

Study on the Dramatic Creative Thinking in Stockhausen Mixed Electronic Music Taking “Sirius” as an Example

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ABSTRACT

This article takes the mixed electronic music creation of German avant-garde composer Karlheinz Stockhausen as the research object, and analyzes the work "Sirius" from the perspectives of text score and creative concepts. It comprehensively sorts out and summarizes the important characteristics of dramatic creative thinking in its hybrid electronic music, such as "roleization", "plotlinization", "fictionality", and "multidimensional dialogue", in order to provide useful inspiration and reference for the creation and research of contemporary electronic music.

Keywords: *Karlheinz Stockhausen, Mixed electronic music, Dramatic creative thinking.*

1. INTRODUCTION

In today's era of continuous development of electronic music technology, the listenability, technicality, and observability of works are increasingly valued. People's appreciation of electronic music has also shifted from simple appreciation to a comprehensive viewing of creation, performance, technology, emotions, and other aspects. Under the influence of dramatic creative thinking, the addition of lighting design, performer's body movements, dance, language, and other elements to music works provides more possibilities for music creation and interpretation. The use of dramatic creative thinking to create electronic music has gradually become an inevitable trend in the development of the times.

Since the mid-1960s, Stockhausen has gradually come into contact with and learned about the cultures of different regions, ethnic groups, and religions, and has incorporated these diverse cultures into his own creations. Starting from the 1970s, influenced by Einstein's theory of relativity, a series of music works about the universe were created. With the advancement and development of science and technology, the invention of devices such as phonographs and broadcasting has gradually led the presentation of electronic music

towards theatrical stages, outdoor spaces, and architectural spaces, injecting spatial concepts into the creation of electronic music. The dramatic creative thinking in his works makes his music full of novelty in terms of creation, notation, and stage presentation. Through visual stimulation and the transformation of music space, he seeks to arouse the audience's interest in music and directly expand the expressive power of electronic music. People usually regard this as a symbol of his music style.

2. TEXT AND SCORE ANALYSIS OF “SIRIUS”

“Sirius” was created between 1975 and 1977 for electronic music, trumpet, bass clarinet, soprano, and basso bass. “Sirius” presents a science fiction story through music, where four messengers from Sirius come to Earth to teach humanity the music of the Sirius sphere, and then return to their own planet. This work is an invitation from the West German government to celebrate the 200th anniversary of the United States of America, and Stockhausen dedicated it to the "pioneers of Earth and space".

Stockhausen once stated in an interview that the ideal performance venue for "Sirius" should be square or circular and the performance area should

be higher than the audience position. Four soloists stand in four different directions on the field, representing the east, south, west, and north directions. Two speakers are added to each direction on the left and right sides for sound amplification. The main console is located in the center of the performance venue, with eight rotating spotlights arranged in four groups of audience seats facing the main console. These spotlights shine on

the starry sky patterned ceiling of the performance venue, and with the flow of light, they immerse the audience in the "vast universe" from both auditory and visual perspectives. The composer's creative notes and the layout and design of the performance venue all reflect the composer's "cosmic" musical concept and the creative concept of "spatial" music. ("Figure 1")

