

Visual representation of sound in modern art

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Abstract: As sound art has become more widely known, more and more artists have begun to create works in this form, most frequently in the form of what is referred to as “sound visualisation.” However, in terms of actual creation and artistic expression, the fusion of sound art and visual art sometimes appears to be incongruous and, to a certain extent, even hinders the meaning of the work itself. Through an analysis of the way sound art works are created and exhibited, this paper presents a reflection on the interplay between sound art creation and exhibition for the author and the audience, and reflects on the practical role of sound art and the significance and impact of combining it with visual art. By re-examining today’s artworks, the author hopes to explore the new fusion of sound art and visual art created in the current era, thus promoting the continuous improvement and development of sound art as a new artistic language.

Keywords: Sound Art; Visual Art; Sound Visualisation.

I. Introduction

(1) Background of the Study

There is no universally agreed definition of the concept of art, and its connotations are constantly updated over time and as it evolves, as is the sound art that it encapsulates. It is a phenomenon and a thing that recognises the world in its own unique and dynamic way. It is a unique practice of being true to things and even to the heart, using the universally popular notion of ‘beauty’ in art. There is no doubt that when an artist creates a work of art, he or she adds a personal touch to it, adding a unique sensuality to a rational creation. This makes the work of art a bridge between the author and the viewer. The sense of hearing, unlike sight, is limited by a physiological construct that cannot be shielded at will, so sound art is distinct from other visual-based art forms. John Cage’s ‘4’33” introduced the world to sound art for the first time. However, although Cage’s thinking breaks with tradition by arguing that music is ubiquitous, his view remains within the established framework of music, and the larger latitude of existence of sound, which encompasses both music and noise, is ignored (Licht, 2019). This underlying perception led to sound artists becoming, in part, ‘experimenters’ at the time, whose work was not understood or accepted by musicians or listeners, and even labelled these ‘experimenters’ as semi-professional. The unique role of sound art as a bridge to the soul was continually, albeit unfairly, overlooked by the public.

On the other hand, sound installations require a quiet environment in order to be listened to and perceived intently by the listener. In many cases, sound art is time-based and its presentation is dominated by electronic signals coming out of headphones or speakers. From this perspective, it would appear that sound art would find it challenging to entice art collectors or even audiences due to its absence of the so-called largely visual performativity. The truth of the matter is that sound art, as a unique art form, is presented with strong emotional overtones (Gafni and Tsur, 2019). It is gratifying to note that its appeal has been increasingly discovered and understood in recent years, and that artists have begun to use various forms of sound art and try to break through the shackles of sound art expression. Sound visualisation has gradually emerged into the public eye.

(2) Development of sound visualisation

The history of sound visualisation can be traced back to the end of the nineteenth century. Wallace Clement Ware, a renowned architectural acoustician, has used ‘Shadow Graph’ technology to bring sound to life for the first time in a concert hall. This practice can be defined as the first fusion of sound art and visual art. Unfortunately, as time went on, the co-performance of sound art and visual art did not develop as quickly as expected, and it is only in recent years that it has come to the fore again. With the addition of the mess media and the growing spiritual and cultural needs of the people, sound visualisations are finally being shown in various art galleries. Predictably, however, visual sound art today requires more thought and scrutiny. As the focus of sound visualisation shifts from sound to vision, the artistic value of sound itself is directly or indirectly neglected. The balance between the auditory and the visual has therefore become an important issue in the art of sound visualisation.

II. The modern interplay of sound visualisation and visual art

(1) Contemporary sound visualization expression

Due to the nature of sound in our universe, it can play a crucial role in how people create their perception of the outside world (Haukamp, 2023). Sight and hearing are the two basic senses that allow humans to explore the world and transform it. Visual art forms, such as painting, sculpture or photography, are diverse and intriguing. Unfortunately, sound art has long been considered a marginal contemporary art form that is difficult to interpret, complex to study and at the same time considered to be a poorly paid art form. Many artworks therefore use sound as a mere visual accompaniment, rather than as the primary symbol of expression. This inconsistent approach to creation is often presented in the expression of immersive works. Immersion, meaning the combined effect of visual and auditory senses, is experienced as if it were real, often through a combination of images, video and sound (audio-visual). However, modern immersive art has, to some extent, placed too much emphasis on the visual and too little on the auditory. The world’s first permanent immersive artwork, “the star” immersive

