

Royal College of Music

Doctor of Music in Composition

Final Submission Commentary

*An exploration towards the enrichment of a personal musical
language in musical composition*

by Yang Liu

Abstract:

The following commentary details ways in which I have enriched my own compositional language by exploring the integration of elements from Chinese musical culture within the context of Western Contemporary music. This commentary accompanies a portfolio of compositions and sets out to articulate the means by which I have attempted to develop and to enrich my personal musical language through the integration of certain, in my view, key elements from Chinese musical culture within the context of Western contemporary musical thought. My focus is on three elements which are shared between both Chinese and Western cultures, used in each with very different effect and intent: glissandi, modality and micro-tonality. The commentary explores the role each of these plays in my own work, how their practice and use derive from Chinese musical traditions and how I have set out to re-think that practice in terms of a musical language derived from a contemporary 'Western' art-music context.

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Contents

1. Introduction	6
2. Compositions before 2014	8
2.1 An exploration of contemporary classical music in Chinese and Western cultures.	8
2.1.1 An exploration of contemporary classical music in Chinese culture.	8
2.1.2 An exploration of contemporary classical music in Western culture.	11
2.2 A selective collection of elements from contemporary music	12
2.2.1 Glissando	12
2.2.2 My own approach to Chinese modal writing.	13
2.2.3 Microtonality	14
2.3 Analysis of my own music	15
2.3.1 <i>Diprosopus</i>	15
2.3.2 <i>Yun</i>	17
2.3.3 <i>Yun II</i>	19
2.3.4 <i>Invisible Valley</i>	21
2.3.5 <i>The Road to the Holy Temple</i>	23
3. 2014-15 compositions	30
3.1 The horizontal writing in traditional Chinese music	30
3.2 Glissando: my own reflection of the horizontal traditional Chinese music	31
3.2.1 <i>The other side</i>	32
3.2.2 <i>Broken Connection</i>	37
4. 2015-16 compositions	49
4.1 Micro-polyphony and Macro-polyphony	49
4.2 He Xuntian's SS (stream of structure) Method of Musical Composition in <i>The Image of sound – FuSe Pattern</i>	50
4.2.1 Prose-like Horizontal Movement and Canonic Relationships in Vertical Parts	50
4.2.2 Pitch relationships based on arithmetic sequence	53
4.3 My own reflection on Macro-Polyphony	55
4.3.1 Ideas about Micro-Polyphony in a Macro-Polyphonic texture	55
4.4 Macro-Polyphony in my own music	56
4.4.1 <i>Drawing Sketch</i>	56
4.4.2 <i>Sun Moon Consonance II</i>	60

5. Compositions after 2016	66
5.1 Exploration of other Chinese composers' approach to Chinese modes in Contemporary music.	66
5.1.1 <i>Crossing the River to Pick Hibiscus</i> (涉江采芙蓉) by Luo Zhongrong	66
5.1.2 <i>Sing the Song with Mountain Drum</i> (扬歌与山鼓) by Zhou Jinmin	69
5.2 My own reflections on the works in the previous section	70
5.2.1 Chinese twelve-tone technique's connection with my own modal system	70
5.2.2 The influence of Donatoni's pitch transformation on my own modal system	72
5.2.3 Gradual development in my music	74
5.3 Analysis of my own music	75
5.3.1 <i>The Passage</i>	75
5.3.2 <i>Rain Air II</i>	77
5.3.3 <i>Rain Air III</i>	83
6. Conclusion	88

Chapter 1:

Introduction

As a composer, it is important to me to explore the role of my Chinese heritage in the development of my own musical language. For this to evolve, I feel that it is crucial that I remain open to all different possibilities which may materialize in the course of composing. The composer and artist Tony Conrad said: “The job of an artist is to discover laws to violate that haven’t been made yet.”¹ It is human nature that some people are afraid to make changes, and prefer to hide away within their comfort zone refusing any new things. But I feel strongly that as composers, we cannot live in the past, we need to create new, unfamiliar experiences. Sometimes, even a mistake is not a bad thing in one’s exploration as it may open up a different pathway to try something completely new. During this experimentation, there is no right or wrong in the development. I like to think about music as being like a ‘tree’. People cannot say one tree is better than another, they just grow in their own personal ways with a unique character. This character will be the personal musical language which I am examining in this commentary.

For me as a Chinese composer, one of the most significant influences on my compositional language is Chinese music. I aim to explore new ways to integrate elements from this music with Western Contemporary music. In 1980, British composer Alexander Goehr visited the Chinese Central Conservatory of Music in Beijing². He introduced the dramatic developments in western classical music in the 20th century, and included music from Debussy, Schoenberg, Stockhausen and Boulez. This was the first close contact with 20th century music for most Chinese composers. Since the visit of Alexander Goehr, Western Contemporary music gradually became more popular with young Chinese composers. In 1981, Professor Zheng Yinglie opened the first serialism class in China for his composition students in the Wuhan Conservatory of Music. As a starting point, Arnold Schoenberg’s serialism gradually became the main bridge between traditional Chinese elements and Western contemporary music. Many young Chinese composers started their own explorations in contemporary music with traditional Chinese sensibilities.

I have been exploring Chinese music for some time, and have analysed a substantial number of works by composers from the 20th and 21st centuries who absorbed Chinese elements within their music. One such composer whom I admire most is Qin Wenchen (born in 1966). For me, he is one of the very few composers who have successfully combined Chinese elements with Western Contemporary music. Although there are not many obvious signs of Chinese music in his scores, such as particular modes or specific instruments, his work captures a strong Chinese influence, by imitating specific Chinese sounds with Western instruments, and through exploring the music of cultures similar to those found in China. As a starting point, by looking into the music of Qin Wenchen, I will explore elements of both traditional and contemporary Chinese music that are absorbed into his instrumental techniques, modes and sound world. By examining how these

1. Brian Duguid, “Interview with Tony Conrad”, *This interview was conducted by email between Tony Conrad and Brian Duguid in June 1996, Atlanta*, accessed March 5, 2018, <http://media.hyperreal.org/zines/est/intervs/conrad.html>

2. Yurun Mao, ‘Discussion about Professor Goehr’s visit’, *Information about Western Music*, 14 (1980)

elements from two different cultures have been integrated, I hope to enrich my own musical vocabulary in a personal and specific way.

Following the timeline of my doctoral research, this commentary is divided into six chapters. The first chapter is the introduction. The second chapter will focus on the early compositions of my doctoral research before 2014. It includes a brief exploration of contemporary music both in Chinese and Western cultures, and in it I will analyse how I have absorbed such materials in order to integrate them with the Chinese influences in my own musical language. The third chapter focuses on my compositions finished after my transfer exam during 2014 to 2015. Through the examination of the Eastern horizontal movements in Chinese music, I want to focus on the glissando as the main element of linear movement to explore music with only one single melodic line in my own compositions. The fourth chapter will be an analysis of Macro-polyphonic music, which I researched between 2015 to 2016. This analysis will also demonstrate how the elements that I discuss concerning macro-polyphony are realised in my own compositions during this period. The fifth chapter will examine the compositions which were written after 2016. Through the analysis of serialism in Contemporary Chinese music, I want to focus on the examination of my own approach to Chinese modal writings in my own compositions. I will lay out the specific methodologies which I have explored to integrate Chinese elements into Western Contemporary music. The last chapter will be the conclusion.

Chapter 2:

Compositions before 2014

In this Chapter, I will focus on three elements which can be found within Eastern and Western cultures and which are areas of focus within my own work: glissandi, my own approach to Chinese modal writing, and microtonality. 2.1 will include a brief exploration of contemporary music both in Chinese (2.1.1) and Western cultures (2.1.2). 2.2 is a selective collection of elements from contemporary music which include glissandi (2.2.1), my own approach to Chinese modal writing (2.2.2), and microtonality (2.2.3). 2.3 is an examination of how these elements are absorbed into my own work through the influence of Chinese practice. I will explore the use of these elements within my own compositions: *Diprosopus* (2.3.1), *Yun* (2.3.2), *Yun II* (2.3.3), *Invisible Valley* (2.3.4) and *The Road to the Holy Temple* (2.3.5).

2.1 An exploration of contemporary classical music in Chinese and Western cultures

2.1.1 An exploration of contemporary classical music in Chinese culture

In the first period of my doctoral research, I examined the music of the Chinese contemporary composer, Qin Wenchen. In his scores, he avoids specific references to Chinese culture; however, through careful listening one can still discern that such influences exist. I believe that there are three main techniques which explain how Qin Wenchen integrates these influences within a context of Western Contemporary music.

Firstly, Qin Wenchen uses Western European instruments to imitate the sound of traditional Chinese instruments. For example, in his cello concerto *The Dawn* (2008), Qin Wenchen explores the technique of glissando found commonly in the performance technique of the traditional instrument Morin Khuur within the cello part³. An Luxin wrote in 2010,

To imitate the glissandi of traditional Chinese instruments is one of the most frequently-used techniques in Qin Wenchen's music.⁴

Moreover, Qin Wenchen not only imitates the glissandi of Morin Khuur, but also uses the sound of many other Chinese traditional instruments such as the Er Hu and Zheng⁵. For example, in *Calling for Phoenix* (1996) the melodic line imitates the grace notes of these instruments. Such grace notes are characterized through their strength of emphasis with the following 'main' notes articulated with less prominence (**Example 2.1**).

3. Morin Khuur is a traditional Mongolian instrument which has two strings to play. The holding position is similar to that of the cello.

4. Luxin An, 'Presentation of the Oriental Colours –Understanding the Features of Qin Wen-chen's Chamber Music Composition'. *People's Music*, 7 (2010) 14-17 (Translated by Author)

5. Er Hu is a traditional Chinese instrument which has two strings. Similar to Morin Khuur, the holding position of the Er Hu is similar to that of the cello.
Zheng is a plucking string instrument. The way of playing is similar to a horizontal guitar.

Example 2.1: *Calling for Phoenix*, bar 238, melody line⁶.

The image shows three staves of musical notation. The top staff is marked 'Lento Rubato' and contains a melody line with dynamics *pp*, *p*, *pp*, and *mf*. The middle staff continues the melody with dynamics *p* and *f fp*, featuring a circled 'v' and the Chinese characters '(飞指)'. The bottom staff has dynamics *ff sempre* and *f*, with a circled 'v' and the Chinese characters '演唱时同时哼唱上方声部'.

The second area that interests me regarding Qin Wenchen's work is that which combines local musical styles from different areas of China. Because he was born in Inner Mongolia, most of his works contain influences from this area; for example, in *The Dawn* (2008), he employs many techniques commonly found in the performance practice of Mongolian music, such as Khoomei⁷. In the first movement of this piece, he explored the use of harmonics in the cello part to imitate the overtones in Mongolian throat singing. In a traditional Mongolian band, there is always a solo singer who sings the Mongolian long-song⁸, while accompanied by this overtone singing as background. In accordance to this, Qin Wenchen used a long glissandi line in this piece to imitate the movements of the Mongolian long-song.

Within his sound world, however, Qin Wenchen also explores elements of Tibetan music; for example, in his work *Holy Road in May* (2004), he imitates the sound of Tibetan Buddhist monks praying. In 2006, Wang Guisheng wrote,

Holy Road in May is a hymn which contains the desire for joy of pilgrims and monks. Their praying sound of Tibetan Buddhism 'six-word mantra'⁹ can be found throughout the whole piece¹⁰.

Example 2.2 shows the bar 120-124 in *Holy Road in May*. Because the viola is one of the instruments which is close to the human voice, Qin wrote the viola part in a lower register with a repeating pattern imitating the chanting sounds of the Tibetan monks.

6. Wen-chen Qin, *Calling for Phoenix* (Hamburg: Sikorski Music Publisher, 1996)

7. Khoomei, also called Mongolian throat singing, is one particular variant of overtone singing practiced by people in Mongolia, Inner Mongolia, Tuva and Siberia.

8. Long-song is one of the central elements of the traditional music of Mongolia. This genre is called "long song" not only because the songs are long, but also because each syllable of text is extended for a long duration.

9. 'Six-word mantra' comes from Sanskrit. In Chinese they are 唵(ōng), 嘛(mā), 呢(nī), 叭(bā), 咪(mēi), 吽(hòng). In English they are 'Om Mani Padme Hum'.

10. Gui-sheng Wang, 'The Complicated Single Tones: Impression of Qin Wen-chen's Symphonic Poem *Holy Road in May*', *Shanghai Conservatory Journal*, 2 (2006), 37-46, (Translated by Author)

Example 2.2: bar 120-124 in *Holy Road in May*.

The image shows a musical score for a string quartet, specifically bars 120-124 of the piece 'Holy Road in May'. The score is arranged in five systems, each containing two staves. The instruments are Violin I (VI I), Violin II (VI II), Viola (Vie.), and Cello (Cello). The tempo is marked as quarter note = 60. The score includes various dynamic markings such as *pppp*, *p*, and *pp*. Performance instructions include *arco* and *sul C. al**. The notation features complex rhythmic patterns and microtonal intervals, with some notes marked with a '1' above them, indicating microtonal adjustments. The score is written in a key signature of one flat and a 4/4 time signature.

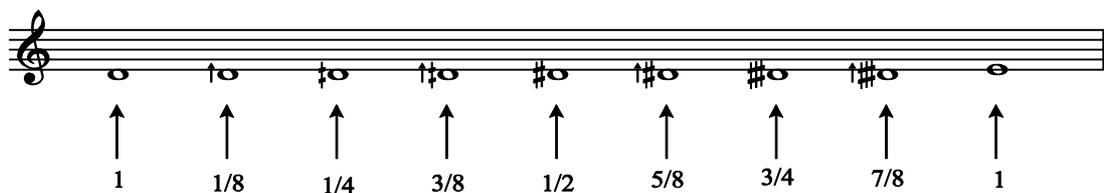
The third area which Qin Wenchen explores within his own musical language, bridging the gap between Chinese and Western musical cultures, is microtonality. When interviewed in 2012, Qin Wenchen explained his fascination with microtonality:

My inspiration usually comes from real folk tales. Many years ago, in Tibet, I heard some local Tibetans singing together on the mountain. Because there were too many people, their song was not in tune. But inside the valley, the whole sound world created a very special effect which I had never heard before. This experience gave me the idea of absorbing the microtonality found in traditional Chinese music into my own work¹¹.

There are numerous uses of microtones that can be found in Qin Wenchen’s music, particularly *Holy Road in May*. Here the composer divided a major second into eight micro-intervals (see **Example 2.3**) and these microtones produce a distinctive sound when played in combinations of 3 or 4 simultaneously, reflecting the composer’s impression of the song in Tibet.

11. Mei Xie, ‘Interview with Qin Wen-chen’, *China Art News*, 1213 (2012) Translated by Yang Liu

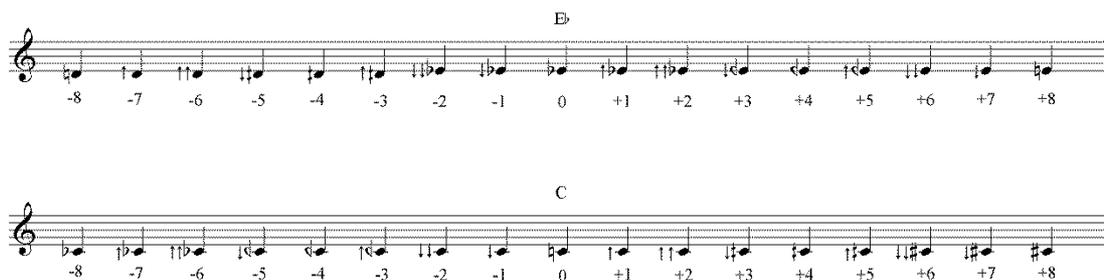
Example 2.3: The divided microtones in *Holy Road in May*.



2.1.2 An exploration of contemporary classical music in Western culture

To turn now to extended instrumental techniques and unique sounds developed by Western contemporary composers in recent times, there are three main musical elements from this music that influence my own work: Microtonality, glissandi, and non-instrumental sounds. For microtonality, one of the pieces which explores a wide range of micro-intervals is *A Carlo Scarpa, architetto, ai suoi infiniti possibili* (1984) by Luigi Nono¹². In comparison with the microtones in Qin Wenchen’s *Holy Road in May*, Nono’s piece uses even smaller micro-intervals, as shown in **Example 2.4**.

Example 2.4: Division of pitches in *A Carlo Scarpa, architetto, ai suoi infiniti possibili* (1984)



Nicolaus Huber points out that “In *A Carlo Scarpa* we have tonal fields which are split up into 1/16th notes on a microtonal basis¹³.” Huber also writes that “The notes E flat and C present themselves as a differentiated field of 14 or 16 different pitches, which frequency-wise, vary in pitch on bare acoustic grounds¹⁴.” Huber also points out that, as it is extremely difficult to play 1/16th tones precisely, there are “infinite possibilities” as a result¹⁵. This is in accordance to Nono’s strong interest in the ‘living sound’, where sound is perceived as an organism imbued with life, an idea that I find inspiring.

In my opinion, some of the richest examples of glissandi can be found in the music of Iannis Xenakis (1922 - 2001). For Xenakis, the glissando becomes one of the most prominent features in a great number of his works. This effect attains a different character from the traditional portamento. Also, it is interesting to mention that, since Xenakis’ first major orchestral work *Metastasis* (1954), the glissandi lines are essentially interlinked with his architectural designs. As Miha Iliescu points out in 2006,

12. Luigi Nono, *A Carlo Scarpa architetto ai suoi infiniti possibili* (Milano: G.Ricodi, 1984)

13. Nicolaus Huber, ‘Nuclei and Dispersal in Luigi Nono’s *A Carlo Scarpa architetto, ai suoi infiniti possibili* per orchestra a microintervalli.’ *Contemporary Music Review*, 18/2 (1999) 25

14. *ibid.*, 25

15. *ibid.*, 20

The correspondence between music and architecture, as he conceives it, actually is founded on the universality of line ... The notion of line actually implies that of motion, so Xenakis remarks that the particular shape of a glissando depends on the speed of a hypothetical sound point that continuously moves within an imaginary pitch-time space¹⁶.

From the above one could suggest that Xenakis' glissandi can be perceived as 'traces' of continuously moving lines that create sound events in a similar manner to constructing architectural buildings. This way of composing has a strong effect in my work, as I explain in more detail in the next chapter.

The last of the three musical elements from Western Contemporary music that influence my own work are 'organic' sounds produced from sound sources that are not conventional musical instruments; for example, natural sounds such as water, stone, paper etc. One of the works that I admire most for involving such sounds is *burbabbar za* (2009) by Jonathan Cole¹⁷. The title of the piece comes from ancient Sumerian and it translates as "to make noise." As Sumerians normally needed to wash their hands before and after playing music, the composer brings hand-washing material into his piece. Cole writes in the programme note for the piece's premiere in 2009 that "for the audience I want the piece to feel like an ancient apparition emerging and dissolving in front of their eyes and ears¹⁸." When I listened to *burbabbar za* for the first time, it was a truly inspiring experience to hear such sounds challenging the boundaries between music and reality.

