

A Study on the Integration of National Style and Western Structural Techniques in Modern Chinese Piano Works—Focusing on "Wu Kui"

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Abstract: *The incorporation of traditional folk music characteristics into piano pieces is still problematic due to the lack of expressive performance, loose composition and poor sound performance. Therefore, as a case study in this paper, by using the method of integrating music ontology with auditory experience experiments, a systematic study is carried out on the incorporation of folk music elements in Western musical composition techniques in the aspects of rhythm, tones, structure and texture. Through recreating the folk dance rhythm, using five tones, and employing multilayered sounds, timbre simulation can systematically perform the folk music in the piano piece. Besides, quantitative analysis on the strength of rhythmic perception, recognition of ethnic styles, structural integrity and sound performance is also done on the basis of the test results of auditory experiences of 30 listeners. It turns out that the score of "Wu Kui" is significantly higher than the control in the strength of rhythmic perception (4.62 ± 0.38) and recognition of ethnic styles (4.48 ± 0.41) ($p < 0.01$). Moreover, the score of sound layer and expressiveness reaches up to 4.55 ± 0.36 , with the structural integrity score of 4.21 ± 0.44 .*

Keywords: *Modern Chinese Piano Works; Fusion of National Styles; Analysis of Musical Form and Structure; Texture and Sound Expression; Auditory Perception Experiment*

1. Introduction

During the process of creating Chinese musical compositions in the mid to late 20th century, many Chinese composers who originate from the world of traditional Chinese folk music have consciously explored Western methods of musical composition to create music with both national and modern characteristics. One such composer is Zhou Long, who is regarded as one of the most outstanding representatives of Chinese composers [1-2]. For instance, his piano composition entitled "Wu Kui" was created in 1983 and is based on the traditional Manchu folk dance called "Da Wu Kui Wu" in northeast China. The five animals of the tiger, leopard, bear, deer, and roe deer are the images depicted in the piece, which depicts the festive mood during the period when Manchu hunters returned home after a successful hunt.

Wu Kui Dance, which belongs to the Manchu ethnic group, reflects the essence of culture and art taste of northern ethnic groups, which is relatively simple and robust. The rhythm is rugged, and the dance is special, with some musical elements unique to the region. However, in composing the music for Wu Kui Dance, Zhou Long did not just mimic the melodic structure of the folk dance, but merged the rhythm of the Manchu music, and some elements of the sounds of ethnic instruments, with some contemporary music characteristics of the western style. This deviates from the traditional form of composition of piano music, producing some lively pictures through the sound of the piano.

So far, studies about Zhou Long's music are only concerned about the macro-level factors. These macro factors include the composer's overall style and mixing up Chinese and Western music. Some scholars have carried out some research about Wu Kui, while the content of their research is focused on only one topic, which covers performance style and melody. However, they fail to provide comprehensive discussions on the three fundamental aspects of the music, which include the style, structure, and texture. The style is the core aspect that highlights the artistic nature of the music. The structure can be used as the basis for building music's logical framework, while the texture acts as the intermediary for the sounds.

In view of this, this paper takes into analysis the artistry, the form structure, and texture of the

musical piece "Wu Kui" composed by Zhou Long to make an inquiry into this particular music through the perspective of musical ontology. In the analysis, one may explore the motivation behind including the ethnic musical elements and the process by which there is the blending of Western modernistic composing techniques. Thus, it becomes easy to understand the motivation behind the creation of the music "Wu Kui." This paper will prove helpful for giving a complete understanding about the artistic value of "Wu Kui" and to reconstruct the aesthetic motivations of the composer.

2. Related Work

Behind the endless evolution of Chinese piano art at the present time, there have been systematic researches about the conversion and application of music elements of China and the means of blending Chinese and Western cultures from various perspectives like history, composition, education, and cross-cultural communication. Their findings will not only contribute to forming the theoretical base for studying the development of Chinese piano art, but also provide reference for modernization in many respects.

