation of traditional culture, and calls for the concept of transcending space and boundaries. This work "Crows" liberates not only the boundaries of time and space, but also the boundaries of the audience's psychology. All choices are subjective and active, and can produce complex and varied feelings and interpretations. This kind of accidental art form, which combines planned installation art and random on-site interaction, advocates the integration of art and real life to bring the surreal excellent experience effect to the audience with the composite new media art.

The work whose audience are the mass instead of academic community, has a certain level of creative ideas, and both the artistic level of creation and the expression level of multimedia device

technology are in an original style. With a look at the Imitation and Application of Some Works of New Media Art Works in the Current Commercial Market, it can be seen that at present, some works in the commercial market imitate and apply some superficial techniques of new media art works as "selling point" and "gimmick". As a creator, it is necessary to uphold the original intention of artistic creation and create more brilliant sparks with modern multiculturalism and technology on the premise of maintaining the artistic and aesthetic value of our works.

AUTHORS' CONTRIBUTIONS

Song Guo was responsible for experimental design and analysed data; Xiaorui Guo wrote the manuscript and contributed to revising and editing.

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