2.2 A selective collection of elements from contemporary music

As mentioned already, one of the main aims of my research involves a better understanding of how the examination of other composers' works and techniques has affected my own compositional language. For this, it felt necessary from the beginning of my research to focus such analysis on specific subjects. Thus, as a result, there are three main elements which I focused on in the pieces that I composed between 2012 and 2013. First and most important are glissandi. Second is the development and use of a specific mode based on Chinese modes. The third element is the use of microtones.

2.2.1 Glissando

In the music played by Chinese string instruments such as the Er Hu, Morin Khuur and Zheng, the glissando is one of the most important features in their manner of performance. For me, such music has a significant influence on my own compositions. There are three main features of the glissandi that I use in my work. The first feature is imitating the human voice, where the movement of glissandi follows the tone and mood of talking. There are four different accents of voice in Chinese mandarin, with the following directions: straight (→), upward (↗), curve (↪) and downward (↘). An example of how one such glissando movement can be notated is shown below in **Example 2.5**. It contains the third voice accent of Chinese mandarin "curve (↪)" in the first beat of the glissandi line.

16. Miha Iliescu, 'Glissandi and Traces a Study of The Relationship Between Musical and Extra-Musical Fields', *Definitive Proceedings of the "International Symposium Iannis Xenakis"*, ed. Makis Solomos, Anastasia Georgaki and Giorgos Zervos (Athens, 2005), 2

17. Jonathan Cole, *Burbabbar za* (London: G.Ricordi & co., 2009)

18. *ibid.*

Example 2.5: The third accent of Chinese speaking in glissandi music.



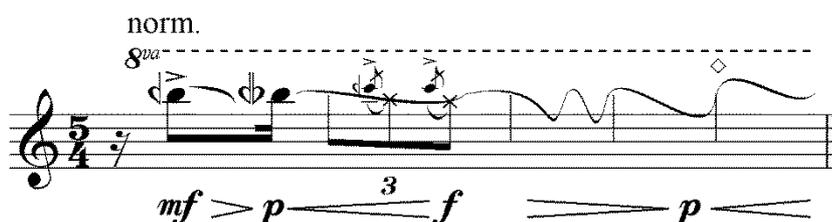
The second feature of glissandi is the different ways of pressing a string while gliding. Players only need to touch the string lightly, instead of pressing, when they are executing glissandi. To achieve such an effect, I used a technique which moves towards a harmonic glide within the long glissandi line (see **Example 2.6**). The mark \diamond means ‘touch the string lightly’, and the sign \blacklozenge shows that the finger returns to normal pressure.

Example 2.6: Change of glissandi pressure in *Yun*, bar 29-31(viola part)



The last feature of glissandi in my music are grace notes. In traditional Chinese music, composers prefer to add grace notes at the beginning or middle of glissandi. In comparison with the use of grace notes in Western music, this sounds much stronger and carries a more significant role in the music. This feature is adopted in some of my works, as shown in **Example 2.7** from my piece *Invisible Valley*. In this piece, I added two strong accented grace notes in the middle of a long glissandi line where the grace notes become more important.

Example 2.7: Strong accented grace note in *Invisible Valley*, bar 9, violin part.



2.2.2 My own approach to Chinese modal writing

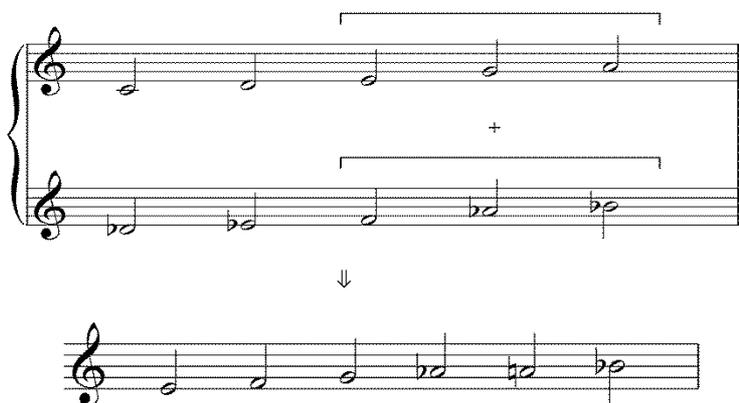
Apart from glissandi, I have also found my own approach to developing modal writing as another element that has resulted from my research. Such modes are constructed from traditional Chinese modes and intervals, as shown in **Example 2.8**.

Example 2.8: Traditional Chinese mode system.

宫	商	角	徵	羽
Gong	- Shang	- Jue	- Zhi	- Yu
	└ Maj. 2 nd ┘	└ Maj. 2 nd ┘	└ Min. 3 rd ┘	└ Maj. 2 nd ┘

The basis for this modal writing is produced by the last three notes of two adjoining keys, “Jue”, “Zhi” and “Yu”. **Example 2.9** demonstrates how the first two consecutive keys construct this mode.

Example 2.9: the way to create the notes using my own approach to Chinese modal writing.



The reason for choosing the above group of six notes for my modal writing is that it contains both Chinese and Western Contemporary elements. Within the last three notes of each key in the Chinese mode, the intervals are consonant with each other. However, if one places two consecutive keys together, there is a merging resulting in dissonant intervals more associated with Western contemporary music and fragments from Chinese modes.

2.2.3 Microtonality

In terms of Microtonality, the “infinite possibilities” of Qin Wen-chen’s and Luigi Nono’s music (see 2.1) has influenced my own musical vocabulary significantly. Thus, in parallel with the composing methodology of Qin Wen-chen’s micro-intervals, my own compositions also aim to capture such musical ingredients as well, as shown in **Example 2.10**.

Example 2.10: The Microtonality system’s notation in my own composition.

1 = whole tone 1/2 = semitone 1/4 = quarter tone 1/8 = 8th tone

As seen from above, I divide the major second into eight micro-intervals. Therefore, there can be a maximum of nine different but closely related pitches playing together. This forms a ‘crowd’ of sounds which surround one pitch in the center. Huber depicts this kind of Microtonality as a “nuclei and dispersal” model¹⁹. This technique aims to expand the possibilities of a single note’s sound.

In order to integrate Chinese musical elements with microtonality, the notes of Chinese modes are employed within microtonality in some of my compositions. In this way, for example, the pentatonic scale evolves into modern harmony with the help of micro-intervals. Therefore, microtonality can be exploited as one of the ‘bridges’ between Chinese and Western Contemporary music that I aim to construct, use and develop for my own work.

2.3 Analysis of my own music

2.3.1 *Diprosopus*

The first piece I would like to discuss in this chapter is *Diprosopus*, which was composed in 2012. *Diprosopus* is for voice, string quartet and piano and the title refers to a person who has two different faces. In accordance with this, I created two contrasting characters in my piece. These two characters are divided into ‘A’ and ‘B’ sections that alternate with each-other throughout the piece: A-B-A-B-A-B and so on. The A sections depict the good side of a person, while the B sections show the evil side. Each time an A or B section repeats, the length of the music is cut to sixty per cent (60%) of the previous section, a proportion chosen to emphasize the gradual changes taking place. The whole piece becomes a sound journey, where these two different characters/sections gradually merge into one towards the end.

There are two main musical elements presented in this piece. The first is the Sanskrit text used in the vocal part writing. Influenced by Qin Wen-chen’s *Holy Road in May*, I chose to use Tibetan Sanskrit as the text. The Sanskrit represents the ‘evil’ side of mantra, which is illustrated through the use of nonspecific pitches with unstable timbres, as shown in **Example 2.11**.

19. Huber, *op. cit.*, 34.

Example 2.11: *Diprosopus*, bar 70-74, vocal part.

$\text{♩} = c.48$
 Voice p low broken sound mf norm. sound with pressure f high evil sound pp air sound p mp norm. sound with pressure
 Yi Ha Sha Li Bu Yi Te La Lu Ba Xu Ni
 Voice p low broken sound mp p air sound pp
 An Ah Xu Ni Ya Da Yi

There are four different kinds of extended vocal techniques: broken sounds, air sound, high ‘evil’ sound and normal sound with pressure. Influenced by Tibetan religious music, I chose to use some of these techniques to imitate the sound of guttural chants, such as the broken sound. The purpose of creating these techniques in the B sections is to achieve the effect of an evil and ‘out of control’ atmosphere that is clearly contrasted with the A sections.

The glissando is the third element included in *Diprosopus*. Due to the fact that this piece was composed in the early stages of my research, the movement of gliding does not yet reflect the influence of Chinese traditional instruments. In *Diprosopus*, the main feature of glissandi is their development process. As shown in the example below (**Example 2.12**), this technique involves mixing material from different glissandi such as A and B in order to produce new types of glissando, such as C.

Example 2.12: The development of glissandi in *Diprosopus* string part. (A+B=C)

A:
 +
 B:
 ↓
 C:

Glissandi are used in a totally different way in the vocal writing of the piece as compared to the string writing. The original melody in the vocal part in the A sections is in the Chinese mode. However, in order to integrate Chinese elements with Western Contemporary music, these notes are played within a microtonal context and glissandi, as shown below (**Example 2.13**).

Example 2.13: *Diprosopus*, bar 34-37, vocal part.

The image shows two staves of musical notation for a vocal part. The first staff begins with a tempo marking of approximately 36 (♩ = c.36) and a 3/4 time signature. It features a vocal line with lyrics 'Ha', 'Yi', and 'Ah'. The music includes dynamic markings such as *p*, *mf*, *pp*, and *p*, along with performance instructions like 'gliss' and '3' (triplets). The second staff continues the vocal line with lyrics 'Ha', 'Yi', and 'Ah', also featuring dynamic markings like *mf*, *p*, *mp*, and *pp*.

2.3.2 Yun

The second piece to examine in this chapter is *Yun*, which was composed in 2013. It is the first of a series of pieces that carry the title *Yun* (a Chinese word depicting ‘inside’ beauty), and the music depicts a variety of paintings. This specific piece, which is written for viola and piano, is based on a traditional black and white Chinese brush painting (**Example 2.14**)

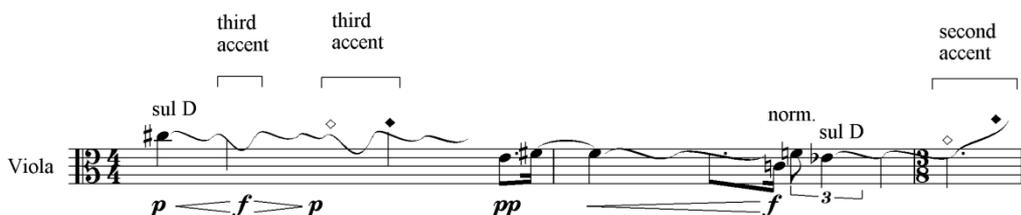
Example 2.14: The Chinese brush painting for *Yun*²⁰



There are three main elements in *Yun*. The most significant element in this piece is glissando, here developed under the influence of traditional Chinese music. As explained in the previous section, there are three different elements that can be applied to my glissando techniques. *Yun* ‘absorbs’ the first two of the elements into the glissando writing in the viola part. More specifically, I firstly use the voice accents of Chinese Mandarin mentioned earlier (see **Example 2.15**).

20. It is a traditional brush painting for Mount Huangshan in China.

Example 2.15: The Chinese language accents of voice uses in the viola part of *Yun*, bar 35-37.



In the example above, the second and third accents of the voice are brought into a long glissando line, in order to imitate the tone of speaking in a long conversation. Secondly, I employ the unique pressing technique of glissando in this piece. The marks ◊ and ◆ appear twice in these three bars. (see **Example 2.15**)

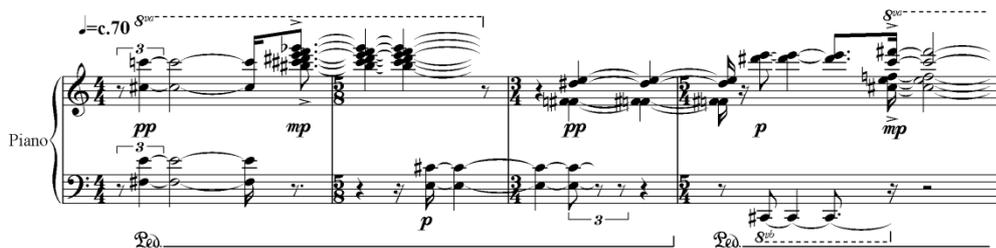
The next essential elements that appear in *Yun* are the 'organic' sounds, which are mentioned in an earlier section. The piece exploits two primary non-instrumental materials in the piano part. Firstly, the player uses a plastic credit card to scratch the piano strings. By following the changes in the dynamics of the scratchy sound, this action is gradually brought into the foreground and becomes prominent in the music. Secondly, the player is asked to employ a bunch of keys and place them above specific strings. While playing the notes where the keys were 'planted', the piano strings resonate like a *sitar*. As the sitar comes from Eastern cultures, the sound world of this piece begins to incorporate strikingly contrasting styles into the Western contemporary context of the piece.

Ultimately, my own approach to Chinese modal writing, as explained in the previous section, is an important element for the harmony of the piano part in *Yun*, as shown in **Examples 2.16** and **2.17**.

Example 2.16: The new mode in *Yun*'s piano part.



Example 2.17: The piano part of *Yun*, bar 17-20.



The image shows a musical score for the piano part of the piece 'Yun', specifically bars 17-20. The score is written for piano and features a complex rhythmic structure with a tempo marking of approximately 70 beats per minute. The music is characterized by dense, overlapping textures and dynamic markings ranging from *pp* (pianissimo) to *mp* (mezzo-piano). The score includes various musical notations such as triplets, slurs, and dynamic accents. The piece is in a 4/4 time signature and features a key signature of one sharp (F#).

As explained before, my own approach to Chinese modal writing is based on two consecutive keys that exist in Chinese modes. The dissonance that can be created between these two keys can bring Western Contemporary music elements into fragments of Chinese modes. Therefore, in *Yun*, depending on which notes have been selected in the chords, the sound of the piece enables it to reflect further my Chinese and Western Contemporary influences.

2.3.3 *Yun II*

The third piece discussed in this chapter is *Yun II*, which is the second *Yun* piece from the series of compositions mentioned earlier. *Yun II* is inspired by the artist Federico Barocci (1535-1612), whose works are exhibited in the National Gallery in London. The piece reflects one of Barocci's drawings, called *Compositional Study of Madonna with a Cat*²¹ (**Example 2.18**). Because this drawing is only a study for the real painting, it has only fragments of small faces. In *Yun II*, I tried to imitate the drawing's lines as the main musical element of the piece; this creates almost a 'drawing' gesture in my composition.

Example 2.18: *Compositional Study of Madonna with a Cat*



21. Barocci, Federico. (1535-1612). *Compositional Studies*. Italy. Black Chalk and Pen and Ink with Wash. Italy, Galleria deli Uffizi, accession no. 11477F.

There are two main elements employed in *Yun II*. Firstly, glissando is, again, the most significant material in this piece. However, its treatment here is different, in that the most important glissandi elements of this piece are created by the bottle neck on the guitar, as shown in **Example 2.19**. It creates a parallel movement with the glissando materials.

Example 2.19: the score of *Yun II*, bar 13-17.

The musical score for Example 2.19 consists of four staves. The Percussion staff features a 'small triangle' with a *p* dynamic. The Guitar 1 staff is marked 'bottle neck' and contains glissandi with dynamics *mf*, *pp*, *p*, and *mf*. The Guitar 2 staff has dynamics *pp*, *p*, *mp*, and *p*. The Violoncello staff includes markings for 'sul D', 'molto sul pont.', 'gliss.', and 'norm.', with dynamics *mp*, *pp*, *p*, *mf*, *pp*, and *p*.

As seen above, the two guitar parts absorb a great number of Chinese mandarin voice accents in the shape of their glissandi movement. For example, the third and fourth accents are demonstrated in the first and fifth bars of Guitar 1 (**Example 2.19**). However, the emphasis of glissandi in *Yun II* is changed in order to depict the shape of Barocci’s drawing, instead of imitating Chinese instrumental elements. Thus, the movement of glissandi becomes more flexible between different parts. Especially in the cello part, the small groups of notes represent the fragmentary faces in Barocci’s drawing. In addition to these groups of notes, the long glissandi element also depicts the lines that surround the unfinished faces in the drawing. (**Example 2.20**)

Example 2.20: the score of *Yun II*, bar 38-42, cello part.

The musical score for Example 2.20 shows the cello part for bars 38-42. It features a series of notes with dynamics *p*, *mf*, *p*, *mf*, and *p*. Above the notes are markings for 'norm.', 'molto sul pont.', and 'norm.'.

Secondly, the ‘organic’ sound which is produced from sound sources that are not musical instruments is another essential element in *Yun II*. In order to explore a bigger variety of glissandi, I incorporated a substantial number of non-instrumental sounds in this piece. Instead of a real bottle neck, I use a glass in order to create the effect of glissandi in the guitar parts. In comparison with a bottle neck, the sound quality of glass captures a more sustaining effect which can support the movement of gliding. Another non-instrumental sound source are metal coins, which the percussionist scratches on the surface of the cymbal,

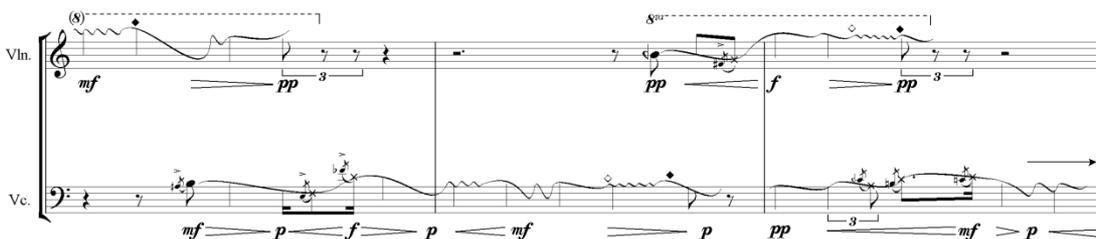
as a variation of the glissandi element. Following the movement of the coin, the sound of scratching changes on different areas of the cymbal.