experience area, created by the Ramus Art team in Sydney, is an illustration of this. The work is a glittering, sumptuous digital artwork that blends in with lots of dazzling light, water and sound. From a visual point of view, the work is undoubtedly mesmerising. The Ramus artistic team places a lot of attention on the visual, and the sound is clearly, and yet again, a tool to help the visual. From the perspective of sound art, however, this work fails. It is one of those works that typically ignores the expression of sound art, and is a typical example of the link between sound art and visual art in this day and age. When sound and visuals are presented together, the general public subconsciously takes the visual as the primary art form of the work. It would be a shame if artists or art groups were to create immersive artworks based on visuals alone. Sound, as the most important part of the 'immersive' experience, should not be taken for granted as a secondary concept.

The purpose and motivation of sound visualisation is in fact largely to show noises that cannot be promptly and directly noticed inside the viewer's field of vision. This is fully realised by Korean-American sound artist Christine Sun Kim, a deaf artist, who redefines the notion of sound and silence through painting, installation, video and performance, questioning the auditory responses people are trained to make in response to the sounds of their surroundings. Her work 'Pianoiss... .issimo (Worse Finish)' appears to be a tree diagram made up of numerous letter "P's". The "P" stands for a weak note in the score, "PP" for weaker, and so on, with each additional letter "P" indicating a weakening of the sound until there is no sound at all. With this clear, brief and precise approach to sound visualisation Christine puts her challenge to the popular belief that silence is linked to deafness. "You can never achieve total silence; silence is an obscure sound (Kim, 2015)". In this way, the visualisation of sound is perfectly expressed, using only lines, colours and letters to bring to every audience the most difficult expression of sound, silence, and the concept of sound as experienced by deaf people. It is worth noting that, despite the author's representation of sound through various forms, her unique experience of sound is different from the norm, so that sometimes the differences in the work can be slightly alienating to the viewer. However, this is also representative of Christine's definition of her own voice. This is something that all sound artists need to think about and practice.

In addition to the above-mentioned three-dimensional and graphic forms of sound art, recent years have seen a proliferation of artists creating sound visualisations through real-time algorithms and algorithmic settings. Through modern technology, they transform cold figures into sensual sound symbols that resonate with the audience's auditory system. Ryoji Ikeda, a Japanese visual and sound artist, is one such artist.

In 2021, Ryoji Ikeda held a solo exhibition of his sound artworks at the 180 Strand Gallery in London, UK. One of the most impressive works is the series Test Pattern. The work uses a large number of texts and computational programs to project data onto the floor in rapid "flashing lights", with speakers placed in various corners of the small space. Ryoji Ikeda brings a variety of 'raw' sounds within the range of the human ear to the audience's senses along with the lights. The audience is taken through a digital re-examination of the world that surrounds us, amidst bursts of extremely fast frequencies and the maximum hertz heard by the human ear. The series is a perfect combination of audio-visuals, intertwining the two and expressing Ikeda's thoughts together. As a modern work of sound visualisation, there is no constraint between sound and vision, nor is there a clear sense of strength or weakness, which is valuable and worthwhile for the creators of sound visualisation artworks today.

