

The Sinicized Expression of Serial Music: A Study on the Generation Mechanism of Chinese Artistic Conception in Gao Weijie's "Thoughts of the Sun"

Xinghe Ma, Qiang Ban

College of Music, Yeungnam University, Gyeongsan 38541, South Korea

Corresponding author: Qiang Ban (e-mail: 18893483630@163.com)

ABSTRACT "Thoughts of the Sun" is an orchestral work composed by Gao Weijie in 1986 during the rise of New Wave Music in China after the Reform and Opening-up. In this period, Chinese composers actively explored the localization of Western modernist techniques and sought international expressions for Chinese music. As a representative academic composer, Gao Weijie neither fully followed avant-garde experimentation nor rigidly adhered to traditional tonality, but instead pursued a balance between rational control and emotional expression. This paper analyzes the generation mechanism of Chinese artistic conception in "Thoughts of the Sun" from the perspectives of musical morphology and Chinese aesthetics. It discusses the linear beauty of Chinese music within an atonal context, the interaction between substantial and insubstantial sound spaces, and the structural pattern of "introduction-elaboration-twist-conclusion." Through the analysis of serial technique, pentatonic organization, timbral counterpoint, and structural expression, the study reveals how Chinese aesthetic conception is generated within a modern compositional framework.

INDEX TERMS serial music, chinese artistic conception, musical morphology, contrapuntal structure, atonal composition

I. INTRODUCTION

"The development of serial music in China throughout the 1980s surpassed that of other musical styles and schools"[1]. Since the 1980s, Chinese composers have engaged in creative experiments combining serial techniques with traditional Chinese musical vocabulary. During this process, a number of serial music works with Chinese characteristics emerged, such as Luo Zhongrong's "Gathering Lotus Seeds Afar"[2] (1982) and Chen Mingzhi's "Eight Piano Pieces"[3] (1982). Gao Weijie's "Thoughts of the Sun" (1986) is among them. The composer Gao Weijie (1938-) is a renowned contemporary Chinese composer and music educator, formerly a professor and doctoral supervisor at the China Conservatory of Music. His compositions are known for integrating traditional Chinese music elements with modern compositional techniques. Gao pursues an "East-West dialogue" in his musical language, emphasizing the combination of pentatonic melodies, linear thinking with Western serial music, and the twelve-tone technique, forming a unique personal style. His representative works include "Distant Dream," "Late Spring," and "Thoughts of the Sun" The orchestral work "Thoughts of the Sun"

was composed as music for a dance poem choreographed by Yue Shiguo, based on the content of Cao Yu's play "Sunrise." This play, set in Tianjin in the 1930s, is divided into four parts: Dawn, Dusk, Midnight, and Sunrise. The main storyline focuses on the life of socialite Chen Bailu, depicting an oppressive city—the semi-feudal, semi-colonial metropolis of Tianjin—where decadent social forces operate in the shadows before the sun rises, while also revealing the hardships of the lower classes' lives.

As music for a dance poem based on the play "Sunrise," the entire structure of "Thoughts of the Sun" corresponds to the four acts of the play, divided into four sections. Regarding the work's style, Professor Gao Weijie once described "Thoughts of the Sun" as follows: "The work is, to some extent, influenced by Arnold Schoenberg's representative work 'A Survivor from Warsaw.' The music adopts an expressionist, tragic, and poetic style, downplaying the depiction of plot details and shifting the focus to psychological portrayal. It expresses the yearning for light and the eventual disillusionment of women trampled and humiliated in those dark times, striving to portray their humiliating life and pure death"[4].

II. SINICIZED DECONSTRUCTION OF SERIAL MUSIC

In "Thoughts of the Sun," Professor Gao Weijie presents the complete twelve-tone series in the string section at the very

beginning of the work (see Example 1).

