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# PORTFOLIO OF COMPOSITIONS

A thesis  
submitted in partial fulfilment  
of the requirements for the degree  
of  
**Doctor of Philosophy in Music**  
at  
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by  
**XU TANG**



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# ABSTRACT

This thesis comprises a portfolio of compositions and a set of accompanying analytical notes.

There are six works in the portfolio of compositions. The works display a diversity of compositional approach, scale, instrumentation and technical procedure. The compositions are:

- *Sun Wukong* for cello octet
- *One, Two, Three* for piano trio
- *Mo* for solo piano
- *Ji* for violin and piano
- *Zhong*, a concerto for cello and orchestra
- *Glow* for cello duo

The portfolio is a creative response to the question of how autochthonous new music might be composed which genuinely reflects the interaction of Western and Chinese traditional music and philosophy. The solution proposed is to avoid excessively fusing musical elements derived from different cultures but instead to seek the most appropriate response to each unique compositional situation, utilising a different palette of techniques in each case. The artistic aim is to create in each composition a unique musical space in which musical elements and philosophical underpinnings from both East and West can interact without fusion, each retaining its own characteristics.

The analytical notes provide exegeses of the technical procedures adopted in each work and the musical and cultural context of each work.

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While bringing the compositions in the portfolio to performance I was fortunate to receive sustained advocacy and artistic commitment from a number of outstanding and creative performers, especially the New Zealand Chamber Soloists (Hamilton), NZTrio (Auckland), Isomura brothers (Auckland), UMich Cello Ensemble (Michigan), Auckland Chamber Orchestra (Auckland), Matthias Balzat (Auckland), Prof. Richard Aaron (Michigan), Santiago Canon Valencia (Bogota), Edward King (Auckland), Yotam Levy (Hamilton), Aurelian Trio (Auckland), Jian Ensemble (Beijing), James Jin (Auckland), and Peter Scholes (Auckland). It has been a privilege to have worked with such outstanding musicians and artists.

I would like to express my deep gratitude to the Wallace Foundation, and soloist Matthias Balzat for funding the development and composition of the cello concerto *Zhong*, the largest work in this portfolio. Grateful thanks are offered for the skillful advocacy of conductor Peter Scholes and Auckland Chamber Orchestra. Special thanks to cellist James Tennant who supported the development of this work.

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# CHAPTER 1

## Introduction

### Statement of research topic: research topic and methodology

The aim of this creative practice research project is to produce a creative response to the question of how to interface Chinese traditional music, Western art music and other idioms, within new compositions in a way that allows the traditional qualities of each music to be maintained rather than watered down through fusion.

The research project is motivated by a desire to create controlled encounters between different musical strands (Chinese traditional, Western art music and others) according to my own sensibilities, aesthetic goals and ideological stance, culminating in a portfolio of original compositions accompanied by an exegetical thesis.

The primary objective of my research is to create musical spaces that encompass the music of different cultural traditions within unified and compositional contexts that allow the music of each tradition to maintain its character and individuality.

### Significance of the topic

We are living in a world where the "convergent" and "divergent" coexist. In the long development of human civilization, these ideas have been both contradictory to, and interdependent on, each other. Different cultural traditions and ideas have been exchanged and integrated through processes of "convergence" and then made pluralistic through processes of "divergence". Every culture has its own idiosyncrasies, which makes the world rich and colourful.<sup>1</sup>

Western society and culture has been influenced by East Asian culture mainly since the mid-nineteenth century.<sup>2</sup> However, information on Chinese culture and music was brought to

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<sup>1</sup> Zhao, Dongmei. Introduction. *中国传统音乐的音高元素在现代音乐创作中的继承与创新. (Inheritance and Innovation of Chinese Traditional Music Pitch Elements in Contemporary Music)*. Beijing: People's Music Publishing House, 2014, p.1

<sup>2</sup> Everett, Yayoi Uno and Frederick Lau, eds. Introduction. *Locating East Asia in Western Art Music*. Middletown (Connecticut): Wesleyan University Press, 2004, p.xv

Europe as early as the sixteenth century.<sup>3</sup> It was diffused and delivered by Jesuit missionaries and other travellers during that time.<sup>4</sup> As Frederick Lau has noted, European composers started to draw attention to Chinese music from the eighteenth century; however, like other exotic sounds that were introduced from outside of Europe during that time, the attitude and reactions of Europeans were not always favourable.<sup>5</sup> Chinese music resources tended to be defined as material that could add “flavour” or “spice” to a composition.<sup>6</sup> The Oriental influence dramatically increased in Western culture and in the works of Western composers in the nineteenth century.<sup>7</sup> Among the notable works of this kind are the opera *Turandot* written by Giacomo Puccini and *Das Lied von der Erde* (The Song of the Earth) by Gustav Mahler.<sup>8</sup>

As well as Europe, North America has been influenced by East Asian culture.<sup>9</sup> In the nineteenth century in San Francisco, New York, and Honolulu, Cantonese opera was one of the genres of the Chinese tradition that was quite often encountered, as most of the immigrants were from the Guangdong province in China.<sup>10</sup> Cultural interactions by American composers were not common until twentieth century, despite Chinese music and performers coming to the coastal cities of America through migration.<sup>11</sup> For example, in 1852, the Tong Hook Tong Dramatic Company, a Cantonese opera troupe from Guangzhou, performed in New York, which was not well received due to the “exotic” sounds.<sup>12</sup> To take another example, in the 1930s in Honolulu, nightly Cantonese opera performances were banned after a complaint was made by the local residents – the “foreign” sound was described as “noise” by the residents.<sup>13</sup> It was very difficult for Chinese music to make the inroads in Western countries during that time. As Mittler noted in 1997, even in the latest dictionary of twentieth century composers published up to that time, very few Chinese composers were mentioned, and none at all from Hong Kong or Macau. Only eight from Taiwan and mainland China were

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<sup>3</sup> Lau, Frederick. *Music in China*. Oxford (New York): Oxford University Press, 2008, p.87

<sup>4</sup> loc.cit.

<sup>5</sup> loc.cit.

<sup>6</sup> loc.cit.

<sup>7</sup> loc.cit.

<sup>8</sup> loc.cit.

<sup>9</sup> loc.cit.

<sup>10</sup> *ibid.*, p.88

<sup>11</sup> loc.cit.

<sup>12</sup> loc.cit.

<sup>13</sup> loc.cit.

discussed.<sup>14</sup> Little about Chinese music is mentioned in the histories of contemporary music generally at that time; there are only brief references to composers from Japan and Korea.<sup>15</sup>

Mackerras asserts:

The Chinese are not interested in adapting to contemporary European or American style, nor have they so far developed their own stamp. They still appear content to copy from the masters of the past.<sup>16</sup>

Scott also concludes:

That China has nothing distinguished to show in the way of new creative music is due to both a lack of seasoned composers and the hindering hand of the Party.<sup>17</sup>

No matter the features of Chinese music, Western scholars did not have much interest in it, and that attitude lasted until the nineteenth century.<sup>18</sup> In the past few decades, the musical art of China began to be introduced much more in the West; the study of Chinese music has also developed extensively with the growth of anthropological and ethnomusicological work.<sup>19</sup>

Through the twentieth century, and especially since the 1950s, many composers have found inspiration through integrating different aesthetics, principles, cultures and sonority systems from traditions of different countries.<sup>20</sup> From the late 1970s, cross-cultural research has been considered a leading topic in ethnomusicology and a new genre has arisen in contemporary music from the crossovers between the cultural traditions of West and East.<sup>21</sup> This is despite most composers paying little attention to the interactive effect on Western culture, and focusing rather on changes in East Asian society.<sup>22</sup> This notion has started to change recently

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<sup>14</sup> Mittler, Barbara. *Dangerous tunes: the politics of Chinese music in Hong Kong, Taiwan, and the People's Republic of China since 1949*. Wiesbaden: Harrassowitz, 1997, p.10, cf. in Morton and Collins

<sup>15</sup> *ibid.*, p.10, cf. in Dibelius

<sup>16</sup> *ibid.*, p.11, qtd. in Mackerras, p.70

<sup>17</sup> *ibid.*, p.12, qtd. in Scott, p.151

<sup>18</sup> *ibid.*, p.7, cf. in Stahl, pp.40-41

<sup>19</sup> *ibid.*, p.8, cf. in Lieberman; Liang

<sup>20</sup> Everett and Frederick, Introduction. *Locating East Asia in Western Art music*. Middletown (Connecticut): Wesleyan University Press, 2004, p.xv, cf. in Bruno

<sup>21</sup> *ibid.*, p.xvii, cf. in Nettl, pp.227-249; John, pp.1-26; and Amnon and Eric, pp.227-252

<sup>22</sup> *loc.cit.*, cf. in Nettl, pp.3-15; Timothy; and Steven, pp.31-37

with musicologists and scholars emphasizing the interaction, function of exotic sounds and impact on both Western and Eastern societies.<sup>23</sup> Western composers tend to be interested in Eastern music both as a new aesthetic and a source of new sounds. This phenomenon is manifested in many ways, like Debussy's gamelan sounds,<sup>24</sup> Mahler's *Lied von der Erde* (1907/08), Cage's philosophy of silence and his *Music of Changes* (1951), Messiaen's use of Indian rhythms in his *Rythme avec valeurs ajoutées*,<sup>25</sup> Boulez's sense of timing,<sup>26</sup> Britten's *Curlew River* (1964), Stockhausen's *Telemusik* (1966), and the use of Asian instruments by Lou Harrison.<sup>27</sup>

In terms of developing contemporary music through the twentieth century, it is important to mention 周文中 Professor Chou Wen-chung (b.1923). He was born in Yantai in Shandong province, China, and moved to America in 1946. He has been considered one of the most important Chinese American composers.<sup>28</sup> He has entered the mainstream of Western contemporary music and developed it by gradually involving essentially Asian concepts and practices in music.<sup>29</sup> Also some Western composers such as Tcherpnin and Avshalomov were fascinated by the Chinese style of music.<sup>30</sup> These composers suggest that interest in Asian music and Asian traditions was on the rise.

Tcherpnin's *Chinese Mikrokosmos* is considered by Chinese composer and pianist 赵晓生 Zhao Xiaosheng to be more accomplished than even some of China's own new music.<sup>31</sup> Another example is 许昌会 Xu Changhui who has successfully applied pentatonic techniques in Western musical repertoire.<sup>32</sup> One group of Chinese composers thinks that the attempt to incorporate Asian traditions in new music is more successful than their own. Another side argues that Westerners, like John Cage, have completely misunderstood China's tradition.<sup>33</sup>

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<sup>23</sup> loc.cit. cf. in Bellman; Richard, pp.127-175; Susan and Judy, eds; and Micheal, ed. Robert, pp.388-410

<sup>24</sup> Mittler, *Dangerous tunes*, p.18, cf. in Chou, p.211

<sup>25</sup> loc.cit., cf. in Oesch pp.120; 122-123, and Chou, p.228

<sup>26</sup> loc.cit., cf. in Oesch, p.119

<sup>27</sup> loc.cit., cf. in Chou, p.220

<sup>28</sup> Lau, *Music in China*, p.99

<sup>29</sup> Mittler, *Dangerous tunes*, p.19, cf. in Chou, p.46

<sup>30</sup> *ibid.*, p.19

<sup>31</sup> loc.cit.

<sup>32</sup> loc.cit., cf. in Xu, p.30

<sup>33</sup> loc.cit., cf. in Oesch, p.117

East Asian society has been influenced by Western culture through missionaries as early as the Yuan (1271–1368) and Ming (1368-1662) dynasties during the thirteenth and fifteenth centuries.<sup>34</sup> As mentioned already, Western music was introduced into the Chinese court by Jesuit priests such as Mateo Ricci.<sup>35</sup> During the seventeenth century, Belgian priest Ferdinandus Verbiest (1623-1688) and Portuguese priest Thomas Pereira (1645-1708) were appointed as music teachers in the Qing court.<sup>36</sup> But the circulation of Western culture and music was restricted to the imperial court and it has been diffused on a large scale only since the nineteenth century.<sup>37</sup> The reception of Western music in China has likewise not always been positive due to various misunderstandings.<sup>38</sup>

In the early twentieth century, China was in a semi-feudal and semi-colonial period and Chinese music was confined to folk status because of the long period of agricultural civilization.<sup>39</sup> Chinese music has been evolving in a natural way which had not changed much for thousands of years.<sup>40</sup> However, Western music has been rapidly developed in professional music contexts through the transformation of community institutions and the development of industrial civilization since the Renaissance, which established a professional music education system and produced numerous masterpieces of musical culture.<sup>41</sup>

In the early twentieth century, when the first intersection of Chinese and Western cultures took place, Chinese composers drew on ideas of Western national music to explore their own forms of nationalism based on Western traditional composition techniques.<sup>42</sup> Under the influence of conventionally classical, romantic or modernist styles, Chinese composers employed Western idioms and styles to create works that were defined as new Chinese music.<sup>43</sup> New Chinese music was born out of transculturation processes of Chinese and Western cultures, and China established its own professional music education system through

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<sup>34</sup> Lau, *Music in China*, p.91

<sup>35</sup> loc.cit.

<sup>36</sup> *ibid.*, p.88

<sup>37</sup> loc.cit.

<sup>38</sup> Mittler, *Dangerous tunes*, p.20

<sup>39</sup> Zhao, *中国传统音乐的音高元素在现代音乐创作中的继承与创新. (Inheritance and Innovation of Chinese Traditional Music Pitch Elements in Contemporary Music)*, p.2

<sup>40</sup> loc.cit.

<sup>41</sup> loc.cit.

<sup>42</sup> loc.cit.

<sup>43</sup> Mittler, *Dangerous tunes*, p.8, cf. in Liu, p.1/2

a comprehensive introduction of the ideas of Germans and Austrians.<sup>44</sup> Since then, Chinese music has followed a special path based on folk music, which brought about the first major step in the development of Chinese music.<sup>45</sup>

However, during the early twentieth century until the 1980s, before the political reform and opening up in China, Chinese music composition study was primarily focused on learning Western traditional compositional techniques. It was confined and constrained to the Western Classical and Romantic periods, which has led to a serious dislocation in the development of contemporary Chinese music compared with the rapid development of Western contemporary music at the same time.<sup>46</sup>

In the 1980s, reform not only brought a second intersection of Chinese and Western musical cultures, but also marked a historic turning point for Chinese contemporary music.<sup>47</sup> Since the birth of "new music" in the 1980s, Chinese composers have been moving from the initial study of imitating Western contemporary compositional techniques to absorbing and fusing these with their own traditions.<sup>48</sup>

As this door has opened to the world, a noticeable change has happened to Chinese music. Chinese music is described now as different types of music rather than a simple tradition in China.<sup>49</sup> After the Cultural Revolution of China (1966-1976), Chinese culture and the economy have been brought into a new age, and the development of Chinese contemporary music has also reached new heights.<sup>50</sup> For example, compositions created by a group of music students from the Central Conservatory (Beijing) were considered modernist and avant-garde.<sup>51</sup> Some members of this group went to study at Columbia University with Chinese-American composer 周文中 Chou Wen-chung in 1986 and 1987, and some of those notable students have now become influential contemporary composers in the world, such as 谭盾

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<sup>44</sup> Zhao, *中国传统音乐的音高元素在现代音乐创作中的继承与创新*. (*Inheritance and Innovation of Chinese Traditional Music Pitch Elements in Contemporary Music*), p.2

<sup>45</sup> loc.cit.

<sup>46</sup> loc.cit.

<sup>47</sup> loc.cit.

<sup>48</sup> *ibid.*, p.3

<sup>49</sup> Mittler, *Dangerous tunes*, p.8

<sup>50</sup> Lau, *Music in China*, p.102

<sup>51</sup> loc.cit.

Tan Dun, 陈怡 Chen Yi, 周龙 Zhou Long, 盛宗亮 Bright Sheng, and 葛甘如 Ge Ganru.<sup>52</sup>

The underlying aim of their compositions was to explore new ways to expand conventional Chinese music compositions within the atonal music field; accordingly, at that time, their musical thinking was influenced by visiting contemporary composers, such as Alexander Goehr, George Crumb, and 周文中 Chou Wen-chung.<sup>53</sup>

In the course of the twentieth century, Chinese music went through enormous change and has been transformed through the process of adopting and absorbing foreign elements.<sup>54</sup>

Particularly since the 1980s, exoticism has been more embedded in their own compositions by the Chinese avant-garde composers.<sup>55</sup> To make a general observation of cross-cultural influences in the music of twentieth century, there has been a variety of methods for merging foreign cultures in compositions. Therefore, a taxonomy of incorporating art music compositions has been established by Yayoï Uno Everett, according to commonly used compositional strategies:

- (1) Reference other cultures through literary and extra-musical means (e.g. Benjamin Britten, Mel Powell, Joseph Schwanter, John Zorn);
- (2) Borrow aesthetic approaches or formal elements without sounding “Asian” (e.g. Olivier Messiaen, John Cage);
- (3) Evoke Asian sensibilities without explicit musical borrowing (e.g. George Crumb, Isang Yun, Joji Yuasa);
- (4) Quote or paraphrase traditional melodies or rhythmic patterns in the form of a collage (e.g. Karlheinz Stockhausen, 谭盾 Tan Dun);

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<sup>52</sup> *ibid.*, p.103

<sup>53</sup> *ibid.*, p.102

<sup>54</sup> *ibid.*, p.99

<sup>55</sup> *loc.cit.*

(5) Transplant East Asian attributes of timbre, articulation, or scale systems into a Western context (e.g. Toshiro Mayuzumi, Lou Harrison, Isang Yun, 罗永晖 Law Wing Fai, Toru Takemitsu);

(6) Juxtapose musical ensembles and/or tuning systems of Western and Asian musical origins (e.g. Alan Hovahness, Lou Harrison, 周龙 Zhou Long, Makoto Shinohara);

(7) Transform Asian and Western musical systems into a distinctive “hybrid” musical idiom (e.g. 周文中 Chou Wen-chung, Yoritsune, Matsudaira, 陈其钢 Chen Qigang, Isang Yun, John Cage).<sup>56</sup>

From the above we can perceive that some of the composers adopted multiple strategies, not just a single technique, as part of their individual music systems.

## **Research Framework**

### **Research Objectives**

- To discover what we may gain from a cross-cultural creative work that we may not get from a monocultural composition;
- To demonstrate how to approach the challenges I find in composing from multiple cultural perspectives;
- To learn what compositional techniques, relevant artistic discipline or genres (e.g. painting, calligraphy, poetry, mathematics), and philosophies are appropriate for creating a common musical space that conveys an inclusive and engaging musical transculturation or cross-culture composition;
- To develop an approach to composition that provides principles for others who may want to undertake cross-cultural composition.

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<sup>56</sup> Everett and Frederick, Introduction. *Locating East Asia in Western Art Music*, p.xviii

My stance as a composer when writing the portfolio is to create musical situations or environments in which different musics can interact without being forced to merge. This position is not as extreme as John Cage's completely change-oriented “happenings” in which relationships occur in an unplanned way and exist mainly in the minds of the perceivers, but neither will it be at the other extreme of creating “fusion music”. Instead I will be seeking a fertile ground somewhere in between these poles. The creative delineation of the arena for musical interaction will help reveal my compositional voice. How much freedom to leave in the composition will be a matter of artistic judgement.

Thus, the core philosophical principle will be not fusing music from different cultures but rather bringing them into immediate proximity and allowing them to “have a conversation”. The individual features of instruments and traditions will be maintained, not suffocated. The aim will be to achieve a transcendence of traditional Western “goal-oriented” music and move into a new, open aesthetic.