From a macro-development perspective, Wang and Jia systematically sorted out the development process of modern Chinese piano, combined with social history and education system, analyzed its multiple functions in performance, creation and teaching, and pointed out that strengthening technical and theoretical research is an important path to promote the innovation of piano art and cultural inheritance[3]. At the creative level, Yuan focused on the application of traditional musical elements in modern piano, summarized its realization path from aspects such as melody borrowing, harmony reconstruction and rhythm integration, and analyzed its role in cultural inheritance and artistic innovation in combination with classic works[4]. Furthermore, Beibei, through a comparative study of Zhang Chao's "Pihuang" and Chen Qigang's "Jingju Moment", explored the cross-cultural integration mechanism from the perspective of musical characteristics and cultural context, and revealed the expressive value of Chinese piano works in the international context[5].

At the educational and practical level, Wei et al., starting from the music education profession, emphasized the fundamental role of piano teaching in talent cultivation, proposing that students' musical understanding and performance abilities need to be improved through systematic theory and scientific training. They also pointed out the important role of academic research in improving the teaching system [6]. At the same time, Bai and Wu, starting from the development of ethnic music in the 20th century, pointed out that this period was a key stage in the transformation of ethnic music to modernity. Piano music, while retaining ethnic elements, absorbed Western techniques and presented diversified and complex characteristics [7]. Enyi, from the perspective of folk song piano adaptation, analyzed how composers expanded the expressive forms of ethnic music through re-creation and promoted its dissemination and acceptance in the international arena [8].

In general, existing research has achieved rich results in macro development, creative paths and educational practices, but it is mostly concentrated on conceptual interpretation or case comparison. The systematic analysis of the internal integration mechanism of specific works is still insufficient, especially the lack of comprehensive research combining music ontology and auditory perception. Therefore, starting from specific works, exploring the integration logic of ethnic elements and Western techniques at multiple levels still has room for further deepening.

3. Method

3.1 *The Musical Expression Mechanism of National Style*

The ethnic character of the music by Wu Kui is primarily expressed through the extremely rhythmic character of the music of this piece. While the rhythm is not directly imitated in terms of the rhythm of the "Grand Wu Kui Dance," it has undergone development and restructuring using rhythmic patterns from the original material. In general, the rhythm has a characteristic dynamism and expressiveness of its arrangement. Specifically, the accenting within the music piece is quite uneven and contributes to creating a rhythmically instable dynamic movement due to the techniques of syncopation, dotting, and alternation of strong beats. Furthermore, the accents performed at weak or cross-beats create a sensation of "stamping and jumping." This is supported by the usage of short rhythms and repetitive rhythmic patterns, resulting in an advancing energetic line.

As far as pitch organization is concerned, the work employs the pentatonic scale as the foundation.

By virtue of its variations and modulation, the scale displays dynamism and tension, enabling it to integrate ethnic elements with modern elements. As for the tonal organization, it progresses predominantly using motive development in terms of repetitions, modulation, and elaborations, such that the lyrical melody becomes the primary motive of the entire composition. Concerning musical ideas, they are differentiated using distinctive sound patterns, which include leap motion vs. line motion, among others.

In terms of sounds, this piece uses a dense rhythmic pattern, placement in registers, and dynamic variations to the fullest to generate vivid folklore images. The bass lines with its rhythmic density create a sense of strength when on the hunt. In contrast, the jumping sound pattern and bright timbre of the treble parts evoke the holiday atmosphere because of a joyful attitude towards life. The combination of a multilayered rhythmic pattern and fast sound pattern leads to creation of a three-dimensional energetic sound which can be perceived as a dance of an orchestra. Nevertheless, such a sonic design goes beyond imitation becoming a metaphorical embodiment of the folklore spirit.