Example 1: Measures 1-7

As shown in Example 2, the composer divides the original series (P0) into four three-note groups [0,2,5]. The first group consists of D-C-A (Shang-Gong-Yu)(Gong, Shang, Jue, Zhi, and Yu are the five notes of the traditional Chinese pentatonic scale, corresponding to Do, Re, Mi, Sol, and La respectively), filling the empty fifth frame with the Gong note. The second group is formed by transposing the first group down a perfect fifth. The third and fourth groups are generated through inversion and transposition of the first two groups. This results in an original series structure

characterized as "symmetrical in form but asymmetrical in potential" [5]. This "symmetrical in form but asymmetrical in potential" morphology is also an aesthetic model found in traditional Chinese cultural. Additionally, because this sequence within a three-note segment features no semitone or third intervals between adjacent pitches and exhibits pentatonic tonal characteristics, it is referred to as the "pentatonic twelve-tone row" [6] within Chinese music criticism circles.

Example 2: Prime form of the twelve-tone row

Besides the design of the original series, the composer skillfully applies this symmetrical approach in horizontal melodic design. For instance, in measures 35-45, taking the second violin part as an example, this part consists of notes 7-12 of the I3 series (F#-E-C#-C-Bb-G) forming a hexachord. Subsequently, within the same part, the composer

uses notes 1-6 of the RI3 series (the retrograde inversion of I3) for connection. Horizontally, the G note acts as an axis of symmetry, with the melody symmetrical before and after it. The composer applies this symmetrical treatment to the entire string section and the piano part (see Example 3 for the tone row in the second violin part).

Example 3: The tone row in the second violin part

This symmetrical aesthetic is also reflected in the vertical design of pitch. In measures 12-31, the string section repeats

the same set of tone rows in one-measure units, serving as a driving force for musical development.

Example 4: Measures 23-26

As shown in Example 4, the first violin part is formed by notes 1-12 of the RI5 series, the second violin part by the inverted and transposed R1 series of RI5; the viola part uses the R3 series, while the cello part uses the inverted RI11 series of R3. The string section repeats this pattern in one-measure units.

The pervasiveness of symmetrical layouts in the pitch system construction of this work will not be listed exhaustively here. This symmetrical arrangement aims to promote harmonic unity in the sound effect, providing listeners with a balanced, stable, yet solemn aesthetic experience.

III. APPLICATION OF MULTI-LEVEL STRUCTURAL COUNTERPOINT IN THE PENTATONIC TWELVE-TONE ROW

As music for a dance poem, the coordination and expression of various instruments in "Thoughts of the Sun" are crucial.

Utilizing multi-level structural counterpoint technology is an ideal choice for better showcasing the style of Chinese national music.

A. COMPREHENSIVE USE OF POINTILLISTIC AND COLLAGE-LIKE TIMBRAL COUNTERPOINT

"Pointillistic timbral"[7] counterpoint is mainly manifested using single notes or short phrases composed of a few notes, presented in a pointillistic texture. "Collage-like timbre"[8] can be understood as an enlarged variant of pointillism, expanding the single note or short phrase content, including duration and the number of instruments, forming large sound masses. In "Thoughts of the Sun," the composer extensively employs pointillistic and collage-like timbres, creating a composite effect of multiple timbral counterpoint across varying temporal and spatial dimensions. (See Example 5)

Example 5: Measures 78-81

As shown in the example above, in measures 78-81, tremolos form block-like timbres, while the upper percussion and color instruments appear in pointillistic textures sequentially on different timbral layers like piano, wood-block, triangle, bangu (Chinese drum), and small bells. By measure 83, this is even more pronounced: the pointillistic texture in the lower piano and jazz drum (here, the piano part's material comes from the [0,2,5] set within the pentatonic twelve-tone row, manifested vertically as tone clusters) contrasts with the block-like melodic timbre of the xylophone above (here, the xylophone material comes from notes 7-9 of the P0 series and notes 1-6 of the I3 series,

with inverted imitation occurring two bars later using notes 7-9 of I3 and notes 1-6 of P0). The contrapuntal method of pointillism and collage shares similarities with the "blank space"[9] technique in traditional Chinese art.

B. THE REGULATORY ROLE OF RHYTHMIC COUNTERPOINT

Rhythmic counterpoint is a common technique in modern music, where different voice layers sound according to their own rhythmic patterns, creating rhythmic counterpoint.