To use a culinary metaphor, fusion music may be thought of as equivalent to baking a cake, whereby a number of different ingredients are blended so they fuse together into something new. On the other hand, my approach of creating a compositional common space in which the individual components from their respective musical traditions remain distinct resembles a salad. The ingredients are mixed but not blended. Each remains identifiable but also relates to the others in the salad to create something new.

## **Literature Review**

One scholar argues that musical phenomena and their effects – for example certain intervals such as the fourth being felt as either consonant or dissonant — do not exist inherently, but rather arise from the human agencies that cause and perceive them.<sup>57</sup> From the perspective of a musicologist, all characteristics, and the very shape of music, tie it to politics so that it reflect the structures of society.<sup>58</sup>

Following ethnomusicological research, John Blacking argued that music follows a

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<sup>57</sup> Mittler, *Dangerous tunes*, p.16, cf. in Baezun, p.5

<sup>58</sup> loc.cit., cf. in Schneider, p.34

cumulative set of rules and an increasing range of permissible sound patterns. That is to say, music is an organized set of ordered sounds. He carried out his fieldwork among the Venda over two years and attempted to analyze his data over a period of twelve years. That experience led him to understand that music cannot be autonomous and is inevitably transmitted through connections between people.<sup>59</sup>

He states:

Music is too deeply concerned with human feelings and experiences in society. All music is structurally, as well as functionally, folk music. I am convinced that an anthropological approach to the study of all musical systems makes more sense of them than analyses of the patterns of sound as things in themselves.

When I lived with the Venda, I began to understand how music can become an intricate part of the development of mind, body, and harmonious social relationships.<sup>60</sup>

And according to Susan McClary:

Music is regarded as essentially a human, socially grounded, socially alterable construct by one strain of Western culture. Both musician and layperson collude in this mystification, both resist establishing connections between the outside, social world and the mysterious inner world of music.<sup>61</sup>

Param Vir (b.1952) is one of Europe's leading contemporary composers. He has been based in London for many years but was born and grew up in Delhi. In a recent work called *Raga Fields*, Vir introduced the concept of bringing music from different cultures into a single work with the aim of allowing both elements to retain their original character and quality. I have picked up and enlarged Param Vir's concept of not creating "fusion music" but rather creating a musical space in which different musics can interact.<sup>62</sup>

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<sup>59</sup> loc.cit.

<sup>60</sup> ibid., pp.vii-viii

<sup>61</sup> ibid., p.9, qtd. in McClary, p.17

<sup>62</sup> Vir, Param. "Embracing otherness-creating a world for raga fields." Online posting. 20 Dec. 2014. N.p. Web. 10 Jun. 2016. <<http://www.paramvir.net/blog.html>>

The exact reason for the combination of Western and Asian music is the fundamental similarities between them in techniques, rather than a Western fascination with Asian culture.<sup>63</sup> Ligeti, Lutosławski, and Scelsi, amongst others, illustrate common features of traditional Chinese music, which are the underlying concept of sound compositions, layered choric structures rather than melodic development, and micro-movements within static clusters, a technique prevalent in some types of new music.<sup>64</sup> Furthermore, multiple melodic structures are also another typical feature of Chinese dramatic music, and even speech-voice is adopted in a similar way to the vocal effects in Chinese opera or Japanese Noh singing.<sup>65</sup>

In his notes, Vir also brings up another point in his *Raga Fields* about the interaction between Indian and Western culture. He states that some musicians' attempts to explore other traditional music only by adding special glissandi and approximately playing the notes of the raga (a traditional Indian tune, the melody of which is constructed by five to nine musical notes) is doomed to inadequacy.<sup>66</sup> I agree with that and I argue that any culture possess a unique identity. Chinese culture has a profound quality and breadth different but equivalent to that of Indian culture. In my experience, Chinese traditional techniques and sonorities can be quite idiosyncratic.

The approaches possible for incorporating different cultures and musics into new compositions can be various. Param Vir and 周文中Chou Wen-chung believe that the cross-cultural composition will rarely work well, if it has been created by merely borrowing a folk tune with tonal harmony or utilizing a distinct scale (e.g. notes of raga or pentatonic scale), or using a particular technique in a unique instrument, or trying to amalgamate some easy musical elements into an artefact with little knowledge of the culture.<sup>67</sup> I believe that it is necessary in a multicultural composition to perceive the essence of culture; if this is lacking, we will not reach sublimation in creative work. 周文中Chou Wen-chung defined failure to achieve such sublimation as “superficial borrowing”.<sup>68</sup>

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<sup>63</sup> Mittler, *Dangerous tunes*, p.19, cf. in Chou, p.222, and Zhang, p.125

<sup>64</sup> *ibid.*, p.20, cf. in Dibelius, pp.33-57, and Vogt, pp.123-126

<sup>65</sup> Mittler, *Dangerous tunes*, p.20

<sup>66</sup> Vir, “*Embracing otherness-creating a world for raga fields.*”, N.p. Web. 10 Jun. 2016

<sup>67</sup> *loc.cit.*

<sup>68</sup> Lau, *Music in China*, p.90

In a speech Chou gave in 2004, he states:

It has become fashionable to adopt the so-called ‘non-Western’ aura or to display the so-called ‘mystic’ philosophy or religious catchwords of the West to intoxicate the public with little understanding of Asian cultures. Even worse is to ignorantly apply and distort the essences of Eastern cultures under the banner of cultural exchange. A composition based on the adoption of Western concepts, techniques and styles but embellished with Asian effects and color, even when composed by a Chinese or Asian, remains a product of emulation. Because such music is not a crystallization of cultural interaction, it is incapable of asserting itself as intercultural contemporary music. Frankly, the development of Chinese music still awaits efforts that are more profound in depth and in breadth. To truly point to the future, the work will have to reveal the intrinsic values of both worlds.<sup>69</sup>

Chou believes that “any new music should be derived from a thorough understanding of a long tradition”.<sup>70</sup>

On 10th of March 2016, I visited Shanghai and Zhejiang in China for musical culture research with my chief supervisor Professor Martin Lodge, Atoll Records producer Wayne Laird and documentary filmmaker Nick Waanders. This research trip was organized by Martin Lodge and it became an extremely important beginning to my PhD research. During the research time, we met three leading contemporary Chinese musicians, including composer 贾达群 Jia Daqun, composer 沈纳蔺 Shen Nalin, and pianist and composer 赵晓生 Zhao Xiaosheng.

Jia Daqun (b.1955) is Senior Professor of Composition and Theory at Shanghai Conservatory of Music. We met in his office at Shanghai Conservatory where he gave one of his compositional theory books *Poetics of Musical Structure* to me as a gift. I found some points in the book very interesting, especially where he argues that humans always give a definition to one point, then overthrow it, then re-define it, over and over again.<sup>71</sup> He believes this

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<sup>69</sup> *ibid.*, pp.100-102, qtd. in Pan-Chew, pp.118;120

<sup>70</sup> *ibid.*, p.101

<sup>71</sup> Jia, Daqun. Introduction. *结构诗学—关于音乐结构若干问题的讨论*. (*Poetics of musical structure-Selected musical configuration issues*). Shanghai: Shanghai Conservatory of Music Press, 2009, p.6

because everything is changing every single day in the universe. Therefore, we need to keep re-thinking all the time and take this attitude in our explorations of creative work. 贾达群 Jia Daqun believes that we should expand our musical understanding to include science (mathematics, physics, biology, chemistry), history, humanities, philosophy, aesthetics, and other fields, which will bring to us a new view, a new method, a new approach, all of which will eventually generate a new outcome.<sup>72</sup> I agree with these two standpoints and I believe that I will be able to make insights in my research by bearing in mind these attitudes.

沈纳蔺 Shen Nalin (b.1958) is Professor of Composition at Zhejiang Conservatory of Music, who completed his MMus and PhD in composition with New Zealand composer Jack Body. My inspiration not only came from Body's contributions to cross-cultural music, but also the fact that these contributions are still moving between China and New Zealand. One example is the Body Music 2016 – Jack Body Cross-Cultural Music Conference which was held in Zhejiang. This conference consisted of two short lectures about Body's composition techniques for string piano trio and string quartet, and concerts by the New Zealand String Quartet, NZTrio, and artists from the Zhejiang Conservatory of Music, all of whom performed compositions by New Zealand and Chinese composers. The details of the conference were communicated to me by 沈纳蔺 Shen Nalin during the research trip to Zhejiang Conservatory of Music with Professor Lodge.

赵晓生 Zhao Xiaosheng (b.1954) is Professor of Composition and Piano Performance at the Shanghai Conservatory of Music. He has described the I Ching as China's greatest invention and most important contribution to the world. He describes the I Ching as being not so much a thing as it is a tool for thinking with (Conversation with 赵晓生 Zhao Xiao Sheng in Shanghai, 12 March 2016).<sup>73</sup> I am considering using the I Ching as a framework within which different music can operate and interact harmoniously.

Art is seen as a kind of organic life system by Chinese art philosophy, while Yin-Yang complementarity is the fundamental principle underpinning cosmology and nature.<sup>74</sup> There is

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<sup>72</sup> *ibid.*, p.14

<sup>73</sup> Zhao, Xiaosheng. Conversation. 12 Mar. 2016

<sup>74</sup> Gong, Xiaoting. *熟悉中的惊奇：陈怡混合室内乐创作研究*. (*The surprise in familiarity: a study of Chenyi's blending chamber music composition*). Beijing: Central Conservatory of Music Press, 2013, p.116

a saying in the I Ching that Yin and Yang generate the principle of Heaven; Gentle and Strong generate the principle of Earth; Love and Justice generate the principle of Humanity. The key idea in 周怡 Zhou Yi emphasizes that Yin and Yang are the fundamental of everything and the essence of variance. Therefore everything is created by them.<sup>75</sup>

Applying the aesthetic theory of Yin and Yang makes it theoretically possible for all genres of music in West and East to co-exist in harmony. Also, they can promote the relationship between music and its environments, such as the natural environment, the city environment, the social environment, the cultural-ecological environment, and can encourage the development of harmony between music and ideologies, ethics, religion, and education.<sup>76</sup>

Nowadays, global culture is integrative. Not only do we need to look into the diversity of the whole world, but we also need learn to discover and utilize precious resources from our own unique cultural traditions.<sup>77</sup> By doing so, we can allow our traditional cultures to develop in a sustainable manner.<sup>78</sup> Amongst composers, renovation and the compatibility of thoughts and techniques can generate striking personal styles as well as raising our consciousness of innovation.<sup>79</sup> In the last 30 years, contemporary music compositions have achieved rapid development and progress.<sup>80</sup> To contend against the overwhelming influence of Western arts and dispel the hegemony of the Western approach, Chinese composers need to explore the special attributes that bind our national spirit and develop a concept that presents the core problems of a new artistic aesthetic.<sup>81</sup> 陈其钢 Chen Qigang (b.1951), is one of China's leading contemporary composers. He was the final composition student of Olivier Messiaen until 1988. He reflected this experience by conveying *minzuxing* (national style), an innovative aesthetic true both to himself as a composer and to the spirit of Chinese culture..<sup>82</sup>

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<sup>75</sup> loc.cit.

<sup>76</sup> *ibid.*, p.116, qtd. in Guan, pp.224; 228-229

<sup>77</sup> *ibid.*, p.123

<sup>78</sup> loc.cit.

<sup>79</sup> loc.cit.

<sup>80</sup> loc.cit.

<sup>81</sup> *ibid.*, p.116, qtd. in Hu and Yue, eds., p.111

<sup>82</sup> Mittler, *Dangerous tunes*, p.18

## Methodology

### Creative Practice

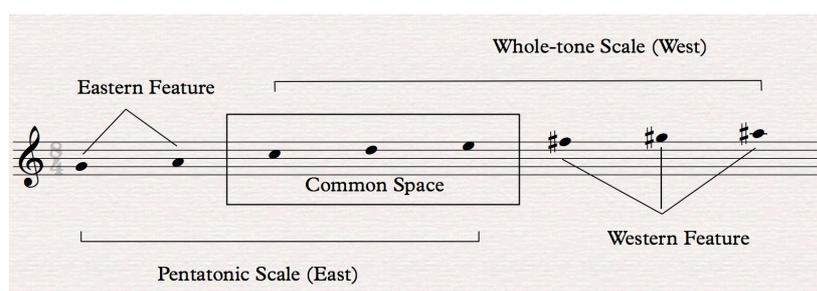
There are two components in my PhD: the composition portfolio and the exegesis. The first part of the research methodology is creative work, involving the writing of approximately an hour and a half's worth of original music. The portfolio of compositions aims to demonstrate through creative practice the principles uncovered by investigating the concept of compositional space for cross-cultural encounter. A productive meeting point of different cultural elements may be organised into two categories: technical concepts, and relevant artistic and philosophical disciplines.

### Technical concepts

1. Working with pitch collections, rhythm, and structure to infuse some elements of traditional Chinese music into newly composed pieces of Western-style contemporary art music.

The process of transforming traditional musical elements, like the pentatonic scale, into contemporary international (Western) music technique with unordered pitch collections proved to be an important aim in this portfolio of compositions. For example, one can borrow a unique scale or some notes of that scale and bring it from one culture into others. I believe – and demonstrate – that some of those ‘borrowed’ notes can be also found in other musical cultures as part of their own scales. A new pitch collection can be created using these common notes, thus connecting different cultures. In a way, those common notes also possess and represent some of their own features from the different source cultures. Other “different” notes apart from this common space can be taken as a medium to allow the music to ‘walk’ between the different cultures. Those common notes will be considered as a common space for the different cultures feeding into it, rather than as an “exotic” scale.

Example 1, common space



2. Generating a sound derived from ‘natural instruments’ or ‘traditional instruments’, with the aim of finding common points between them, and using those as a bridge in the work to make an artistic linkage.

An example of this approach would be to work on extracting an extended range of colour from natural sonorities. Dropping stones into water can make sounds that very rapidly rise in pitch, for instance, and a similar effect can be gained with light glissandi on string instruments. A sound similar to hitting and rubbing the stones can be gained by hitting the string instruments, muffling the strings and pizzicato. Combining and transitioning between these different sounds could not only be a thread running through a work, but also could forge an audible link between the ancient sounds of nature and the cultivated world of musical instruments.

Creatively exploring the timbres and expressive possibilities of the instruments by using different techniques is also an exciting prospect but requires reference to the cultural contexts of both Chinese sources and new Western concert circumstances. Broadly put, the idea is to write for instruments in unconventional ways that are derived from musical traditions to evoke natural sounds. The crux of my approach is to avoid superficial, purely technical borrowings or interchanges. Referring to his own composition *Raga Fields*, Param Vir stated: “there was no need for Western musicians to sound like Indians”.<sup>83</sup> I agree with that and I think that individual features of instruments and traditions need to be kept, not suffocated, not masquerade as other traditions or other traditional instruments.

### **Related artistic and philosophical considerations**

Not only do all genres of traditional arts (poetry, painting, drama, music, calligraphy, architecture, dance) have their own unique systems, they also interact, or are mutually incorporated. For example, the beauty that is created or required by garden architecture can be found in poetry or painting, while garden architecture is also influenced by poetry and

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<sup>83</sup> Vir, “*Embracing otherness-creating a world for raga fields.*”, N.p. Web. 10 Jun. 2016

painting that make it aspire to be idyllic. In terms of aesthetic particularity and aesthetic standard, there are many similarities or connections in all genres of arts.<sup>84</sup>

宗白华 Zong Baihua, as a philosopher and thinker, asserted that artistic conception is one of life's important realms like, ethics, politics, academia, and religion.<sup>85</sup> In ancient China, poetry, dance and music were integrated in many situations.<sup>86</sup>

Known as sister arts, music and literature have many similarities and connections in formal logic. T.S.Eliot, a Nobel Prize winner in Literature, wrote in 'The Music of Poetry' that:

poets will acquire a lot when they study music,...the closely related property in music to them was the sense of rhythm. The possibility of the variance of poetry somewhat appears to develop a theme by different groups of instruments; it is also likely to have various possibilities of modulation in a poem, which is like that there are different movements in a symphony or quartet. Subjects can also be arranged by counterpoints".<sup>87</sup>

高为杰 Gao Weijie (b.1938) is a famous Chinese composer, Professor of Composition at China Conservatory of Music, and Visiting Professor at Yanbian University and University of Cincinnati in America. In the foreword he contributed to 贾达群 Jia Daqun's book, Gao writes that music and poetry have the closest relationship of all the arts. Music is an art form which may convey many different types of meaning, including suggestions implied by the shape and rhythm of poetry. Not only is poetic inspiration included, but the rhythms that are found in musical structures also can be analogous to the rhythms of poetry.<sup>88</sup> Poetry has had a long history in both Western and Eastern cultures. In following the direction of my main research, which is to create a common space, I also aim to make connections between different musics through the similarity of poetry from different cultures.

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<sup>84</sup> Gong, 熟悉中的惊奇 (*The surprise in familiarity*), p.114, qtd. in Zong, p.31

<sup>85</sup> *ibid.*, p.117, qtd. in Zong, p.70

<sup>86</sup> *ibid.*, p.115

<sup>87</sup> *ibid.*, p.114, qtd in Guan, p.270

<sup>88</sup> Gao, Weijie. Foreword. *结构诗学—关于音乐结构若干问题的讨论*. (*Poetics of musical structure-Selected musical configuration issues*). By Daqun Jia. Shanghai: Shanghai Conservatory of Music Press, 2009, p.3

Chinese calligraphy is not only a unique art in world culture, it is also the art that represents the most characteristic of Chinese aesthetics. Chinese music and line art in calligraphy appear to be organic.<sup>89</sup> Music seems to flow like calligraphy, while calligraphy is like solid music.<sup>90</sup> Music and calligraphy may be thought to be stirring and responding to each other.

陈怡 Chen Yi (b. 1953), is a Chinese violinist and composer of contemporary classical music and Professor of Composition at the University of Missouri and Kansas City Conservatory of Music and Dance. She has paid much attention to Chinese calligraphy and *qi* (Chi) in *qigong*.<sup>91</sup> In Chinese literature, *qi* is viewed as the origin of life energy; *qi* is strong and flexible; it is powerful and inaccessible; it is mysterious and eternal.<sup>92</sup> This imaginative construct underpins many Chinese traditional arts, such as painting, music, calligraphy and so forth.<sup>93</sup> In the forms of these arts, the perspective on space or the movement of arc-shaped lines are all regarded as the expression of *qi*.<sup>94</sup>

Although chant tones are closer to poetry, Chinese traditional art and the aesthetics of calligraphy are highly consistent with tonal elements.<sup>95</sup> In China, a single tone varies between strong and weak, slow and swift; timbre varies between thick and thin; and the phoneme varies between high and low, and fine and smooth, throughout the flowing process.<sup>96</sup>

It appeared to the ancient philosophers that music could describe mathematics and the order of the universe through the emotions.<sup>97</sup> Furthermore, for many years certain ratios of numbers have governed the ‘laws’ of string and wind instruments.<sup>98</sup> Pythagoras (572BC-497BCE), the pioneer of Western mathematical philosophy, was an ancient Greek mathematician and

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<sup>89</sup> Gong, *熟悉中的惊奇* (*The surprise in familiarity*), p.115

<sup>90</sup> loc.cit., qtd. in Guan, p.49

<sup>91</sup> Gong, *熟悉中的惊奇* (*The surprise in familiarity*), p.116

<sup>92</sup> loc.cit.

<sup>93</sup> loc.cit.

<sup>94</sup> loc.cit., qtd. in Li, p.29

<sup>95</sup> *ibid.*, p.115

<sup>96</sup> loc.cit.