2.3.4 Invisible Valley

The final piece which I present here is *Invisible Valley*. The inspiration of this work came from my experience of travelling in west China, where I followed the places where Qin Wen-chen has been, such as the mountains of Tibet and Xinjiang. There, I was extremely impressed by the songs of local ethnic minorities who live in the valley of the highlands, and this listening experience had a strong impact on my own musical language. It was striking to hear that these people do not always try to reach 'corrected' pitches when they are singing, which created for me a similar impression to Qin Wen-chen's music. However, being sung in the midst of huge mountain valleys, these un-tuned pitches bring an even more special sound quality to traditional local songs, especially when they are sung by many people, with different voices creating a substantial number of microtones within a specific bandwidth.

As in my previous pieces, there are three elements which I incorporate in *Invisible Valley*. So firstly, the most characteristic element in this piece is, again, glissando, but here it exploits all the three elements explained in the previous section (**Example 2.21**).

Example 2.21: the score of *Invisible Valley*, bar 10-12, string part.

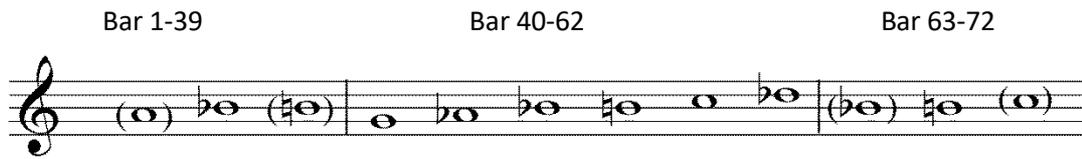


There are Chinese mandarin voice accents in most of the glissandi lines; for example, the second and third bar of the cello part contain the third accent, as shown in **Example 2.21**. The pressing technique combined with glissando also appears in **Example 2.21**, above the marks \diamond and \blacklozenge .

In comparison with other compositions of mine, *Invisible valley* is the first piece which introduces the grace notes which are the focus of the third element of my glissando techniques. As shown in **Example 2.21**, the grace notes are employed inside the glissandi line. Because most of the grace notes in traditional Chinese music are stronger than the following 'main' note, I added strong accents to some of the grace notes inside the glissandi of this piece.

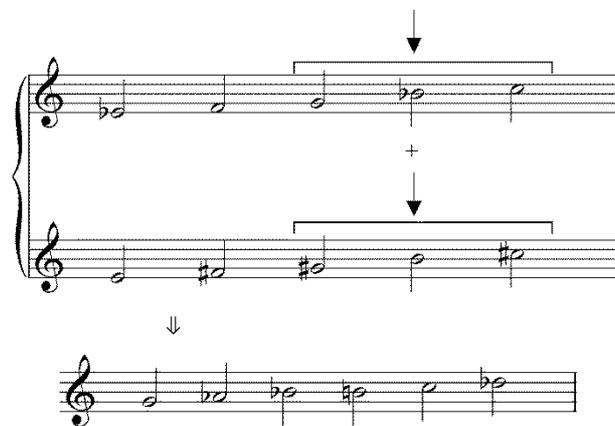
Secondly, the chord of *Invisible Valley* is constructed using my own approach to modal writing (explained in previous section). Based on this mode, this piece is divided into three main sections. (**Example 2.22**)

Example 2.22: The notes of three sections in *Invisible Valley*.



The choices of notes in the second section are also constructed using this specific system. As explained before, my own approach to Chinese modal writing is created by combining the last three notes of two adjoining Chinese keys. As shown by **Example 2.23**'s arrow, the first and third sections' B flat and B natural come from the central notes of these two fragmentary keys.

Example 2.23: showing the method of creating the notes in the second section, and also indicating the origin of the central notes in the first and third sections.



Therefore, this piece can be viewed as a 'journey' from B flat to B natural or a 'transition' from one fragment of a Chinese mode to another, with the second section acting as a bridge to connect them.

Finally, the last aspect of *Invisible Valley* which I wish to focus on is microtonality. Because this piece's inspiration originally came from the unusually tuned songs performed by the local people of Tibet and Xinjiang, I attempt to capture this sound world in the way I use pitches. As shown in **Example 2.24**, it is one of the most effective ways to show the range of sound.

Example 2.24: The microtonality system in *Invisible Valley*.

1 = whole tone 1/2 = semitone 1/4 = quarter tone 1/8 = 8th tone

The image shows two musical staves. The top staff has nine notes with arrows pointing to them from below, labeled with intervals: 1, 1/8, 1/4, 1/8, 1/2, 1/8, 1/4, 1/8, and 1. The bottom staff also has nine notes with arrows pointing to them from below, labeled with the same intervals: 1, 1/8, 1/4, 1/8, 1/2, 1/8, 1/4, 1/8, and 1. The notes are placed on a five-line staff to show their relative positions.

I divide this piece's instruments into 2 groups, the first of which contains string and brass instruments (mainly violins and trombones) which represent the glissandi lines as a 'solo voice' in the music. The second group contains wind instruments, in order to create the microtones inside the 'choir' sound. (**Example 2.25**)

Example 2.25: *Invisible Valley*, bar 19-21, wind instruments part.

The image shows a musical score for four wind instruments: Flutes, Clarinets in B, Bass Clarinet in Bb, and Bassoons. The score covers bars 19-21. It includes various dynamics such as *sf*, *pp*, *p*, *mp*, *mf*, and *f*. There are also performance instructions like 'gliss. within semitone (gliss. always lower than B which above the starting note)'. A rehearsal mark 'c.40' is present at the beginning of the section.

Therefore, when these two groups are 'singing' together in the piece, the sound world depicts a fairly accurate picture of the specific valley that I have seen in Tibet.

2.3.5 The Road to the Holy Temple

The Road to the Holy Temple is the last piece which I want to examine in this chapter. This is an orchestral piece which was inspired by an experience in Tibet when I saw people coming to a pilgrimage at the holy temples. I was fascinated by the sound of the Tibetan Buddhist monks praying and the Tibetan instruments, the sound of which I attempt to capture in this piece as part of the main materials. The work is constructed in two movements. The first movement focuses on the journey to the holy temple, and the second section explores the chanting found in the temples of Tibet.

The most important elements in the first movement are those drawn from the Tibetan influences and the use of microtonality. Influenced by Luigi Nono and Qin Wenchen, the whole piece is written around one

central pitch “D” which is surrounded by numerous microtonal inflections of D in different octaves. **Example 2.26** shows the opening section of this piece in the cello part. The central note “D” has been slowly introduced by the pizzicatos which imitate the sound of the walking pilgrims who are heading to the temple. The other cello part enters after 8 seconds with another “D” which gradually moves a quarter tone sharp to create the microtonal contrast with the central note in the upper part. Mirroring the walking of the pilgrims, the dynamics increase as they move closer to the temple. **Example 2.27** shows the developments of the materials in **Example 2.26** where I eliminate the central tempo and instruct the performers to choose their own tempo between 60 to 80 crotchets per minute. This can be viewed as a huge crowd of pilgrims creating an irregular rhythm.

Example 2.26: the opening cello part of *The Road to the Holy Temple*

Example 2.27: bar 4-5 of the cello part in *The Road to the Holy Temple*

While the cellos are moving around the D, the range of pitches in the other parts gradually opens up towards B flat to F sharp in the second section. Although it is close to D, it contains a wider range of pitches within which to explore the microtones. **Example 2.28** shows the string parts of bar 9 and 10 in *The Road to the Holy Temple*, while **Example 2.29** shows the woodwind parts of bar 9 to 11. The notes in this section are all

pitched within B flat to F sharp with micro-intervals, especially in the string parts, which, for me, depict the sound of the Tibetan horns that I heard in Tibet.

Example 2.28: the string part of bar 9 and 10 in *The Road to the Holy Temple*

Example 2.29: the woodwind part of bar 9 to 11 in *The Road to the Holy Temple*

In comparison with the first two sections, brass instruments become one of the main parts in the third section from bar 20. In contrast to the microtonal writing in the woodwind and string instruments, the French horn, trumpet and trombone only focus on the central note D as an echo of the “walking” materials in the opening cello parts in **Example 2.26**. **Example 2.30** shows the brass instruments from bar 21 to 23 in *The Road to the Holy Temple*. In order to provide enough variations to the repeating note D, instead of changing the pitch, I decided to change other factors, such as tone colour, rhythm and dynamics. The way to produce various tone colours is to engage the timbres of different instruments. There is always one of the French horn, trumpet and trombone parts holding a long note while the other two brass instruments echo each other in different rhythms. In addition to this, the long notes also have different dynamics to the other two parts.

Example 2.30: the brass instruments from bar 21 to 23 in *The Road to the Holy Temple*.

The musical score for Example 2.30 shows three staves: Horn (Hn.), Trumpet (Tpt.), and Trombone (Tbn.). The Horn part consists of a series of eighth notes with dynamic markings of *mf* and *p*. The Trumpet part features a mix of eighth and quarter notes, with dynamic markings including *mf*, *sf*, and *p*. The Trombone part has a similar rhythmic pattern to the Horn, with dynamic markings of *p*, *mf*, and *f*.

The last section of the first movement starts from bar 33, and imitates the sound of the ceremonies in the Tibetan temples. The brass instruments remain with the central note D which is now relocated in different octaves, as shown in **Example 2.31**. The notes of the trombone part have been moved an octave lower plus a quarter tone sharp, whilst the pitches of the trumpet part have been relocated an octave higher. In contrast to the repeating D in brass instruments, the micro-intervals in the string parts open up a large sound cluster in this section. **Example 2.32** shows the string parts from bar 33 to 35 in *The Road to the Holy Temple*. In comparison with the previous sections, within each string part, the intervals have been increased from microtones to a semitone or a whole tone which creates a huge sound block instead of the micro-interval cluster.

Example 2.31: the brass parts from bar 33 to 35 in *The Road to the Holy Temple*.

The musical score for Example 2.31 shows three staves: Horn (Hn.), Trumpet (Tpt.), and Trombone (Tbn.). Each instrument part consists of a sustained note with dynamic markings of *fff* and *mf*. The Horn part is in the upper register, the Trumpet part is in the middle register, and the Trombone part is in the lower register.

Example 2.32: the string parts from bar 33 to 35 in *The Road to the Holy Temple*.

Passionate
 ♩ = c. 84
 div. molto vib.

Vln. I
 fff
 p

Vln. II
 fff
 p

Vla.
 fff
 p

Vc. 1-2
 fff
 p

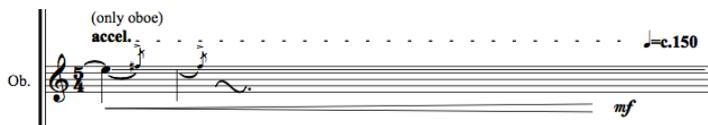
Vc. 3-4
 fff
 p

In addition to the use of microtonality, glissando is the second characteristic element which I explored in the first movement of this piece. It contains all the three glissando elements explained in the previous section. Firstly I used the grace notes taken from the glissando technique. In comparison with other compositions which I have examined before, this piece not only uses the strong grace notes before the following ‘main’ note, but also explores the possibilities of playing the grace notes afterwards. **Example 2.33** shows the grace notes before the main notes in the string parts, while **Example 2.34** shows the grace notes after the main notes in the woodwind parts. I added the accents to all of these grace notes which gives a stronger impression to the listener. In addition, I explored different rhythms within the grace notes. **Example 2.35** shows the grace notes speeding up in the oboe part, which depicts a sound found in traditional Chinese local operas.

Example 2.33: grace notes before the main notes

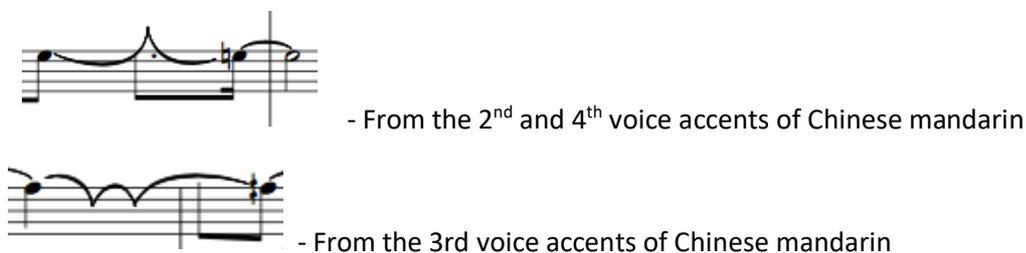
Example 2.34: grace notes after the main notes

Example 2.35: grace notes in accelerando



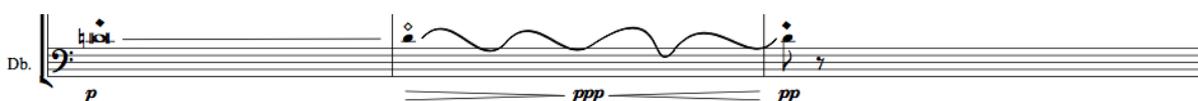
Secondly I explored the Chinese mandarin voice accents in the glissandi lines of this piece. **Example 2.36** shows the 2nd, 3rd and 4th voice accents in *The Road to the Holy Temple*. In contrast to the free glissandi lines in my previous compositions, the shape of the voice accents in this piece are simple and clear, coordinating with the grace notes in **Example 2.33** and **Example 2.34**.

Example 2.36: The Chinese mandarin voice accents in the glissandi lines



The pressing technique combined with glissando also appears in this piece and is mainly used in the opening section. **Example 2.37** shows the double bass part from bar 4 to 6. Following the marks \diamond and \blacklozenge , the player only touches the string when the glissandi line starts from bar 5, and changes back to normal pressure at the beginning of bar 6.

Example 2.37: the double bass part from bar 4 to 6 in *The Road to the Holy Temple*



The most characteristic element in the second movement of *The Road to the Holy Temple* is the sound of the Tibetan Buddhist monks praying alongside the Tibetan instruments. In order to conjure up the sound of the Tibetan instruments, I used tingsha bells²² as one of the main percussion instruments in this piece. Tingsha bells are pitched instruments and I used two of them in E and F sharp. In Tibet, tingsha bells are always used as a sign for the pilgrims to pray, which I want to explore as a signal sound associated with the Tibetan Buddhist monks' praying materials in my music.

In accordance with the sound of the chanting monks, I added a singer in this second movement who led other parts to complete the ritual. **Example 2.38** shows the vocal part from bar 59 to 62 in *The Road to the*

22. Tingsha bells are small cymbals used in prayer and rituals by Tibetan Buddhist practitioners.

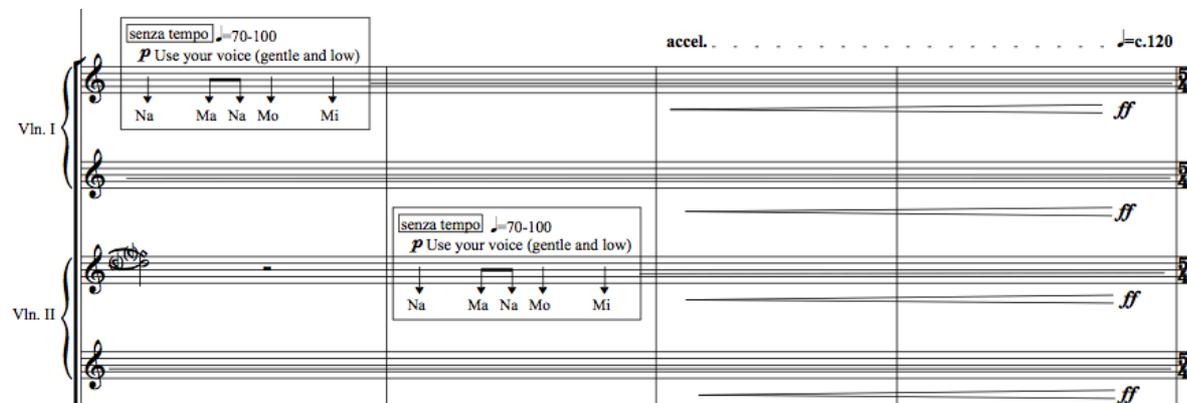
Holy Temple. As a reminder of the brass instruments in the previous movement, the vocal part remains with the central note D as the main pitch which is accompanied by the strong grace notes. The text of the vocal part is inspired by the ‘six-word mantra’ which I mentioned in the previous section. In Chinese, the ‘six-word mantras’ are 唵(ōng), 嘛(mā), 呢(nī), 叭(bā), 咪(mēi), 吽(hòng) which are commonly found in chanted Sanskrit. I chose to pick up some of their syllables in the text of my vocal part which are interpreted as “Na”, “Mo”, “Ma”, “Mi”.

Example 2.38: the vocal part from bar 59 to 62 in *The Road to the Holy Temple*.



I felt it was crucial that I convey the sound of a chanting crowd instead of one single voice, in order to depict the sounds that are found in Tibetan temples. In accordance with this, I instructed the string and woodwind parts to sing the text in a low and gentle way. **Example 2.39** shows the violin parts from bar 88 to 91 in *The Road to the Holy Temple*. I used the text “Na”, “Ma”, “Mo” and “Mi” in a repeating pattern with a specific rhythm, while the tempo is free for the player to choose within 70 to 100 crotchets a minute, depicting the impression of the chanting sound coming from several people.

Example 2.39: the violin parts from bar 88 to 91 in *The Road to the Holy Temple*.



Chapter 3

2014-15 compositions

After the analysis of three important elements in my own musical language, I now want to focus on the glissando. This chapter is divided into two main parts. In 3.1, I will discuss the linear movement in traditional Chinese music, which will include an analysis of Chinese instruments and notation. Moreover, my own reflections on linear movement will be discussed in 3.2, and followed by an analysis of my own compositions written during this period, with 3.2.1 and 3.2.2 as examples: *The other side* (2014) and *Broken Connection* (2015). In this chapter, I will lay out the working process of these works during the period after my transfer exam.

3.1 The horizontal writing in traditional Chinese music

In contrast to Western music, most Chinese traditional music eschews the involvement of vertical thinking, which plays such an important role within Western music, and focuses on the linear construction of melody often drawn from a single line. If we look back to more than one thousand years ago, in both ancient Chinese and Western cultures, music (such as religious music, court music, local folk music) originated from single melodic lines. Following the development of polyphonic music in Western countries, vertical harmony became more important as the number of layers of material began to increase. But unlike Western classical music, after one thousand years of development, Chinese music still kept the original solo voice melody as its main feature. In this section, I want to analyse the linear movements in traditional Chinese instrumental technique and notations.

First, I want to focus on traditional Chinese instruments. Most of these instruments are designed to play a single melodic line: one example is the Er Hu, which cannot be as flexible as western string instruments in double stopping or triple stopping. Some Chinese instruments, such as the Pipa, may have more strings to play chords, but they are mainly used to highlight decorations. Even when there are multiple Chinese instruments playing together, the overall texture is heterophonic rather than polyphonic, as shown in **Example 3.1**, part of the Jiangsu folk tune “*Argusianus argus song*” (青鸾曲) where the lower two parts are a variation of the original folk tune in the upper part.