3.2 The Logic of East-West Integration in Musical Form

As far as the structural organization is concerned, while using the structure of music, although Wu Kui does not adhere to the classical structure of the Western world, he applies a combination of a multi-section structure and a deformed composite structure. There is always one musical section, in which the center point is the image of an animal. Even though the images may vary from one section to another, they are bound by musical imagery and rhythmic organization to form harmony. It thus follows that the structure of this composition can be defined as "image based," meaning that sections are formed by musical imagery and not tonality.

Regarding structural construction, it is evident that the piece has been developed along the lines of Western musical tradition. As can be clearly observed, the nucleus of the ethnic element is contained within the motif which changes constantly throughout the course of repetitions, transformations, and developments, thereby leading to structural motion. This is possible because the composer has succeeded in varying the motif through numerous means including rhythm expansion/contraction, intervallic alteration, textural change and so forth.

As to the problem of total control, the work is quite well put together using contrasts and unity. Contrasts occur due to various sections with regard to the rhythmic texture, pitch level, and dynamics. The contrast between "heavy/deep" and "light/bright," apart from being an example of music imagery, creates a situation of tension and resolution. At the same time, the continuous variation of the central theme and rhythmical patterns maintains the unity of structure.

3.3 Innovation in Piano Texture and Sonic Expression

3.3.1 Percussive Texture and Rhythmic Pattern Construction

The texture structure of the composition Wu Kui is represented mainly by powerful rhythmic beats, which demonstrate the degree of generalization and recreation of the sounds of ethnic dances and drums. The author skillfully applies the acoustic features of the piano instrument, which can be defined as "instrument that hits strings," and creates a drum sound effect by means of rhythmic beats, using the methods of sound effects, the repetition of sounds of dense layout, short duration, rhythmic strokes, etc.

In terms of rhythmic beats creation, there are many techniques such as sustained beats of individual sounds, beats of double sounds and chords, alternating bass accents with treble rhythmic beats. This technique serves not only for the purpose of increasing the rhythmicity of music, but also for the creation of aural images "stomping together" and "beat drum." Moreover, thanks to the technique of accent change and gradual rhythm intensification, the climax is achieved through simulation of the process of movement from dispersal to concentration in ethnic dances.

However, the percussion timbre is more than just a combination of musical layers, but rather an indication of a highly developed understanding of rhythm and dynamics, where the sounds produced by the piano are distinctly recognizable despite their spatial impact, thus emphasizing the character of the national rhythm within the piano music.

3.3.2 Spatial Unfolding of Multi-layered Textures

In terms of texture, Wu Kui has a distinctive multiple-layered structure where Wu Kui creates a three-dimensional musical space using division of labor between different voices and registers. As a

rule, three types may be identified within this structure: melody, accompaniment, and rhythm. The combination of these three layers creates an exclusive texture from both spatial and temporal points of view.

The melody layer is comprised predominantly of motifs that have ethnic tonality and are performed in middle or upper registers; thus, it creates an image in the listener's imagination. The accompaniment layer is characterized primarily by harmonized or broken-texture soundings; these perform the role of sound filling and texture stabilization. Lastly, the rhythmic layer is performed mostly in low or middle-low registers; rhythm is maintained due to repetitions and accents on accented beats. Nonetheless, no unchangeable functions are performed by these layers; they only switch roles.

Additionally, the composer draws attention to the depth of texture through the use of the technique of registers and voices interweaving. The instance of this contrast can be seen when referring to the contrast between the leaps of the high register and the sounds produced by the low register, which add depth and give an impression of both space and height. This way, a rich texture creates a sense of depth and continuity simultaneously.

3.3.3 Timbre Imitation and Expansion of Piano Expressiveness

In terms of timbre usage, Wu Kui has diverged from the usual idea of a piano that highlights the timbre of its "singing" by emphasizing the replication of different timbres. With the help of touch control, dynamics, and the pedal effect, the composer allows the piano to produce timbral features resembling those of the Chinese traditional instruments.

