

Research on the Application of Fuzzy Philosophy Theory in Chinese Contemporary National Chamber Music Creation: The *erhu* Ensemble “Opera Mask” as an Example

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Abstract: Human beings grapple with a wide range of uncertainties and ambiguities in the process of cognition. Fuzzy Philosophy theorizes that there are major changes in the way humans think. Fuzzy Philosophy is also widely used in theorizing about art, such as the fuzzy aesthetics in artistic aesthetics, the fuzzy beauty in music appreciation, and the hazy beauty that all embody Fuzzy Philosophy. This article is inspired by the theory of Fuzzy Philosophy and uses Xiong Xiao's *erhu* ensemble's work called “Opera Mask” as the entry point into analyzing the work's timbre and sound layout, pitch organization and tonality, unconventional performance and other aspects, revealing elements of fuzzy aesthetic philosophical theory contained in the work. Analysis of this work can provide a useful reference for the creation of contemporary national chamber music and can provide a new way of thinking about the innovation and development of contemporary national chamber music. At present, the creation of contemporary national chamber music no longer occurs in a single, invariable and unified state, but through a multi-innovational, multi-form and multi-level process. In this new and changing situation, Chinese contemporary national chamber music should no longer be limited to a single positioning but should cover multiple aspects of fuzziness. These multiple aspects that characterize a fuzzy creation method are useful for obtaining a larger and wider creative space that will also represent an expansion of creative ideas and methods.

1 INTRODUCTION

There are many different experiences in human development. Art is an indispensable phenomenon that validates the existence of mankind. Fuzzy art is one expression of an ever-changing emotional experience that cannot be seen and that is an emotional state of aesthetics. Fuzzy aesthetics is a subject that researches the uncertain state of beauty in nature, society and art. Aestheticians throughout the ages have spent their lives exploring the mysteries of beauty. There are also philosophical theories of fuzzy aesthetics in contemporary national chamber music. The characteristics of fuzzy aesthetics philosophy theory are various and embodied in uncertainty, integrity, mutual penetration, transition and change. “Crazy for innovation” is the general trend of contemporary music creation by which it is the responsibility of Chinese composers to explore new

techniques and the new vocabulary of Chinese contemporary national chamber music works. For example, “Opera Mask” created by an *erhu* quartet, is a work by the composer Xiong Xiao combining traditional cultural and contemporary connotations. The work depicts the various styles of Peking Opera on the stage with occasional and unique sound effects. This article considers pitch organization and mode, tone sound, techniques and other aspects of in-depth analysis. The analysis of “Opera Mask” helps to further understand the work's characteristics using the Fuzzy Philosophy theory. It is the authors' hope that the analysis will provide a reference for the creation of contemporary national chamber music work.

2 TIMBRE AND SOUND LAYOUT

The work “Opera Mask” uses the contemporary composition method in the layout of timbre and sound. It uses the $\flat B$, C, D, three core sound of various arrangements of modulation, transposition and is constantly repeated, showing the theme of the motive. In contemporary national chamber music works, the pursuit and performance of distinctive and personalized timbre and sound have always been one of the key development objects of composition techniques. “Opera Mask” highlights the rich timbre and flavor of *erhu*. It not only designs the unity of timbre, on the whole, embodying the timbre characteristics of *erhu*, but also designs the prominent combination of new timbre sounds and arrangements from the expressive needs of each paragraph content. Furthermore, the work also explores feasible ways of composition from the unique and creative artistic perspective of the work.

2.1 Overall Layout

In terms of the overall layout, “Opera Mask” presents the timbre characteristics of the *erhu* in different timbre layouts. According to the needs of the work, the unique timbre and range of the Erhu quartet are presented through different contents.

2.1.1 Introduction

The introduction starts with the bow hitting the canister, showing the timbre of the percussion instrument, which forms a sharp contrast with the quick playing of the semiquaver. At the same time, a strong dynamic tone appears with the free speed and the appearance of overtones combined with a sliding tone.

2.1.2 The Other Parts

In part one and part two, the theme motivation combines the flatness of play with transposition to show the lasting appeal of opera style. In the third part, a transitional free phrase is added which is set off by a single glide tone and accented dense tone pattern to increase the concentration and density of the timbre and natural transition into the strong dense timbre of the fourth part.

2.1.3 The embodiment of the Characteristics of the Fuzzy Philosophy

The appearance of this transition exhibits transitional features in fuzzy aesthetic philosophy theory such that features gradually develop from one stage to another stage, which can also be called the intermediate state. Transition is indispensable in musical works and is becoming an important means to enrich the timbre. After the intermediate state of the transition to the more intense fifth part of the work results in a strong ending. Thus, what is created is the sense of paragraph level on the overall sound, highlighting different timbres in different paragraphs, progressive layers and ending at the climax. The paragraph level is contained in its entirety explainable by the wholeness of fuzzy philosophical theory. The work focuses on the overall grasp rather than parts whereby each part in the blend and penetration constantly makes its outline so that impression disappears in a mutual connection. This interconnection reassembles a unified whole to outline an impression. It is hazy, demonstrating a kind of vague aesthetic feeling.