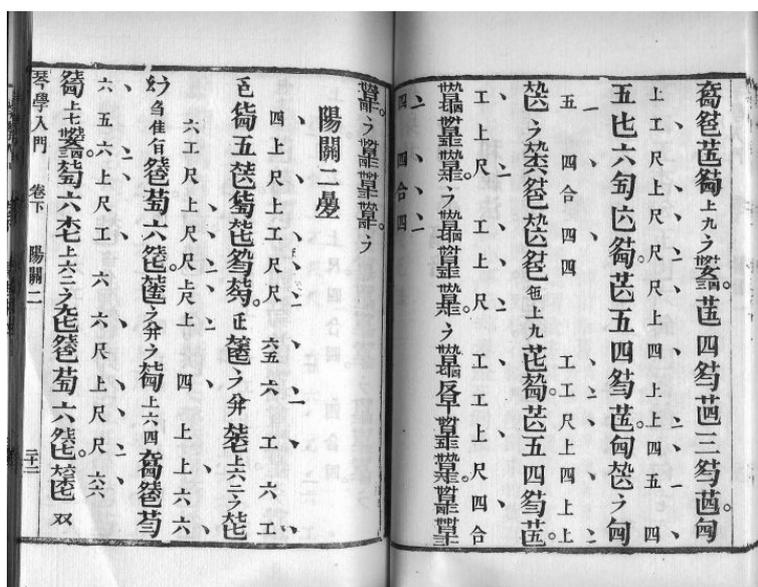
Example 3.1: part of *Argusianus argus song* (青鸾曲)

苏南吹打《青鸾曲》

笛
二胡
三弦

Secondly, in **Example 3.2**, we see a traditional score for a Chinese instrument. The left side of each line is “guqin tablature”(减字谱) which represents the performance technique of every note, while the smaller words in the middle part are “Gongche notation”(工尺谱) which are the notes of this piece. Moreover, the dots on the right-hand side of each line denote the rhythm of music. It is similar to a graphic score in Western contemporary music, which uses different imagery to represent music than that which is found in traditional notation. Occasionally, a whole sentence is used to describe only one single note. In comparison with Western five-line staves, traditional Chinese notation is more complex, with multiple lines in a musical score, but because there are only descriptions about the notes, players have a certain range of freedom to improvise with their own sensibilities.

Example 3.2: Traditional music score for Chinese instrument.



3.2 Glissando: my own reflection of the horizontal traditional Chinese music

As I mentioned in chapter 2, glissando is one of the most important elements which can represent the timbre of the melodic lines in Chinese traditional music. The well-known Chinese violinist Yu Lina²³ pointed out in her lecture in 2016:

glissando is one of the most significant features in Chinese traditional music. I carried out extensive research through my own performing experiences. If Chinese music is played without glissando, it conveys different rhythms, emotions and can lose its lingering charm.” (滑音是中国音乐作品的一大特点，我在拉琴的过程中也反复研究过。有滑音和没滑音，节奏不同，情绪不同，韵味也不同)²⁴

Therefore, I want to focus on the glissando as the main material of the linear movement to explore music with only one single melodic line.

23. Yu Lina is a famous Chinese violinist who played in the premiere of one of the most popular Chinese folk song “The Butterfly Lovers” (梁祝).

24. Lina Yu, “Professor Yu and “The Butterfly Lovers” (梁祝)”, *Zhanjiang violin lecture*, accessed March 20, 2018. <http://www.hkivs.com/newsview-980-391.html>

3.2.1 The Other Side

The Other Side (2014) and *Broken Connection* (2015) are both written for solo violin and electronics. *Broken Connection* grew out of revisions made to *The other side*. *The other side* was written for a RCM *Contemporary Music in Action* project concert in 2014. This is a collaborative project for both players and composers, which is an opportunity for us to work together closely on a new piece. I chose violin and electronics because I want to explore the glissando as the main material of the linear movement in a single melodic line. The inspiration for this piece came from the classic film *The Exorcist* (1973), because I am fascinated by the idea of an exorcism and of making contact with the dead. The electronic part represents the evil environment from “the other side”, and the violin plays the key role as the medium who tries to make contact. During the process of this piece, the violin part approaches the character of the electronic sounds, which feels to me like the violin is conducting the exorcism and getting closer to the world of the dead. In order to get the two different sounds to become closer to each other, it was necessary to explore their inherent similarity. As shown in **Example 3.3**, the sounds of the violin part are divided into ‘cantabile’ and ‘glissandi’, and the electronic sounds are mainly constructed from noise and air sounds. Following the lines indicated below, one can see the connections between the two elements in **Example 3.3**. For example, the harmonic glissandi have a similar sound quality to a whispering air sound. Every time these similar sounds meet each other during the performance, it produces contact between violin and electronic sounds in the music.

Example 3.3:

Violin		Electronic	
Cantabile	glissandi	noise	Air sound (whisper)

Apart from the electronic part, glissando is one of the most important elements in the single melodic violin part. Instead of writing a long, continuous work, I chose to cut this piece into small sections, which players can choose and play in their own order. In comparison with my previous works, I want to give some freedom to the player to explore a level of unpredictability in this piece. If the player wants, he can even repeat one of the sections at an extreme speed (extremely slow or fast).

I will also take the opportunity to discuss in more precise detail the process through which I progress from initial sketches and continue to fully-realised compositional end-product. **Example 3.4** shows the working process of this composition in three different stages. The earliest sketches consist of short fragments for each section. As shown in **Example 3.4.1**, ideas A, B and C are only used to explore the glissandi materials. In the later version **Example 3.4.2**, I amalgamated these three ideas into 2 sections but expanded the small glissandi fragments into different kinds of variations. Finally, I transformed all previous elements of the last version of the hand writing sketch which contains three sections with a specific order which remains in the final version (**Example 3.4.3**).

Example 3.4: the working process of *The Other Side*

Example 3.4.1: Version 1

2 ♩ = c.50

Idea A

(Within semitone) Central note Random notes (slightly higher)

pppp p > pp < mp pp mf > pp < p 3 PPP

Idea B

(normal gliss.) (retrograde note)

f > p < mf > pp f < p < mf > p < f > pp < p < mf > p

Idea C

8 db 3 mf pp mf pp < f > p < mf

molto sul pont.

(x Try!)

Example 3.4.2: Version 2

Idea A

2 ♩ = c.42

* starting note is the central note

gliss. within semitone (random grace notes) * in this section

molto sul pont. norm. db gliss. molto sul pont.

pppp p > pp < p > pp < mp > pp < p > pp < p > pp < p

norm. gliss. within semitone molto sul pont. norm.

mf pp < mp > pp < p > pp 3 mf

molto sul pont. norm.

3 3 3

p < mp > p < mf > p < mf > pp

Idea B

Idea B 3rd gliss 4th slur \uparrow Random note

Example 3.4.3: Version 3

Idea A

A ♩ = c. 42 *Soft*

Idea B

B $\downarrow = c. 70$

** super fast*

Idea C

C $\downarrow = c. 56$

Violin

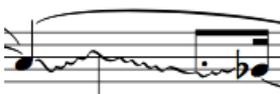
There are three sections in the final score of this composition: A, B, C. (shown in **Example 3.5, 3.6 and 3.7**), which are all combined by various normal notes and glissandi lines. Section A is constructed from two elements: cantabile notes and straight glissando lines. Section B is made of cantabile notes and waving glissando lines. Section C is slightly different from the previous two: it contains small range glissando and dramatic glissando lines. The player chose to play this piece with an A B C B C' (extremely fast) order in the

first performance. In comparison with the first C section, the repeated C' creates a different sound world to the original version, exploring a new effect for the purposes of musical development.

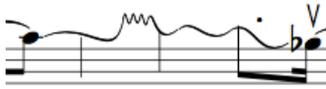
Example 3.5: Section A main elements

Element 1:  Element 2: 

Example 3.6: Section B main elements

Element 1:  Element 2: 

Example 3.7: Section C main elements

Element 1:  Element 2: 

This piece includes all three elements from my own approach to glissando materials, as analysed in the second chapter. The first one is the imitation of the voice accents in Chinese Mandarin (mainly in section C).

Example 3.8 shows the second accent “upward (↗)” of Chinese Mandarin in glissandi lines. In contrast to the second voice accent in a straight glissando, this line has a change of speed during the movement from slow to fast.

Example 3.8: the imitation of the voice accents in Chinese Mandarin in section C.



The pressing technique combined with glissando appears mainly in section C. **Example 3.9** shows the marks \diamond and \blacklozenge which appear in the middle of a glissandi line where only part of the sound is changed in the linear glissandi material.

Example 3.9: the pressing skill of glissando in section C.



The third element is the grace note in the glissando materials. In contrast to my use of grace notes in my previous compositions, I changed it to a specific type of accent in this piece, which can produce a similar sound. **Example 3.10** shows the glissando line and the accent in section A. The glissando has to start as a down-bow, while the accent is in the middle of the line with a sudden up-bow but changes back to down-bow immediately. This process is an imitation of the movements involved in playing grace notes during a glissando line.

Example 3.10: the up-bow accent in a glissando line in section A.



3.2.2 Broken Connection

Broken Connection was written the year after *The Other Side*. In the earlier piece, I used electronic recordings instead of live electronics, but in the new piece I wanted to explore the live interaction between violin and electronics. In comparison with *The Other Side*, *Broken Connection* gives more freedom for small details in the linear glissandi materials. In the early stages of planning the piece, I increased the number of sections from 3 to 5. **Example 3.11** shows the sketches for these sections. The intention was that the player could have more freedom in choosing the order. However, I changed the elements from **Example 3.5, 3.6 and 3.7**, pushing the normal notes and the single glissandi lines into different extremes.

Example 3.11: the sketches of *Broken Connection*

Section 1:

The image displays six systems of handwritten musical sketches for Section 1 of 'Broken Connection'. Each system consists of a Violin staff and an Electric guitar (Elec.) staff. The sketches are as follows:

- System 1:** Violin starts with a tremolo on a note (marked $(d \rightarrow t_2)$), with dynamics *ppp*, *p*, *pp*, *p*, and *pp*. Performance instructions include *Sul tasto*, *norm.*, and *sul tasto*. The Elec. staff is marked *Silence*.
- System 2:** Violin starts with a tremolo on a note (marked $(d \rightarrow t_2)$), with dynamics *pp*, *mp*, *pp*, *mf*, and *p*. Performance instructions include *norm.*, *sul pont.*, and *norm.*. The Elec. staff is marked *Silence*.
- System 3:** Violin starts with a tremolo on a note (marked $(d \rightarrow d_2)$), with dynamics *p*, *mf*, *p*, *mf*, and *p*. Performance instructions include *molto sul pont.*, *norm.*, and *molto sul pont.*. The Elec. staff is marked *Silence*.
- System 4:** Violin starts with *Silence*, then a tremolo on a note (marked $(d \rightarrow t_2)$) with dynamics *pp*, *f*, *p*, and *mp*. Performance instructions include *Sul tasto*, *norm.*, and *molto sul pont.*. The Elec. staff is marked *Silence*.
- System 5:** Violin starts with *Silence*, then a tremolo on a note (marked $(d \rightarrow d_2)$) with dynamics *mf*, *p*, *fp*, *mp*, and *pp*. Performance instructions include *norm.*, *molto sul pont.*, and *norm.*. The Elec. staff is marked *Silence*.
- System 6:** Both Violin and Elec. staves are marked *Silence*.

Section 3:

Handwritten musical score for Section 3, consisting of five staves of music. The notation includes various dynamic markings, articulation, and performance instructions.

- Staff 1:** Starts with a **V** (Vibrato) marking. Dynamics include **PP**, **f**, **P**, **f**, **P**, and **f**. There are slurs and accents throughout.
- Staff 2:** Dynamics include **PP**, **f**, **P**, **PP**, **ff**, **PP**, and **f**. Includes the instruction "lower bridge" and "norm" (normal).
- Staff 3:** Dynamics include **mp**, **PP**, **P**, **Sf** (Scratch tone), **P**, **PP**, **f**, **PP**, and **mf**. Includes the instruction "norm." and "Scratch tone".
- Staff 4:** Dynamics include **ff**, **P**, **f**, **P**, **ff**, and **P**. Includes the instruction "Scratch tone" and "molto sul pont." (molto sul ponticello).
- Staff 5:** Dynamics include **f**, **PPP**, **PP**, **Sf** (Scratch tone), **PP**, **mp**, **PP**, **mp**, and **PPP**. Includes the instruction "norm" and "molto sul pont.".

Section 4:

Handwritten musical score for Section 4, consisting of several systems of staves. The notation includes notes, rests, and dynamic markings such as *mf*, *pp*, *f*, *ff*, *sf*, *f*, *pp*, *norm.*, and *molto sul pont.*. Performance instructions include *8* (likely indicating eighth notes) and *molto sul pont.* (likely indicating a *molto sul ponticello* effect). The score is written on a page with a pinkish tint and includes a circled signature "FREAN/C" in the top right corner.

2

mf *pp* *f* *ff* *f* *pp*

norm.
 $\downarrow = 252$ $\downarrow = 35$

sf *f* *ff* *f* *pp*

norm. $\downarrow = 35$

pp *f*

molto sul pont.

$\downarrow = 252$ $\downarrow = 35$

ff *pp* *sf* *f* *pp*

norm. $\downarrow = 35$

P *f*

$\downarrow = 35$ $\downarrow = 252$ $\downarrow = 252$ $\downarrow = 35$

Section 5:

Handwritten musical score for Section 5, consisting of several staves of music with various annotations and dynamics.

Staff 1: $P=c.35$, $P=c.35$ norm \leftrightarrow sul tasto c.15", pp , f , P (suddenly quiet) C.20", mf , ppp

Staff 2: non gliss, norm \leftrightarrow sul pont., $\downarrow=c.252$, $\downarrow=c.35$, $\downarrow=c.35$, ppp , mp , pp , f , mf , p , f , 3 , 3

Staff 3: $\downarrow=c.35$, $\downarrow=c.35$ norm \leftrightarrow molto sul pont., C.10", ff , p , mf , p , f , mp , p , mf , pp

Staff 4: $\downarrow=c.35$ non gliss, $\downarrow=c.35$, mf , pp , f , p , 3 , mp , 3 , pp

Staff 5: C.25", mf , sul tasto \leftrightarrow norm. \leftrightarrow molto sul pont., p , mp , pp , p , $pppp$

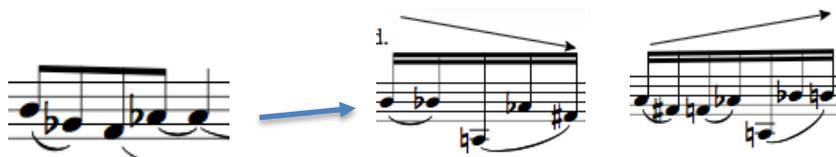
Staff 6: (dynamic ?) in

$P=c.35$ $\downarrow=c.252$

$P=c.35$ $\approx \approx$

First, as shown in **Example 3.12**, I changed the first element of section A in **Example 3.5**.

Example 3.12:



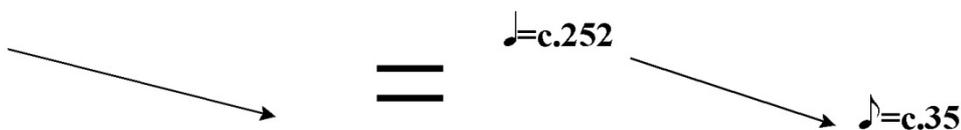
Instead of keeping the original material, I added an arrow above each phrase to indicate the changing speed.

There are two tempos: ♩=c.35 and ♩=c.252, which constantly alternate throughout the piece. The upward

arrow indicates that the tempo gradually moves from ♩=c.35 to ♩=c.252



The downward arrow indicates that the tempo gradually moves from ♩=c.252 to ♩=c.35



Because the total amount of change is always the same (35 to 252 or 252 to 35), the rate of change in speed depends on the length of each phrase. In comparison with short phrases, longer groups of notes will take longer reaching the highest tempo.

Secondly, I combined the second element of **Example 3.5** and the first element of **Example 3.6**, as shown in **Example 3.13**. I kept the movement of latter, and used the small glissando of the former. As a result, the new idea becomes a repeating glissando which moves constantly within a small range of notes. There is also an alternate option which moves without the glissandi, as shown in the right bottom corner of **Example 3.13**. Above each group of notes, the number represents the duration of each section in seconds. During the movement of the notes, the player can choose and move between sul tasto and sul pont as shown above the box.

Example 3.13:

The last elements which I altered are the glissandi in **Example 3.6**. These are transformed to different extremes. First, as shown in **Example 3.14**, I minimised the range of the glissandi movement. The indications of pitches before the violin's melodic line do not suggest any added duration to the music. They represent the note range of the following glissandi. Therefore, the glissandi of this section do not move beyond each side of the limit. As shown in **Example 3.14**, instead of five lines, there are only three lines in the violin part.

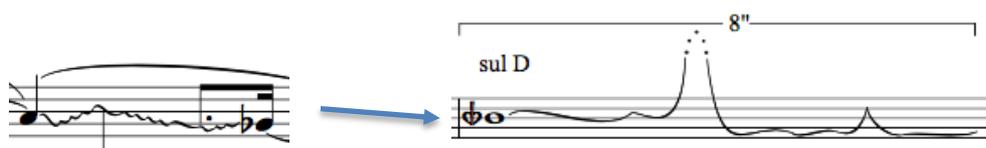
Example 3.14:

The top line represents the highest note of the range (B quarter tone sharp), while the lowest note (A quarter tone flat) is on the bottom line. The total length of each section is written above the violin part: for example in **Example 3.14**, the length of this section is 12 seconds. The dotted line means the note will be sustained at the same level for a period of time until the real glissando afterwards. Because there is no other sound at the same time, the audience can concentrate on the small changes within the glissandi line. Often our attention is drawn to the smallest elements in front of us while larger elements tend to disappear within the background. In this context of small changes, any micro-development can be noticed by the listener. As shown in **Example 3.15**, it is the development of one simple glissando idea. This small difference can be recognised in the repeating musical environments.

Example 3.15:

The second glissando material is also transformed from **Example 3.6**. As shown in **Example 3.16**, in contrast with the minimised version in the previous section, the glissando material moves into the other extreme of register and explores a much wider range of movement. As I mentioned before, if there is no other sound, small changes can be easily recognised. But if there is a sudden big change, the small movements will become less important. When the violin rises towards the dotted line (a different type of dotted line from **Example 3.14**), it gradually moves into silence. It produces the illusion for the audience that the sound is still there but just moving far away from them. Then, the violin sound comes back when the dotted line drops down towards the 'real' glissandi material.