<sup>97</sup> *ibid.*, p.117

<sup>98</sup> loci.cit., qtd. in Zong, p.189

philosopher.<sup>99</sup> He believed numbers were the origin of all things and that all things could be explained by numbers.<sup>100</sup>

Further:

One is the supreme item and itself is not considered as a number; One is independent and it is a unit that cannot be divided; it is the origin of eternity in the universe and it is the cause that balances everything in the universe; Two represents surplus and supplement; since the universe is harmonious and harmony cannot be explained only by One; Two and One generate the first number, Three, so Two is seen as the creator of numbers.<sup>101</sup>

There is a similar understanding of numbers in China. Chinese philosophers have used numbers to explain the principles of the world since antiquity, and their praise of numbers is strikingly similar to that found in Western philosophers.<sup>102</sup> The following are some examples found in famous ancient works. It is said in 老子 Lao Zi (b.6th-5th Century BC-531BCE) that Tao generates One, One generates Two, Two generates Three, and Three generates everything (Chapter 42 in Lao Zi). It is said in Shuo Wen Jie Zi that “One is the origin and the principle comes from One; Dividing the world generates everything; ...Two is in fact the world; ...Three is the number and the principle of Heaven and Earth.” It is said in Shiji, Lvshu that numbers come from One and end at Ten, and grow from Three. All of the above offer the idea that One is Heaven, Two is Earth, Three is the combination of Heaven and Earth, which gives everything.<sup>103</sup> Also they align with the idea that Yin and Yang combine, and that Three generates everything, suggesting that everything grows from numbers.<sup>104</sup> In other words, One is the beginning of numbers and everything derives from numbers, thus numbers determine everything in the universe as well as the survival and the movement of humankind.<sup>105</sup>

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<sup>99</sup> Jia, *结构诗学 (Poetics of musical structure)*, p.120, qtd. in Aristotle, p.12

<sup>100</sup> Cited in Jia, *结构诗学 (Poetics of musical structure)*, p.120

<sup>101</sup> loc.cit., qtd. in Lin, pp.32-34

<sup>102</sup> ibid., p.121

<sup>103</sup> loc.cit.

<sup>104</sup> ibid., pp.121-122

<sup>105</sup> ibid., p.122, qtd. in Zhang, p.10

Gradual change is one of important features in Chinese traditional music, like the derived development of a melody, the distribution of tempo in a ‘free-slow-medium-fast-free’ pattern, and the structural thoughts of four steps in the composition(起承转合, introduction, elucidation of the theme, transition, summing up). They all display the feature of gradual change, and also they reflect the philosophical idea ‘*Tao* generates one, one generates two, two generates three, three generates everything, then everything comes back to one’.<sup>106</sup> Traditional Chinese music has long been constructed upon these ancient principles of numbers and change.<sup>107</sup>

It has been asserted by music theorists that both composers and architects adopt sources without intrinsic meaning to create significant forms, whilst following the principles of proportion, balance and symmetry.<sup>108</sup> 王骥德 Wang Jide, a Chinese traditional opera artist, correlates the similarity of musical composition and building construction to explain the overall arrangement of music structure in his famous work *Qu Lu*. As can be seen, many philosophers have studied the relationship between music and mathematics in ancient times. That is because the wisdom of philosophy is connected with the wisdom of both music and mathematics.<sup>109</sup>

Put simply, in order to use or borrow an element (e.g. pitch, rhythm, structure, timbre, theory, arts, philosophical thinking) from one culture, some part of this borrowed element needs to exist in all of these cultures; this will create the common space to make a connection between different cultures. The aim is to find the similarities, and to recognize and keep the differences, rather than fusing the differences. The connections of music with mathematics, and with poetry and *qi* (Chi), in both Western and Eastern cultures historically, reflect the essential commonalities between them.

The second part of the research methodology involves standard scholarly reading of relevant literature and examination of existing works. In this case, the primary source of information is scores, recordings and live performances of compositions by some well-known composers

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<sup>106</sup> An, Luxin. 郭文景音乐创作研究. (*A study of Guo Wenjing's music composition*). Beijing: Central Conservatory of Music Press, 2012, p.181

<sup>107</sup> loc.cit.

<sup>108</sup> Gong, 熟悉中的惊奇 (*The surprise in familiarity*), p.117, qtd. in Guan, p.148

<sup>109</sup> *ibid.*, pp.117-118, qtd. in Guan, p.148

who have worked from a similar philosophical or aesthetic position that are relevant to the proposed topic, for example Param Vir, 高平Gao Ping, Jack Body, and 谭盾Tan Dun.

Published writings and interviews can also be a significant source. My work aims to embody their discoveries and move forward into new areas. As there appears to be very little secondary material published in my specific topic area to date, I expect to work mainly from primary sources, although there are a few theses on more or less related topics.

My work as a composer has allowed me to meet a number of talented instrumentalists, vocalists and musicians. I recruited instrumentalists, vocalists and actors for performances of the compositions and recordings through my established networks of performers based on their appropriateness for the roles. Rehearsals are an opportunity for the major concept of the composition to be exposed, and for structure, rhythmic pacing and performing techniques to be experienced in an overall context, as well as a chance for me to focus on the space of the composition. The purpose of this is to give a performative impression of the composition, as this is the first opportunity to experience the composition as performance.

Interviews with composers and artists or philosophers working in other disciplines may sometimes also provide valuable thoughts as part of my critical analysis of the creative practice.

With the development of my PhD research, I do not feel confined just to creating the common space for cross-cultural compositions; I attempt to go deeper inside the particularity of musical forms and the generality of musical thinking by analysing my creative works. To conclude, I reflect upon, refine, abstract and summarize a general principle of thinking or try to create a system out of researching my creative works, which will then be able to advance the theory of my research. In general, theory follows practice.

### **Statement of research questions or hypotheses**

The goal of this PhD research is to generate a number of artistic and technical questions which call for creative solutions. My key research question is:

How can a productive meeting of different cultural elements be organised when each culture has different philosophical and technical concepts underpinning it?

This gives rise to a number of secondary questions:

- What musical languages am I composing in? Why choose these?
- How does my first musical language function in relation to my other cultural reference points?
- Why should one try to work beyond 'fusion' music?
- How much individual freedom can be maintained in such an approach?
- What challenges arise when incorporating different cultures into one larger compositional unity that does not dilute or compromise the source traditions?
- How can these challenges be resolved through creating a common compositional space?
- What are the commonalities of Chinese, Western and other musics, and how might clashes of values be reconciled?
- How can a 'musical space' for intercultural encounter be created within a single composition?

## CHAPTER 2

### *Sun Wukong* for cello octet

#### Genesis and background

*Sun Wukong* for cello octet was commissioned by New Zealand cello group Cellophonics in 2016. Cellophonics is an ensemble of eight cellos, created and directed by cellist James Tennant. This ensemble has collaborated with many national and international artists, such as world-famous musicians Li-Wei Qin, Wolfgang Schmidt and Philippe Muller. *Sun Wukong* was premiered at the Waikato International Cello Fest 2016 by special all-star Cellophonics line-up, consisting of a group of international soloists and exceptional young cellists, including Prof. Richard Aaron (Michigan), James Tennant (Auckland), Santiago Cañón Valencia (Bogota), Edward King (Auckland), Matthias Balzat (Auckland), Yotam Levy (Hamilton), Jacky Siu (Auckland), Callum Hall (Auckland). Subsequently the work was also performed by the UMich Cello Ensemble in late 2016 in the USA, directed by Prof. Richard Aaron, conducted by Victor Huls. This live recording was completed at Stamps Auditorium at the University of Michigan, and the recording has been included in my PhD portfolio.

There is another version of this work that is an arrangement for a piano quartet. This reduced version was created in response to a request from the Chiaro quartet of New Zealand. This version was performed by the quartet – Olivia McNeill (violin), Grace Leehan (viola), Siyu Sun (piano), Yotam Levy (cello) – at the Centre for Music and the Arts in Christchurch, New Zealand, as one of the featured pieces in the programme for the 2017 ROSL Arts Chamber Music Competition.

#### Cultural inspiration

The artistic concept of this work is based on the character Sun Wukong in the Chinese novel *Journey to the West*, one of the four great classical novels of Chinese Literature. It was written by the revered novelist and poet Wu Chengen (吴承恩) (1500-1580) of the Ming Dynasty. The composition aims to capture the movement gestures and personality of the main character in *Journey to the West*, the Monkey King Sun Wukong.

The way of writing this piece that was influenced by the imagery of the monkey. The music opens with a dexterous and mischievous introduction played by two groups of cellos. The light plucking and the slow glissandi at the end of each group enhances the feeling of slyness, which is one of the characteristics of monkeys. The correlation of the two groups naturally builds up the sense of a conversation, of question and answer alternating. But each group ‘speaks’ its own way. In other words, the creative principle here is interaction, or, interdependence. The following example illustrates this kind of conversational format that exists between two groups of notes.

Example 2, *Sun Wukong*, bars 1-4 a dialogue between two groups of instruments: cellos 4-8 and cellos 1-5

The image shows a musical score for eight cellos, divided into two groups. The first group, cellos 4-8, is in the Moderato section (♩=80). The second group, cellos 1-5, is in the Presto section (♩=140-145). The score includes various musical notations such as dynamics (mp, p), articulations (pizz., gliss.), and rests.

This idea of dialogue is expressed in several different compositional elements of the piece, such as pitch organization, rhythm and distribution of the performers. This concept will be elucidated in detail below.

## Conversation - group of eight cellos

From the above example we can see that the eight cellos are divided into two groups, which respectively are cellos 4-8 and cellos 1-5. The permutation and combination of this question-and-answer mode may be considered analogous to a conversation between different cultures. After the introduction, this dialogic modality continues to evolve, to spread and to penetrate into diverse aspects of the piece, ultimately permeating the entire work. Not only is dialogic modality one of the important structural principles of this piece, but also it arises out of the central research question of my PhD.

*Sun Wukong* is carefully designed in terms of positioning and movement of the sounds that are generated by the eight cellos. All the performers are required to sit on stage according to designated seat numbers in order to achieve the spatial effect of a moving trajectory of sound between each cello.

In addition to the dialogue between the two group of cellos mentioned above in example 1, there is also a point-to-point dialogic modality that has been generated in this work. For instance, from bar 57 the notes are first swiftly transferred back and forth between cellos 1 and 8, the two cellos that are the farthest apart on stage. Thus the quick question-and-answer effect is matched by a spatial correlative, a point-to-point mode. The sounds gradually move towards the centre of the cellists on the stage. Each cellist responds to the notes that are thrown by the other cellists, thereby generating a conversational environment. In terms of performance, this effect could be likened to a ping pong game. But in this case, not only the 'ball' or gesture is passed back and forth between different cellos but also an implied exchange of cultural information. The following example shows the process of this 'ping pong' game.

Example 3, *Sun Wukong*, bars 57-66

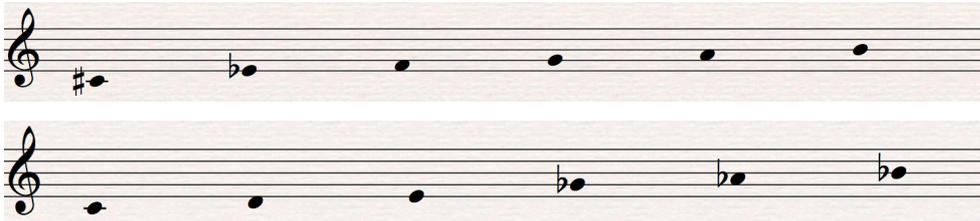
The musical score is presented in two systems. The first system covers bars 57 to 61, and the second system covers bars 62 to 66. The score is for a string ensemble with parts for Violin 1, Violin 2, Violin 7, Violin 8, Violin 3, Violin 4, Violin 6, Violin 7, and Violin 8. The time signature is 2/4. The key signature has one flat (B-flat). The score includes dynamic markings such as *p* (piano) and *f* (forte). A dynamic marking 'D' is enclosed in a box above the first staff at the beginning of the first system. The notation includes various note values, rests, and slurs.

### Conversation - note sequences

The pitch organization at the beginning of the work is based on two six-note groups, or hexachords, which are evenly allocated to the corresponding two groups of the cellos, 4-8 and 1-5. The hexachords are complementary, so they have no notes in common and together present all 12 chromatic pitches. The pitch collection difference between the two groups produces a distinct contrast in colour. The interaction between the notes from the two hexachords can be considered as representing an encounter and interchange between the

character of two different cultures. The following example shows the two groups of six-note sequences.

Example 4, Hexachords 1 and 2



The introduction of the two hexachords at the beginning of the work aims to establish a strong feeling of independence for each group. In such a context, each group of cellists performs using just one pitch collection, at the same time engaging in a dialogue with the other group – co-existence without compromising difference.

The total set of 12 pitches is divided into several parts, with various combinations that are utilized as the compositional materials of this work. The independence of each part is maintained while it interacts with the other parts. This is a creative method that is often used in the works of my composition portfolio. In example 2, we can see that the two hexachords coexist with their respective complements. The following example illustrates a different situation in which the two sequences meet.

Example 5, *Sun Wukong*, bars 13-19

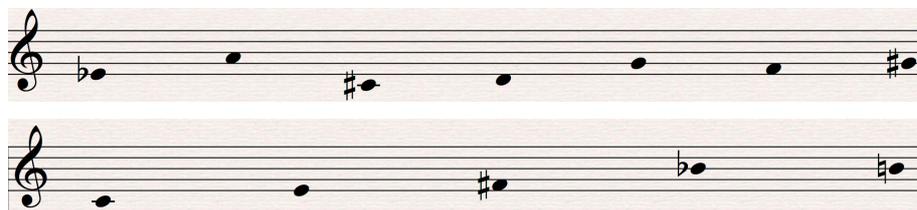
In example 5, all the notes in bars 13-19 are from hexachord 1, except at the bar 19 where the note D, from hexachord 2, is introduced for the first time. In this encounter of the two pitch collections, hexachord 2 is exposed in an incomplete form. The note D that is played by cello 2 and cello 5 at bar 19 is deliberately foreign to hexachord 1. Furthermore, cello 5 is required to play the D with a strong Bartók pizzicato, emphasizing this note as an exotic voice that comes from a different pitch world, the ‘other’ hexachord.

These group of notes have been through a series of processes such as splitting, refining, and recombining into various new groups, over and over again so as to construct the pitch system of the work. This modus operandus is widely applied into my creative works of the PhD portfolio.

Each group is both independent and interactive. The integration of all groups forms a complete 12-pitch system. The sets of 12 pitches can be split into several groups that have either equivalent notes or different numbers of notes. For example, in this piece the 12 pitch system was also divided into two groups so that group one has seven notes and group 2 has the other five notes. Or like the example 2 listed above, it can be divided into two groups so that each group has six notes. The vital pivot when using this method that is complementarity. This core theory will be elaborated in detail in the following analysis.

As mentioned above, from bar 57 (rehearsal mark D), a new seven-note sequence has been generated. The piece continues to develop in this sequence until bar 77 where the remaining five notes are presented one after another. The following example shows the seven-note sequence and the rest of the five notes sequence.

Example 6, seven-note sequence 1 and remaining five notes sequence



Example 7, Sun Wukong, bars 62-76, seven-note sequence 1

62

Vc. 1 *f* *p*

Vc. 2 *f* *p*

Vc. 3 *p* *f* *p*

Vc. 4 *p*

Vc. 6 *p* *f* *p*

Vc. 7 *f* *p*

67 disappearing ...

Vc. 1 *f* *ppp*

Vc. 2 *f* *ppp* disappearing ...

Vc. 3 *f* *p*

Vc. 4 *f* *p*

Vc. 5 *ppp* *p*

Vc. 6 *f* *p*

Vc. 7 *f* *p* disappearing ... *ppp*

Vc. 8 *f* *p* *p* *ppp* disappearing ...

72 disappearing ...

Vc. 3 *ppp*

Vc. 4 disappearing ... *ppp*

Vc. 5 *mf* *ff* *subito p*

Vc. 6 disappearing ... *ppp*

From bars 87-96, the five-note sequence and the seven-note sequence begin to create a strong confrontation against each other. Specifically, the seven-note sequence suddenly intrudes into a passage that was being driven by the five-note sequence. The continuity of this passage is temporarily interrupted by this exotic voice at bar 91. But immediately the piece returns to the track of the thematic pattern organised by the five-note sequence. The music is propelled forward to the end of the first main part, section D, through two such conflicts between the two sequences. The interactions and the process of pushing toward the climax that are shown in the following example.

Example 8, *Sun Wukong*, bars 87-99

87 arco

Vc. 1 *mp*

Vc. 2 *mp*

Vc. 3 *mp*

Vc. 4 *mp* *p* *mf*

Vc. 5 *p* *mf* *p* *mf*

Vc. 6 arco *mf* *mp*

Vc. 7 *mf* *mp*

Vc. 8

92 pizz. arco

Vc. 1 *p*

Vc. 2 *mf* *p*

Vc. 3 *mf* *p*

Vc. 4 *mp* *p* *mf*

Vc. 5 *p* *mf* *mf*

Vc. 6 *mf* *p*

Vc. 7 *mf* *p*

Vc. 8

97

Vc. 1 *f* *fp* *ff*

Vc. 2 *f* *fp* *ff*

Vc. 3 *f* *fp* *ff*

Vc. 4 *p* *f*

Vc. 5 *p* *f*

Vc. 6 *f* *fp* *ff*

Vc. 7 *f* *fp* *ff*

Vc. 8 *p* *ff*

## Central note, common point

Taking a closer look at this seven-note sequence, we find that it is possible to obtain a symmetrical sequence by realigning it. The following example shows how this seven-note sequence looks after a re-arrangement.

Example 9, re-arrangement of the seven-note sequence 1



As we can see from the example above, the note F serves as the centre surrounded by two groups of tone clusters that line up on both sides. From bar 57, the six notes from the tone clusters move forward in a wavy manner. The cellos are superimposed in multiples, reaching a peak in number at bar 65, along with a strong crescendo to the highest point at bar 67. Thenceforth, the number of cellos progressively decreases with a diminuendo, and the central note F is slowly revealed from the bar 69. As all the other cellos are fading away, the note F that was played by cello 5 takes an opposite path to enter into the music. Compared to all the other sounds that are dying away, the note F seems like a foreign invader who occupies the dominant position in the music and leads the work to the next chapter. Therefore, this note F can be regarded as a common point between the sections C and D. The central importance of this note is continuously enhanced through pizzicato and Bartók pizzicato, which also help to make this note feel aggressive towards other notes, as if it belongs to an exotic ‘species’.

By using the same method of constructing the sequence found in example 8, we can draw a new seven-note symmetrical sequence with the note E flat as the centre tone. The following example shows the seven-note sequence 2: it is the same as the seven-note sequence 1 in structure.

Example 10, seven-note sequence 2



The single central note has been repeated with various different articulations. This way of constantly emphasizing a single note is also presented in other parts of the work, as shown in example 11 below.

Example 11, *Sun Wukong*, bars 182-191

The above example shows that the single note E flat has been repeatedly played by cello 5. In addition to specific performance techniques, such as pizzicato and Bartòk pizzicato that were included in the previous example, a glissando in a different direction is also applied to this note. Continuous ups and downs in pitch, and a series of short glissandi played pizzicato, generate a voice that inspired by the sounds of a small gongs and Choke cymbals. It is a method of rhythmic combination in Beijing opera, called “*Cang and Cai*”.<sup>110</sup> These glissandi moving in different pitch directions can greatly enrich the tone of a single note.

<sup>110</sup> Tang, Jianping. Introduction. *Cang Cai*. Beijing: People’s Music Publishing House, 2015

## Conversation – rhythm

In the section E, the rhythm is composed of two distinct groups, one of which is a string of busy sixteenth notes played arco and continues to run through the whole section. The other is a group of short notes played with more percussive techniques such as pizzicato, Bartòk pizzicato, staccato, and the less unconventional techniques of slapping and sweeping the strings. In particular, the performers are required to slap the strings with palm and hold to mute the strings and then sweep off the strings.