2.2 Presentation of Parts

In addition to the overall timbre layout, “Opera Mask” also highlights and explores the relationship between different timbres and configurations through the presentation of paragraph contents.

2.2.1 Part One (6-12 Bars)

In part one (bars 6-12), the four voices are interspersed and the theme motivation is mainly played in flatness, accompanied by Pizz, slide tone and increasing the richness of the theme melody. At the same time, the combination of $3/4$ and $4/4$ in rhythm seemingly irregular and uncertain, actually increases the melodic drama and presents the rich timbre of the *erhu*. Bars 6-9 intersperses different timbre combinations such as hitting the canister, Pizz and slide tones to show the theme motivation around the C core (see Figure 1).



Figure 1: (Bars 6-9)

2.2.2. The Other Parts

Part two (bars 13-23), highlights the timbre change in transposition and at the same time adopts a rich rhythm decoration and explores the new timbre.

In part three (bars 24-44), the melody in transposition is combined with the transitional phrase, and the tone colour of the monophonic part and the four-part part section is contrasted to highlight the lucidity of the theme melody performed with uncommon fragments.

Part four (bars 45-87), presents the image of the Beijing Opera with intense gongs and drums gradually pounding away and reveals the sharp contrast in timbre. Entering the fifth part (bars 88-123), the fast jump and slide tone form the sound effect, highlighting the contemporary playing color of national musical instruments.

2.2.3 The Embodiment of Characteristics of the Fuzzy Philosophy

The combination of different timbres embodies the characteristics of mutual permeability found in the theoretical framework of Fuzzy Philosophy. There are differences between the timbres of Pizz, slide tone, percussion and long tone, constantly realizing mutual infiltration, mutual transformation and mutual transition presenting a variety of crossover states. This crossover shows the rich character of the music and provides a reference for the creation of contemporary national chamber music works.

3 PITCH ORGANIZATION AND TONALITY

In terms of designing pitch and pitch sequence, the work mainly follows the Chinese national mode and the seven tones YU mode combined with mode variation required by contemporary performance. $\flat B$, C, D comprise the core of pitch organization form and that is Beijing Opera XiPi cavity characteristics. The three main tones throughout the entire music piece, combine modulation and transposition in contrast and development.

3.1 The Overall Tonal Layout

The overall tonal layout is as follows:

Table 1: The overall tonal layout

Parts	Bars	Mode	Explain
Introduction	1-5	e YU	Bars 9, 12, 13 transposition.
I	6-8	c YU	
	10-11	e YU	
II	14-16	g YU	Bars 17, 22-23 transposition, rhythm decoration.
	18-21	e YU	
III	24-28	a YU	Bars 29, 39-44 transposition.
	30-38	$\sharp f$ YU	
IV	45-50	e YU	Bars 51-52, 57-59 transposition. Bars 60-84 modulation. Bars 85-87 repeat.
	53-56	d YU	
V	88-101	e Gong	Bars 102-115 variation.
	116-123	d YU	

3.1.1 The First Part

The work of the first part theme development of $\flat B$, C, D, ends with C. The whole phrase contains only four $\flat B$, C, D, G, as a type of Chinese national pentatonic mode. C is the scale-step that should be emphasized in the Chinese national mode and is the backbone of the national chord. $\flat B$ and D are near the tonic C and are repeatedly used. It should be stressed that this highlights the intense, dramatic acoustics (see Figure 2).



Figure 2: Bars 6-7 main themes.

3.1.2 The Second Part

To increase the tension of music, the second part centers on G as the tonic and is transferred to the national G mode. In bar 17, the transposition is #d-e, #g-a (with the minor second), and the music color is very prominent (there are also #G, #A: 23), which promotes the development of music. Although the use of these tones is only a transition, the music soon moves into the E national YU mode. At the end of the second part, it contributes to the development of tonality by repeating in a single tone.

3.1.3 The Third Part

At the beginning of the third part, with A as the main tone and E as the treble, it forms a harmonious five-degree relationship, a type of the Chinese national mode. In this process, the sound color is constantly changing along with the notes as it flows around A. In the Bars 39-44 have # G, F, b B, moves things a semitone down from transposition, the musical colour is richer during the change of the mode. Changeability is also one of the important characteristics of the Fuzzy Philosophy theory. Fuzziness leads to the mystery in things, thus forming the artistic effect of “unpredictability”.