Example 3.16:



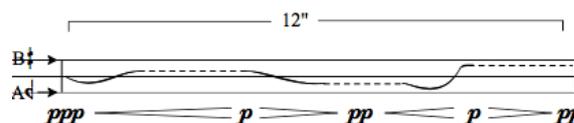
Following the evolution of the musical materials in *Broken Connection*, I turned my attention to the structure. In comparison with *The other side*, I decided to combine all the sections together in a specific order, and finally amalgamated them into one piece. The new order emphasizes the growth and concentration of the relationship between the violin and electronics. There are two main elements in this piece; cantabile notes and linear glissandi materials. I started this piece with micro-glissandi movement, as shown in **Example 3.15**. Similarly to *The other side*, here the violin is the 'medium' to connect with the 'underworld'. When the violin starts the 'calling', the electronic part 'responds' to the sound. The interaction between violin and electronics produces the idea of communication between the medium and the underworld. There is always a gap between each of the two violin sounds at the beginning which gives space for the electronic response to resonate, as shown in **Example 3.17**.

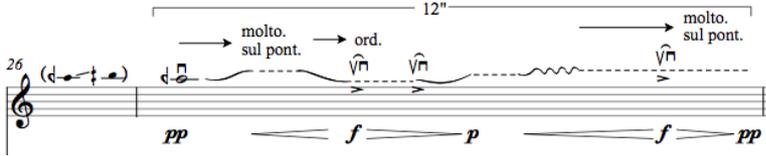
Example 3.17: the communication between violin and electronic part

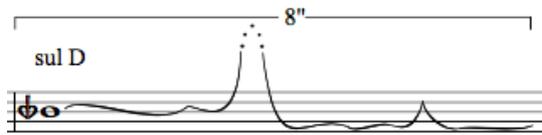


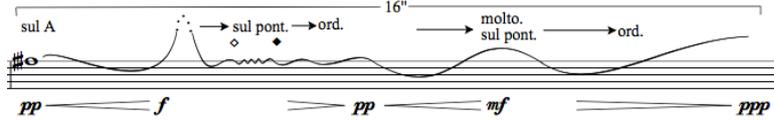
After the micro-glissandi movements in the opening section, the linear glissandi materials continue to develop throughout the remaining parts of the piece. **Example 3.18** shows there are three developments of the original glissandi line. In Development 1, the linear glissandi materials remain as micro-movements within a small range, but with more changes between the non-moving dotted line and the glissandi materials. The up-bow accents can also be found in most of this development. Development 2 explores the possibilities towards the extreme of the violin range where it moves into silence at the dotted line on the top. In Development 3, in addition to the linear glissandi movements towards the extreme, the micro-glissandi materials open up to a wider range of waves with the changes of the sound qualities, such as *molto sul pont.* and the pressing technique marks \diamond and \blacklozenge .

Example 3.18: the developments of the single glissandi line in *Broken Connection*.

Original: 

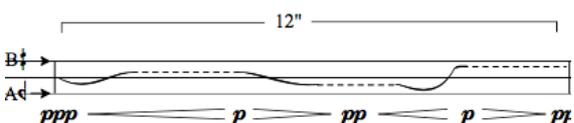
Development 1: 

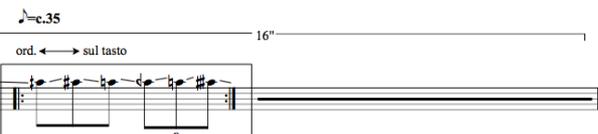
Development 2: 

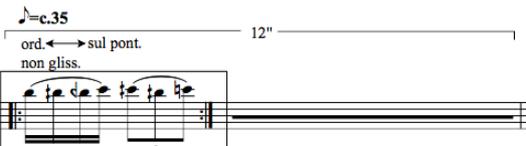
Development 3: 

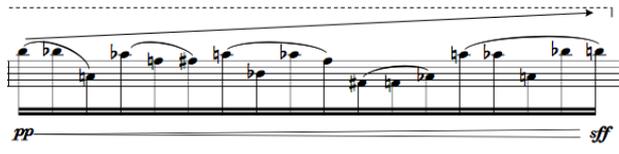
The cantabile notes also originally come from the micro-glissandi line in the beginning. **Example 3.19** shows the developments of the cantabile notes in *Broken Connection*. In Development 1, the glissandi lines remain as small movements within a certain range, but with notated notes to indicate the change of pitches in great detail. Development 2 explores the possibilities without the glissandi between each of the two notes in Development 1, which still keep the group of notes in a repeating pattern. In Development 3, in addition to the repeating phrases in Development 2, the cantabile notes become totally free to move without any repetition: this enables me to explore the music in more detail.

Example 3.19: the developments of the cantabile notes in *Broken Connection*.

Original: 

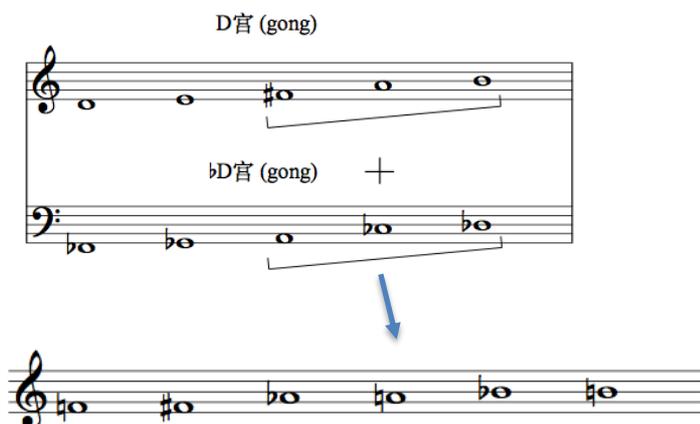
Development 1: 

Development 2: 

Development 3: 

This developing process of the cantabile notes has included all three elements from chapter 2: glissando, microtonality and my approach to Chinese modal writing. The original material and Development 1 are made by the glissandi lines, while Development 2 includes many microtones. Following my approach to Chinese modal writing, the notes in Development 3 come from the last three notes of two adjoining keys D 宫(gong) and D flat 宫(gong) in the Chinese mode. (**Example 3.20**) The developments in **Example 3.19** and **Example 3.21** show that there is a progression moving from glissandi to microtonality as we open the intervals from linear space to small intervals. This is extended further within my approach to Chinese modal writing, in which I use semi-tones and whole tones. In my music, I want to explore this connection between these three musical elements in order to control the sound of my music by opening or closing the space between notes.

Example 3.20: the notes of Development 3 in *Broken Connection*



Example 3.21: the progression of the three elements in *Broken Connection*

The image displays a musical score with four parts, each with a label on the left and annotations on the right:

- Original:** A 12" section with a wavy line above a staff. Dynamics are *ppp*, *p*, *pp*, *p*, and *pf*.
- Development 1:** A 16" section with a treble clef, a tempo marking of $\text{♩} = c.35$, and the instruction "ord. ← sul tasto". It features a triplet of notes.
- Development 2:** A 12" section with a treble clef, a tempo marking of $\text{♩} = c.35$, and the instruction "ord. ← sul pont. non gliss.". It features a triplet of notes.
- Development 3:** A section with a treble clef, a tempo marking of $\text{♩} = c.35$, and dynamics *pp* and *sf*. It features a melodic line with microtonal inflections.

Annotations on the right side, connected by blue arrows:

- Glissando:** An arrow points from this label to the wavy line in the Original section.
- Microtonality:** An arrow points from this label to the melodic line in Development 3.
- My own approach to Chinese modal writing:** An arrow points from this label to the melodic line in Development 3.

Chapter 4

2015-16 compositions

In contrast to the linear writing in the previous chapter, next I want to turn my focus onto vertical writing. Although most traditional Chinese music is presented with only a single melodic line, some contemporary Chinese composers are exploring a contrasting, more vertical approach, and this includes macro-polyphony, a technique I admire greatly. This chapter is divided into 4 sections. In 4.1, I will compare and contrast the terms micro-polyphony and macro-polyphony. Next, in 4.2, I will focus on He Xuntian's SS (stream of structure) method of musical composition in *The Image of sound – FuSe Pattern*, and explore how macro-polyphony works in this piece. 4.3 will focus on my own reflections on macro-polyphonic structures. Finally, my own compositions will be discussed in 4.4, including *Drawing Sketch* and *Sun Moon Consonance II*.

4.1 Micro-polyphony and Macro-polyphony

The term macro-polyphony started with the journal of a Chinese composer Lin Hua (1942-), which was called 'The Colour of Polyphony'²⁵. In his article, he says, 'There are three different kinds of polyphony: traditional polyphony, polyphony within homophonic music, and colour polyphony. Micro-polyphony and macro-polyphony belong to colour polyphony that is, texture in which the overall colours are more important than functioning details.' In terms of micro-polyphony, Ligeti (1923-2006) was one of the first composers to make micro-polyphony into a compositional technique. For example, in his *Atmospheres* (1961), parts overlap creating a cluster of sound. The colour of this cluster is the main character of micro-polyphonic music, rather than the individual movement of lines. In comparison with micro-polyphony's sound clusters, macro-polyphony introduces a huge structure of sound which has large blank spaces between the musical materials. This structure usually creates an independent complete piece by itself. The parts are widely separated in pitch, and related to each other by imitation. Although Lin Hua was the first to use the term 'macro-polyphony', he did not use it in his music. The first composer who successfully absorbs this in his music is He Xuntian (1953-), who defines his approach of macro-polyphony as 'a stream of structure' (or SS for short)²⁶. He uses canon as the structure of the work, which requires imitation between parts. Therefore his system perfectly fits with the nature of macro-polyphonic musical structure. In **Example 4.1**, I have compared and contrasted micro and macro-polyphonic music.

25. Lin Hua, "The Colour of Polyphony", *Chinese musicology*, 4 (1986) 112-119

26. Renping Qian, "Macro-polyphony's shape of body and function of texture – An analysis of He Xuntian's sound patterns, No.3." *Journal of the Shanghai Conservatory of Music: The art of music*. 1 (2004) 41-48

Example 4.1: Micro-polyphony and Macro-polyphony.

	Micro-polyphony	Macro-polyphony
The horizontal gap between musical time	Minute	Spacious
The vertical gap between pitches	Dense	Spacious
The pattern/shape of musical material	Rarely rest or interrupted, continual short notes or constant long note	Sparse, with space, irregular rhythmic movement
Length/size of the music material	Short	Long (sometimes as long as a whole work)
Function of the musical material	Usually one or more sections of one composition	Often the main structure of the composition (or even to be the whole piece)
Relationship between parts	Similar or imitation	Imitation
The number of parts	Two or more	One or more

4.2 He Xuntian's SS (stream of structure) Method of Musical Composition in *The Image of sound – FuSe Pattern*

I will analyse He Xuntian's work *FuSe Pattern*(1997) in two sections: firstly, I will examine the prose-like²⁷ horizontal movement and vertical canon relationship in the parts. Secondly, I will focus on the pitch relationships which are based on an arithmetical sequence.

4.2.1 Prose-like Horizontal Movement and Canonic Relationships in Vertical Parts

27. I have called this prose-like as, for me, it conjures up the irregularity and unpredictability of the written word.

Example 4.2: first page of *FuSe Pattern* (1997)²⁸

FuSe Pattern
Images in Sound 2

Xuntian He
*1952

Purification (♩ = 99)

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Example 4.2 is the first page of *FuSe Pattern*. Vertically, it has strict canon movement lasting five bars. Horizontally, the prose-like movement is constructed by many irregular rhythmic cells and unpredictable blank spaces. He Xuntian believes this kind of musical development can represent the characters of some Chinese words, especially their unpredictable accent movements. There are seven different kinds of time units in these cells which gradually increase in duration: A, B, C, D, E, F, A+F, as shown in **Example 4.3**.

28. He Xuntian, *Images in Sound: FuSe Pattern*. (Mainz: Schott Music, 2014)

Example 4.3: time units in *FuSe Pattern's* musical cells

If we consider one note of a demisemiquaver triplet as one unit, the duration of the notes as they increase in length makes the pattern 2 : 3 : 4 : 6 : 9 : 12 : 26 as shown in **Example 4.3**. For example, A is a semiquaver triplet which equals two units of demisemiquaver triplet, and B is a semiquaver which has three units of demisemiquaver triplet. The combination of these durations creates an irregular rhythmic movement in each cell. Therefore, the proportions of the 'blank spaces' produce a prose-like musical development creating irregularities in the texture. For example, if we look at the violin part with proportions also built on one note of a demisemiquaver triplet, we produce the following lengths: 60: 72: 78: 2: 3: 24: 6: 16: 27: 27: 3: 58: 51: 68: 6: 52: 3, which follow no obvious pattern. Most of the time, cells with many notes define the main character of this piece. Following the development of a canon, different kinds of small cells frequently appear in the three parts. Therefore, the note cells gradually become longer within spaces. As shown in **Example 4.4**, there are 19 kinds of note cells in these three parts which appear in gradually decreasing numbers.

Example 4.4:

Number of continuous notes in each cell	1	2	3	4	5	6	7	8	9	10
Appear times	52	39	33	15	12	8	8	3	5	2
Number of continuous notes in each cell	11	12	13	14	16	19	21	24	25	
Appear times	2	1	1	2	2	1	1	1	1	

As can be seen, smaller cells appear far more than longer cells, which helps provide the flexibility of the texture.

4.2.2 Pitch relationships based on arithmetic sequence

Example 4.5 shows all the notes which have been used in *FuSe Pattern*. Each instrument only uses five notes in this piece, with no changes of octave (the notes with black note heads only appear once and three times respectively in the whole piece).

Example 4.5:

The first note of the electronic violin part in **Example 4.5** is A flat. If it moves three semi-tones higher to B, it would be the Piccolo’s first note. If it moves down two semi-tones to F sharp, it becomes the Chinese flute’s opening note. **Example 4.6** introduces a different technique. Here the numbers represent how many semitones exist between notes. Following the arithmetical sequence, the intervals between electronic violin, piccolo and Chinese flute become one semi-tone larger when that instrument’s scale moves to the next note. Therefore, the distance between instruments becomes larger when the notes go higher.

Example 4.6:

Piccolo	Horizontal	B4	+4	bE5	+5	bA5	+4	C6	+4	E6
	Vertical $d=n+1$	+3		+4		+5		+6		+7
Electronic Violin	Horizontal	bA4	+3	B4	+4	bE5	+3	#F5	+3	A5
	Vertical $d=n-1$	-2		-3		-4		-5		-6
Chinese Flute	Horizontal	#F4	+2	bA4	+3	B4	+2	#C5	+2	bE5

Therefore, this arithmetical sequence produces the variation of notes within this piece's canonic imitation, instead of purely copying material from one instrument to another. As shown in **Example 4.7**, I have selected one section of the electronic violin part as an example to show my previous theory; I also found the same section in the other two instruments and put them together. The Roman numerals on the top represent which note is in their instrument's scale (see **Example 4.5**), and the bottom numbers indicate the intervals in semitones between each of the two notes of the same instrument.

Example 4.7: Bar 83-85 in piccolo part, bar 78-80 in flute part, bar 73-75 in violin part.

Because there are no octave changes within each of these three instruments' five note scales, the movements of these three parts are always in the same direction. Therefore, intervals become the main differences between instruments. **Example 4.8** shows the specifics of the changing intervals. The first three lines in **Example 4.8** are copied from the bottom numbers in **Example 4.7** which indicate the intervals between each successive note in each instrumental part. The vertical differences of these intervals follow the arithmetical sequence. The bottom line shows the common difference between the instruments' intervals.

Example 4.8: Intervals in the number of semitones

Piccolo	5	9	4	8	9	4	13	4	4	4	9	9	4	4	9	9	9	5
Electronic Violin	4	7	3	6	7	3	10	3	3	3	7	7	3	3	7	7	7	4
Chinese Flute	3	5	2	4	5	2	7	2	2	2	5	5	2	2	5	5	5	3
Common Difference	1	2	1	2	2	1	3	1	1	1	2	2	1	1	2	2	2	1

He Xuntian used a very special way to produce a canon to construct the macro-polyphonic texture. Because of the arithmetical sequence, his canon contains a level of variation in a very logical way with many small

details, such as prose-like movement. His approach to macro-polyphonic texture inspired me in many ways which will be discussed in the next section.

4.3 My own reflection on Macro-Polyphony

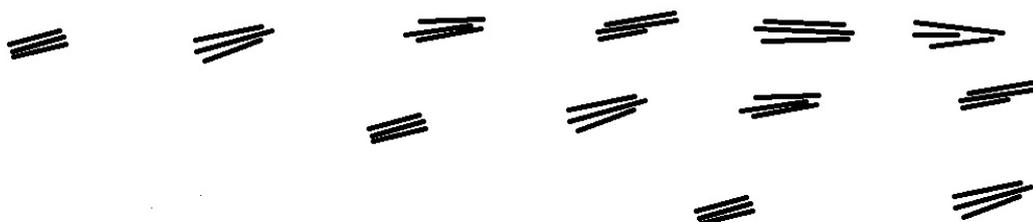
As I mentioned before, the topic of my doctoral research is ‘an exploration towards the enrichment of a personal musical language in composition’. In order to enrich my personal musical language, I focused on new ways to integrate elements from Chinese music with Western Contemporary music in the first two years of my research. I was trying to explore a deeper identity of Chinese music than merely using the surface details such as Chinese modes or instruments. During this period, glissandi have gradually become the main connection between Chinese and Western Contemporary materials in my music. I absorbed many glissandi elements from local folk music of different nationalities within China, especially Mongolian music, and injected them into the bodies of Western Contemporary musical textures.

But after the analysis of He Xuntian’s work, I changed the direction of my research, as I decided to begin exploring a different aspect of my musical language – namely Macro-polyphony. My study of macro-polyphony has opened up possibilities with glissandi which I will discuss later.

4.3.1 Ideas about Micro-Polyphony in a Macro-Polyphonic texture

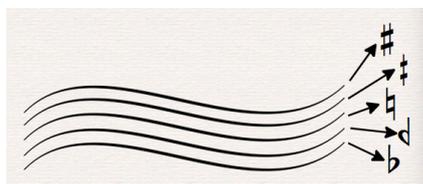
After examining macro-polyphony, I explored some possibilities of variations within the repeating canonic texture. Firstly, I wanted to integrate micro-polyphony into a macro-polyphonic texture. As I mentioned before, Ligeti was the first composer to make micro-polyphony into a compositional technique. Micro-polyphony is textural music; it contains small movements within an essentially static texture. All parts stay close to each other, and the texture creates a cluster of sound. The colour of this cluster is the main characteristic of micro-polyphonic music, rather than the individual movement of lines. **Example 4.9** shows how I am combining these two elements together. Instead of using notes, I create some small micro-polyphonic sound clusters as the musical cells within a macro-polyphonic texture. Each small sound cluster is constructed from several adjoining glissandi lines which can move in different directions. The distance between each two would be no more than a semitone. Vertically, the structure of this macro-polyphonic music is still a three-part canon: the sound clusters are imitated in different lines. Horizontally, these micro-polyphonic cells are also in a prose-like movement.