Example 6: Measures 27-29

As shown in Example 6, in measure 27, the violin, viola, and cello parts of the string section maintain a triplet tremolo rhythm pattern, using the twelve-tone rows of R15, the inverted and transposed R7 series of R15, R1, and the transposed R11 series of R15 as material, repeating in one-measure units; the double bass uses quarter notes, the harp uses glissandi, and the piano uses quintuplet arpeggios (the first three notes of the quintuplet come from notes 4-6 of the R1 series and notes 4-6 of the R7 series, followed by inverted imitation based on these two groups forming P8 and P4 series). This contrapuntal structure breaks the metric accent rules, creating a vertically dense effect in the hearing, resulting in dissonant sound within the multi-level counterpoint.

C. EMBODIMENT OF COMPREHENSIVE POLYPHONIC THINKING IN MULTI-LEVEL STRUCTURES

Using contrasting and imitative counterpoint methods simultaneously or successively within a multi-level musical structure can present musical expression and organization in a more regulated manner. This approach is termed com-

prehensive polyphonic thinking. In "Thoughts of the Sun," there are numerous examples of using the pentatonic twelve-tone row combined with comprehensive polyphonic thinking to narrate each tone row layer by layer.

As shown in Example 7: In measure 49, the double bass part uses notes 1-6 of I5(F-G-A#-B-C#-E) as a hexachord, imitated at the second above in the cello part (i.e., notes 1-6 of I4: E-F#-A-Bb-C#-Eb), repeating in one-measure units to constitute the first timbral layer. Simultaneously, the oboe uses the three-note group from notes 7-9 of the R1 series (D#-C#-Bb). Two beats later, the piccolo and flute imitate at the second above, presenting the E-C#-B three-note group (notes 7-9 of the R2 series). The clarinet enters two beats after the piccolo and flute, where the three-note group from notes 7-9 of the R1 series appears again. After each part states its material over three measures, the three-note groups are presented again in inverted imitation sequentially in the oboe, piccolo, flute, and clarinet parts. Thus, the entire woodwind section uses imitative canon technique to form the second timbral layer. The violin and viola parts form the third timbral layer: in measure 50, the first violin, second

violin, and viola parts use the twelve-tone rows of P2, P1, and P0 respectively as pitch material, repeating in four-

measure units. Finally, the jazz drum uses a fixed pattern repeating every two measures as the fourth timbral layer.

Example 7: Measures 49-54

Through examples of timbral treatment, rhythmic control, and the comprehensive use of hierarchical polyphonic thinking in "Thoughts of the Sun," the author illustrates how the composer reorganizes, contrasts, and combines the pentatonic twelve-tone row through polyphonic techniques, thereby integrating traditional Chinese pentatonic melody into modern polyphonic music.

IV. THE SPATIO-TEMPORAL SYMBOLISM OF THE STRUCTURAL DESIGN IN "THOUGHTS OF THE SUN"

The work is divided into four parts, corresponding to the four acts of the play "Sunrise," namely "Dawn-Dusk-Midnight-Sunrise," presenting an "Introduction-Elaboration-Twist-Conclusion" pattern. The structural form is shown in Table 1 below:

The first part, "Dawn" (measures 1-30), fully presents the original series in the string section in measures 1-4. Violins and violas, cellos and double basses present the series in a call-and-response form, followed by the entry of piano and percussion. Then, around measure 8, the complete I6 series appears in the viola part, followed by notes 1-6 and 7-12 of the R4 series answered in the cello and double bass parts respectively. From measure 12, using the RI5 series in the first violins as a prototype, the second violins, violas, cellos, and double basses form a fixed bass line through inversion, transposition, and compressed imitation, serving as a developmental thread continuing until measure 31.

The second part, "Dusk" (measures 31-71), consists of two segments. The first segment runs from measure 31 to 46. The tempo is *Senza misura* Allegro. Here, the string parts imitate the rhythmic patterns of Chinese cymbals and bangu (Chinese drum), using inverted series as a fixed pattern for repetition. The series appearing in this segment are no longer complete rows as in Part I, but mostly appear fragmentally as