The group of short notes generate a sense of leisurely pace and space, thus forming a sharp contrast with the previous group of busy sixteenth notes. This idea was motivated by a distinctive gesture from Peking Opera, which is called *Jinda manchang* or *Jinla manchang* (紧打慢唱 or 紧拉慢唱). The rhythm of *Jinda manchang* contains a fast stroke with slow singing in music.<sup>111</sup> This mode is extensively applied in *ban-qiang* (板腔) of *xiqu* (戏曲), one of the genres of traditional Chinese opera which comprise a slow singing with a busy accompaniment using a particular rhythmic system.<sup>112</sup> The two contrasting rhythms are presented simultaneously to build up a dramatic intensity in music. This is a method that is frequently used in my creative works in the composition portfolio. In later analyses, I will elaborate on how this rhythmic technique fired my creative skills and concepts.

The second main part is stated in a relatively slow tempo with a chain of bowings which make a sharp contrast to the sense of ‘jumpiness’ produced by the pizzicato sounds in the previous part. A series of melodic gestures influenced by Beijing opera arias start from bar 105. Here the performers are required to play the sixteenth notes with less staccato. The bow strokes should be separate but not crisp, which generates a sense of ‘laziness’ and ‘stickiness’. This performing technique is inspired by the playing style of the Chinese traditional instrument, *erhu*.

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<sup>111</sup> Yang, Honlun and Saffle Michael, eds. *China and the West*. Ann Arbor: University of Michigan Press. 2017, pp.174-175

<sup>112</sup> Hsia, Lu-Ting. 吹拨乱弹腔系戏曲「紧拉慢唱」板式的戏剧运用与音乐特征. (*Theatrical Uses and Musical Features of Jin-La-Man- Chang Rhythmic Mode in Que-Bo-Luan-Tan Xiqu*). Taipei: Taipei National University of the Arts. 2017, pp.105-128

# Two-note pattern

The first section is begun by a string of pizzicato sounds which imitate various gestures from the Monkey King, such as light-footed walks, struts, jumps, and runs. The rhythmic pattern gradually tends to become denser, moving from the sense of looseness at the beginning and reaching the first climax at bar 19. The core motivic material of the work, the two-note group, is introduced in the bass part of bar 19 after the first undulation of the piece. The following example shows the first undulation of the piece.

Example 12, *Sun Wukong*, bars 13-22

The musical score for Example 12, *Sun Wukong*, bars 13-22, is presented for eight violas (Ve. 1-8). The score begins at bar 13, marked with a *mp* dynamic. The first four bars (13-16) feature a rhythmic pattern of eighth notes and rests, with the first two violas (Ve. 1 and 2) playing a similar pattern. From bar 17, the pattern becomes more complex, with various violas playing different rhythmic figures. The dynamic markings are *mp* for the first four bars, and *p* for the remaining bars (17-22). The score is written in bass clef and includes a variety of note values and rests.

18 C

Vc. 1 *ff subito p*

Vc. 2 *ff*

Vc. 3 *ff subito p*

Vc. 4 *ff*

Vc. 5 *ff*

Vc. 6 *ff*

Vc. 7 *ff*

Vc. 8 *ff*

Subsequently, a Chinese folk dance-like rhythmic pattern with traditional pentatonic scale and its variants push the work forward to the next climax at bar 56. The forward impetus from bar 19 to 56 derives from the two-note group that is shown as a semitone ascending in the pitch system.

From bar 83, a thematic two-note pattern appears for the first time in this work, as illustrated in example 13.

Example 13, *Sun Wukong*, bars 87-91, thematic two-note patterns

The musical score for Example 13, *Sun Wukong*, bars 87-91, features eight cello parts (Vc. 1-8) and a double bass part (Vc. 8). The score is divided into two sections by a bar line at bar 89. The first section (bars 87-88) shows cellos 2 and 3 playing a minor second interval (B-C) and cellos 6 and 7 playing a major second interval (E-F sharp). The second section (bars 89-91) shows the same intervals but with a change in dynamics and articulation. The score includes dynamic markings such as *mp*, *p*, *mf*, and *arco*.

As we can see from the example above, the two different thematic two-note patterns are respectively played by two groups of cellos. The interval relationship of pattern 1, notes B-C, that is played by cello 2 and 3 is minor second. The interval relationship of the pattern 2, notes E-F sharp, that is played by cello 6 and 7 is major second. The simultaneous horizontal movement of the two intervals forms a strong contrast between the two groups of cellos, minor second against major second. In the meantime, the two patterns also provided an increasing intervallic tension through a movement from perfect fifth to augmented fourth. All the notes of the two patterns were chosen from the remaining five-note sequence.

The structure of this piece is Intro-A-B-C-D-E-A'-C'-D'. A few structural materials, pitch organisation, and rhythmic patterning are borrowed from the previous sections. They are varied and applied to the final section. For example, the thematic two-note pattern can be also found in the section D'. The difference is that the interval of the thematic pattern is heard in the form of major second, both horizontally and vertically. Then it is expanded into a three-note sequence with a pentatonic context. At bar 219, the thematic two-note pattern returns to the same interval relationship and structure which it had in section D, a minor second superimposed with a major second, a movement from perfect fourth to augmented fourth, for the purpose of increasing tension. This two-note group becomes the core generator of melody

in the final section. Under the impetus of the two-note theme, the music eventually reaches a concluding climax. The following example shows the shape and evolution of the thematic two-note pattern in the section D'.

Example 14, *Sun Wukong*, bars 197-207, bars 218-227

The image displays two systems of musical notation for a string ensemble, labeled Vc. 1 through Vc. 8. The first system covers bars 197 to 207, and the second system covers bars 218 to 227. The notation includes various dynamics such as *mp*, *p*, and *f*, and features a change in time signature from 4/4 to 2/4. The Vc. 1 part is characterized by a melodic line with slurs and accents. The Vc. 2, 3, and 8 parts provide harmonic support with rhythmic patterns. The Vc. 4 and 5 parts feature triplet patterns. The Vc. 8 part has a steady bass line. The second system shows a dynamic shift from *f* to *p* and a change in time signature.

218

Score for measures 218-222. The score consists of eight staves (Vc. 1-8) in bass clef. Vc. 1 has a melodic line with slurs. Vc. 2 and Vc. 3 play a rhythmic pattern of eighth notes, with dynamics *mf* starting at measure 219. Vc. 4 and Vc. 5 play a triplet of eighth notes, with dynamics *p* starting at measure 219. Vc. 6 and Vc. 7 play a rhythmic pattern of eighth notes, with dynamics *arco* and *mf* starting at measure 219. Vc. 8 plays a simple bass line. A double bar line is present at the end of measure 222.

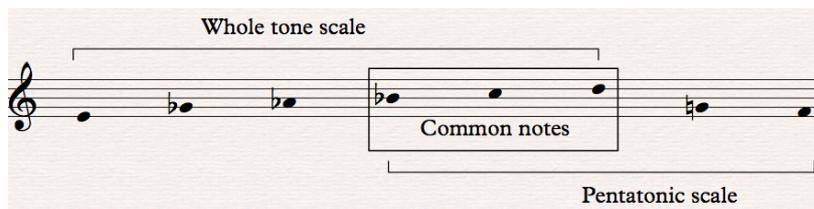
223

Score for measures 223-227. The score consists of eight staves (Vc. 1-8) in bass clef. Vc. 1 has a melodic line with slurs. Vc. 2 and Vc. 3 play a rhythmic pattern of eighth notes, with dynamics *mp* starting at measure 223 and *mf* starting at measure 224. Vc. 4 and Vc. 5 play a triplet of eighth notes, with dynamics *mp* starting at measure 223 and *p* starting at measure 224. Vc. 6 and Vc. 7 play a rhythmic pattern of eighth notes, with dynamics *mp* starting at measure 223 and *mf* starting at measure 224. Vc. 8 plays a simple bass line.

## Different scales, common point

This work also contains one of the technical concepts that I put forward in the hypothesis of my PhD thesis proposal, which is mutual transformation of musical elements that derive from different cultures. In this case, the theory of the transformation is put into practice in section B through an interaction between pentatonic scale and whole tone scale. The following example shows a diagram of this method and it will be explained further below.

Example 15, transformation between two different scales



The first half of the section B consists of a combination of pentatonic scales and incomplete whole scales. The first melody from bar 24-32 walks between these two scales. It starts with the common notes of the two scales, D and C. The note A flat of the whole tone scale briefly intervenes into the common area at bar 25, following the entry of the other three notes, G, B flat, F which makes the pentatonic scale complete and gradually dominant in the succeeding phrase. The frequency of such interaction between the two different scales continues to intensify toward the end of this section, which helps propel the music to its climax by means of the greatly increased tension in sonority.



Photograph 1: Performance of *Sun Wukong* in Michigan, USA 2016

## **Conclusion**

The focus of this work is exploring the possibilities and approaches for creating a conversation between the different fields of the piece. The interaction between multiple melodic gestures shown in the above examples is also applied in my other works. The theory of this technique is inspired by the interchanges possible between multiple cultures. The approach of associating and transferring from cultural ideology to composing method has become one of the most important philosophical elements in my PhD research.

## CHAPTER 3

### Analytical notes on *Ji* for violin and piano

#### Genesis and cultural background

In July of 2017, after several fruitful meetings and discussions with New Zealand-born Japanese pianist Kent Isomura about new music, creative arts and cultural exchange, Kent and his brother violinist Shanuo Isomura decided to invite me to write a new piece for their violin-piano duo known simply as the Isomura Brothers.

This piece was written for the 2018 Tsunami Violin Japan Concert Series. The concert was a part of a global project involving a thousand violinists playing on the special ‘Tsunami Violin’. It has been a great privilege and pleasure for me to be invited to create a work for this special instrument and event.

On 11th March 2011, a disastrous earthquake and tsunami hit the Tohoku region of Japan. Many people were forced to flee their homes and more than 1700 people died in Rikuzentakata. The energy of nature is enormous, irresistible, unpredictable. Humankind is insignificant in the face of nature’s unexpected force.

The 2016 Kaikoura earthquake was a magnitude 7.8 earthquake in the South Island of New Zealand. At the time I was living on the third floor of an apartment in Hamilton, New Zealand. The earthquake caused a strong shake and I could not even stand upright on the floor of the apartment. Immediately I felt alarmed, frightened and began to feel motion sickness. When unknown forces come, we feel fear, panic and helplessness.

In 2011 in the Tohoku region of Japan, 70,000 trees were destroyed by the earthquake and tsunami. These trees once stood on the coast of Rikuzentakata town. But there was a ‘miracle’ pine left standing tall which became a symbol of hope that survived from the tsunami. It became known as the ‘kiseki no ipponmatsu’ (the miracle pine). But the powerful vitality of nature can manifest in creative ways as well, so love and hope take root and burgeon in the face of challenges, such as earthquakes and tsunami.

A Tokyo luthier, Muneyuki Nakazawa, gathered driftwood from the coast after the tsunami to make the body of a special violin and he was granted permission to use a small amount of the miracle pine to create the sound post as part of this instrument. This special violin was the primary performance instrument for Shanuo Isomura in the 2018 Japan Concert Series.

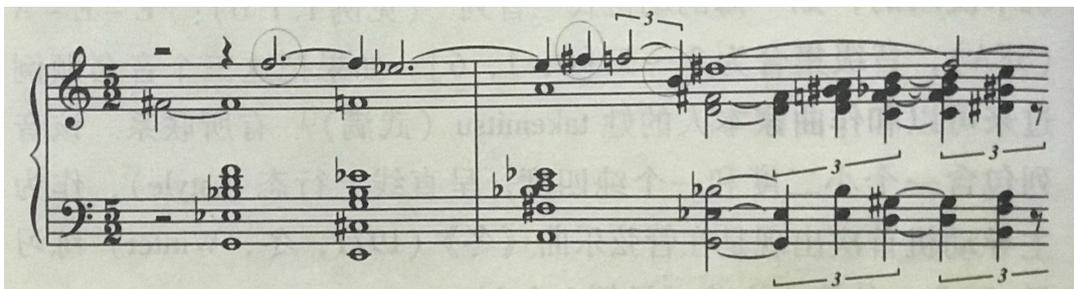
## General characteristics

Ji (極 in Japanese or 极 in Chinese) means literally pole, utmost point, extreme. All things in the world have two sides, or two polarities, such as bright and dark, loose and tight, fast and slow, high and low, positive and negative and so on, forming a strongly contrasted energy. The two forces I explored in this creative work follow the concept of bipolarity as the core energy and power of the whole work, which in this case also implies a meeting of different cultures.

## Thematic explication

This piece was premiered in Tokyo, Japan in April 2018 and followed by other performances in Okayama and Tomakomai as part of the Isomura Brothers 2018 Tsunami Violin Japan Concert Series. Because of the special theme of the concert series and the venue of the premiere being in Japan, I decided to make a musical tribute to one of the greatest Japanese composers of the twentieth century, Toru Takemitsu. The pitch collection of *Ji* was created based on the pitch class set (0, 1, 6), which has been used frequently by Takemitsu in works such as *Requiem for Strings*, *Far Calls*, *Coming far!*, *Paths*, *Quatrain*, *A Flock Descends into the Pentagonal Garden* and *Folios*.

Example 16, excerpt from Takemitsu's *Requiem for Strings*



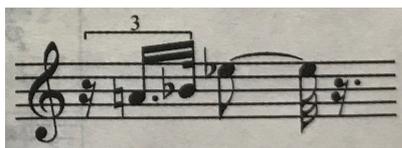
Example 17, excerpt from Takemitsu's *Far Calls. Coming far!*<sup>113</sup>



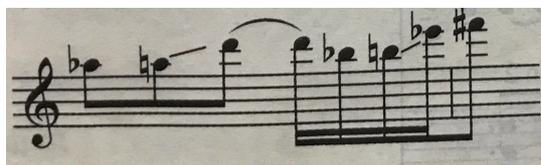
Example 18, excerpt from Takemitsu's *Paths*<sup>114</sup>



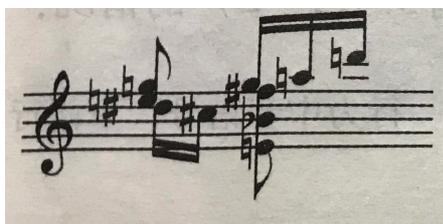
Example 19, excerpt from Takemitsu's *Quatrain*<sup>115</sup>



Example 20, excerpt from Takemitsu's *A Flock Descends into the Pentagonal Garden*<sup>116</sup>



Example 21, excerpt from Takemitsu's *Folios*<sup>117</sup>



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<sup>113</sup> Toru, Takemitsu. *Far Calls. Coming, far!* 1980. Tokyo: Schott Japan. 1 July. 2005

<sup>114</sup> Toru, Takemitsu. *Paths: In Memoriam of Witold Lutoslawski.* 1994. Tokyo: Schott Japan. 1 July. 2005

<sup>115</sup> Toru, Takemitsu. *Quatrain.* 1974-1975. Paris: Editions Salabert. 1984

<sup>116</sup> Toru, Takemitsu. *A Flock Descends into the Pentagonal Garden.* 1977. Paris: Editions Salabert. 2002

<sup>117</sup> Toru, Takemitsu. *Folios.* 1974. Paris: Editions Salabert. 2007

For this reason, people sometimes refer to it as the Takemitsu pitch class set.<sup>118</sup> It seemed appropriate that this set provides the core of pitch organisation to my work.

## **Philosophy and Arithmetic**

As mentioned above, most things can be viewed as having two complementary facets or ways of being seen. For this reason, the number two plays an important role in *Ji*. The structure of the piece consists basically of two main sections. The source of inspiration refers to the symbolism of the Chinese cosmological term, Taiji, from which Yin and Yang originate. A contrasting yet complementary energy is created between these two sections and it is further reflected in several different aspects of the piece as follows.

## **Structure**

In contrast to the fragmentary character and irregularity of the form in the first section, a more regular and uniform structure is built up through the second section. The work is permeated by a dynamic and static combination that manifests mainly as fast or slow. Violent and peaceful gestures are interlaced with each other through a rhythmic momentum throughout the first section, which eventually provides impetus to the climax.

## **Nature and Notation**

Certain ‘sound events’ (very low notes in the piano) are triggered at unpredictable times, accompanied by drastic changes in dynamics that produce a sense of the unexpected, and fear of the unknown. In our lives, unknown powers can erupt with unpredictable timing rather than following a regular pattern. In keeping with this notion, barlines and time signatures are omitted in first section in order to offer extra freedom of pulse. Free flow is suggested, as opposed to steady rhythm. However, the performers still need to feel the rhythm written as an underlying yet unheard pulse but, more importantly, they need to listen keenly to the flow of the piece in the first section and make decisions based on the clock-time markings, rather than

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<sup>118</sup> Wang, Cui. 武满彻和声技巧研究. (*A study of Toru Takemitsu's harmonic techniques*). Beijing: Central Conservatory of Music Press, 2011, p.31

the usual rules governing time signatures and barlines. The following example shows the new notation for this piece.

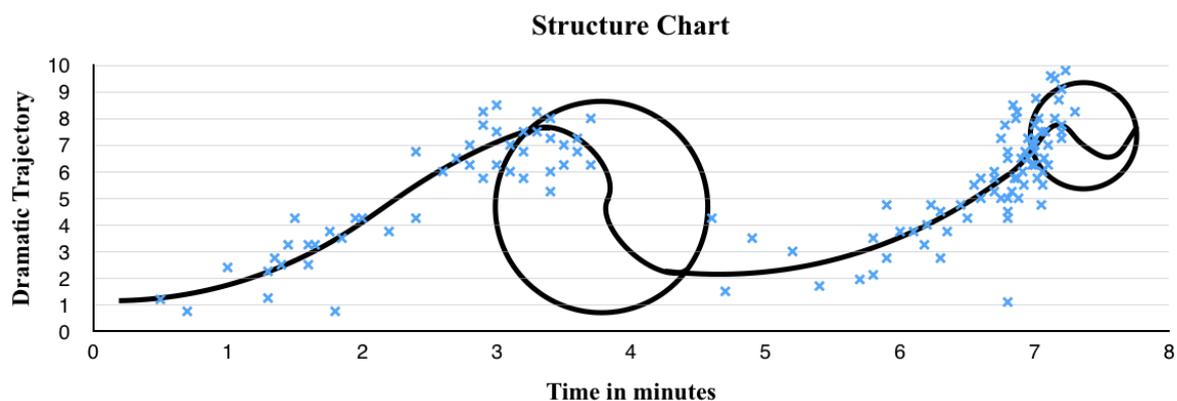
## Rhythmic pulse

In contrast, in the second section the music is required to be performed with rhythm accuracy, exactly as written in the score. A time signature is applied in the music for the first time, in contrast to the metrical freedom of the previous section. The regular 2/2 time signature at the beginning of the second section brings a strong sense of stability to the work which continues pushing forward with a gradual change in the rhythmic patterns from simplicity to a furious energy. The march-like character and emphasis on the downbeat generate a force of hope, which offer a response to the unpredictable force of nature represented in the previous contrasting section.

## Chinese philosophy Taiji

According to Taiji, harmony is created when the two forces interact with each other. In my work *Ji*, there is a transition passage between the two contrasting structural sections that absorbs and transfers the energy from one to another in order to achieve a balance. This transition seems to reappear at the end and is followed by a strong concluding gesture. The structure of the piece and the placement of the layers of tension are illustrated in the following example.