Example 4.9:



Secondly, microtonality is another element which can be absorbed into macro-polyphonic texture. Following on from **Example 4.9**, each glissando can be divided into many lines with the same shape. The gap between each line is a microtone, as shown in **Example 4.10**.

Example 4.10: This glissando is divided into 5 lines in the same shape.



The glissando becomes a thick line throughout the texture. Each glissando line becomes a small micro-polyphonic structure. And each cell of **Example 4.9** contains three micro-polyphonic sound clusters. There can be a maximum of fifteen different pitches playing together, while the original music only introduces three glissandi lines. This forms a ‘crowd’ of sounds within each cell. Therefore, the whole macro-polyphonic structure will be made by different layers of micro-polyphonic texture through glissandi and microtones.

In comparison with micro-polyphony, macro-polyphony is the skeleton of music which can provide a flexible structure for composers to build on. For me, macro-polyphonic music is more like a drawing than pure sound. It reminds me of one of Barocci’s paintings: *the sketches of Madonna of the Cat*, the stimulus for *Yun II*. This sketch is constructed from many small baby faces and lines. Because it is the preparation for a painting, Barocci was trying to present the same face on the paper, but each individual one is slightly different. The thing that attracts me to macro-polyphony is its closeness to drawing musical shapes in the way that an artist would draw a sketch for a painting. Perhaps we can see these faces as the cells in macro-polyphonic music. If you look at them from a distance, they might look the same. But if you get closer, you will see many variations happening between each one of them.

4.4 Macro-Polyphony in my own music

As I started looking into He Xuntian’s work, I began to experiment and apply his techniques to my own work. As I said before, I find that incorporating arithmetical sequences into my work allows for a high degree of balance between repetition and variation.

4.4.1 Drawing sketch

The first piece that resulted from this is called ‘*Drawing sketch*’ for harpsichord. This is, for me, a pure exercise in macro-polyphonic music. **Example 4.11** shows the notes of three-part scales in this piece (the numbers show how many semitones there are in each interval).

Example 4.11: the notes of three parts' scales in *Drawing Sketch* (1=1 semitone)

The image shows three musical staves labeled Part 1, Part 2, and Part 3. Part 1 is in treble clef, Part 2 is in treble clef, and Part 3 is in bass clef. Each staff contains a scale of notes with intervals indicated by numbers between the notes. Part 1 intervals: +3, +4, +3, +3, +3, +3. Part 2 intervals: +1, +2, +1, +1, +1, +1. Part 3 intervals: +2, +3, +2, +2, +2, +2. Vertical arrows indicate the distance between notes of Part 1 and Part 2 (3, 5, 7, 9, 11, 13) and between Part 2 and Part 3 (13, 12, 11, 10, 9, 8).

Inspired by He Xuntian's canon and arithmetical sequences, I begin my piece from the middle scale line which has the smallest intervals between notes. In this three-part canon, the gap between the upper two parts' scales is an ascending arithmetical sequence which has two semitones as a common difference (as shown in **Example 4.11**, they are 3,5,7,9,11,13). However, the distance between the lower two parts' scales is a descending arithmetical sequence with only one semitone common difference (as shown in **Example 4.11**, they are 13,12,11,10,9,8). In order to keep the system constant, each of the lower and upper parts is never more than 13 semitones apart from the middle part.

Example 4.12 is the first two pages of this piece. The right hand plays the upper two parts of the canon, and left hand plays the lowest part. Because I don't want the audience to be too aware of the imitation between parts, I integrate notes from both upper parts into one musical cell. **Example 4.13** is the right hand of bar 25. In this section, I have divided the upper two parts by red circles. It clearly shows how these two lines are working together in different parts of the same cell. When the listener knows that a piece uses canon, this creates a level of expectation and predictability, which can distract from the actual musical experience. For myself, I prefer listeners to interpret my pieces in their own way.

Example 4.12: from bar 1 to 31 in *Drawing Sketch*.

Drawing Sketch

Yang Liu (2015)

The musical score is written for piano in 4/4 time, marked with a tempo of approximately 76 beats per minute (♩=c.76). The key signature has one flat (B-flat). The score is divided into five systems, each containing two staves (treble and bass clef).
- **System 1 (Measures 1-4):** Measure 1 starts with a piano (*p*) dynamic. The right hand has a quarter rest, followed by a quarter note B-flat. The left hand has a whole rest.
- **System 2 (Measures 5-8):** Features triplet eighth notes in the right hand and quarter notes in the left hand.
- **System 3 (Measures 9-12):** Continues the melodic development with triplet eighth notes and quarter notes.
- **System 4 (Measures 13-15):** Includes a triplet eighth note in the right hand and a triplet eighth note in the left hand.
- **System 5 (Measures 16-21):** The final system shown, featuring complex rhythmic patterns with triplets in both hands.

19 *mf*

22 *f*

25

28

30

Example 4.13: Right hand part of Bar 25 in *Drawing Sketch*.

4.4.2 Sun Moon Consonance II

In 2016, I started a new string quartet called *Sun Moon Consonance II* as the second examination of macro-polyphonic music. This quartet was based on a short sketch which I wrote before my research into macro-polyphony. **Example 4.14** shows the opening of this sketch.

Example 4.14:

Sun Moon Consonance II

Yang Liu (2016)

$\text{♩} = c.64$ Extremely Soft
ord.

Violin I
Violin II
Viola
Violoncello

2

Violin I
Violin II
Viola
Violoncello

The opening chords of the sketch are constructed with four notes: E, E flat, G and F sharp. The gaps between each two semitones in the parts (cello to violin 1, violin 2 to viola) are semi-quavers. Following this pattern, the musical material is developed by the movement of individual notes, involving for example the delay of parts and missing notes. The sound block of the four-part texture gradually disperses into glissandi lines. Based on this sketch, I started exploring macro-polyphony in this piece.

In the previous chapter, I examined the linear glissandi movements in a single melodic line. Although this piece is a multiple-line macro-polyphonic structure, within it I continued to examine the possibilities of glissandi in my work. First, I wanted to focus on the horizontal movement and vertical canon relationship in the first section of *Sun Moon Consonance II*. According to the possibilities which I explained above, I started to absorb micro-polyphony into a macro-polyphonic texture. Instead of micro-polyphonic sound clusters, I thought of the single glissando line like a cell within the macro-polyphonic structure. As a canonic texture, the single glissando line is imitated throughout each part. It provides the relationship between the four parts in the string quartet. As shown in **Example 4.15**, the glissando cells start from the viola part, then are imitated by violin 2, cello and finally violin 1 with five bars gap. Similarly to the notes of the original sketch in **Example 4.14**, the new version started this piece with E (viola) – E flat (violin 2) – F sharp (cello) – F (violin 1). But instead of a semi-quaver gap between each two semitones (E to E flat, F sharp to F), the distance is stretched to five bars because of the macro-polyphonic structure. It explores a whole new approach to developing the original material, as shown in **Example 4.15**.

Example 4.15: the first type of cells at the opening of *Sun Moon Consonance II*.

The diagram illustrates the canon structure of the first type of cells at the opening of *Sun Moon Consonance II*. It features three staves of musical notation connected by blue arrows, indicating the sequence of imitations. The top staff shows a melodic line with dynamic markings *p*, *ppp*, *mf*, and *ppp*. The middle staff shows a similar line with *p* and *ppp* markings. The bottom staff shows a line with *ppp* and *p* markings. To the left, a separate staff shows a whole note chord with the dynamic marking *pppp*. The notation includes slurs and accents, and the dynamic markings are placed below the notes.

Example 4.16: the second type of cells at the opening of Sun Moon Consonance II.

The image displays four musical staves illustrating variations of a cell. The top staff features a glissandi line with a 'non vib.' marking and dynamic markings *pp*, *mp*, *pp*, *mp*, and *pp*. The second staff shows a variation with dynamics *p*, *ppp*, *mf*, and *p*. The third staff shows a variation with dynamics *ppp*, *p*, and *ppp*. The bottom staff shows a variation with dynamics *pp*, *mp*, and *pp*. Blue arrows indicate relationships between the staves, pointing from the bottom staff to the others.

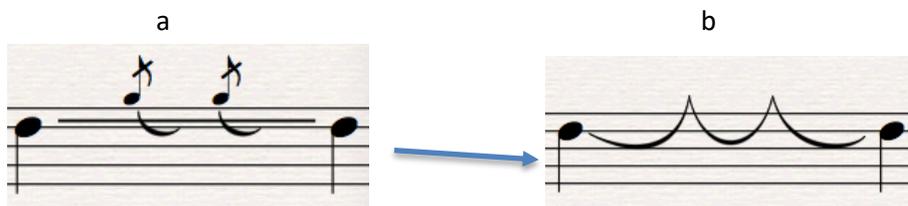
Example 4.17: the third type of cells at the opening of Sun Moon Consonance II.

The image displays four musical staves illustrating variations of a cell. The top staff features a glissandi line with dynamics *p*, *f*, and *p*. The second staff shows a variation with dynamics *mp*, *f*, and *p*. The third staff shows a variation with dynamics *f*, *p*, and *pp*. The bottom staff shows a variation with dynamics *p*, *mf*, and *p*. Blue arrows indicate relationships between the staves, pointing from the bottom staff to the others.

Compared to **Example 4.15**, the original sustained long notes become straight glissandi lines from bar 4 in **Example 4.16** as a first variation. The shape of the lines is imitated by the other three instruments in the following bars. And from bar 25, as shown in **Example 4.17**, the glissando material is developed into the second variation. I transfer two features from the Chinese instruments above: imitating the human voice and grace notes, and combining them together in the glissandi lines. I explore the four voice accents of Chinese mandarin to imitate the sound of the grace note, as shown in **Example 4.18**. The glissandi lines in “b” are constructed by upward (↗), curve (↘) and downward (↘) accents of Chinese mandarin, which produces the

two peak point as the imitation of the grace notes.

Example 4.18: the transformation from grace notes to glissandi.



Secondly, I wanted to explore the cells' development in the opening section. Following the transformation of the musical material, both of the cells and gaps become shorter in all parts. **Example 4.19** and **Example 4.20** show the length of the cells and gaps of all instruments in the opening section before bar 48. In **Example 4.19**, the length of the cells in violin 1 decreases from 4.5 – 3.5 – 3 crochets. Although the length of the cells in violin 2 and viola decreases as well, the change of speed is slightly different. But compared to the previous three instruments, the cells' development in the cello part is very different. It stays the same in the first two sections, but suddenly increases to 7.5 crochets in the last moment before bar 48. Because of the prose-like musical development, it creates irregular cells and an unpredictable speed of development for all instruments.

Example 4.19: Note Length of each cell (in crochets)

	Bar 1-38	Bar 39-44	Bar 45-48
Violin 1	4.5 (crochets)	3.5	3
Violin 2	3.75	3	2.5
Viola	3	2.75	2
Cello	2.25	2.25	7.5

Example 4.20: Gap Length between every two cells (in crochets)

	Bar 1-27	Bar 18-32	Bar 33-38	Bar 38-40	Bar 40-42	Bar 43-48
Violin 1	3 (crochets)	2.5	2.25	1.75	1.25	1.25
Violin 2	2.75	2.25	2	1.5	1.25	1
Viola	2.5	2	1.75	1.5	1	0.75
Cello	2.25	1.75	1.5	1.25	0.75	0.75

Although the length of each cell changes irregularly, the imitating materials remain the same. Therefore, as the result of changing instrumentation, the same shape of glissandi lines can be transformed into different components within the canonical structure. As shown in **Example 4.17**, because the glissandi length of the 2nd violin is longer than that of the cello, the changing speed is much slower and it takes longer to reach the

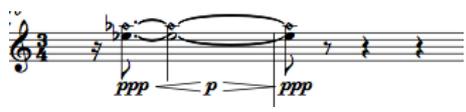
highest point. Therefore, a completely different experience results from listening to the different instrumental imitations of the material.

The canonical structure is interrupted by a silence at bar 49. Although it continues with similar glissandi lines, the texture has been replaced by the materials in the original sketch in **Example 4.14**. **Example 4.21** shows two examples from bar 50 to 51 and bar 62 to 63 in *Sun Moon Consonance II*. Similar to the pattern that is found in the sketch, the gaps between cello and violin 1, or violin 2 and viola become semi-quavers.

Example 4.21: bar 50 to 51, and bar 62 to 63 in *Sun Moon Consonance II*.

In contrast to the first section, the developments of the glissandi materials are the main variations in the second section of *Sun Moon Consonance II*. **Example 4.22** shows the glissando developments in the second section. In comparison with the first section, the music starts from the artificial harmonic notes in the original version. In Development 1, the glissandi materials start to move in straight lines within microtones. Development 2 explores the possibilities of the extremely quick glissandi movements within a very small range. In comparison with vibrato, it has a slightly wider range and irregular waves. The strong grace notes (refer to chapter 2) can be found in many glissandi lines in Development 2. In Development 3, the linear glissandi materials are constructed by upward (↗), curve (↘) and downward (↙) accents of Chinese Mandarin (refer to chapter 2), which produces the two peak points as the imitation of the grace notes, as shown in **Example 4.18**. They also always appear with the pressing technique of glissando (refer to chapter 2) which are marked with ◊ and ◆. Development 4 is an amalgamation of Development 2 and Development 3, in which the third voice accent curve (↘) of Development 3 is replaced by the irregular glissandi lines from Development 2. In Development 5, the linear glissandi material finally becomes a wide range version of Development 2: it moves at an extremely quick speed with irregular rhythms.

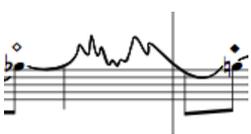
Example 4.22: the glissando developments the second section of *Sun Moon Consonance II*.

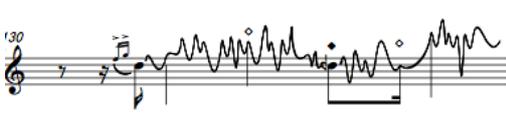
Original: 

Development 1: 

Development 2: 

Development 3: 

Development 4: 

Development 5: 

Chapter 5

Compositions after 2016

After examining the possibilities of glissando materials in horizontal and vertical textures, I want to focus on how I integrate modal harmony into my work. In 5.1, I will examine the modal systems in other Chinese composers' work from the early 1980s when contemporary music just started to become popular in China. I will analyse the Chinese composer Luo Zhongrong's (1924-) work *Crossing the River to Pick Hibiscus* (涉江采芙蓉) (1980) in 5.1.1. It will be followed by the examination of another Chinese composer Zhou Jinmin's (1956-) *Sing the Song with Mountain Drum* (扬歌与山鼓) (1986). In 5.2, I will talk about my own reflections on the works by Luo Zhongrong and Zhou Jinmin, which includes a comparison with my own approach to modal compositions in 5.2.1, and further developments of it in 5.2.2 and 5.2.3 inspired by Franco Donatoni (1927-2000) and Morton Feldman (1926-1987). The last section 5.3 will be an analysis of my own compositions after 2016: *The Passage*, *Rain Air II*, *Rain Air III*.

5.1 Exploration of other Chinese composers' approach to Chinese modes in Contemporary music.

As I mentioned in the introduction, since the visit of Alexander Goehr, Western contemporary music gradually became more popular with young Chinese composers. As a starting point, Schoenberg's serialism gradually became the main bridge between traditional Chinese elements and Western contemporary music. Many young Chinese composers started their own explorations with serialism with traditional Chinese sensibilities. In this section, I will analyse some of the most important works during this period, and explore different approaches to serialism from traditional Chinese composers.

5.1.1 *Crossing the River to Pick Hibiscus* (涉江采芙蓉) by Luo Zhongrong

The first composer I want to talk about is Luo Zhongrong, who wrote *Crossing the River to Pick Hibiscus* (涉江采芙蓉), which was one of the earliest Western contemporary compositions in China. As I mentioned before, serialism was the first technique which was widely used by Chinese composers in the early 1980s. In *Crossing the River to Pick Hibiscus*, Luo Zhongrong employed Schoenberg's twelve-tone technique as the main method of note selection. As shown in **Example 5.1**, "O" is the original tone row. "R" is the original tone row in reverse order. The third one "I" is the original tone row with intervals inverted. The last one "RI" is the interval inverted version of "R".

Example 5.1: The tone rows in *Crossing the River to Pick Hibiscus*.

The image displays four musical staves, each representing a different tone row. The first staff, labeled 'O', shows a sequence of notes with brackets underneath identifying four modal segments: E宫, bE宫, bB宫, and E宫. The second staff, labeled 'R', shows the reverse order of the first staff, also with brackets identifying the same four modal segments. The third staff, labeled 'I', shows the original tone row with intervals inverted, with brackets identifying the modal segments E宫, bB宫, bE宫, and E宫. The fourth staff, labeled 'RI', shows the interval inverted version of the reverse order, with brackets identifying the modal segments E宫, bE宫, bB宫, and E宫.

The original tone row is mainly constructed from three keys or Chinese modes, E Gong (宫), E flat Gong (宫), B flat Gong (宫). As I mentioned before in chapter one, the Chinese modal system includes five notes in each key, 宫(gong), 商(shang), 角(jue), 徵(zhi), 羽(yu), as shown in **Example 5.2**. The name of the key depends on the tonic in the scale. If the tonic is the first note 宫(gong) in the mode, it's called 宫(gong) key. As shown in **Example 5.1**, the first key of the original tone row is "E 宫". "E" represents the pitch of the tonic, and "宫"(gong) indicates which note of the Chinese modal system is the tonic "E".

Example 5.2: Traditional Chinese modal system.

宫	商	角	徵	羽
Gong	- Shang	- Jue	- Zhi	- Yu
└ Maj. 2 nd ┘	└ Maj. 2 nd ┘	└ Min. 3 rd ┘	└ Maj. 2 nd ┘	

Chinese composer Zheng Yinglie wrote in 1983: "*Crossing the River to Pick Hibiscus* (涉江采芙蓉) has a strong pentatonic colour in its serialism system."²⁹ As I mentioned before, the tone row is mainly constructed from three main keys, E 宫(gong), E flat 宫(Gong), B flat 宫(Gong). The notes of these three keys are shown in **Example 5.3**.