For example, staccato phrases with forceful touch and deep bass sounds recreate the timbre of percussion instruments, whereas fast-paced staccato and light touch in high-pitched sounds produce bright timbre akin to that of wind or stringed instruments. In addition, the use of registers and patterns allows for the illustration of diverse timbres in the context of group dancing scenes to simulate playing together with a "multi-instrument band."

Furthermore, the imitation of the timbre is not onomatopoeic depiction, but is rather very close to the music. Changes in the timbre of different periods are related to changes in musical images and the development of the emotional component, which makes it an important form of storytelling. Consequently, there is an enormous expressive potential for pianistic execution, while the piano becomes able to reproduce sounds specific for folk music, besides being the medium for other forms of art.

3.4 The Path of Fusion between Folk Elements and Western Techniques

In the first place, the fusion of music languages is manifested in the harmonious blend of scales, harmony, and rhythm. In accordance with the pentatonic scale, the composition applies chromatic and modified techniques that give the melody ethnic features while generating tension and openness. Concerning the harmony, it does not follow functional logic but employs overlapping intervals of fourth and fifth and combinations of dissonant intervals to generate colorful sounds. As far as the rhythm is concerned, the piece applies the technique of syncopation, accent, and polyrhythms to produce primordial features of folk dances alongside complicated structures. Thus, the fusion of music language systems is achieved.

The second aspect is the use of ethnic materials within a Western logical framework through motifs as the basis for structuring. The processes of development, transformation, and recapitulation enabled the transformation of ethnic motifs into structural movement. The continuous variation of motifs on aspects of rhythm, pitch, and texture helped maintain a developing character in the composition while transitions and responses helped prevent fragmentation and thus helped develop an organic structure form.

Concerning sound performance, this composition offers a combination of the two through multi-layered textural technique, sound timbre treatment, and sound texture performance in order to achieve sound integration. This has been achieved through the use of superimposed vocal lines and registers to create a multi-layered sound space, where there is clear differentiation between the powerful bass sounds and the soft treble sounds that create a sound timbre similar to national musical instruments and hence adding symbolism to the piece.

4. Results and Discussion

4.1 Experimental Samples

The sample size is set at 30, comprising 15 students who have been studying piano professionally for more than five years, and another 15 non-students who are music enthusiasts. It is assured that all subjects are able to distinguish musical sounds and did not have hearing problems.

In addition, the materials used for the experiment include three samples from the composition Wu Kui (including rhythm-focused, melody-based, and development-oriented passages), and two samples from Western piano compositions are chosen as control samples.

4.2 Experimental Procedure

The testing takes place in a quiet room where good quality sound systems are employed for the playbacks. The subjects listened to various audio samples presented in a random order, playing each sample twice.

While listening, the subjects assessed on four dimensions out of five:

- (1) Strength of rhythm perception (rhythm-motor integration)
- (2) Recognition of ethnic style
- (3) Coherence of structure
- (4) Depth and expressiveness of sound layers

In addition to this, after the subjects provided their ratings, their subjective verbal descriptions are noted down.

4.3 Results Analysis

Table 1. Comparison of evaluation results for each dimension (mean \pm standard deviation)

Evaluation Dimension	“Wukui” (n=30)	Control Work (n=30)	t-value	p-value
Rhythm Perception Intensity	4.62 \pm 0.38	3.81 \pm 0.45	6.87	<0.01
Ethnic Style Recognition	4.48 \pm 0.41	3.02 \pm 0.52	9.12	<0.01
Structural Coherence	4.21 \pm 0.44	4.35 \pm 0.39	-1.28	>0.05
Acoustic Layering & Expressiveness	4.55 \pm 0.36	4.03 \pm 0.42	5.03	<0.01

As can be seen from Table 1, there are many strengths demonstrated by the work Wu Kui on many different levels. First of all, with respect to the intensity of the rhythmic perception, the average score achieved is much higher, being 4.62 \pm 0.38 compared to 3.81 \pm 0.45 for the control group (t=6.87, p<0.01). This is probably due to the fact that the piece uses irregular accents, rhythmic density, and organization in order to achieve a stronger rhythmic drive and association. In turn, ethnic style recognition score for Wu Kui is 4.48 \pm 0.41 compared to 3.02 \pm 0.52 for the control group (t=9.12, p<0.01).