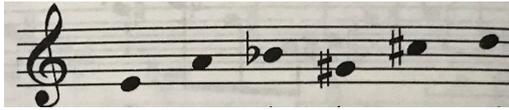
Example 22, *Ji*, structure chart



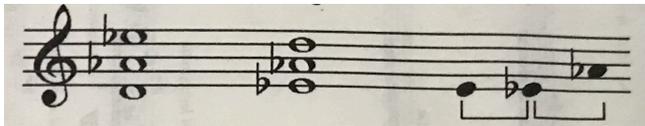
## Precedents

Besides Takemitsu, the pitch class set (0,1,6) also has been used by some other notable twentieth century composers in their works in different ways, including Webern, Boulez, and Crumb.

Example 23, excerpt from analysis of Webern's Five Pieces for Orchestra <sup>119</sup>



Example 24, excerpt from analysis of Boulez's *Improvisation Sur Mallarmé* <sup>120</sup>



I used this pitch class set in my own way rather than strictly following the classic pitch class set theory of Allen Forte, where the interval components are considered one of most important elements in building the structure in a piece. The intervals of (0,1,6) seem to imply various characteristics for different composers. George Crumb emphasised minor ninths in his work *Black Angel* because this interval symbolises doom, sin and devil in his view. <sup>121</sup>

## Pitch organisation

Following humbly in the footsteps of these great composers of the past, I attached a special meaning to the intervals in (0,1,6) that applied in this piece, as explained below.

In *Ji*, the twelve note chromatic scale is used to form four groups, with each group consisting of six notes. The minor second is considered as one of the most dissonant intervals and can

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<sup>119</sup> *ibid.*, p.34

<sup>120</sup> *ibid.*, p.35

<sup>121</sup> Zhao, Guang. 解读数字“三”——在朱践耳音乐创作中的结构意义和象征意义. (*Interpretation of the Number "Three"-The Structural Meaning and Symbolic Meaning in Zhu Jianer's Music Creation*). Shanghai: Shanghai Conservatory of Music Press, 2013. pp.21-22





Example 27, *Ji*, section B

The musical score consists of three systems, each with a Violin (Vln.) and Piano (Pno.) part.

- System 1:**
  - Vln.:** Starts with a long note marked "Dry, n.v." and "c.11''". Dynamics include *mp*, *mf*, *pp*, and *mp*. A bracket indicates "change bow strokes imperceptibly until rehearsal mark C" with a duration of "9''". Glissando markings (*gliss.*) are present.
  - Pno.:** Features a complex rhythmic pattern with various accidentals and dynamics. A *Red.* (Reduction) line is shown below.
- System 2:**
  - Vln.:** Marked "sul tasto" and "c.17''". Dynamics include *pp*. Glissando markings (*gliss.*) are present.
  - Pno.:** Continues the rhythmic pattern. A *Red.* line is shown below. Instruction: "left hand poco a poco cresc. reaching forte".
- System 3:**
  - Vln.:** Marked "c.15''" and "sul pont.". Dynamics include *f*. Glissando markings (*gliss.*) and a breath mark (*h*) are present.
  - Pno.:** Features a dense texture of notes. Dynamics include *ppp*, *mf*, *f*, and *p*. A bracket indicates "play elements in the box repeatedly until the line stops (*ppp*)" with a duration of "c.5-7''" and "4''". A *Red.* line is shown below.

In part C, the new interval of a perfect fourth is introduced. This fresh interval encloses each six-pitch group from collection no. 1, providing a complementary interval to the minor second. The perfect fourth can provide a more peaceful sound against the violent sound of the minor second. These two sounds continuously alternate and interact with each other in part C. The contrasting characters of these two respective intervals symbolise not just the pairs of contrary things in the world, such as dark and bright, tension and release, but also a conversation between different cultures.

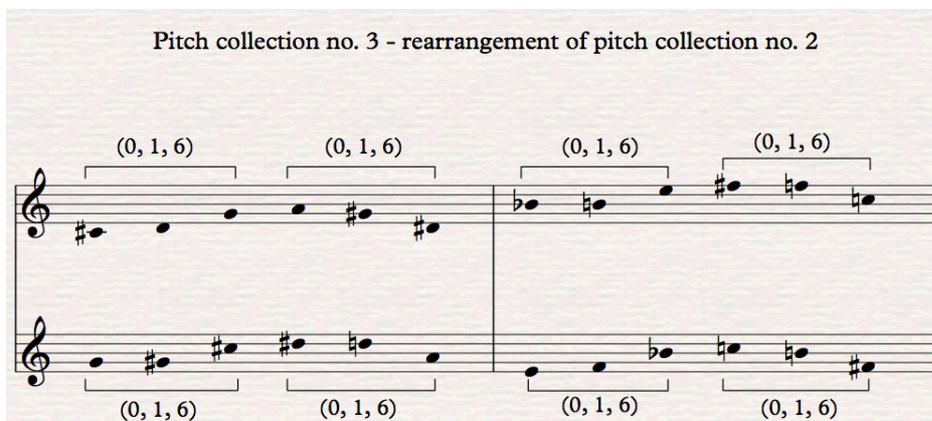
The sounds of pitch collection no. 2 are quietly introduced into the music at middle of the part C. Pitch collection no. 2 is formed based on pitch collection no. 1. The following example illustrates the process of constructing the pitch collection.

Example 28, Ji, construction of pitch collection 2, derived from collection 1



As we can see, pitch collection no. 2 is rearranged from pitch collection no. 1. Pitch collection 2 has only been used in middle and later part of C, which is considered as a transition pitch collection from no. 1 to no. 3.

Example 29, Ji, construction of pitch collection 3, derived from collection 2, both intervals now used, producing the augmented fourth when together



In this example we can see that pitch collection no. 3 is still divided, like collection no. 1, into four six-note groups but with a different sequence of notes. Each group contains two (0,1,6) pitch class sets. The pitch class set (0,1,6) is displayed in its entirety for the first time at the end of part C, producing a new sonority of the augmented fourth.

## Conclusion

This pitch class set (0,1,6) has been used by some leading twentieth century composers who came from both the west and the east, including Toru Takemitsu, George Crumb, 朱踐耳 Zhu Jianer. The set (0,1,6) becomes one of the most important tools with which to establish a common space in this work, *Ji*, forging a connection between different cultures. As well as the idea of complementarity as the principle method of creating the ‘common space’ in this composition portfolio, the contrasting elements in *Ji* such as structure, rhythm, dynamics, also can be viewed as possible elements from which to form a common space, generating a musical community for different cultures to manifest in the musical work.



Photograph 2: After a performance of *Ji* in Japan. The composer with the Isomura brothers.

## A note on the recording

The performance of *Ji* included with this portfolio is a live recording of the Chinese premiere of the work. The concert was held at the Renmin University Concert Hall in Beijing, as part of the violin-piano duo Isomura’s China tour.

## **CHAPTER 4**

### **Analytical notes on *Glow* for cello duo**

#### **Genesis and Background**

This cello duo was commissioned by an exceptional young cellist, Matthias Balzat, during his study towards a Bachelor of Music degree with soloist performance specialization at the University of Waikato Conservatorium of Music. *Glow* was written in April 2016, to be performed as part of Matthias' end of year recital. In November that year, the work was recorded at the Gallagher Academy of Performing Arts Concert Chamber Hall by Matthias Balzat and New Zealand cellist Yotam Levy. The first section of the piece was performed by European cellists Guillaume Lagraviere and Bruno Ispiola in Brussels in 2017.

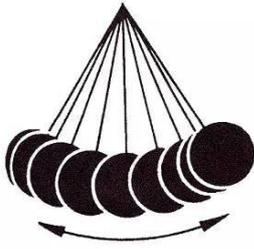
#### **Challenge and solution**

One of challenges of writing this piece was to obtain a varied range of colours. Because of the homogeneous qualities of the duo idiom, creating diverse sonorities became one of the key issues in this work. The piece was written as a single large movement but with five distinct sections. Each of the sections possesses its own unique features but also there is a strong dynamic interlinking of musical elements between sections. For example, the same thematic materials reappear in each section in a variety of forms. The distribution of colours and shapes throughout the entire piece is driven by unconventional performing techniques, tempo, density of pitch and contrasts of rhythmic pulse. The following example shows the shape of this work.

#### **Thematic explication**

Conceptually this piece is based on the mechanics of a pendulum, particularly the central point of the arc, where the pendulum is at its lowest point and about to either go up or down.

Example 30, pendulum



This notion is further reflected in several different aspects of the piece as follows.

## Further conceptual development

### Central Tone

From a central tone, which can be likened to the pendulum at its lowest point, this note can oscillate from side to side, away from the central axis by way of widening vibrato. For example, C is taken as the central pitch in the first section. The note C is reiterated in various registers, but remains considered as C. At the beginning of the piece it is the sole pitch used, but articulated with various performing techniques, as shown in music Example 1 below.

Example 31, *Glow*, section 1

**Freely**  
change bow strokes imperceptibly  
S.T. ↔ ord. (gradually shorten cycle, c. 5" → c. 1")  
N.V. c. 11"

Violoncello I

Violoncello II

**A**

*mf* *spp* *f* *pp* *f*

sim.

c. 9"

a punta d'arco ord. → al taco

*sfp* *mf* *p* *mf* *p* *sf* *f* *p* *mp* *p*

c. 11"

c. 7"

Vc. II begin imperceptibly

*mf* *p* *mp*

After introducing the note in four different octaves, other new pitches directly below and above are subtly reached, starting with the pitches within the range of a semitone. The range is then gradually extended wider and wider through B above and C sharp below, eventually reaching low B flat and high D at the end of first section.

Example 32, *Glow*, section 1, bar 9

The image shows a musical score for two staves, labeled I and II. Staff I is in bass clef and contains a melodic line with a bracket above it labeled 'c. 15"'. Staff II is in bass clef and contains a more complex line with various performance instructions: 'vib. \*', 'c. 3"', 'vib.', '(Sul D)', 'arco', 'S.P.', 'c. 3"', 'vib.', 'ord.', 'c. 3"', and 'vib.'. Dynamic markings include 'p', 'f', 'fp', and 'ff'. There are also some plus signs (+) above notes in the upper part of the score.

As many twentieth century Eastern and Western musicians, such as Zhu Jianer, Giacinto Scelsi, Tan Dun discovered, the subtlety of pitch contained within the range of a semitone can be very rich.

Example 33, excerpt from Zhu Jianer's Yu123

The image shows a musical score for two staves, labeled I and II. The score is in treble clef. Above the first staff, there is a performance instruction: 'poco a poco accel. e cresc.'. The score contains various rhythmic markings, including 'C', '///', and 'ff'. There are also some 'x' marks and 'H' marks above notes. The score is written in a style that suggests a specific performance technique, possibly related to the 'Yu' mentioned in the caption.

<sup>123</sup> Zhu, Jianer. *Yu*. 1999. Shanghai: Shanghai Conservatory of Music Press, 2003

Example 34, excerpt from Tan Dun's *Orchestral Theatre II: Re*<sup>124</sup>

The image displays a musical score for four string instruments: Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), and Cello (Vc.). The score is divided into three systems, each with four staves. The first system shows the initial notes and performance instructions: 'non vib. near the fingerboard' and 'ppp' (pianissimo) are indicated for the first two measures. The third measure includes the instruction 'gradually change to'. The second system continues with similar instructions: 'near the bridge', 'above the bridge', 'near bridge', and 'half wood, half hair'. The third system focuses on 'only wood' and 'near fingerboard, only wood' instructions. The notation includes slurs, ties, and dynamic markings throughout the piece.

<sup>124</sup> Tan, Dun. *Orchestral Theatre II: Re*. 1992. New York: G. Schirmer, Inc., 1998

Example 35, excerpt from Giacinto Scelsi's *Quattro pezzi (su una nota sola)*<sup>125</sup>

4 QUATTRO PEZZI PER ORCHESTRA (CIASCUNO SU UNA NOTA) G. /CEL/ |

*♩ = 54*

1 Flauto in Sol

1 Oboe

1 Corno ingl.

2 Clar. (in do)  
I  
II

1 Clar. basso (in do)

4 Corni in fa  
I  
II  
III  
IV

1 Saxof. ten. (in sib)

2 Trombe (in do)  
I  
II

2 Tromboni  
1 Tuba

Timpani  
2 Bongos e 1 Thambo  
P. ito sapeso  
T. tam piccolo  
T. tam grande

2 Viole  
I  
II

1 Violoncello

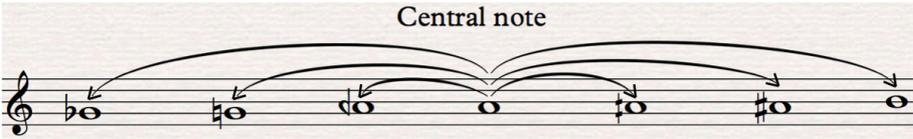
1 Contrabasso

© 1962 by Editions Salabert, Paris

<sup>125</sup> Giacinto, Scelsi. *Quattro pezzi (su una nota sola)*. 1959. Paris: Editions Salabert, 1998

Small changes in the method of playing the instrument on those pitches can create tremendous diversity of sonic detail. All of the pitches in the first section are derived from the central tone, the note C. This approach was inspired by a Chinese traditional philosophical view that all changes originate from one single point. Finding this common point is also related to the core argument of my PhD. The following example illustrates the process of generating all the pitches from the note C in the first section.

Example 36, process of generating pitches symmetrically outwards from the central note C



All the pitch organization in this work is created by the idea of diverging outward from a central tone. The note C at the beginning of the piece possesses a fundamental energy and functions as an inner core and a common point.

In this figure we can see that at the very end of the piece, the music returns back to its origin, where the open C string is used to restate the central note a final time. An echo of the pitch C is produced by a strong (over-pressured) bowing of the open string and letting the sound continue to ring until it naturally fades out. This contrasts with the fade-in at the very beginning of the piece and highlights the movement from origin and towards destination, as illustrated in Example 2.

Example 37, *Glow*, section 5, ending, bars 227-231



Example 38, *Glow*, section 1, beginning

**Freely**  
change bow strokes imperceptibly  
S.T.  $\rightleftharpoons$  ord. (gradually shorten cycle, c. 5"  $\rightarrow$  c. 1")  
N.V. c. 11"

**A**

Violoncello I

Violoncello II

## Theme

The thematic phrase consisting of a downward step from D to C appears at the end of first section for the first time. It is followed by a string of repetitions with a passing note C sharp. This characteristic gesture is restated in the second section and the fourth section in changed forms. The following example shows this thematic phrase in different sections of this work.

Example 39, *Glow*, section 1

*II*

N.B.  $\rightarrow$  M.V. pizz.

S.P.

*I*

*II*

N.B.  $\rightarrow$  M.V.

c. 3" c. 5" c. 3" c. 2"

*f* *sf* *f* *p* *fp* *mf* *p* *mp*

Example 40, *Glow*, section 2

36

*I*

*II*

arco

*ppp*

*p* *pp* *f*

vib. accel. M.V.

*p* *+* *+* *+*

*ppp* *f*

Example 41, *Glow*, section 4

The image shows a musical score for two cellos, labeled I and II. Part I begins at measure 160 with a fermata. It then plays a triplet of eighth notes marked *fmp* and *M.V.*, followed by another triplet of eighth notes marked *3* and *M.V.*, and ends with a wavy line indicating *accel.* Part II plays a series of notes with a long interval marked *M.V.*

## Pitch organisation

One of my original thoughts before writing this piece was to employ a retuning of the strings of the two cellos. However, I chose not to do that after a meeting with the cellists who preferred performing with the standard tuning. The following example demonstrates the original idea of the retuned strings' pitches for each cello.

Example 42, Scordatura of two cellos

The image shows two staves of musical notation representing the scordatura tuning for two cellos. The first cello has a sharp sign on the second string and a flat sign on the third string. The second cello has a sharp sign on the second string and a flat sign on the third string.

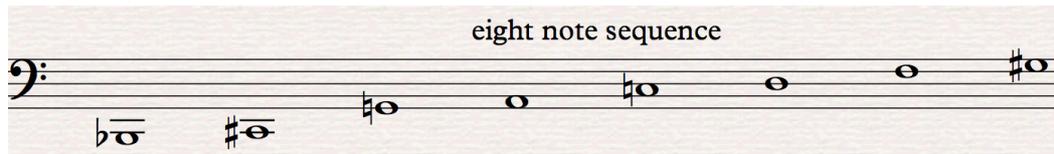
As we can see, each of the two cellos has a similar interval relationship between pairs of adjacent strings in the scordatura tuning. The modified tuning configurations possess a symmetrical nature, inspired by oriental architecture, where one interval is symmetrically flanked by another matching pair of intervals.

Symmetry necessitates a centre, which is the core concept for this work. For example, one central interval flanked by another interval above and below implies that the central interval is a pivot around which the symmetry is based. One cello has an augmented fourth between the two middle strings, with minor and major sixths on either side. The interval arrangement for the tuning of the other cello is opposite, with a minor sixth at the centre with augmented and perfect fourths respectively on the outside. I believe that the combination of the altered tuning of each cello not only would have brought out an interesting resonance, but would have also

possessed an enormous potential for development. However practicalities of performance in the end outweighed these potential gains.

Instead, those eight notes from the altered tuning of each cello were applied as a starting point of organizing pitch materials in the ensuing section of this work. The following example shows the eight note sequence.

Example 43, eight note sequence



In this example we can see the eight notes, B flat, C sharp, G, A, C, D, F, G sharp.

The opening note of the second section, C, has two roles. Its first role is as the starting note of the above eight note sequence. Its other role is as a turning point, connecting the end of the preceding section to the opening of the second section, where C is the starting note of an eight note sequence. These eight pitches are slowly introduced one by one until the all the notes of the sequence are sounded. The following example illustrates the connection point between first and second sections.

Example 44, *Glow*, ending of section 1 and beginning of section 2

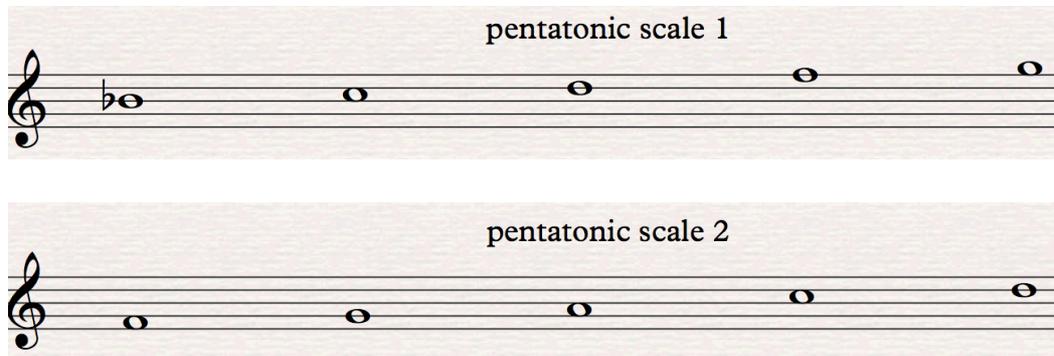
I

II

14 **B** Ancient  
(c. J = 50)

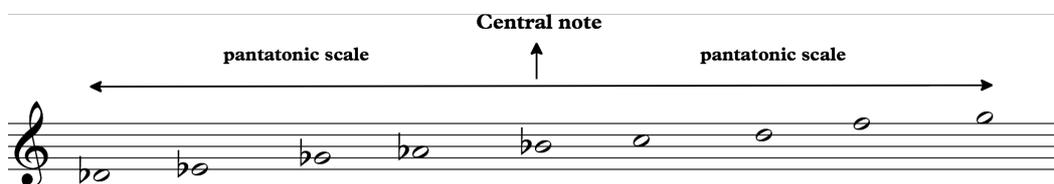
One of the main features of traditional Chinese music is the use of the pentatonic scale.<sup>126</sup> Two pentatonic scales can be extracted from this eight-note sequence. The two pentatonic scales are shown below.