hexachords. The second segment of Part II starts at measure 46 and ends at measure 71, marked *Presto*. The series fragments shorten further, from hexachords to trichords. As shown in score examples, woodwind instruments enter successively; the piccolo, flute, clarinet, and oboe all use the [0,2,5] isomorphic set. The third part, "Midnight" (measures 72-117), consists of three segments, serving as the "Twist" in the overall "Introduction-Elaboration-Twist-Conclusion" structure, with a very clear transitional function. The first segment of Part III (measures 72-88), *Lento A piacere*, sees all instruments quiet down. Piano arpeggios appear intermittently, while percussion instruments like woodblocks and small bells fill the gaps between arpeggios, creating an ethereal soundscape. Here, the tremolo rhythm pattern introduced from measure 67 in Part Two "Dusk" is continued by the piano. In terms of pitch design, the horizontal tone rows transform into vertical clusters constructed using the [0,2,5] set. From measure 89, the second segment begins, marked *Fantastico*. Here, complete twelve-tone rows reappear. For example, in the cello part, the I2 series repeats every two measures, while the clarinet part presents the complete R10 series. Simultaneously, the celesta part provides a background texture with octave-leaping figures repeated throughout—a similar treatment also appears in measures 122-124 of Part Four "Sunrise." The third segment runs from measure 100 to 117, returning to the tempo of the first segment – *Lento A piacere*. The musical idea returns to that of the first segment, featuring vertically stacked fourth and fifth intervals, typical of the Chinese theory of "Generation of Fifths." Then, around measure 110, the string section again stacks three note groups isomorphic to the [0,2,5] set. This method of treating the series as collections can not only derive various pitch groups that seem different on the surface but also, through the consistent characteristics

TABLE 1. Formal Structure of Thoughts of the Sun

	Part I Dawn	Part II Dusk	Part II Dusk	Part III Midnight	Part III Midnight	Part III Midnight	Part IV Sunrise	Part IV Sunrise	coda
Section	A	B	B	C	C	C	A	A	
Measure	1–30 1–30	31–46 31–71 Senza	46–71	72–88 72–117	89–99	100–117	117–148 117–172 Sostenuto	148–172	173–187 173–187
Tempo	Lento	misura Allegro	Presto	Lento A piacere	Fantastico	Lento A piacere	-Agitato -Meno mosso	Dramatico	Dramatico

within the set, endow the music with strong internal unity and structural force.

The fourth part, "Sunrise," consists of two segments. The first segment (measures 117–148) uses the original series (P0). The same rhythmic pattern reappears in the cello part and, after presenting several symbolic gestures, drives the music forward. The tempo in this segment is variable, progressing through *Sostenuto*, *Agitato*, and *Meno mosso*, gradually pushing the music towards the climax, leading to the musical image of "Sunrise." The second segment (measures 148–172), marked *Dramatico*, presents the overall climax: brass, percussion, and the lower strings play triplets in unison, while sustained high E notes hover in the woodwinds and upper strings, once again building an intense, rich atmosphere until measure 172, where it subsides into tranquility.

Coda (measures 173–187): At measure 173, the timpani sounds again, accompanied by low human voices chanting "hei yo hang hei," as if declaring the end of darkness, with the protagonist step by step walking towards the sunrise, emerging from the shadows until measure 187, finally reaching the light! The piece ends.

Throughout the structural layout, as the emotional trajectory of the work shifts, climaxes arrive one after another. However, in this piece, climaxes do not appear in isolation. Typically, the main climax is accompanied by a series of smaller climaxes, following the principle of "Introduction-Elaboration-Twist-Conclusion" from Chinese classical music, making the music more coordinated and continuous.

V. CULTURAL METAPHOR IN ORCHESTRATION

As a modern musical work with an "Eastern artistic conception" at its core, the orchestration of "Thoughts of the Sun" exhibits the dual qualities of "conciseness" and "imagism." Its instrumental choices both serve the parametric control of serial technique and subtly align with the aesthetic pursuits of traditional Chinese art.

Besides undertaking the linear presentation of the core series theme, the string section, through techniques like pizzicato and repeated triplet tremolos, interacts with percussion and color instruments, functioning as a rhythmic layer. For instance, in measure 8, the string parts are created through gradual entry techniques, processing preset tone row combinations with a method of "gradually accelerating from a slow start, but not playing simultaneously." The resulting sound effect is irregular, thus able to blend with the "Tone-rain" (referring to clusters/indeterminate pitches)

in the piano part. (Please refer to measure 5 of Example 1 for details.)