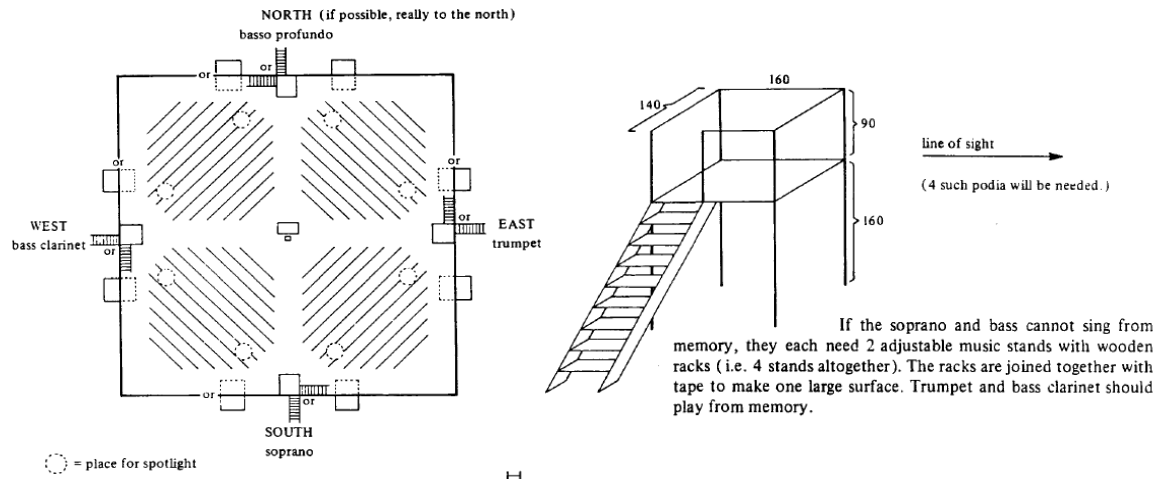


Figure 1 Layout of the performance venue for "Sirius".

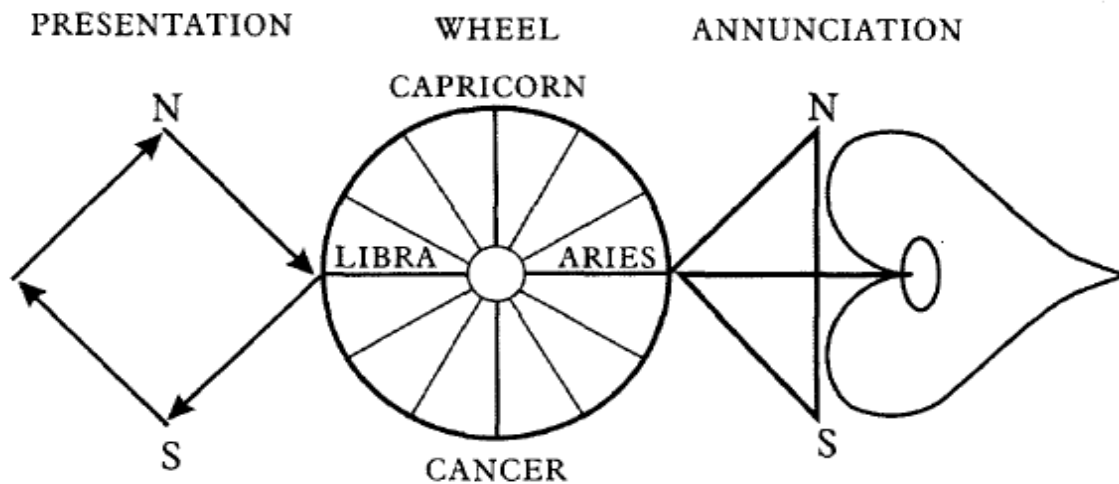


Figure 2 Illustration of three parts of the work.

The work is generally divided into three parts, namely: the soloist's self-introduction, annual rings, and manifesto. Stockhausen drew these three parts graphically¹, as shown in "Figure 2".

2.1 Part One: Presentation

In this section, the performers take on different roles to perform, giving each performer a distinct personality trait and making the music and stage performances more immersive and expressive. ("Table 1")

1. Image source: Kompositionen Kurs über SIRIUS from the Stockhausen Courses in Kürten 2000.

Table 1. Role allocation of singers and performers

Character Player	Direction	Season	Time	Character	Various stages of plant production	Natural things
Bass	North	Winter (Capricorn)	Night	Boy	Seed	Soil
Trumpet	East	Spring (Aries)	Morning	Youth	Sprout	Fire
Soprano	South	Summer (Cancer)	Noon	Daughter	Flower	Water
Bass clarinet	West	Autumn (Libra)	Dawn	Lover	Fruit	Air

The prelude of the music is introduced by a low-frequency electric current sound, which gradually increases from weak to strong. At about 1min 55s, a high-frequency electronic interference sound appears, and it slides back and forth 4 times between high and low frequencies, ending around 3min 13s. Composers use this sound effect to simulate the rotation of tree rings, and then move on to the "Presentation" section. In the "Presentation" section, Stockhausen incorporated specific sounds of nature that were collected and recorded, such as the sound of snow falling, ice breaking, the crackling of firewood burning, the sound of flowing water, and the whistling wind. These sounds were presented one by one after the

musicians introduced their respective roles, explaining the attributes of each character and the motivations behind the four movements in the "wheel" in this way. In this section, the traditional instrument sounds, human voices, recorded specific sounds, and electronic sounds on site are integrated and interwoven with each other, showcasing the goodwill of the "Sirius" messenger to the audience through rich sound and dynamic lighting effects. At the end, the sound of the wheel turning in the prelude is reproduced, and the sound is gradually overlaid in various ways. Finally, after reaching the preset frequency peak, the sound gradually weakens to disappear, and the first part ends. ("Figure 3")

Figure 3 Excerpt from the prelude score of "Sirius".