Example 45, two pentatonic scales

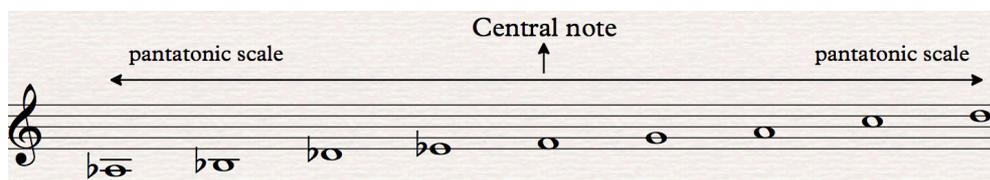


Based on the notion of a swinging pendulum, the B flat and F are taken respectively as two individual central pitches on which to construct other pentatonic scales in the opposite direction, that is, as a kind of inversion. Two nine-note sequences are generated and are applied as the main pitch collections in the fourth section. The two nine-note sequences are shown as below.

Example 46, nine note sequence, B flat as central note



Example 47, nine note sequence, F as central note



<sup>126</sup> Fan, Zuyin. Preface. *中国五声性调式和声写作教程*. (*The writing course of Chinese pentatonic scale and harmony*). Beijing: People's Music Publishing House, 2013, p.1, qtd. in Wang and Du, eds., pp.165-168

This characteristically organic way of generating a pitch collection has become an important structural feature of the works in this composition portfolio.

## Complementarity

As noted above, the principle of complementarity, the balancing of pairs of various kinds, plays a core conceptual role in my compositions for this portfolio, especially regarding pitch organisation. The notes E flat, E, F sharp and B are not in the eight note sequence, entering as an exotic voice into the music to complete the sets of 12 pitches. In a similar way, the notes E, B, F sharp and A are the complementary notes of the two nine note sequences. The eight note sequence and the two nine note sequences are respectively taken as the main pitch collections in the second section and the fourth section. I put all the complementary notes of both sequences together to form a new pitch collection that becomes the pitch material of the third section. This new complementary pitch collection plays an important role in connecting the second movement and the fourth movement. The following example shows the new complementary pitch sequence.

Example 48, complementary pitch sequence



At the end of the second section, a long note B enters into the music very quietly, as a sonority foreign to the eight note sequence. This new voice can be likened to a new culture that meets with the existing culture, the latter represented by the eight note sequence, with which a new conversation is initiated, as shown in the following example.

Example 49, *Glow*, section 2

A musical score for three staves. The top staff (I) is in treble clef, starting at measure 36. It contains a melodic line with dynamic markings *p*, *pp*, and *f*, and performance instructions *vib.*, *accel.*, and *M.V.*. The middle staff (II) is in bass clef and contains a sustained bass line with dynamic markings *p* and *pp*, and a *+* symbol. The bottom staff (III) is in bass clef and contains a long, sustained note starting at *ppp* and ending at *f*, with a *M.V.* instruction. The time signature is 2/4.

In the third section, all the notes of the first cello part are derived from the complementary pitch collection. The second cello part keeps using pitch material from the original eight note sequence which creates a strong contrast. The sound of the complementary pitches gradually fades out at the beginning of the fourth section, and then the two nine-note sequences combine together to take over as the new pitch collection.

The three different pitch collections interact with each other in the final section. For example, the first cello commences with the pitches complementary to the eight-note sequence, playing strong pizzicato chords followed by a utilization of the complementary pitch collection in the melodic part. The second cello starts with the two nine-note sequences. The two cello parts interchange their pitch collections from bar 194 and maintain the interaction until the concluding section. The following example illustrates the interaction between three different pitch collections.

Example 50, *Glow*, section 5, bar 165-170

**Furious**  
(c. ♩ = 130)

165 **F** pizz. *f*

arco *f*

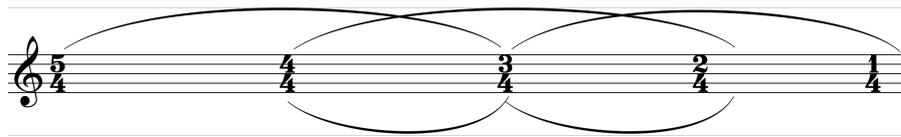
*mp*

### Generating melodic material from the pitch collections

The first way that melodic material is generated, is by adherence to concept of the movement of a swinging pendulum. Beginning with the central pitch B flat, the pendulum swings “from left to right” with the B flat gradually moving upward to the C, then D etc., and “from right to left” which translates as downward to the A flat, G flat etc. The following example illustrates the curved motion created by using this technique.



Example 53, time signatures 1



Example 54, *Glow*, section 5, bar 176-181

A musical score for two staves, I and II, in bass clef. The score covers bars 176 to 181. The time signatures are 3/4, 4/4, 2/4, 3/4, 4/4, and 3/4. The first staff (I) contains melodic lines with dynamics *p*, *fp*, *f*, *p*, *fp*, and *p*. The second staff (II) contains accompaniment with dynamics *f*, *p*, *f*, *mp*, and *mf*. The key signature changes from one flat to one sharp.

The second technique is based on the central pitch method, but pitch is now replaced by numbers of beats per bar. Using the numbers 1-7 as a starting point, the following time signatures are used with 4/4 as a central signature. This is illustrated in example 54.

Example 55, time signatures 2

A musical staff showing seven measures with time signatures 7/4, 6/4, 5/4, 4/4, 3/4, 2/4, and 1/4. A large slur covers all seven measures. The 4/4 measure is labeled "Central point" below the staff.

Example 56, *Glow*, section 5, bar 182-194

## Tempo

The tempi of the piece are as follows:

- first section — *lento rubato*
- second section — *slow*
- third section — *medium*
- fourth section — *lento rubato*
- fifth section — *fast*.

The flowing of each tempo on to the next is like a pendulum, swinging between slow and fast.

## Rhythmic pattern

In the third section, the repetitive leaping between E and E flat is a characteristic rhythmic pattern that re-emerges in the fifth section in an altered guise, with the change of atmosphere from the tenses interval of the major seventh to the brighter minor seventh. This rhythmic pattern creates a sense of swing, like a pendulum. The following example shows this pattern.

Example 57, *Glow*, character rhythmic pattern, section 3, bar 106-109

Example 57, *Glow*, character rhythmic pattern, section 3, bar 106-109. The score shows two staves, I and II, in bass clef. Staff I contains chords and single notes, while Staff II features a rhythmic pattern of eighth notes with slurs and accents, alternating between E and E-flat.

Example 58, *Glow*, character rhythmic pattern, section 4

Example 58, *Glow*, character rhythmic pattern, section 4. The score shows two staves, I and II, in bass clef. Staff I is marked "ad lib. arco" and has dynamics *ppp*, *p*, *pp*, and *mf*. Staff II is marked "ad lib." and features a rhythmic pattern of eighth notes with slurs and accents.

Example 59, *Glow*, character rhythmic pattern, section 5, bar 220

Example 59, *Glow*, character rhythmic pattern, section 5, bar 220. The score shows two staves, I and II, in 7/4 time. Staff I is in treble clef and Staff II is in bass clef. Both are marked "fmp sempre".

## Utterance

In this piece, the performers are required to express two different types of glissandi – quick and slow, which are respectively marked by two distinct notations, straight and curved. The former, the characteristic Western glissando, brings a sense of speed and directness, while the latter, the characteristic Eastern glissando, is slow and soft with a sense of radiance. The two types of glissandi are shown as below.

Example 60, *Glow*, two types of glissandi, section 5, bar 97-101

The musical score consists of two staves, I and II, in bass clef with a key signature of one sharp (F#). Staff I begins at bar 97 with a piano (*p*) dynamic and a straight glissando. At bar 99, it changes to a forte (*f*) dynamic and a curved glissando. Staff II begins at bar 97 with a piano (*p*) dynamic and a straight glissando. At bar 99, it changes to a fortissimo (*fff*) dynamic and a curved glissando, with the instruction *sempre* (always) written below the staff.

The two instruments are predominantly treated as two people, or independent cultures, that meet and interact with each other. This idea forms the basis of the compositional approach for this work.

## CHAPTER 5

### Analytical notes on *Mo* for piano

#### Genesis and background

This piece was written in July 2017 in response to a request from a New Zealand pianist, Max Munneke while he was completing his Bachelor of Music degree in piano performance at the University of Waikato. He was hoping to present a short contemporary work for solo piano at his final recital before leaving his hometown and country (Whanganui, New Zealand) to start life in a new environment, my hometown (Beijing, China). This work was performed in London in 2017 by Lithuanian-Russian pianist Jelena Makarova. This piece was also included in a concert at the Sydney Opera House on January 2020, performed by Chinese-American pianist Xing Wang. The piece was featured in a CD *Modern Music for Piano*, produced and released worldwide through RMN Music Record Label of London.

There are two other versions of this work, which will be explained in detail below.

One version of the work is an arrangement for five cellos that was performed by the Waikato cello ensemble Cellophonics on September of 2017 at the Gallagher Academy of Performing Arts, directed by New Zealand cellist James Tennant. A recording of this arrangement is included in my PhD portfolio.

The second version of the work has the piano joined by a bass flute. The piano part of *Mo* and the bass flute part were written at different times and brought into coexistence later. The confluence of the two musical parts that had been created in different environments can be regarded as a concrete example of the kind of encounter between different cultures that exists in different parts of the world in many different circumstances. This version was performed at a concert mounted by the Okta contemporary music ensemble in Hamilton. The performers were New Zealand-American flutist Tessa Brinckman partnered by a second-year piano student from the University of Waikato, XuanChang Shi. The name of the concert was *when flutes had words*. Accordingly, each piece was required to be performed with a poem read by the performers. I chose the poem *Hua* (画 in Chinese) that was written by Wang Wei (699-759) a poet, musician, painter, and politician during the Tang dynasty,. The following is the original poem *Hua* with an English translation by Wang Ruli.

画

远看山有色，  
近听水无声。  
春去花还在，  
人来鸟不惊。

A Painting

Seen from afar, the mountain view clearly shows;  
Within earshot, the rapid water silently flows.  
Flowers are still in bloom when spring is gone;  
Birds don't startle as people walk hither and yon.

### **Cultural inspiration and transformation**

*Hua* (画) means literally painting. The reason I chose the poem *Hua* is because this piece was inspired by the concept of Chinese ink wash painting. The title *Mo* (墨 in Chinese) of my composition means literally the ink that is used in traditional Chinese calligraphy or painting. The density of the pitch and the rhythmic pulse in this work aims to capture characteristics of the varying shape of calligraphic ink on rice paper, and the sense of flow and movement found in Chinese ink wash painting. The whole piece references the varying ink load and pressure that can be manifested within a single brushstroke of Chinese ink wash painting.

The work begins with consonant intervals creating a gentle atmosphere, and then gradually moves into a sharper sound environment with dissonant intervals generating increasing tension. The changing sonority is created by carefully chosen combinations of intervals. The aim was to imitate the effects of Chinese calligraphy and ink wash painting, where the ink creates various shapes on the rice paper through subtly different techniques of moving the brush, such as speed and strength controlled by the wrist.

### **Philosophical influence and interaction**

At the beginning of the work, the points of sound are spaced far apart in a slow tempo, and most of the notes are performed with soft staccato and light pedal. This idea was inspired by ink slowly dripping onto rice paper, and then being speedily spattered around as soon as it touches the paper. The initial long distance between adjacent notes is intended to generate an enhanced sense of space. The idea of this kind of ‘space of sound’ was influenced by the concept of *Tao Te Ching* by Lao Tzu, where in Chapter 41 it is written that great music has the faintest notes, and that the highest form is without shape.<sup>127</sup> In Western countries, this Chinese philosophy has also been applied to various subjects, and it is reflected in the proverb that ‘less is more’. This common area in philosophy became one of the most important concepts informing the creating and developing of works in this PhD portfolio.

### **‘Less is more’, space and character**

The well-known proverb in English ‘Less is more’ has been traced back to the nineteenth century and poet Robert Browning, but was famously taken up by the Modernist architect Mies van der Rohe in 1947. Since then it has become the catchphrase for minimalist design in many different fields.<sup>128</sup> It also aligns perfectly with ancient Chinese philosophy, as noted above. Furthermore, when it comes to music, composer Qu Xiao Song (1952–) has to be mentioned. Western music critics have described him as “The Master of Silence”.<sup>129</sup> Qu Xiao

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<sup>127</sup> Fan, Yingyuan. *宋本老子道德经*. (*Tao Te Ching*). Beijing: National Library of China Publishing House, 2017, p.168

<sup>128</sup> *Less is more-until it isn't*. 15 Oct. 2016. N.p. Web. 20 May. 2017. <<https://www.reviewjournal.com/life/less-is-more-until-it-isnt/>>

<sup>129</sup> 瞿小松教授《虚幻的“主流”》讲座概要. (*Seminar 《Unreal Mainstream》 by Professor Qu Xiaosong*). 20 Dec. 2014. N.p. Web. 2 Apr. 2017. <[http://musicology.cn/lectures/lectures\\_6804.html](http://musicology.cn/lectures/lectures_6804.html)>

Song believes that the silence has become one of his most important elements of creativity.<sup>130</sup> His opera *The Test (Shiqi)* was staged in Germany in May 2004. The critic Kowvenhouven reviewed it and noted that the core concept of the work was “less is more”,<sup>131</sup> which is also the central idea of my work *Mo*.

In the Chapter 12 of *Tao Te Ching* by Lao Tzu, the oneness of the five colours blinds the eyes, the oneness of the five tones deafens the ears, the oneness of the five flavours dulls the tongue.<sup>132</sup>

In line with this traditional Chinese philosophy, composer Qu Xiao Song has stated his point of view as being that the plethora in the modern world sound causes people to lose sensitivity and clarity. If we are obsessed with colourful shapes and very rich sounds, then we will be lost on the surface and it will be difficult to reach into the essence of the work.<sup>133</sup>

Qu Xiao Song observes this precept in his creative work, as he believes that with more sounds and more movement in the design of his works, the sense of time will become urgent, and the sense of space will be small. On the contrary, with less sound, the space will be large because the virtual ‘room’ is large, and the capacity is consequently large.<sup>134</sup>

Sound and colour can be both obstacles and opportunities for comprehending and In other words, homogamically, less is more, attaining enlightenment in Tao. In summary, the principle is: the less sound, the more space; the more sound, the less space.

One of Qu Xiao Song’s other works that influenced me is *Xing Cao (Cursive)*, which also is based on the concept of ‘less is more’. *Xing Cao* was written between 2000-2001, commissioned by the Gate Cloud Dance Theatre and its founder, choreographer Lin Hwai-min in 1999. The composer himself thinks *Xing Cao* can be considered as his ‘longest breath

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<sup>130</sup> 我们有一些音乐状态是西方音乐所没有的。 (*Some of our musical ideology does not exist in West*) . 24 May. 2011. N.p. Web. 10 Mar. 2017.

<[http://culture.ifeng.com/gundong/detail\\_2011\\_05/24/6586116\\_0.shtml](http://culture.ifeng.com/gundong/detail_2011_05/24/6586116_0.shtml)>

<sup>131</sup> Cited in Liu, Jingzhi. Introduction. *A Critical History of New Music in China*. Beijing: Chinese University Press, 2010, p.641

<sup>132</sup> Fan, Yingyuan *ibid.* p.44

<sup>133</sup> 我们有一些音乐状态是西方音乐所没有的。 (*Some of our musical ideology does not exist in West*) . *loc.cit.*

<sup>134</sup> Qu, Xiaosong. *音乐之道. (The way of music)*. Beijing: SDX Joint Publishing Company, 2014, p.10

and loosest creation'.<sup>135</sup> Audiences seem to feel the same way, with commissioner Lin Hwai-min writing that 'you can hear that composer's inner voice that is extreme peaceful'.<sup>136</sup> This is also what I pursued in my work *Mo*, aiming to explore musical boundaries from extreme peace to an intense upsurge of energy.

In relation to the perspectives and examples above, we can find a similar outlook in some Western music. Witold Lutosławski, one of the leading European composers of the 20th century, is recorded as having proposed a comparable point. In the book *Music of Lutosławski* by, composer, pianist, musicologist and Lutosławski scholar Charles Bodman Rae, Lutosławski is quoted as asserting that 'the fewer different intervals between neighbour notes the chord contains, the more characteristic the result is'.<sup>137</sup> In other words, harmonically, less is more when designing chords.

### **Thematic kernel**

The beginning of this work has very few sounds, introducing only the thematic two notes C and D. The two notes are placed so far apart in register that the distance creates a sense of space, as if one were falling into an infinite space-time universe. The paucity of notes at the beginning makes every note precious. The relationship between one sound and another has become tenuous, very delicate. The long distance between the two sounds as well as the subsequent rest builds a sense of stillness and formlessness. This 'gap' between the notes in fact contains an extremely rich sonority. The monotonous single note motive at the beginning of the work establishes a feeling of peace in silence, but there is motion hidden within this silence.

### **Structure**

This work was formed like a wave pattern, with three ups and downs. Each rise and fall pushes the music further into motivic development as well as deeper into the realm of tension, before subsiding and fading away again with the recurring motive. The following example illustrates the shape of the work.

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<sup>135</sup> 瞿小松在寂静中回归传统. (*Qu Xiaosong returns to tradition in silence*) . 13 Jan. 2010. N.p. Web. 25 Mar. 2017. <[http://paper.people.com.cn/rmrbhwb/html/2010-01/13/content\\_425936.htm](http://paper.people.com.cn/rmrbhwb/html/2010-01/13/content_425936.htm)>

<sup>136</sup> loc.cit.

<sup>137</sup> Rae, Charles Bodman. *The Music of Lutoslawski*. London: Bobcat Books, 2012, p.121, qtd. In Lutoslawski

# Thematic working and pitch organisation

The first two notes of this work, C and D provide essential material for the development of the whole work. This thematic element is mainly reflected in two aspects: pitch and rhythm.

Example 61 C-D theme at the beginning of the work

**Lento**  
(c. ♩ = 50)

The musical score for Example 61 consists of two staves. The top staff is in treble clef and contains two notes: C4 (middle C) and D4 (D above middle C). The first note is marked *pp* and the second *ppp*. There are fermatas over both notes. The bottom staff is in bass clef and contains two notes: C3 (two ledger lines below) and D3 (one ledger line below). The first note is marked *p*. There are fermatas over both notes. Above the second note of the bass staff, there is a marking '8va' with a dashed line, indicating an octave shift.

In example 62, the C-D theme is hidden inside a harmonic progression.