Example 5.3: Notes from E 宫(gong), E flat 宫(gong), B flat 宫(gong)



The interval between E 宫(gong) and E flat 宫(gong) is a semitone, and between E 宫(gong) and B flat 宫(gong) is a tritone. If the notes move within E 宫(gong), the sonic result will remain Chinese in its pentatonic colour. But when it moves towards E flat 宫(gong) or B flat 宫(gong), the semitone or tritone interval will break the Chinese colour and produce an atonal interval that modifies the Chinese mode. The conflict between the Western dissonant intervals and the Chinese consonant elements is the main character in *Crossing the River to Pick Hibiscus's* (涉江采芙蓉) serial system.

29. Yinglie Zheng, 'Luo Zhongrong's *Crossing the River to Pick Hibiscus* (涉江采芙蓉) – Serialism analysis No.5', *Xinghai Conservatory of Music Journal*, 2 (1983)

The conflict is not only in the horizontal tone row, but also in the vertical structure. As shown in **Example 5.4**, the opening of *Crossing the River to Pick Hibiscus* (涉江采芙蓉). The first block in the vocal line is E 宫 (gong), but the following second block of the piano part is in E flat 宫 (gong). When the vocal part moves towards E flat 宫 (gong) at the end of second block, the third block of the piano part changes to E 宫 (gong). Although the conflict may sound dissonant through the different parts, the tone row remains the same in this section. Therefore, the listener can still hear the unison from the semitone or tritone conflict between the pentatonic keys.

Example 5.4: *Crossing the River to Pick Hibiscus* (涉江采芙蓉) bar 5-7

The composer Luo Zhongrong did not entirely follow the twelve-tone technique, as he explored a new method of combining tone rows in his music. As shown in **Example 5.5**, the composer interposed tone row “R” into “O”. Because “R” is only the reverse of the original “O”, the new combined tone row can still keep the unison with the same notes but in a new order. As result, bar 16 to 18 of *Crossing the River to Pick Hibiscus* (涉江采芙蓉) in **Example 5.5** indicates with numbers how the composer exploits the new tone row in the piano part.

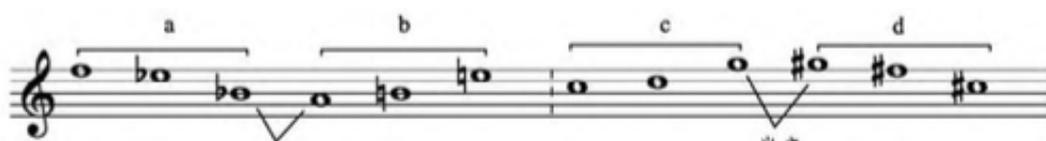
Example 5: *Crossing the River to Pick Hibiscus* (涉江采芙蓉) bar 16-18

This piece is the starting point for Chinese contemporary music since the 1980s. Because twelve-tone technique is a flexible tool which can produce the freedom for composers to explore their own imaginations, many Chinese composers started to analyse serialism, and explored their own approach in order to integrate it with Chinese traditional music.

5.1.2 *Sing the Song with Mountain Drum* (扬歌与山鼓) by Zhou Jinmin

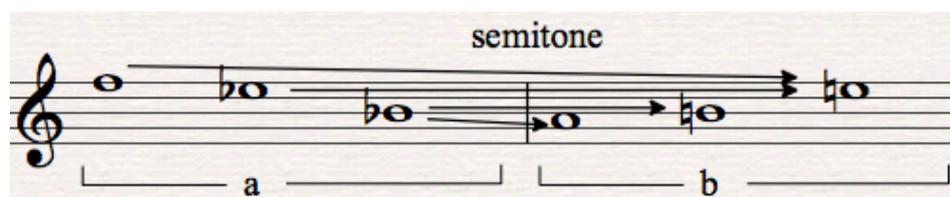
Zhou Jinmin's *Sing the Song with Mountain Drum* (扬歌与山鼓) is the second piece I want to analyse. After the development of serialism in China, Zhou Jinmin started a new exploration towards Chinese traditional music in twelve-tone technique. In comparison with Luo Zhongrong's *Crossing the River to Pick Hibiscus* (涉江采芙蓉), Zhou Jinmin used a local folk tune as part of the main tone row instead of a Chinese pentatonic mode. It is called "Three-voiced tune" (三声腔) from the folk songs in Hubei province. As shown in **Example 5.6**, it is the tone row in *Sing the Song with Mountain Drum* (扬歌与山鼓) which is made by the "Three-voiced tune" (三声腔). Because this particular tune only contains three notes, Zhou Jinmin used combinatorial hexachords to construct his tone rows in twelve-tone technique. This technique was derived from the music of Milton Babbitt (1916-2011).

Example 5.6: the tone row in *Sing the Song with Mountain Drum* (扬歌与山鼓)



Section "a" is the original "Three-voiced tune", which is followed by the interval inverted version "b". The interval between the last note of "a" and the first note of "b" is a semitone. Tone rows "c" and "d" have the same relationship as "a" and "b". Moreover, if you consider "a" plus "b" as one idea, "c" plus "d" is also the intervallic inversion of it. Because of the special relationship between these tone rows, many semitones are found between each of them, as shown in **Example 5.7**. Rather than creating conflict within each tone row, as in *Crossing the River to Pick Hibiscus* (涉江采芙蓉), *Sing the Song with Mountain Drum* (扬歌与山鼓) uses the conflict between two tone rows. Although the "Three-voiced tune" (三声腔) can produce the melody of the Hubei folk song with each group of three notes, the inversion can create a dissonance to interrupt the folk tune when the music moves between tone rows. Therefore, the Chinese elements appear as fragments within an atonal context during this process.

Example 5.7: the semitones between tone row "a" and "b"



Example 5.8 is the second movement in *Sing the Song with Mountain Drum* (扬歌与山鼓). The string part uses the "Three-voiced tune" (三声腔) tone row "a" as the main singing voice, while the piano part absorbs

both “a” and “b” to create conflict between different layers. The lower part of the piano uses “b” (A, B, E) as a chord to contrast with the higher right hand chord “a” (B flat, E flat, F) in a rhythmic way.

Example 5.8: *Sing the Song with Mountain Drum* (扬歌与山鼓) 2nd movement, bar 16 - 25

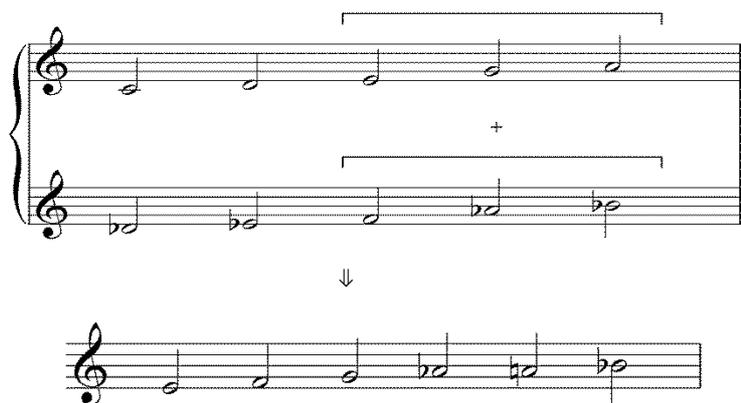
The image displays two systems of musical notation. The first system, covering bars 16 to 20, consists of three staves. The top staff is for Violin I (labeled 'Vla.') and contains a melodic line with a quarter rest followed by eighth notes, marked with a mezzo-forte (*mf*) dynamic. The middle and bottom staves are for piano accompaniment, marked *fp* (fortissimo piano). The piano part features a consistent eighth-note bass line and chords in the right hand. The second system, covering bars 21 to 25, also has three staves. The top staff is for Violin II (labeled 'Vi.') and contains a melodic line similar to the first system, ending with a *ppp* (pianissimo) dynamic marking. The piano accompaniment continues with the same rhythmic pattern as in the first system.

5.2 My own reflections on the works in the previous section

5.2.1 Chinese twelve-tone technique’s connection with my own modal system

The theory of *Crossing the River to Pick Hibiscus* (涉江采芙蓉) is similar to my own approach to Chinese modal writing mentioned in the second chapter. The basis for the modes that I found is produced by the last three notes of the two adjoining pentatonic keys, 角(Jue), 徵(Zhi) and 羽(Yu). **Example 5.9** demonstrates how the first two consecutive keys construct this mode. In comparison with my own approach to Chinese modal writing, Luo Zhongrong’s *Crossing the River to Pick Hibiscus* (涉江采芙蓉) has a similar starting point, but instead of mixing two adjoining keys together, he lays out two or three keys one by one as a tone row to gain more Chinese colour within each small group of notes.

Example 5.9: the way to create the new mode.

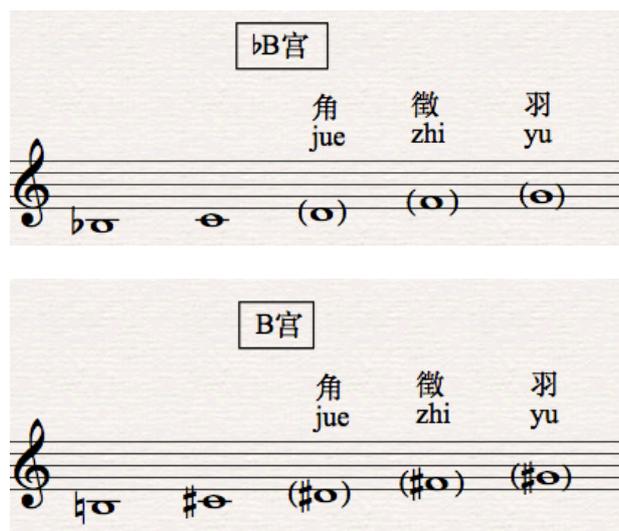


But in contrast to *Crossing the River to Pick Hibiscus* (涉江采芙蓉), *Sing the Song with Mountain Drum* (扬歌与山鼓) employed the local folk tune “Three-voiced tune”(三声腔) as the main idea. If we examine the notes of “Three-voiced tune”(三声腔), we realise these three notes are the first (宫 gong), second (商 shang) and fourth (徵 zhi) of the Chinese pentatonic scale. As shown in **Example 5.10**, the original tone row of *Sing the Song with Mountain Drum* (扬歌与山鼓) is the first, second and fourth notes in E flat 宫(gong) key. It demonstrates a similar approach to my own in Chinese modal writing, since both Zhou Jinmin and I choose to include only three notes from the pentatonic scale. As I mentioned before, I chose the last three notes (角(jue), 徵(zhi) and 羽(yu)) of two adjoining keys from the Chinese mode. For example, in my piano work *Rain Air II*, the notes are chosen from the last three notes of B 宫(gong) and B flat 宫(gong), as shown in **Example 5.11**. But similarly to *Crossing the River to Pick Hibiscus* (涉江采芙蓉), *Sing the Song with Mountain Drum* (扬歌与山鼓) also uses the twelve-tone technique to construct the notes as a tone row in a horizontal way, which is different with the mix of notes from my own approach to Chinese modal writing.

Example 5.10: first tone row of *Sing the Song with Mountain Drum* (扬歌与山鼓) in E flat 宫(gong) key



Example 5.11: Notes of my modal system in *Rain Air II*



5.2.2 The influence of Donatoni's pitch transformation to my own modal system

As I mentioned before, in the 1980s, many Chinese composers used serialism as a tool to treat Chinese elements. Instead of serialism, I wanted to explore another western technique to help me develop my own modal writing, and I became fascinated with how the Italian composer Franco Donatoni developed ways of pitch transformation. In 1966, he wrote what he considered to be his first truly characteristic piece, *Etwas ruhiger im Ausdruck* (Somewhat More Peaceful In Expression) in which he rejected much of the methodology he had developed up to that point. He extracted the first three beats of the eighth bar of the second of Schoenberg's Five Piano Pieces (Op. 23) as a fragment which he used as a seed to develop in new ways. Donatoni said in 1991:

I took that little fragment of Schoenberg and made it proliferate, like in Boulez's music. This involved many, many different techniques – from proliferation, through selection, cutting up the music, new selections, proliferation of those selections, and so on.³⁰

One of these techniques I have found useful involves the transformation of a set of pitches. Donatoni takes the original notes from Schoenberg's fragment, and then changes them by moving each note a semitone up or down (sometimes in different octaves). **Example 5.12** show how this process is developed from bar 100 onwards. He moves each note a semitone up or down as it goes from one bar to another, whilst the total number of notes in each bar diminish where some notes become a quaver rest and then disappear.

30. Andrew Ford, *Composer to composer: Conversations about Contemporary music*, (London: Quartet books Limited, 1993) 118.

Example 5.12: the notes' development from bar 100 to 103.

The image shows a musical score for four staves, numbered 100 to 103. Each staff contains a sequence of notes with various accidentals (sharps, flats, naturals). Lines connect notes across the staves, illustrating how specific notes from one staff develop or transform into notes in the subsequent staves. For example, a note in staff 100 is connected to a note in staff 101, which is then connected to a note in staff 102, and so on, showing a gradual evolution of the pitch material.

If one takes the six-note scale of my own approach to Chinese modal writing created by the last three notes of two adjoining pentatonic keys (see chapter 2) one can adapt Donatoni's method from *Etwas ruhiger im Ausdruck*, and move the notes a semitone up or down individually within a specific set of limitations. For example, I can move one of the six notes up each time but not down, while the other five notes move down but never up. **Example 5.13** shows the procedure of the notes' development. In the first step, I only move the last note of the scale up a semitone, and push the other notes down a semitone. And then I take the second last note up a semitone when every other note drops down another semitone. Following this order of movement, the six-note scale finally arrives at the last group of notes in **Example 5.13**. This slow development produces small levels of change while keeping most of the elements within the scale. This gradual movement may be hard to recognise, but it gives enough variation to the repeating material whilst keeping the original profile present.

Example 5.13: pitch transformation in my approach to modal composition.

The image shows a musical score for two staves. The top staff contains a six-note scale with a bracket above it. The bottom staff shows the same scale with arrows indicating pitch transformations: five notes moving down and one note moving up. A blue arrow points down from the top staff to the bottom staff, indicating the transformation process.



5.2.3 Gradual development in my music.

The idea of gradual development in my music is influenced by the American composer Morton Feldman (1926-1987). Throughout his work, the balance between repetition and variation becomes an area of focus within the musical continuity. Feldman opens up long durations in his pieces which allow the musical material to transform slowly. The space Feldman establishes in his music, like oxygen, allows a listener's own experience to emerge rather than imposing a meaning onto the listener. An obvious criticism of Feldman's music is that the slow rate of change and growth can lead to boredom; however boredom has a threshold, which once traversed can open up possibilities of stimulation in the brain. American composer John Cage (1912-1992) famously referred to this when he said: "If something is boring after two minutes, try it for four. If still boring, then eight. Then sixteen. Then thirty-two. Eventually one discovers that it is not boring at all."³¹ The Danish philosopher, Soren Kierkegaard (1813-1855), discussed how small details can take on important consequences when one's environment is limited:

31. John Cage, *Silence: Lectures and Writings*, (London: Marion Boyars Publishers, 2004)

The more a person limits himself, the more resourceful he becomes. A solitary prisoner for life is extremely resourceful; to him a spider can be a source of great amusement.³²

In music, if the original material lacks variation, any small changes can be more easily recognised and draw the listeners' attention. But if dramatic changes consistently appear, the big variations will no longer surprise the audience and become part of the material itself. I prefer the former as it enables me to explore material in great detail.

This approach is closer to my nature. No two things are exactly the same in our life, and if the same event has been repeated, there will always be some differences with each reappearance. For example, if we look at clouds in the sky, it will be extremely strange if the cloud moved from one place to another keeping exactly the same shape. You might not see its movement, but it gradually changes into a different shape without you noticing. I want to explore small scale variations within my own musical language where the ideas do not move to a specific goal but twist and change shape like a cloud.

5.3 Analysis of my own music

5.3.1 *The Passage*

The Passage is a piano piece began in 2014 and completed in 2016. The material for this piece was used to explore different approaches in expanding my harmonic outlook (see chapter 2 for an exploration of my modal writing). I wrote three piano works during my time as a DMus student. In this section, I will analyse them one by one to explore the development of my compositional approaches.

The title "*The Passage*" has two meanings. First, it represents the passage of life, the starting and ending points of which become less important than the journey between the two. The most meaningful and significant part is the scenery during the journey. Secondly, from a musical point of view, it describes the slow transposition from one chord to another during the piece. The starting and ending chords are from three adjoining keys in the Chinese modes, as shown in **Example 5.14**. The starting chord is made of the last three notes of B flat 宫(gong) and B 宫(gong) key in the Chinese modes, while the last chord is constructed from the last three notes of A 宫(gong) and again the B flat 宫(gong) key. So the starting chord is a semitone higher than the ending chord, whilst it also has three notes in common from the B flat 宫(gong). This whole piece is the journey from one pitch area to another. This type of slow harmonic transformation enables me to present details of musical material with a strong sense of focus.

32. Soren Kierkegaard, *Either/Or Part 1: The Rotation of Crops*, (New Jersey: Princeton University Press, 1987) 281-300

Example 5.14: The starting and ending chords of *The Passage*

In comparison with the serialism in *Crossing the River to Pick Hibiscus* (涉江采芙蓉) (1980) and *Sing the Song with Mountain Drum* (扬歌与山鼓) (1986), I adapted Donatoni's pitch transformation method as a way of combining Chinese musical material with a western compositional technique. The rules I employed were that, of the six notes within each chord, only five of them would move by a semitone up or down each time. As shown in **Example 5.15**, in the first scale, the first, third and fifth notes move a semitone down, while the second and fourth notes move a semitone up. Moreover, the last note remains the same. Following these rules, the note with a semitone going up always alternates with the one moving down. But there is always one note which does not move within each scale, here these are the 6th, 1st, 2nd, 3rd, 4th, 5th notes. And so the final chord is located a semitone lower than the opening.