3.1.4 The Fourth Part

The fourth part starts with an E tone, a repeat of the figure at the same time as gradually transferring to the transposition, forming a transition in the bars 51-52. This centers around bG, A, and bB, #F and promote musical transition. This kind of intermediate state transition is consistent with the characteristics of the Fuzzy Philosophy theory performance, forming a natural music character (see Figure 3).



Figure 3: Bars 6-7.

Music by #E, F, G, A, bB, #C of scales, centered around the D tone repeated development, pitch change, into bars 60-84 of transposing, which of two unessential notes (#D, #E) in bar 71. The three-bars repetition then enters the fifth part.

3.1.5 The Fifth Part

The fifth part is the climax of the work, centering on the national Gong mode of E tone. In bars 102-115 transposition and variation are performed, and the tone row shift is repeated, using the method of tone row imitation. The final ending echoes the theme note in D (see Figure 4).



Figure 4: Tone row.

3.2 Summary

Overall, the work has gone through numerous transpositions, modulations and transitions. At the same time, based on the Chinese national seven tones YU mode, the pitch of the work and its organizational form are developed. On this basis, the interval relations commonly used in national modes such as the octave, fifth degree and second degree are widely used so that the overall sound effect expresses the mutability of artistic conception. To show an unstable mood, the work also directs attention to the use of small second degree and other dissonant sounds showing the changes and hazy beauty in fuzzy artistic conception.

4 INNOVATIVE *erhu* ENSEMBLE PERFORMANCE

In the performances of today’s *erhu* ensemble works, in addition to traditional performing methods, contemporary sounds are used in other ways.

4.1 The Performance Techniques

To express the content, the following work has been designed for unique performance methods such as hitting the canister with the bow, hand clapping the canister, using the slide and bow shaking. These methods vividly imitate the percussive effect of drum music in opera and the instability and discontinuity of the singing style in Peking Opera. It also gives the audience a three-dimensional, rich and thick music artistic atmosphere.

The work immediately below imitates the colour of Peking Opera and the exaggerated slide based on traditional performing methods (see Figure 5).



Figure 5: Bar 17.

Innovative performing techniques for new timbres such as crescendo, saw playing, improvisation, etc., can be seen in the overtones in bars 4-5, (see Figure 6).



Figure 6: Bars 4-5.

The strength change of Pizz is seen in Figure 7.



Figure 7: Bars 85-87

The performance of these compositional designs produced new timbres and sounds. Thus, it can be said that the expansion of the new *erhu* performance is one of the important means by which the concept of timbre and sound can be formed. In the entire music piece, the combining of modulation and transposition to set contrast and development is evident.

4.2 Summary

New performing methods are fuzzy within the music score, lacking clear markings for the intensity, strength and duration of playing. A certain degree of freedom helps to create differences between the real sound and the virtual sound in the timbre. Moreover, the work makes use of different performing methods to produce the change in timbre when the homophones repeat the timbre. These changes reflect the uncertainty of fuzzy philosophical theory. The term “uncertainty” refers to the unstable characteristics of things. Certainty is temporary so that a stable shape is here and now, not there and then. However, unstable factors lurk in the time of stability. This kind of unsteady factor increases ceaselessly until a saturated level is reached that can break through a stable limit and appear as an unsteady phenomenon. Due to the constant changes of time and space, there are many uncertain intermediate links and mutual transitions thus exemplifying a unique fuzzy state. Therefore, certainty is temporary and relative while uncertainty is permanent and absolute.

Because of the aforementioned instabilities, the work “Opera Mask” creates practical contemporary *erhu* performance skills. Thus, the modernization of the *erhu* quartet is demonstrated and provides a way of thinking about the development of contemporary national chamber music by breaking the fetters of traditional performing methods and designing new performing skills in line with the works.

5 CONCLUSION

The work “Opera Mask” is based on the Chinese national seven tones YU mode and is combined with a new tone series such as modulation and transposition. Taking the structure of decorative variations as the principle for developing a new and contemporary work, “Opera Mask” is created by changing and unifying paragraph levels. The creation technique, paragraph layout and new playing acoustics of the work reflect the transitional and uncertain characteristics attributable to changing, integral and permeable characteristics of the Fuzzy Philosophy theory. The work also shows the unpredictability of facial makeup characters in the Peking Opera stage. Opera Mask combines the appeal of traditional *erhu* with modern timbre making it possible to foment timbre development and explore the unique artistic expressive modes of Chinese contemporary national chamber music. Employing

the philosophy of fuzzy aesthetics theory to explore the characteristics of the techniques used in the creation and research of the contemporary national chamber music is the first step of interdisciplinary research exploring the relationship between artistic creation and philosophical logic. This encompasses the work's layout using logic theory and the foundations of aesthetic psychology. This interdisciplinary study expands the philosophical-theoretical basis of contemporary national chamber music creation.

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