Example 62, hidden theme

The musical score for Example 62 is in treble clef with a key signature of one sharp (F#). It shows a harmonic progression. The first measure has a dynamic *p*. The second measure has a dynamic *pp*. The third measure has a dynamic *ppp*. The notes in the progression are: F#4, G#4, A4, B4, C5, D5, E5, F#5, G#5, A5, B5, C6, D6, E6, F#6, G#6, A6, B6, C7, D7, E7, F#7, G#7, A7, B7, C8, D8, E8, F#8, G#8, A8, B8, C9, D9, E9, F#9, G#9, A9, B9, C10, D10, E10, F#10, G#10, A10, B10, C11, D11, E11, F#11, G#11, A11, B11, C12, D12, E12, F#12, G#12, A12, B12, C13, D13, E13, F#13, G#13, A13, B13, C14, D14, E14, F#14, G#14, A14, B14, C15, D15, E15, F#15, G#15, A15, B15, C16, D16, E16, F#16, G#16, A16, B16, C17, D17, E17, F#17, G#17, A17, B17, C18, D18, E18, F#18, G#18, A18, B18, C19, D19, E19, F#19, G#19, A19, B19, C20, D20, E20, F#20, G#20, A20, B20, C21, D21, E21, F#21, G#21, A21, B21, C22, D22, E22, F#22, G#22, A22, B22, C23, D23, E23, F#23, G#23, A23, B23, C24, D24, E24, F#24, G#24, A24, B24, C25, D25, E25, F#25, G#25, A25, B25, C26, D26, E26, F#26, G#26, A26, B26, C27, D27, E27, F#27, G#27, A27, B27, C28, D28, E28, F#28, G#28, A28, B28, C29, D29, E29, F#29, G#29, A29, B29, C30, D30, E30, F#30, G#30, A30, B30, C31, D31, E31, F#31, G#31, A31, B31, C32, D32, E32, F#32, G#32, A32, B32, C33, D33, E33, F#33, G#33, A33, B33, C34, D34, E34, F#34, G#34, A34, B34, C35, D35, E35, F#35, G#35, A35, B35, C36, D36, E36, F#36, G#36, A36, B36, C37, D37, E37, F#37, G#37, A37, B37, C38, D38, E38, F#38, G#38, A38, B38, C39, D39, E39, F#39, G#39, A39, B39, C40, D40, E40, F#40, G#40, A40, B40, C41, D41, E41, F#41, G#41, A41, B41, C42, D42, E42, F#42, G#42, A42, B42, C43, D43, E43, F#43, G#43, A43, B43, C44, D44, E44, F#44, G#44, A44, B44, C45, D45, E45, F#45, G#45, A45, B45, C46, D46, E46, F#46, G#46, A46, B46, C47, D47, E47, F#47, G#47, A47, B47, C48, D48, E48, F#48, G#48, A48, B48, C49, D49, E49, F#49, G#49, A49, B49, C50, D50, E50, F#50, G#50, A50, B50, C51, D51, E51, F#51, G#51, A51, B51, C52, D52, E52, F#52, G#52, A52, B52, C53, D53, E53, F#53, G#53, A53, B53, C54, D54, E54, F#54, G#54, A54, B54, C55, D55, E55, F#55, G#55, A55, B55, C56, D56, E56, F#56, G#56, A56, B56, C57, D57, E57, F#57, G#57, A57, B57, C58, D58, E58, F#58, G#58, A58, B58, C59, D59, E59, F#59, G#59, A59, B59, C60, D60, E60, F#60, G#60, A60, B60, C61, D61, E61, F#61, G#61, A61, B61, C62, D62, E62, F#62, G#62, A62, B62, C63, D63, E63, F#63, G#63, A63, B63, C64, D64, E64, F#64, G#64, A64, B64, C65, D65, E65, F#65, G#65, A65, B65, C66, D66, E66, F#66, G#66, A66, B66, C67, D67, E67, F#67, G#67, A67, B67, C68, D68, E68, F#68, G#68, A68, B68, C69, D69, E69, F#69, G#69, A69, B69, C70, D70, E70, F#70, G#70, A70, B70, C71, D71, E71, F#71, G#71, A71, B71, C72, D72, E72, F#72, G#72, A72, B72, C73, D73, E73, F#73, G#73, A73, B73, C74, D74, E74, F#74, G#74, A74, B74, C75, D75, E75, F#75, G#75, A75, B75, C76, D76, E76, F#76, G#76, A76, B76, C77, D77, E77, F#77, G#77, A77, B77, C78, D78, E78, F#78, G#78, A78, B78, C79, D79, E79, F#79, G#79, A79, B79, C80, D80, E80, F#80, G#80, A80, B80, C81, D81, E81, F#81, G#81, A81, B81, C82, D82, E82, F#82, G#82, A82, B82, C83, D83, E83, F#83, G#83, A83, B83, C84, D84, E84, F#84, G#84, A84, B84, C85, D85, E85, F#85, G#85, A85, B85, C86, D86, E86, F#86, G#86, A86, B86, C87, D87, E87, F#87, G#87, A87, B87, C88, D88, E88, F#88, G#88, A88, B88, C89, D89, E89, F#89, G#89, A89, B89, C90, D90, E90, F#90, G#90, A90, B90, C91, D91, E91, F#91, G#91, A91, B91, C92, D92, E92, F#92, G#92, A92, B92, C93, D93, E93, F#93, G#93, A93, B93, C94, D94, E94, F#94, G#94, A94, B94, C95, D95, E95, F#95, G#95, A95, B95, C96, D96, E96, F#96, G#96, A96, B96, C97, D97, E97, F#97, G#97, A97, B97, C98, D98, E98, F#98, G#98, A98, B98, C99, D99, E99, F#99, G#99, A99, B99, C100, D100, E100, F#100, G#100, A100, B100, C101, D101, E101, F#101, G#101, A101, B101, C102, D102, E102, F#102, G#102, A102, B102, C103, D103, E103, F#103, G#103, A103, B103, C104, D104, E104, F#104, G#104, A104, B104, C105, D105, E105, F#105, G#105, A105, B105, C106, D106, E106, F#106, G#106, A106, B106, C107, D107, E107, F#107, G#107, A107, B107, C108, D108, E108, F#108, G#108, A108, B108, C109, D109, E109, F#109, G#109, A109, B109, C110, D110, E110, F#110, G#110, A110, B110, C111, D111, E111, F#111, G#111, A111, B111, C112, D112, E112, F#112, G#112, A112, B112, C113, D113, E113, F#113, G#113, A113, B113, C114, D114, E114, F#114, G#114, A114, B114, C115, D115, E115, F#115, G#115, A115, B115, C116, D116, E116, F#116, G#116, A116, B116, C117, D117, E117, F#117, G#117, A117, B117, C118, D118, E118, F#118, G#118, A118, B118, C119, D119, E119, F#119, G#119, A119, B119, C120, D120, E120, F#120, G#120, A120, B120, C121, D121, E121, F#121, G#121, A121, B121, C122, D122, E122, F#122, G#122, A122, B122, C123, D123, E123, F#123, G#123, A123, B123, C124, D124, E124, F#124, G#124, A124, B124, C125, D125, E125, F#125, G#125, A125, B125, C126, D126, E126, F#126, G#126, A126, B126, C127, D127, E127, F#127, G#127, A127, B127, C128, D128, E128, F#128, G#128, A128, B128, C129, D129, E129, F#129, G#129, A129, B129, C130, D130, E130, F#130, G#130, A130, B130, C131, D131, E131, F#131, G#131, A131, B131, C132, D132, E132, F#132, G#132, A132, B132, C133, D133, E133, F#133, G#133, A133, B133, C134, D134, E134, F#134, G#134, A134, B134, C135, D135, E135, F#135, G#135, A135, B135, C136, D136, E136, F#136, G#136, A136, B136, C137, D137, E137, F#137, G#137, A137, B137, C138, D138, E138, F#138, G#138, A138, B138, C139, D139, E139, F#139, G#139, A139, B139, C140, D140, E140, F#140, G#140, A140, B140, C141, D141, E141, F#141, G#141, A141, B141, C142, D142, E142, F#142, G#142, A142, B142, C143, D143, E143, F#143, G#143, A143, B143, C144, D144, E144, F#144, G#144, A144, B144, C145, D145, E145, F#145, G#145, A145, B145, C146, D146, E146, F#146, G#146, A146, B146, C147, D147, E147, F#147, G#147, A147, B147, C148, D148, E148, F#148, G#148, A148, B148, C149, D149, E149, F#149, G#149, A149, B149, C150, D150, E150, F#150, G#150, A150, B150, C151, D151, E151, F#151, G#151, A151, B151, C152, D152, E152, F#152, G#152, A152, B152, C153, D153, E153, F#153, G#153, A153, B153, C154, D154, E154, F#154, G#154, A154, B154, C155, D155, E155, F#155, G#155, A155, B155, C156, D156, E156, F#156, G#156, A156, B156, C157, D157, E157, F#157, G#157, A157, B157, C158, D158, E158, F#158, G#158, A158, B158, C159, D159, E159, F#159, G#159, A159, B159, C160, D160, E160, F#160, G#160, A160, B160, C161, D161, E161, F#161, G#161, A161, B161, C162, D162, E162, F#162, G#162, A162, B162, C163, D163, E163, F#163, G#163, A163, B163, C164, D164, E164, F#164, G#164, A164, B164, C165, D165, E165, F#165, G#165, A165, B165, C166, D166, E166, F#166, G#166, A166, B166, C167, D167, E167, F#167, G#167, A167, B167, C168, D168, E168, F#168, G#168, A168, B168, C169, D169, E169, F#169, G#169, A169, B169, C170, D170, E170, F#170, G#170, A170, B170, C171, D171, E171, F#171, G#171, A171, B171, C172, D172, E172, F#172, G#172, A172, B172, C173, D173, E173, F#173, G#173, A173, B173, C174, D174, E174, F#174, G#174, A174, B174, C175, D175, E175, F#175, G#175, A175, B175, C176, D176, E176, F#176, G#176, A176, B176, C177, D177, E177, F#177, G#177, A177, B177, C178, D178, E178, F#178, G#178, 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A337, B337, C338, D338, E338, F#338, G#338, A3

In example 63, the rhythm of the C-D theme is prolonged and repeated.

Example 63, rhythmic prolongation

In example 64, the development of a series of sound patterns is influenced by the rhythm of the C-D theme.

Example 64, sound pattern development

In example 65, the C-D theme is re-presented at the end of the work with a more tension-filled interval, the minor ninth. The elements in the box are required to be played repeatedly until they disappear, where the solid line stops.

Example 65, repeated minor ninth

## Rhythmic pulse

In this work, bar lines are omitted to offer freedom in pulse, suggesting flow as opposed to regular, beat-defined rhythm. The performer still needs to feel the rhythms written but, more importantly, they need to listen keenly to the flow of the piece and make decisions based on this, rather than the rules governing time signatures and bar lines. This mode of writing was also influenced by the philosophy of Zen, one of the Buddhist sects that originated in China during the Tang dynasty. The goal of practising Zen is attaining unity with nature and peace. For these qualities to be reflected in the music, it seemed important to try to dissolve traditional ideas about musical structure and to reinterpret the concept freely in terms of intentional formlessness, more or less in accordance with some of John Cage's principles.<sup>138</sup> This mode of writing has also been utilized in the other works of my PhD portfolio, including in *Ji*, and *Zhong*.

## Confluence and heterogeneity

The philosophy of Zen is also implied in some of aleatoric music created by John Cage, not only in rhythm but also in other aspects such as the selection of musical materials and the organization of musical structure.<sup>139</sup>

John Cage introduced a number of profound and radical changes to Western contemporary music. In the late 1940s, he turned to Eastern philosophy and studied Buddhism with the Japanese Zen master, Daisetsu Teitaro Suzuki.<sup>140</sup> He came to understand nature and natural processes from the teachings of Zen. In practice, this meant that in Cage's own music came to be freed from the constraints of planned structure and instead moved towards deconstruction. He applied to his works the ideas of permutation and combination found in the I Ching, basing his creative method on them. Based on his understanding of Zen

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<sup>138</sup> 约翰凯奇偶然音乐的创作思想探析. (*An analysis of John Cage's creative thoughts on aleatory music*). N.p. Web. 15 Apr. 2017  
<<https://www.ixueshu.com/document/cbdda1caac6215c2885813abb1152984318947a18e7f9386.html> >

<sup>139</sup> Yu, Mengqiao. 语默之间：禅宗与当代西方艺术哲学---以约翰·凯奇的音乐创作为例. (*Between Words and Silence: Zen and Contemporary western Philosophy of Art---John Cage's Music Creation as the Case*). Diss. Xiamen University, 2015, pp.3 and 9

<sup>140</sup> 约翰凯奇偶然音乐的创作思想探析. (*An analysis of John Cage's creative thoughts on aleatory music*) loc.cit.

philosophy and the divination methods of the I Ching, Cage provided an open and diverse alternative approach to form in Western art music.<sup>141</sup>

John Cage had been interested in Hinduism and the *I Ching* since the second half of the 1940s.<sup>142</sup> His encounter with Daisetsu Suzuki in the 1950s directly affected his creative approach.<sup>143</sup> After that time, a large number of future avant-garde artists was influenced by Cage, initially through gatherings such as performance art groups working at the Black Mountain College, including American visual artists Robert Rauschenberg and Jackson Pollock. Cage's work also came to function as a bridge between many Asian artists who emigrated to the United States after the war and the American art world, such as Toshiro Mayuzumi (黛敏郎) and Yoko Ono (小野洋子). It can be said the theory of Zen bursts out with a great power in the West through John Cage. Because of that, John Cage can be considered as an essential starting point when examining the relationship between Zen and postmodernism.<sup>144</sup>

The interaction of ideology and culture between East and West is frequently a focus of academic research, especially since the beginning of the 21st century. These two sets of self-generating ideological systems that originally were isolated from each other, and then met and interacted, caused strong shocks to both sides after the collision. Attitudes of assimilation and anti-assimilation continue to be exercised in this relationship.<sup>145</sup>

At the same time, during 1960s, American art critic and philosopher Arthur Coleman Danto was looking for a way to comprehend avant-grade art that could not be encompassed in the definition of traditional art. Zen was seen to offer suitable spiritual resources for the avant-grade art and its theorists. As a result, Zen and the philosophy of Western contemporary art met in Cage's works and converged more broadly in the complicated postwar American art scene. There is both harmony and dissonance, commonalities and contradictions to be found

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<sup>141</sup> loc.cit.

<sup>142</sup> loc.cit.

<sup>143</sup> Yu, Mengqiao *ibid.* p.3

<sup>144</sup> loc.cit.

<sup>145</sup> *ibid.* p.1

between the two philosophies derived from Eastern and Western intellectual traditions respectively.<sup>146</sup>

In today's era of globalization and homogenization, we should probably try to perceive the possibility of a different kind of conversation between Eastern and Western cultures. The integration in the deep structure is revealed by the common core beliefs of the two systems. Divergence from the common root is generated by the different aspects of the two systems.<sup>147</sup>

Historically there have been many interactions between Eastern and Western philosophy, such as Gottfried Wilhelm Leibniz and Lao Tzu, Martin Heidegger and Taoism, Alfred North Whitehead and Mahayana Buddhism.<sup>148</sup> and the interaction in late twentieth century thinking between French literary theorist and philosopher Roland Barthes and Japanese satori.<sup>149</sup>

An interesting example of such interaction can be dated to May 1966, when Roland Gerard Barthes (1915-1980) accepted an invitation from the Dean of the French-Japanese School in Tokyo, Maurice Pinguet, to teach a course on the analysis of narrative structure in Japan. Over the next two years, Roland Barthes visited Japan three times. His Japanese trips finally gave birth to his monograph *L'Empire des signes*, published in 1970. In this collection of academic essays, Barthes organizes the daily fragments of Japanese into a symbolic system profoundly different to that of the West. Compared with the emphasis on language, logic and meaning in Western philosophy, Barthes considers his writing about Japan to be a satori, a Japanese Buddhist term for enlightenment and awakening that is derived from the root of the Zen Buddhist word satoru (悟 in Kanji).<sup>150</sup> It creates a silent environment. All kinds of characteristics can emerge from this atmosphere of meditative emptiness. In this theory, the core concepts of deconstruction meet the thinking of Japanese Zen, and the postmodern West meets the classical East.<sup>151</sup>

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<sup>146</sup> *ibid.* p.1

<sup>147</sup> *ibid.* p.1

<sup>148</sup> *ibid.* p.2

<sup>149</sup> *ibid.* p.3

<sup>150</sup> *ibid.* p.2

<sup>151</sup> *loc.cit.*

The collision between East and West does not only happen at the philosophical level. In his writings, the Algerian-born French philosopher Jacques Derrida (1930-2004) paid great attention to Chinese calligraphy and characters.<sup>152</sup>

There is no doubt that there are also many examples of this intersection in music between East and West. For instance, John Cage met the Indian musician Gita Sarabhai in USA. He found that the Tala (Titi or Pipi), the term used in Indian classical music to refer to musical meter to be similar to his invented organizational system called macro-micro rhythmic structure in the organization of music rhythm.<sup>153</sup>

From the above examples, we can see that the similarities and differences between the East and the West exist in the field of music, but also more widely in philosophy and other disciplines. How to find these common spaces and individual characters, and how to refine and transform them into my creative approach as one of the central elements in my works, became the main creative research focus of my PhD. The confluence and the heterogeneity of Western art and philosophy on the one hand and Eastern Zen on the other suggested an important method for me to construct compositions.

The method of creating in this piece is mainly affected by the following two aspects. One of them is that a common point, the philosophy of the proverb ‘less is more’ has been existed in both West and East. It contains a theory of space and character, which plays a vital role in creating theme, the pitch organization, and the structure of my work. Another aspect that inspired this work is technical transplantation in different discipline. In this case, the technical transplantation occurred between two different arts, music and ink painting. As explained above, there are similarities and common points in the respective structural approaches of these two types of art, which can be transplanted to each other.

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<sup>152</sup> loc.cit.

<sup>153</sup> ibid. p.9

## CHAPTER 6

### Analytical notes on *One, Two, Three* for piano trio

#### Genesis and background

This work was written in March, 2017 and was performed at the Edinburgh Festival Fringe by the Aurelian Trio. The piece was also performed by NZTrio in October the same year in New Zealand.

#### Arithmetic and music

In the development of Western and Eastern art, the concept of arithmetic has consistently occupied an extremely important place. In the sixth century BC, the father of mathematics and aesthetics in ancient Greece, Pythagoras, and his school, utilised mathematics to explore the underlying principles of nature and music, for example, the natural scale formed by the circle of fifths was once known as Pythagoras Scale.<sup>154</sup> In the Pythagorean view, all things in the universe are grounded in harmony, the formation of harmony needs to be built upon a certain order, and arithmetic provides the foundation for this order.<sup>155</sup>

The process of combining pitches to produce harmony in music usually is dictated by arithmetic. Therefore, music and arithmetic could be considered to be inseparable elements in the composition of the universe.

Almost all parameters in music, and in the establishment of relationships between them, can be seen in terms of arithmetic, such as harmonic series, scales, the circle of fifths system, harmonic function etc.<sup>156</sup> The nature of sound itself is based on arithmetical principles.<sup>157</sup> Each number could be seen as an entity which possesses its own unique set of characteristics, implication and function according to a composer's own sensibility and usage.

Pythagorean arithmetic theory established a scientific foundation for the development of Western art music. Through the Middle Ages, the Renaissance, Baroque and Romantic eras,

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<sup>154</sup> Zhao, Guang. 解读数字“三”——在朱践耳音乐创作中的结构意义和象征意义. (*Interpretation of the Number "Three"-The Structural Meaning and Symbolic Meaning in Zhu Jianer's Music Creation*). Shanghai: Shanghai Conservatory of Music Press, 2013, p.18

<sup>155</sup> loc.cit.

<sup>156</sup> *ibid.*, p.17

<sup>157</sup> *ibid.*, p.18, qtd. in Brindle, Chapter 6

and the 20th century into the 21st, it has remained one of the predominant concepts as musical language has evolved.<sup>158</sup>

In the creation of music, the employment of numbers or numerical symbols emerged in the Middle Ages.<sup>159</sup> Later, the arithmetic that appeared in Bach's vast musical output came to attain a level of mastery and sophistication that has remained one of the most enduring and universal sources of inspiration to this day. Many 20th century composers such as Zhu Jianer, Stravinsky and Berg, became increasingly inclined to use arithmetic as a completely rational and logical tool to comprehensively conceive and structure musical works. George Crumb took the numbers 7 and 13 as the core symbols in his amplified string quartet work *Black Angels*, and the essential triad is derived from these two numbers.<sup>160</sup> The number 7 represents light and purity while the number 13 represents darkness and sin. That work, and the precedents of these composers and their arithmetical workings, constitute the foundation for the structuring of *One Two Three*.