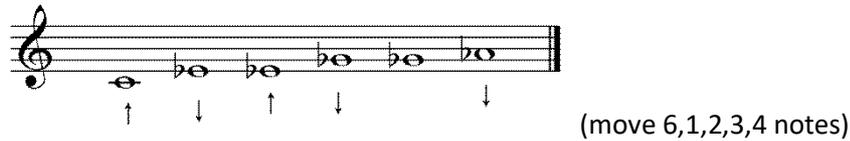
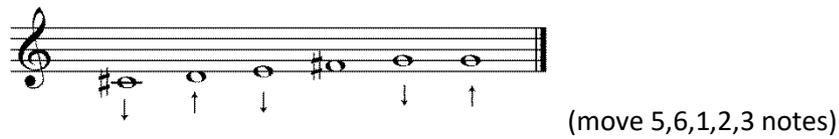
Example 5.15: the changing process of the chords:

(move 1,2,3,4,5 notes)

(move 2,3,4,5,6 notes)

(move 3,4,5,6,1 notes)

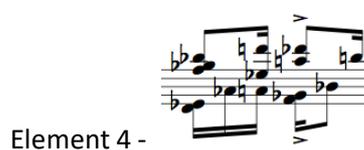
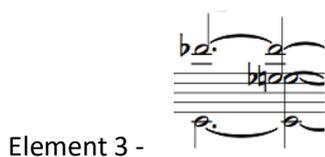
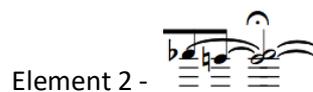
(move 4,5,6,1,2 notes)



5.3.2 Rain Air II

My *Rain Air* piano work series started in 2012 when my first *Rain Air* work was premiered in an RCM concert as part of the 21st Century Liszt project³³. *Rain Air II* was finished in early 2017, and was inspired by the sounds of the rain. In accordance with this, I employed four main elements, which represent four different kinds of rain sounds. (Example 5.16) The first element is made from arpeggios, and uses Donatoni's pitch transformation technique within the development of its notes. Similar to *The Passage*, the first six-note scale of the arpeggios is also constructed by the last three notes of B flat 宫(gong) and B 宫(gong) key in the Chinese mode. Example 5.17 shows the notes and their movements in the opening section of *Rain Air II*. In contrast to *The Passage*, *Rain Air II* does not apply any rules of the Donatoni technique to the directions of pitch transformation, whilst the movement of each step still remains a semitone. As a result of this, the scales change slowly, keeping a similar shape, providing enough variation for the unchanging material to still evolve.

Example 5.16: four main elements in *Rain Air II*.



33. 21st Century Liszt was a collaborative project between the RCM piano department and the composition department. It set composers the challenge of composing 21st-century pieces influenced by Liszt's music.

Example 5.17: The pitch movements in the opening section of *Rain Air II*

The image displays seven musical staves, each labeled 'No.1' through 'No.7'. Each staff shows a sequence of notes on a five-line staff. Arrows above and below the notes indicate their movement from one staff to the next. Blue arrows point downwards between the staves, indicating the progression of the sequence. The notes are: No.1 (G4, F4, E4, D4, C4), No.2 (F#4, E4, D4, C4, B3), No.3 (E4, D4, C4, B3, A3), No.4 (D4, C4, B3, A3, G3), No.5 (C4, B3, A3, G3, F3), No.6 (B3, A3, G3, F3, E3), No.7 (A3, G3, F3, E3, D3).

In addition to this gradual movement of pitch transformation, I remain with each chord for 5 to 6 arpeggios which further slows down the developing process. In order to avoid repeating materials, and influenced by Morton Feldman, I applied small variations to the sections where the notes come from the same chord.

Example 5.18 shows the arpeggios in the opening section of *Rain Air II*, which are the notes from the first chord in **Example 5.17**. In accordance with the small variations within the unchanged chord, I relocate the notes in different octaves to explore their possibilities of sound. **Example 5.19** shows the movements of the

relocated notes in the first three arpeggios. I moved three notes from the first one to the second, while I kept E flat, A flat and D the same. In contrast to the first figure of notes, I relocated all six notes in the third arpeggio. I feel it is crucial that the materials are always going towards a balance between repetition and variation whilst never settling into a pattern. It is like a man walking along a high wire: he will need to adjust the angle from one side to another when he goes too far towards one direction. This unbalance creates an energy which helps push music forward, as the process always remains in motion.

Example 5.18: Bar 1-5 in *Rain Air II*

Rain Air II

Yang Liu (2017)

Example 5.19: The note movements of the first three arpeggios in the opening section.

The second element is constructed from a two-note phrase made from a semitone interval which always appears after the arpeggios. (**Example 5.20**) It is one of the elements which are absorbed from the first *Rain Air* work, because this two-note phrase reminds me of the sound of rain falling.

Example 5.20: Element 2 in the beginning of *Rain Air II*.

The image shows a musical score for a piano piece. The title is "Freely". The score is in treble and bass clefs. The dynamics are marked as *p* (piano) and *ppp* (pianissimo). A blue arrow points from a specific musical phrase in the right hand to a callout box labeled "(Element 2)". The callout box shows a close-up of the notes: B-flat, A, and G, with a slur over them.

Following the pitch transformation, the notes of this element become part of the arpeggios in the opening section, but the development of this material takes place independently. **Example 5.21** shows how the second element develops throughout the piece. In Development 1, the semitone intervals remain as the main intervallic relationship within each part, but with added triplets against the quavers in the texture. Development 2 explores the different possibilities of triplets against quavers or semiquavers with the pitches moving from one area to another within the two-note semitone phrase (B flat to A, the first and last notes of development 2). Development 3, instead of triplets against quavers, uses semiquaver triplets for the notes in both hands. Although both hands have the same rhythm, I applied a repeating six-note group (B, C, E, E flat, A flat, G) in the right hand against a five-note group (C sharp, G, A flat, F sharp, D) in the left hand, while some notes become rests in the second half of the phrase.

Example 5.21: the developments of Element 2 in *Rain Air II*.

Original: (bar 1)

Development 1: (bar 11)

Development 2: (bar 27)

Development 3: (bar 54)

In comparison with the second element (original – **Example 5.21**), the third element also uses a semitone as the main feature. Instead of a phrase, it is a two-note chord with a semitone interval. **Example 5.22** shows the section with the third element from bar 29 to 34. In addition to the semitone chords, I relocated some of the chords in different octaves, which provide not only different sonorities but also variations within the original semitone construction. **Example 5.23** shows the relocations of the semitone chord E and E flat from bar 29 to 31. The middle chord is in the original position of the chord, while the notes of the other two chords are spread across one octave higher and two octaves lower.

Example 5.22: bar 29 to 34 in *Rain Air II*.

Example 5.23: relocations of E and E flat from bar 29 to 31.

In contrast to the horizontal developments in the second element, the third element develops in a vertical way. (see **Example 5.24**) I kept the shape of the element including the expansion and contraction of intervals, whilst the notes of each chord in the developments increase from two to four (Development 1),

then six (Development 2), and finally ending at the chromatic cluster in Development 3. Moreover, the range of the relocating notes move even higher or lower towards the extreme of the piano range, exploring many different sound qualities from the original semitone chord.

Example 5.24: the developments of the third element.

The diagram illustrates the evolution of a semitone chord through four stages:

- Original:** A semitone chord consisting of two notes, one with a flat and one with a sharp.
- Development 1:** The chord is expanded to a six-note cluster, marked with a forte (*sf*) dynamic.
- Development 2:** The cluster is further expanded to a seven-note cluster, marked with a fortissimo (*ff*) dynamic and a ritardando (*rit.*) marking.
- Development 3:** The cluster reaches its final form as an eight-note chromatic cluster, marked with a fortissimo fortissimo (*fff*) dynamic. The notes are labeled as 8^{va} and 8^{vb} , indicating their extreme positions on the piano range.

The last element in this piece is a group of notes in a specific pattern. **Example 5.25** and **Example 5.26** shows the fourth element of *Rain Air II* and the notes which have been included. In contrast to the previous elements, the fourth element has an increase in the number of notes available to use, which does not follow the pitch transformation of previous sections. The original tone row of the fourth element is based on the last scale of the previous pitch transformations (**Example 5.17**). **Example 5.26** shows the addition of three new notes (C sharp, A flat and B in brackets) in order to create the tone row for the fourth element from the last scale of **Example 5.17**.

Example 5.25: the fourth elements of *Rain Air II*

Example 5.26: the notes in the fourth element

The diagram shows the transformation of a scale into the fourth element:

- No.7 (the last scale in pitch transformation):** A scale consisting of seven notes: G, A, B, C, D, E, F.
- fourth element:** The same scale is expanded to include three additional notes: C sharp, A flat, and B. These three notes are enclosed in brackets, indicating their addition to the original scale.

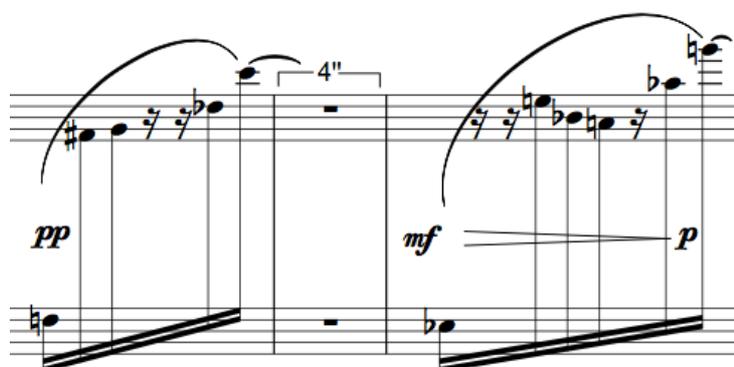
In comparison with the semitone pitch transformation in the other elements, the notes of this element move by a whole tone during the development. As shown in **Example 5.27**, rhythms remain the same while the pitches move down a whole tone from bar 44 to 50. In contrast to the pitch relocation of the same chord in **Example 5.19**, the pitch movements themselves become the main variations while the materials are repeating.

Example 5.27: the pitches move down a whole tone from bar 44 to 50.



The piece ends with fragments of the first and second elements, which include many rests in the middle of each phrase. **Example 5.28** shows the first elements from bar 85 to 87. Some of the notes in these arpeggios have been replaced by semiquaver rests, which produce some fragment-like memories of the opening section.

Example 5.28: bar 85 to 87 in *Rain Air II*



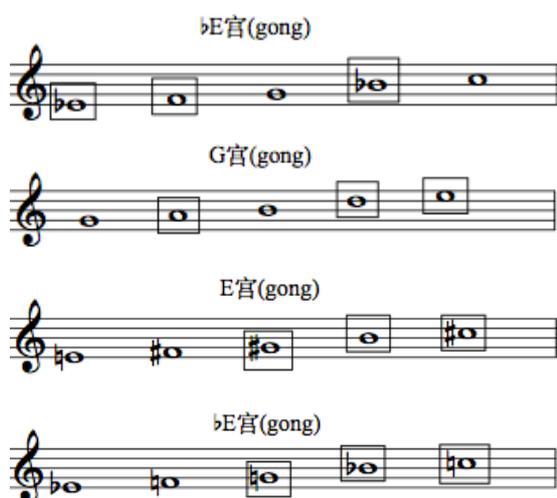
5.3.3 *Rain Air III*

The third piano piece which I wrote at the end of this period is *Rain Air III* which will be performed in 2019. After the exploration of *Crossing the River to Pick Hibiscus* (涉江采芙蓉) and *Sing the Song with Mountain Drum* (扬歌与山鼓), I wanted to experiment with the theory in which the Chinese elements appear as fragments within an atonal serial context. In accordance with this, I created a tone row which is constructed from fragments of Chinese modes. In contrast to *Crossing the River to Pick Hibiscus* (涉江采芙蓉) and *Sing the Song with Mountain Drum* (扬歌与山鼓), I explored this tone row with the techniques learned from Franco Donatoni and Morton Feldman.

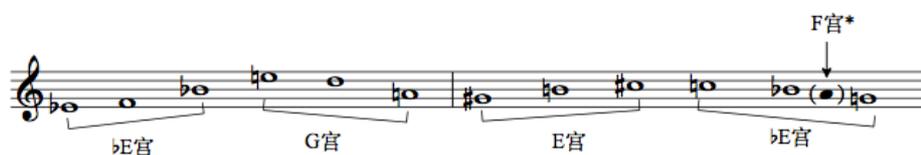
Based on the twelve-tone technique, I created a tone row which is made by three different keys from the Chinese mode: E flat 宫(gong), G 宫(gong), E 宫(gong). **Example 5.29** shows the full scales of these three

pentatonic keys in the Chinese mode. I chose three notes from each one of them which are selected in the box: the 1st, 2nd and 4th notes from E flat 宫(gong), the 2nd, 4th and 5th notes from G 宫(gong), the 3rd, 4th and 5th notes from E 宫(gong), and the 3rd, 4th and 5th notes from E flat 宫(gong). Because there are in total 12 notes in this tone row, E flat 宫(gong) has been used twice as the beginning and ending, as shown in **Example 5.30**. The second three-note group from G 宫(gong) are an inversion of the first group of notes from E flat 宫(gong), but in contrast to the twelve-tone technique in *Sing the Song with Mountain Drum* (扬歌与山鼓), the fourth group of notes from E flat 宫(gong) reverse the third group from E 宫(gong) instead of inverting it. If we follow the original rules of the twelve-tone technique in *Sing the Song with Mountain Drum* (扬歌与山鼓) to make an inversion of the third group of notes, the 2nd note of the last three-note group should be A, which would change the last group to F 宫(gong). (in the bracket of **Example 5.30**) But I move it up to B flat to make E flat 宫(gong), which becomes an echo of the first three-note group of the tone row. (also in E flat 宫) Moreover, if we only look at the last two groups in **Example 5.30**, they come from the last three notes of two adjoining keys in the Chinese mode, which is part of my own approach to modal writing.

Example 5.29: the full scales of the four pentatonic keys in the tone row



Example 5.30: the original tone row of *Rain Air III*



Following the tone row in **Example 5.30**, I started this piece with a B flat in the first three-note group in E flat 宫(gong) as a single note cell. **Example 5.31** shows the opening section of this piece. This small cell is gradually developed with the notes from the tone row which are added one by one to the single B flat. In order to keep the Chinese fragments within each key, the notes which belong to the same group in the tone row are placed next to each other in the cell. **Example 5.32** shows bar 10 in this piece, which has been divided into two groups of notes. The first group E flat, B flat and F belong to the E flat 宫(gong) in the first

three-note group of the tone row, and the second group D and A are part of the G 宫(gong) in the second three-note group.

Example 5.31: the opening section of *Rain Air III*

The musical score for the opening section of *Rain Air III* is presented in three systems. The first system is labeled 'Free' and consists of five measures. The piano part (Pno.) is written in a single staff with a treble clef and a key signature of one flat. The dynamics are *ppp*, *pp*, *mp*, *pp*, and *mp pp*. The second system is labeled 'Pno.' and consists of four measures. The dynamics are *mf*, *p*, and *mf*. The third system is also labeled 'Pno.' and consists of four measures. The dynamics are *pp*, *mf*, and *p*. The score includes various musical notations such as triplets, slurs, and dynamic markings.

Example 5.32: bar 10 in *Rain Air III*

The musical notation for bar 10 in *Rain Air III* is shown in a single staff with a treble clef and a key signature of one flat. The notation features a complex melodic line with various rhythmic values and articulations. A pink oval highlights a specific group of notes, and a pink line traces a path through the notes, indicating a specific melodic or harmonic structure.

When the music has used all twelve notes in the tone row, the cells start to grow by the addition of the notes from the reversed version. **Example 5.33** shows both the original and reversed tone rows in this piece. After the gradual developments in the opening section, the music reaches the longest cell in bar 37 which includes all 24 notes (**Example 5.33**). After that, the music starts the diminishing process of the materials within each cell. **Example 5.34** shows the opening of this process which includes the notes from bar 37 to 39.

Example 5.33: the original and reversed tone rows of *Rain Air III*

original

reversed

Example 5.34: the notes of the diminishing process from 37 to 39.

Bar 37:

Bar 38:

Bar 39:

Following the pitch transformation, instead of moving individually, the notes within each three-note group move in the same direction by a semitone, which keeps the Chinese fragments within each group of notes. As shown in bar 37 of **Example 5.34**, the first and the last three notes move downwards while the second and the third groups move up a semitone. In the reversed tone row, the notes follow the movement of the original tone row but in the reverse order. In bar 38, apart from the third group which changes direction to move down, the other three groups move in the same direction with another semitone. Not only do the pitches move, but also the number of the notes diminishes (also inspired by Franco Donatoni). **Example 5.35** shows the diminishing process of the notes from bar 37 to 39 in the score. While the notes move a semitone

up or down, the 3rd, 7th, 13th and 21st notes of bar 38 are removed from the cell and replaced by quaver rests. The same process is repeated in bar 39 in which the 2nd, 9th and 13th notes are deleted. The missing notes are also shown in **Example 5.34**, which are selected in brackets. The Chinese fragments are chopped to even smaller pieces during this gradual diminishing process and disappear at the end.

Example 5.35: the diminishing process from bar 37 to 39 in *Rain Air III*

The image displays a musical score for three staves, labeled 38, 39, and 40. Each staff contains a sequence of notes and rests. Vertical lines connect notes across the staves, illustrating the diminishing process. In bar 38, notes are grouped into triplets (marked with a '3' above the bracket). In bar 39, some notes are replaced by quaver rests (marked with a '7'). In bar 40, the process continues with more notes being replaced by rests. The score shows the gradual disappearance of the Chinese fragments over the three bars.

Chapter 6

Conclusion

In conclusion, in terms of enriching my personal musical language in composition, integrating Chinese elements with Western Contemporary music has been the main aim in my research. After analysing the music by Chinese composers Qin Wenchen, He Xuntian, Luo Zhongrong and Zhou Jinmin, and Western Contemporary composers Luigi Nono, Iannis Xenakis, Franco Donatoni and Morton Feldman, there are four elements which significantly affect my own musical vocabulary: glissandi, my own approach to Chinese modal writing, macro-polyphony and microtonality. Each of these employs a unique methodology enabling me to absorb Chinese influence within a context of western Contemporary music. The analysis of my own compositions has shown how these elements are realised in my own personal musical language.

Throughout my research I have been constantly surprised and reassured by how two different cultures, which may seem to share little in common, complement each other. By integrating different approaches and techniques in order to explore different tools for composition I have been able to focus on both similarities and differences which, as a whole, create a well-balanced approach in which neither culture imposes on the other. This means that I can focus on aspects of composition which are not dependent on culture but which remain universal: the changes that take place within material over time, and how we as composers can create structures from balancing similarities and differences in personal ways.

Areas which I am interested in developing within further research are the deeper levels of connection between these two different cultures, and how the parameters focused on here, along with others, can create a more integrated musical language. Although I have found many elements which enable me to integrate Chinese influences into my own musical language, I want to find a personal way to explore the deeper identity of Chinese music which does not include many obvious signs of Chinese elements in the scores, such as particular modes or specific instruments. In the score, the specific references to Chinese culture may be hard to recognize; however, through careful listening one can still discern that such influences exist. The Chinese composer Zheng Yinglie said (1986):

Contemporary Chinese music still mainly focuses on the use of the Chinese mode. Most of the Chinese contemporary composers have ignored the deeper identity which are the “ethnic temperaments” or the “ethnic Lingering Charms” of the traditional Chinese music.³⁴

Some Contemporary Chinese composers may have found their own way to depict the “ethnic Lingering Charm”, such as Qin Wenchen, but I aim to find my own personal musical language to characterise such ethnic influences.

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