2.2 Part Two: Wheel

In this section, the twelve zodiac signs and the four seasons represent the clock of Sirius. The section is divided into four movements, representing the “four seasons of Aries, Cancer, Libra, and Capricorn”² in a year. In actual performances, the corresponding seasonal movement on the “wheel” has been chosen to start playing according to different seasons. Therefore, the seasonal changes result in four different playing sequences for the “wheel” section of the work “Sirius”:

1. Aries version:

Presentation—Aries—Cancer—Libra—
Capricorn—Bridge—Annunciation

2. Cancer version:

Presentation—Aries—Cancer—Libra—
Capricorn—Bridge—Annunciation

3. Libra version:

Presentation—Aries—Cancer—Libra—
Capricorn—Bridge—Annunciation

4. Capricorn version:

Presentation—Aries—Cancer—Libra—
Capricorn—Bridge—Annunciation

2.3 Part three: Annunciation

As the finale of the entire work, the material for the Presentation is reproduced, and the four soloists express their declaration in the form of a quartet (singing): “Sirius has chosen Earth in the vast universe, and I am willing to become the embodiment of humanity and coexist harmoniously with Earth forever.”³ The sound system becomes more bizarre and fluid in this part, and then gradually disappears.

In summary, in “Sirius”, the composer has designed different performance plots and lines for different parts of the music, and fictionalized and simulated the scenarios of spacecraft hovering, landing, and takeoff through real-time electronic sound direction changes. These fully demonstrate

2. Widder-Aries, abbreviated as Aries or A; Krebs-Cancer, abbreviated as Cancer or C; Waage-Libra, abbreviated as Libra or L; Steinbock-Capricorn, abbreviated as Capricorn or Cap.

3. Translated from: “Kompositions-Kurs über SIRIUS” from the Stockhausen Courses in Kürten 2000.

Stockhausen's dramatic creative thinking in mixed electronic music.

3. THE CREATIVE CONCEPT AND CHARACTERISTICS OF “SIRIUS”

British musicologist Reginald Smith Brindle argues in his book “The New Music — The Avant-garde since 1945” that “electronic music, as a form of concert, is difficult to elicit a response from the audience. In fact, sometimes there is no response at all... The audience only responds to the art of people and the performance of live performances. And Stockhausen also realized this, so he brought electronic music to the stage for performance, allowing people to not only hear electronic music works, but also see the entire process of sound formation in real time through the performers' performances on stage, attracting the audience's attention to the music creation itself and the performers' performance behavior, eliminating the distance between electronic music and the audience.”⁴ In order to better shape the musical image and enhance the stage performance of music, Stockhausen organically combines music with theatrical art in mixed electronic music creation. The dramatic creative thinking formed from this has had a significant impact on his music creation, mainly manifested as the following characteristics.

3.1 Roleization

The first important feature is the role-playing creative thinking and technique. Under this concept, Stockhausen often assigns different personality traits, attributes, and meanings to music performers and instruments. In music performances, each character exhibits different color and sound characteristics. The characterization makes the music form a distinct and multi-level contrast. Against the background of different movements and story plots, the relationship between the main role and the supporting role is also changing constantly, making the overall expression of music more logical, expressive and ornamental.

In the work “Sirius”, the four performers are assigned roles with different attributes and characteristics. In the first part, based on the pre-set specific music, the performers take turns playing melodic fragments of the characters they represent to emphasize the meaning of their respective roles. In the second part, which represents the four

4. From Reginald Smith Brindle, *The New Music — The Avant-garde since 1945*, p173.

different seasons of "Aries, Cancer, Libra, and Capricorn", the "Sirius Messenger" plays the "protagonist" in the movement corresponding to its character, and uses the melodic fragments of the character it represents as the main musical material for the development of the movement.

3.2 Plotlinization

The second important feature is the plot based creative thinking and techniques. Under this concept, composers particularly enjoy combining music with woven storylines, making the presentation and expression of music more intricate and interesting. People and events are the main content of the plot, with logic and conflict. The plot is a narrative story, and plotlinization is the element of a coherent story. On the one hand, dramatization makes the music image more full, and on the other hand, it adds a complex and logical driving force to the development of music.