(2) Sound visualisation and soundscapes

When sound art is mentioned alongside world art, one aspect that cannot be avoided is the soundscape. The concept of soundscape was developed in 1967 by Michael Southworth and is defined as the perception, experience and understanding of an individual, group or society of its environment in a given scene or context. It is clear from this definition that the concept of soundscape is in fact perceptual, and that it is subject to the will of man. Sound art is therefore, to some extent, limited by the connotations of the soundscape. Sound visualisation is inextricably linked to the soundscape, and when sound is presented to the viewer in visual form, the connotations of the soundscape are incorporated into the visualisation in the process of its transformation. When the work is exhibited in a gallery or art space, it is once again integrated into the exhibition space, giving the work a new and surging vitality. It can be said that soundscapes are an integral part of sound art and visualisation. The first fusion of soundscape and sound art was in the Phillips Pavilion at the 1958 World's Fair, where Edgard Varese's electronic music piece *Poeme electronique* and Lannis Xenakis' tape work *Concret PH* were played on a loop throughout the gallery. At the same time, slides and films are played in this exhibition area, which turns the entire Phillips exhibition area into a large multimedia pavilion, the whole of which could be called the first sound installation artwork.

However, as the field of sound art continues to advance and the art of soundscape and visualisation continues to be explored, new thinking has emerged. For example, is the concept of a soundscape the embodiment of sound? Sound researcher Wang Jing gives a negative answer. In her opinion, although the concept of soundscape is very important for sound, it is somehow unfair to the expression of sound. The way in which soundscapes are understood remains visual. And in essence, sound and light are heard and appreciated in a completely different way in their transmission, and to interpret sound in a visual way is to lose the expressive power unique to sound. It is true that in the exploration of sound visualisation it is biased to interpret a completely different field in accordance with what is already known, but from an artistic point of view the visualisation of sound based on the concept of soundscape is impeccable and encouraging. This is not just a step forward, but a figurative expression of the 'non-existent' object by sound artists, an exploration of the application of the sensual to the visible. While it can be seen that sound visualisation does not, to a certain extent, accurately represent the nature of sound, it is worth acknowledging the significance of its creation and the way in which it interacts with the soundscape.

(3) How is sound visualization defined?

As the concept of sound is increasingly addressed and used, sculpture, painting, collage and even felt art are all moving towards

sound in contemporary art. The space required for the exhibition of individual works is becoming more and more large and intimate. In many cases, sound has even replaced some of the things that need to be shown visually. While as a sound practitioner it is gratifying to see the importance of sound being constantly mentioned, on the other hand, the definition of sound visualisation seems to have become more ambiguous, and even the need for the label sound visualisation to describe a work has become increasingly unclear. British media artist Neil Mendoza's sound art piece 'Robotic Voice Activated Word Kicking Machine' has won the 2017 Life Geek Top Creative Award. In this production, what the audience says to the speakers is converted directly into text that appears on the screen, while some of the text is re-identified by the speakers at the other end and played out again in the real world. There is no doubt that this work is a typical sound visualisation. But what makes us think it is? If it is the fact that sound can be seen within a medium, then clearly either John Cage's 4'33" or Janet Cardiff's Forty Part Motet The former is the medium of the chattering engine, the opening and closing of the mouth and the stamping of thick-soled shoes, while the latter is the medium of the vibrating speakers.

From a personal point of view, although modern art blurs the boundaries between the various forms of artwork, the observer should still be able to make these distinctions. A proper appreciation of sound art will help it to express artistic values in a way that visuals cannot. Secondly, it is reasonable to see the transient responses of sound art as emotions and intentions, rather than simply as the so-called 'entrance to the artwork'. Finally, from the moment one decides to begin to appreciate sound art, one should entrust ideas and perceptions entirely to the work of sound art itself. Only then can sound art be truly understood and resonated.

Conclusion

By analysing the characteristics and creative methods of modern sound art, this paper takes a fresh look at the pros and cons, techniques and connotations as well as the appreciation and feelings of sound art in the current era by way of a work analysis. It is worth considering the fusion of sound art and visual art. Although many people are keen to experiment and some artists have produced impressive presentations, the visualisation of sound art is still dominated by visuals, due to the short history of 'sound visualisation' and the lack of precise artistic positioning. The reasons for this are not only the long history of visual art, but also the fast-paced and colourful nature of the modern city, which emphasises visual impact at the expense of the sense of hearing. If visitors can grasp the old way of visual appreciation while recapturing the close connection between the human ear and the brain, I believe that the fusion of sound art and visual art can become unique in the history of human art, unlike other visual art forms such as painting and sculpture.

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