Gao Weijie draws on the "blank space" concept from Chinese painting and calligraphy, interspersing moments of silence within dense note clusters, forming an auditory space where "mutual generation of void and solid"[10] elements interact. The woodwind section serves as a carrier for timbral "pointillism," participating in the vertical stacking of serial intervals with fragmented patterns. The high-frequency overtones of the piccolo symbolize the piercing intensity of sunlight. Brass instruments play an indispensable role, especially in the first part "Dawn," where the trombone section uses slide glissandi to great effect in shaping the scene of the heroine's decadent life. The work incorporates Chinese cymbals and bangu (Chinese drum) into the percussion section—two highly characteristic Chinese percussion instruments. These, along with the large gong and bass drum, often play simultaneously. In terms of sound effect, the combination of metallic sounds and drumbeats constructs a spatial layer of "shifting light and shadow." The use of a whip (slapstick) among the special instruments depicts the image of the suffering lower-class people.

In summary, the orchestration of "Thoughts of the Sun" not only expands the expressive dimension of serial music through nuanced timbral variations at the micro level but also emphasizes the portrayal of musical imagery and the "ideographic" expression found in traditional Chinese music at the macro level. It provides an highly enlightening practical model for the Sinicized transformation of serial technique.

TABLE 2. Instrumentation of Thoughts of the Sun

String Section	Woodwind Section	Brass Section	Percussion & Other
Violin I	Piccolo	Horn	Pitched Percussion: Timpani
Violin II	Flute	Trumpet	Glockenspiel
Viola	Oboe	Trombone	Xylophone
Cello	Clarinet	Tuba	Vibraphone
Double Bass	Bassoon		Piano
			Harp
			Unpitched Percussion:
			Snare Drum
			Jazz Drum
			Triangle
			Hi-hat
			Chimes
			Bangu (Chinese drum) Muyu (Chinese woodblock) Tambourine
			Grand Cymbal & Tam-tam (Chinese gong)
			Whip (Slapstick)
			Small Bells

VI. CONCLUSION

This paper has elucidated how the composer successfully transformed Western modernist techniques into a musical narrative of Chinese culture through the Sinicized reconstruction of serial music, the application of contrapuntal techniques in multi-level structures based on the pentatonic twelve-tone row, the spatio-temporal symbolism of structural design, and the culturally metaphorical expression in orchestration. Firstly, regarding the design and use of the twelve-tone row, the composer employed the "symmetrical in form but asymmetrical in potential" design concept to reconstruct the series in a Sinicized manner. This principle is reflected both in the horizontal melodic design and the vertical layering of different pitch strata throughout the work. Secondly, concerning the application of contrapuntal techniques within the multi-level structure of the twelve-tone row, the composer utilized pointillistic and collage-like contrapuntal textures, further subdividing the musical hierarchical structure through rhythmic counterpoint, embodying a sense of combined polyrhythms. Finally, by controlling the sonic attributes of different instrument groups and hierarchical units for differentiated timbral contrast, the timbres are effectively stratified, thereby achieving overall control of the pentatonic twelve-tone row within multi-level timbral groupings. Furthermore, in terms of structural design, the work's formal divisions correspond to the four acts of the play "Sunrise" – "Dawn – Dusk – Midnight – Sunrise" – presenting the traditional Chinese musical structural layout of "Introduction-Elaboration-Twist-Conclusion," reflecting the composer's consistent adherence to traditional Chinese aesthetics. Lastly, in the culturally metaphorical sound expression, different instrument groups contribute significantly to shaping the musical characters as the piece progresses. The composer focused on the "ideographic" expression of traditional Chinese music, interspersing silent moments within dense note clusters to create an auditory space where substantial and insubstantial elements interact.

In "Thoughts of the Sun," we can see the composer

seeking a balance between rational control and emotional expression in musical creation, with the music consistently reflecting his use of modern musical language to express traditional musical aesthetics. This work is not only a microcosm of contemporary Chinese composers' exploration of the fusion between "modernity" and "national identity," but it also provides significant creative inspiration for future composers.

AUTHOR CONTRIBUTIONS

Conceptualization – Xinghe Ma and Qiang Ban; methodology – Xinghe Ma and Qiang Ban; investigation – Xinghe Ma and Qiang Ban; writing-original draft preparation – Xinghe Ma and Qiang Ban. All authors have read and agreed to the published version of the manuscript.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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