The work "Sirius" revolves around the story of the "Sirius new messenger's visit to Earth", conveying the goodwill of the "Sirius Messenger" through communication between different characters and music media.

3.3 Fictionality

Another important feature is the imaginative creative thinking and techniques. In order to fully extend the dramatic imagination and action within the limited time and space of stage performance, composers have the right to imagine and fabricate. Creators transform and recreate life materials based on the patterns of real life and the needs expressed in music works, while respecting the inherent laws of development of things. The fictionality in Stockhausen's mixed electronic music works is mainly achieved through the following two ways:

3.3.1 The Fictionality of Stage Setting and Storyline

Starting from the 1970s, Stockhausen broke away from his early creative style and was deeply influenced by Einstein's theory of relativity, which revealed the relationship between material motion and time and space in the universe. He became obsessed with creating music works related to the universe, among which the most representative was the mixed electronic music work "Sirius" analyzed earlier. In the work "Sirius", the composer presents the audience with a virtual music scene and storyline of an "extraterrestrial visitor" visiting Earth through stage lighting design, actor costumes, and rich and varied sound systems, from both auditory and visual perspectives. ("Figure 4")



Figure 4 Performance photo of the performers of "Sirius".

3.3.2 The Fictionality of the Way of Expression

In "Sirius", Stockhausen uses pre-set natural sounds to depict the different character attributes and characteristics of the performer, such as using the sound of snow to represent winter, using the sound of flowing water to represent spring, and using the whistling sound of the wind to represent autumn. In the prelude, electronic interference sounds sliding back and forth between high and low

frequencies are used to simulate the rotation of fictional wheels. In the conclusion, a large amount of electronic and concrete sound is used, combined with surround distributed speakers, to simulate the hovering and landing of a spacecraft using motion sound. In the score, the composer also writes a large number of monologues that goes against the authenticity of real life, to convey the goodwill and blessings of the "Sirius" messenger to Earth. ("Figure 5")

Figure 5 Excerpted lines from "Sirius".

“We are messengers from Sirius, and in our music, we can perceive the changes in space and the seasons... May Sirius's music bring happiness to humanity and space explorers...”

The fictionality in stage context, storyline, and expression not only enriches the diversity and selectivity of music creation themes, but also stimulates the audience's curiosity and attracts their attention to performance and music through fictional stage context and storyline, as well as stage lighting design, actor costumes, body movements, and diverse sound systems. This makes music presentation more immersive and maximizes the breaking of the limitations of objective space on time span and spatial dimensions.

3.4 Multidimensional Dialogue

Stockhausen has unique insights into spatial thinking characteristics and structural organization. He believes that spatial layout can express and construct different levels of sound, establish a sense of depth in space through the superposition of sound levels, and create a sound perception from far to near or from near to far, thus forming a space of sound in the development and movement of

sound. This concept has also been fully implemented in his hybrid electronic music creation, mainly reflected in the following three aspects:

3.4.1 Objective Space and Symbolic Space

In Carl Heinz Stockhausen's "Sirius", objective space and symbolic space are intertwined, forming the core concept of the work. The objective space is reflected in the physical performance environment of the work, such as a square or circular theater composed of surround sound and lighting, while the symbolic space conveys deeper concepts through music and sound design, such as the Sirius Messenger's declaration of peace to Earth. The interaction between these two spaces not only affects the sound distribution and sound movement of the work, but also involves the composition of the language material of the work. Stockhausen creates a music world with both physical presence and symbolic meaning through spatial language organization, combining linear and nonlinear sound elements, as well as the use of electronic effects and instrumental voices. The aim is to express the deep expression intention of the work through this unique combination of space and sound.