According to Figure 1, the values of various testing groups in all dimensions of the assessment are fairly similar, with differences falling in the range from 0 to 0.15, which suggests that the sound features of the composition "Wu Kui" have very strong universal perceptibility. Regarding rhythmic perception intensity, the professional group and the non-professional group scored 4.68 and 4.56 respectively, a difference of 0.12, indicating that its rhythmic drive and dance-like characteristics can be accurately identified not only by professionals but also intuitively perceived by ordinary listeners. In the dimension of ethnic style recognition, the difference between the two groups is only 0.09, further demonstrating that the ethnic tones and sonic characteristics of the work have high consistency and stability, and can be effectively identified without professional training. With respect to structural consistency, the values of the professional and non-professional groups differed by only 0.14, namely, 4.28 and 4.14 correspondingly. It demonstrates that people with musical education have some advantage over the unprofessional group when perceiving the progression of the music and its structuring.

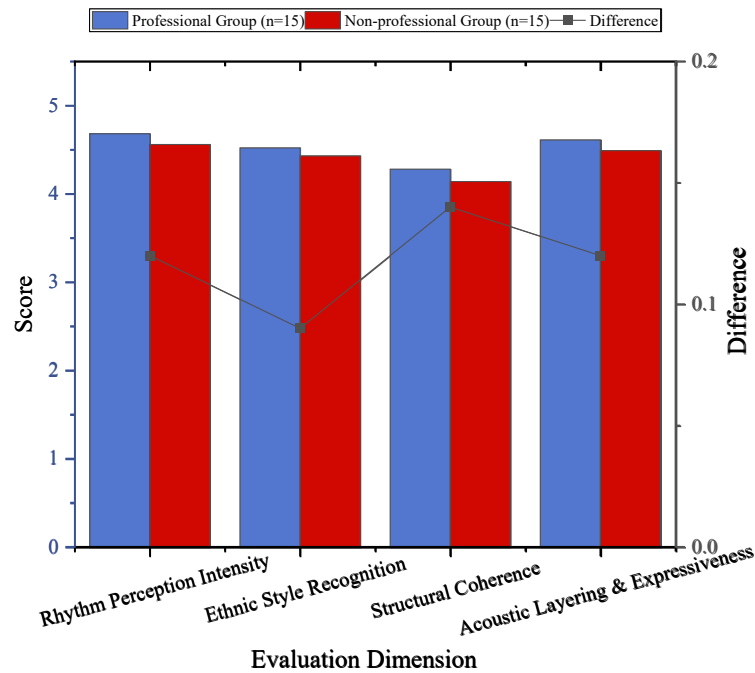


Figure 1. Comparison of evaluation results (mean) among different participant groups

5. Conclusion

"Kui Wu" by Zhou Long is selected as the research object of this essay, wherein the characteristics of the music piece are analyzed from three dimensions of ethnic group, form, and texture. As for the conclusion, the integration effect is proved by the auditory experiment. According to the analysis, it is clear that the music piece successfully combines the two different cultures in a synergistic way, in terms of rhythm, tone motif, and texture. More specifically, the ethnic group rhythm and timbre play an important role in identifying the style, while the motif development and structure arrangement ensure the unity in the entire piece, thus forming a unified presentation combining the unique culture and modern aesthetic concept. From the above empirical results, it can be observed that Wu Kui has shown strong capability in relation to his understanding of rhythm, recognizing the national style, and sound performance; however, he is also able to maintain clarity of structure, meaning that he has been quite successful in his efforts to amalgamate the two music styles. Nonetheless, it should be acknowledged that the above research does not completely free itself from certain constraints, such as the number of samples and scope of the study.

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