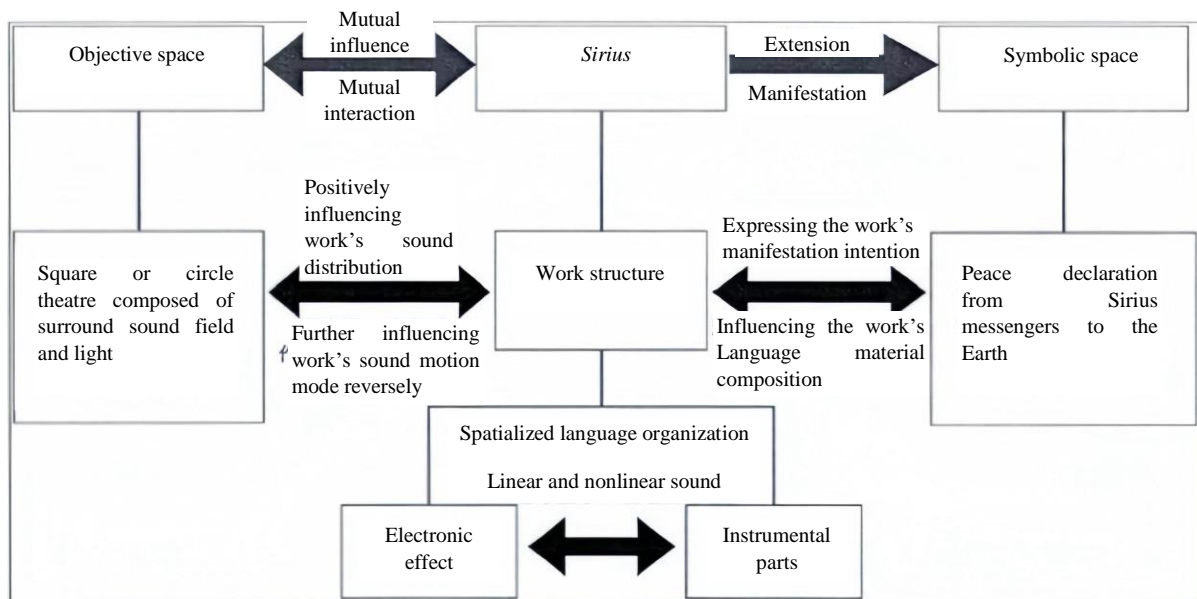


Figure 6 Objective and symbolic space of "Sirius".

3.4.2 Static Space and Dynamic Space

In the work "Sirius", Stockhausen selects four melodies with distinct rhythmic, pitch, and length characteristics as the main building blocks for the development of the work, starting from the structure of musical materials. In addition to expressing both "objective space" and "symbolic space", it also takes into account the expression of "dynamic space" and "static space": on the one hand, these main melodies are pre-recorded, and then controlled by the operator on site, using the on-site sound amplification equipment to dynamically surround the sound between 16 speakers connected by 8 tracks. On the other hand, on-site acoustic instruments or human voices perform in static space at fixed sound positions, creating a contrast and presenting a varied and multi-layered effect in the sound space.

3.4.3 Virtual Space and Reality Space

In the four movements of "Wheel" in "Sirius", the composer pre-installs the live sound system in the electronic music section after deformation processing, which echoes the sound system of real instruments and human voices during performance. The addition of these pre-installed virtual instrument performance sections greatly enhances the spatial and rich sense of the live sound system, and creates another "virtual space" for real-time performance.

The use of the above three spatial concepts not only brings changes and impetus to the

development of music, but also maximizes the sense of hierarchy and space in the presentation of works, and greatly enhances the infectiousness and expressiveness of music.

4. CONCLUSION

In Stockhausen's mixed electronic music creation, his creative application of dramatic creative thinking and techniques has greatly enriched the expressive power of sound materials such as electronic music, acoustic instruments, and vocal singing in his works, boldly breaking through and innovating early electronic music creation concepts and techniques. The application of dramatic creative thinking and techniques, on the one hand, makes the types of sound materials in music works more diverse and novel, and the musical context is no longer limited to people's familiar fields, providing more possibilities and fun for contemporary mixed electronic music creation. Whether it is the theme combined with acoustic instruments or other sound media, it has unique performance forms and artistic effects. At the same time, in terms of the integration of computers with musical instruments and human voices, acoustic instruments and human voices with computer-processed sound effects, because they are largely based on live performances and computer-processed sound effects and are real-time, each performance and sound processing will be slightly different, which also makes there a certain degree of uncertainty in notation. It is precisely for this reason that traditional acoustic instruments, human

voices, and vocal performances have been greatly expanded in terms of performance, performance, and even notation, invisibly enriching the diversity and experimentation of mixed electronic music creation.

In short, the dramatic creative thinking in Stockhausen's mixed electronic music creation not only strengthens the structural power of music works, but also greatly enriches the diversity of sound forms in works, leaving countless profound and beneficial inspirations for contemporary electronic music creation and research.

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