In Chinese traditional philosophy expressed in *Tao Te Ching* by Lao Tzu, the way (Tao) gave birth to the number One, One gave birth to Two, Two gave birth to Three, Three gave birth to all things. The numbers One, Two, and Three have become the essential motive for the present musical work. There is a strong connection between each number in both the creative approach and philosophical perspective.

### **Cultural background and interaction**

This piece is inspired by poet Rewi Alley and his work. Rewi Alley is considered to have played a significant role as a bridge-builder in China-New Zealand friendship and cultural understanding. One of New Zealand's leading composers, Jack Body, even wrote an opera based on this. Alley translated numerous Chinese traditional poems and also wrote a number of original works. His writing embodied a profound understanding of different cultures and showed a formidable knowledge of literature.

In his poem 'Home' written on October 25th 1977, Rewi Alley described his life in Beijing. It touched me deeply, being a Beijing-born person myself, and I had a strongly sympathetic

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<sup>158</sup> loc.cit.

<sup>159</sup> loc.cit.

<sup>160</sup> loc.cit.

response to it. It was the definition and description of what the idea of homeland might mean through his cultural perspective that inspired me to compose this piece.

Because he spent 60 years living in China, Alley had a unique understanding of Chinese culture, history and politics based on his Western mindset. We have that in common: I have been studying and living for many years in New Zealand, which attracted me to Alley's interest in connecting with a different culture. Alley's perception and understanding was expressed through his poems, and this notion is implied in my work.

His poem "Home" not only embodied his love of Beijing but there is also a Chinese flavour floating between the lines. This affected the compositional techniques of this piece and also affected vitally the development of its structure.

At the end of this poem, Alley's expressed his belief that the philosophy of giving rather than taking is identical with Chinese traditional culture and philosophical concepts. The philosophy underlying my work is based on a very similar principle: everything in the piece was based on the notion of 'giving' and was gradually developed and evolved.

Alley's poems 'Peking' was written on February 5th of 1951, 'Fragments of Living Peking' on June 1st 1952, and 'Peking May Day' on May 1st 1953. These poems reveal glimpses of the changing Chinese scene at the time. Those changes made on me, a person who was born and grew up in Beijing, and influenced by what I constantly saw and heard, a strong visual impact and impression. No matter what changed in appearance or in humanity in Beijing, all of the changes spawn from a common root, or a single point. Nothing is created completely from scratch, but rather everything can be seen to evolve out of what has preceded it. I have tried to imply this in my piece 一 二 三 (One Two Three). In the wisdom of *Tao Te Ching* by Lao Tzu, the way (Tao) gave birth to one, one gave birth to two, two gave birth to three, three gave birth to all things. Following this belief, the music in One Two Three all evolves out of the opening musical point. Nothing new is added after that, but rather everything is derived from the opening material through processes of evolution and development. The following analytical notes will demonstrate this.

## **Development of the concept**

This piece was written in 2017 which was the 110th anniversary of Rewi Alley's birth and 30th anniversary of his passing. Following the philosophical ideas about the significance of the number three in both the East and the West, the general structure of the work is divided into three sections with an introduction. The piece starts with a meditation upon nothingness, which musically is shown by starting with a bar of silence, a bar's rest that is unmeasured due to the fermata. Then comes a persistent dab on piano in the introduction that may be compared to the monk retained to play the Qing while chanting in a Buddhist Chinese temple, a spiritual gesture that suggests emptiness. The introduction of this piece is illustrated in the following example.

Example 66, *One Two Three*, introduction, bar 1-15

*♩=50*  
**Meditation 1-2-3**      **Nothingness, Root, Formless**      imperceptiblement      Sul G a misura 31      non vib.

Violin

Violoncello

*♩=50*  
**Meditation 1-2-3**      **Nothingness, Root, Formless**

Piano

*pp*

*keep sustain pedal until bar 27*

Vln.      *mp*      *pp*      *mf*      vib. largement

Vc.

Pno.

*II*      vib. normal      *p*      *fp*      *molto vib.*      *fp*      *mf*      vib. normal

Vln.

Vc.

Pno.

## **Structure**

This piece was written as a single large movement but with three sections. As noted above, a fermata is marked over the rest in the first measure of the work. The duration of this measure is left for performers to decide. The main function of this rest is to suggest the concept of a void, a completely silent state of mind, even if there is some quiet noise in the concert hall. The fundamental time signature of the whole work is 3/4. Three performers are required to make a meditation on the progress from number one, through two, to number three in order to feel the pulse of three beats per measure, which repeats and emphasises the core conception of the work. The introduction can be viewed as a musical acknowledgement that everything starts from nothing, then shifts from zero to number one.

The continuous interaction of the duality, Yin and Yang, in the second section creates the third section. The notion of the three numbers is implied in different parts of the work in different layers, functioning as a hidden thread that binds together all the elements of the work.

The compositional strategy of “one-two-three” is also applied in the organisation of the timeframe of this work. Each structural section is planned to last approximately three minutes, two minutes, and one minute respectively. The intention of this is to embody the concept of all things being subject to an overall driving force that pushes the music forwards to the ending.

## **Tempo**

The initial tempo is set as 50 crotchet beats per minute, and then raised to crotchet 60. At the end of the first section, the tempo is raised to crotchet 80 in order to drive towards the first climax. The tempo is eventually raised to crotchet 110 at the connecting pivot between the second section and third sections. That is followed by a passage of densely textured and intricate lines that propel this fast tempo along, with even fiercer rhythms sprinting to the conclusion, the highest point of dramatic tension in the work. From the figures mentioned above, we can perceive that the tempo is advanced in units of 10 beats per minute, namely 10, 20, 30 respectively, which follows the idea of “one two three” in mathematical relationships.

## Pulse

In the rhythmic pulse, the time signature of three crotchets per measure through the whole work serves to emphasise the foundation of the underlying beat pattern in this work: one, two, three. But a much more elaborate rhythm is concealed within this constant time signature. For example, the two-note interval pattern E-F is played consistently on seemingly irregular beats from the beginning of the work, however the positions of the beats are actually triggered on the first beat, second beat, third beat respectively in each measure and then repetitively cycling until end of the introduction. It not only implies the core idea of the work, “one, two, three”, but also creates a sense of two conflicting time signatures applying simultaneously. Specifically, the strings stay on the metrical pattern of 3 crotchets per measure while the piano keeps playing the E-F motive sounded on the beat pattern of 4 crotchets per measure, as shown in the following example.

Example 67, *One Two Three*, section 1, bar 16-25

The musical score for Example 67, *One Two Three*, section 1, bars 16-25, is presented in three systems. The first system (bars 16-20) features Violin (Vln.), Viola (Vc.), and Piano (Pno.). The Violin part starts with a fermata and then plays a melodic line with dynamics *fmp*, *f*, *pp*, *mf*, and *fmp*. The Viola part has dynamics *f* and *pp*, with markings *pizz.* and *arco*. The Piano part plays a steady E-F motive with dynamics *f* and *p*. The second system (bars 21-25) continues the same parts. The Violin part has dynamics *p*, *mf*, and *mp*, with a "molto vib." marking. The Viola part has dynamics *p* and *fp*, with a "pizz." marking and the instruction "Sul A a misura 31". The Piano part continues the E-F motive with dynamics *p* and *fp*.

## **Thematic explication**

The rationale for utilising the E-F motive at the beginning is that these two notes are right in the centre of the piano pitch register. If we move from the highest note on the normal piano keyboard, which is C, and the lowest note, A, towards the centre of the keyboard, eventually we can obtain the adjacent notes E and F as a central point. Thus the piece begins with this two-note group at the central pitch position of the piano. The E-F motive then gradually moves outwards toward the poles, reaching the outermost extremes of the keyboard at the end of the first section. The cello moves from the high register to its lowest note while the violin makes an opposite movement, rising from the low register to high C sharp to create a tension against the lowest C natural on cello. This trajectory also implies the underlying structural concept of this work, namely that everything is created out of a central common point and spreads outward.

## **Further conceptual development**

At the connecting point between the first section and second section, the pitch material returns to the original starting point, the E-F motive in the centre of the keyboard, to highlight again this principle of the centre. The second section consists of repeated conversations in the polar extremes of pitch register, very high versus very low, while the pitch distribution of the third section is more widespread in register.

To connect the three sections, pitch material from the end of each section is utilised as the starting material of the following new section. This not only achieves a smooth transition but also suggests the central concept in which the everything is born from a common root and then burgeons out. The materials of the second section and third section are both derived from the first section. The following example illustrates the connecting material in this work.

Example 68, *One Two Three*, connecting material, bar 121-124

11

**C**  
♩=110 Flow, Constant  
dim. disappearing...  
disappearing...

**C**  
♩=110 Flow, Constant  
as soft as possible  
*PPP*  
Pedal mark\* see performance notes



Photograph 3: Performance of *One, Two, Three* for piano trio by the New Zealand Chamber Soloists, University of Waikato

## CHAPTER 7

### Analytical notes on *Zhong* concerto for cello and orchestra

By the time I came to compose the Cello Concerto I was entering the final stage of work on the PhD portfolio. The research methodology originally set out in the doctoral full proposal had been repeatedly tested, expanded, and refined through two and a half years of practical music creativity. Through this period of writing and reflecting on several works, including processes of planning, composition, rehearsal, amendments, public performance and further amendments, a revised view of the original methodology came into being. This combines and refines discoveries made from the preceding compositions of the portfolio, in particular how accepting the universal existence of numbers could be applied to the central research question of the PhD study: how can an artistic space be created in which musical encounters from different cultural traditions can take place safely and to mutual advantage?

#### Numbers

As mentioned in the previous analysis, since ancient times, many composers have applied the numbers or the symbols of numbers to their works, such as Johann Sebastian Bach, Arnold Schoenberg, Olivier Messiaen, Pierre Boulez, George Crumb, etc. In both Eastern and Western cultures, numbers are often believed to possess particular significance. For example, Tan Dun's work *12 Prayers and a Blessing* was performed by international artists online via technology in Wuhan, Shanghai and New York. The piece is not only related to number 12 in the instrumentation by using 12 gongs, but also implies the concept of numbers in philosophy. As mentioned in the documentation of his live concert, Chinese culture takes 12 as a cycle of life and 12 also indicates a prayer for blessings.<sup>161</sup>

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<sup>161</sup> Yang, Yu and Meng, Yan. 谭盾新作《武汉十二锣》全球首演为中国加油. (World Premiere of Tan Dun's New Work "12 Prayer and Blessing"). 17 Feb. 2020. N.p. Web. 17 Aug. 2020. <http://world.people.com.cn/n1/2020/0217/c1002-31590755.html>

From the Chinese and Western zodiac signs, through the hours of the day, the months of the years and (up until recently) the twelve planets in our solar system – and of course in music – numbers are significant.

Consequently, numbers play an important role in my Cello Concerto in terms of its structure and its pitch organisation, but in this case a move was made away from the very familiar number five to an alternative key number. The aim in doing this was to introduce an innovative element in the use of a numerological basis of construction.

In the previous compositions of the present portfolio, a numerological element already is strongly evident. The piano trio piece *One Two Three* was constructed using those three numbers: 1, 2 and 3. The work for piano and violin *Ji* explored the energy generated between two contrasting poles. As work proceeded on the compositions for the portfolio, it became ever more clear to me that numbers were going to become a central structural principle of the portfolio. As a culmination of this growing awareness of numerology and its place in my musical imagination, the Cello Concerto forms a natural zenith.

In traditional Eastern and Western cultures, the numbers from 1 to 5 are of great significance. Each number has a unique meaning but there is also interrelation and interaction between them. As I mentioned in the previous chapters of the thesis, numbers are closely related and interact with many other disciplines. For example, in the fields of philosophy, traditional Chinese medicine, the meaning of numbers has different expressions. This has long fascinated me, and eventually inspired me to try applying similar numerical principles to the construction of a large-scale musical work, in this case a cello concerto. The structural layout, timbre distribution and pitch organisation of the work are all derived from the interaction between numbers and what I understand to be the characteristics of each number.

## **Structure**

The Cello Concerto work is structured in six sections. The numbers from one to five are all of importance in the way the work is put together. The final section is a prolongation of the previous five numbers and combines the core elements from the previous sections. The detailed evolution process will be provided below.

## Section number one

The number 1 stands for origins and unity that is formless in character. The most primitive form of human music is to convey their needs and emotions by utilizing the range and dynamic of sounds.<sup>162</sup> Since there is no scientific basis that enables us to determine the chronological order of musical phenomena, we can only speculate on the successive stages of sound development.

Perhaps the earliest kinds of music featured rhythms generated according to the movement of living beings, such as hitting and shaking objects. It has been speculated that in the Paleolithic Age, the most basic human expression was to imitate the sounds and rhythms of nature through the mouth and throat.<sup>163</sup> In 70,000 BC, humans began to try to change their voices to gradually adapt to observed changes. Furthermore, with the growing personal experience and awareness, the timbre and tone of the voice were changed when expressing emotions. After that, humans gradually learned to speak and sing. It has been suggested that the first musical civilization was born around 9000 BCE.<sup>164</sup>

We can see from the above that, in the initial stage, sound was mostly produced through mutual interaction of creatures and objects. In simple percussive sounds, pitch cannot be accurately recognized, even it is able to be heard. In the early stages of my PhD, I put forward an argument that many things may originate from a common point, and then grow into different fields through various evolution of year after year. In *Zhong* I take this idea as the starting point for constructing the first section of the work. More specifically, the above paragraph is a brief description of the origin of music in ancient times and its development. From this, we can make the further inference that the music of East and West derived from the same initial, human common point of sound, production which is mainly percussive, and has a less obvious element of pitch.

Thus, his kind of sonority is used throughout the section number one, suggesting the origin of musical sound as well as the beginning of the numbers. An opening that is deep and spacious in character suggest a primeval abyss.

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<sup>162</sup> Roland, de Candé. *Histoire Universelle de la Musique*. Beijing: China Remin University Press, 2014, p.6

<sup>163</sup> *ibid.*, p.31

<sup>164</sup> *ibid.*, p.32

To achieve a primeval musical atmosphere, sounds from the world of nature are called for. So the concerto begins with an unpitched environment that is composed of two different type of bass drums, which are the Chinese drum (Dagu), and the Western symphonic bass drum. Throughout the entire work, these two drums, respectively from the East and the West, have many intersections, especially working with the soloist at the cadenza to once reassert the importance of primeval percussive sound in music.

The two type of the drums are very different in tone, performance techniques, and cultural background, which results in a unique combination of percussion sound. The use of the tam-tam is to enhance the thickness and colour of the lower sounds produced by the drums at the beginning of the work. Since the sound of the Chinese drum will disappear within a short period after each strike, the rolling of the tam-tam can make those bass sounds that about to disappear seem to continue to move forward.

Example 69, *Zhong* percussion at the beginning of the work

The musical score for percussion instruments at the beginning of the work is as follows:

- Snare Drum:** Marked "let ring until disappear" and "l.r. sim.".
- Taiko Drum:** Features a melodic line with notes marked c.3°, c.7°, c.6°, c.5°, c.4°, c.4°, c.3°, c.2°, and c.1°. Dynamics range from *f* to *p*.
- Cymbals:** Marked "Enter sim.".
- Tam-tam:** Marked "Enter about 1° after Taiko Drum" and "Enter sim.". Dynamics are marked *ppp*.
- Whip:** Marked "Enter about 1° after Taiko Drum" and "Enter sim.". Dynamics are marked *ppp*.
- Bass Drum:** Marked "Enter about 1° after Taiko Drum" and "Enter sim.". Dynamics are marked *ppp*.

All the string performers are required to muffle their open strings at the beginning of the work, to evoke a natural wind sound. Each voice of the string sections enters the music in turn and slowly reaches to a climactic tutti at the end of bar 13. The sound of wind, combined with the bursting percussive sound produced by the drum, attempts to delineate a natural landscape of violent storms and thunder.

Example 70, *Zhong*, bars 13 - 14

The musical score for Example 70, *Zhong*, bars 13-14, is a complex orchestral arrangement. It features several parts: Taiko D., T-t., B. D., Vc. Solo, Vln. I, Vln. II, Vla., Vc., and Db. The tempo is marked  $c. \text{♩} = 50$ . The dynamics range from  $mf$  to  $f$ . The score shows a transition from unpitched percussion to pitched sounds, with instructions like "Muffle the open strings harmonics may be heard" and "Snap pizz.". The score is divided into two sections by a double bar line at bar 14. The first section (bars 13-14) is marked  $c. \text{♩} = 50$  and the second section (bars 15-16) is marked  $c. \text{♩} = 100$ . The first section includes dynamics like  $mf$ ,  $p$ ,  $f$ ,  $pp$ ,  $fp$ , and  $f$ . The second section includes dynamics like  $pp$ ,  $mf$ ,  $f$ , and  $mf$ . The score also includes instructions like "Muffle the open strings harmonics may be heard" and "Snap pizz.".

The soloist is introduced at bar 14 after the introduction. The rest of the section number one continues to comply with the key rule, which is more percussive sound, less pitch.

In this section, in addition to the sound of unpitched percussions, other instruments are used in ways that avoid producing pitched sounds as far as possible. For instance, the soloist and all the strings are required to apply some unconventional performing techniques to produce more percussive sounds, such as striking the string with the stick of the bow and Bartók pizzicato. The rhythmic pattern at the beginning of the section number one suggests a connection to an ancient sacrifice, a ritualistic dance of sacrifice. The temporary avoidance of pitched notes is intended to enhance a sense of the complex world of nature. Percussive sounds may evoke the emergence of a jagged terrain of mountain ranges, as the world gradually takes shape from nothingness.

After a time, the percussive sounds slowly transition to pitched sounds. This transition process starts at bar 14, culminating in bar 31 when the important centre note C sharp is heard clearly for the first time, performed by the soloist. Subsequently, this single note is repeatedly

emphasized over and over again by other lower pitched instruments until reaching a climax at the end of the first section.

Example 71 *Zhong*, Percussive sounds, bars 28 – 31

The musical score for Example 71, *Zhong*, Percussive sounds, bars 28–31, is presented in a multi-staff format. The instruments and their parts are as follows:

- S. D. (Shamisen):** Features a rhythmic pattern of eighth and sixteenth notes.
- Taiko. D. (Taiko Drum):** Provides a steady, rhythmic accompaniment.
- Whip:** Adds a percussive texture with sharp, rhythmic accents.
- Vc. Solo (Violoncello Solo):** Plays a melodic line with dynamic markings including *Snap pizz.*, *ord.*, *arco*, and *fp*.
- Vln. I (Violin I):** Plays a melodic line with dynamic markings including *ord.* and *fp*.
- Vln. II (Violin II):** Plays a melodic line with dynamic markings including *ord.* and *fp*.
- Vla. (Viola):** Plays a melodic line with dynamic markings including *ord.* and *fp*.
- Vc. (Violoncello):** Provides a rhythmic accompaniment.
- Db. (Double Bass):** Provides a rhythmic accompaniment.

Example 72, *Zhong*, bars 32-35, emphasis on the central note C sharp

The musical score for Example 72, *Zhong*, bars 32-35, features a variety of instruments and dynamic markings. The woodwind section includes B. Cl., Bsn. 1, 2, Ctnsn., Hn. 1, 3, Hn. 2, 4, Tbn. 1, 2, 3, and Tba. The percussion section includes Timp., S. D., Tsk. D., and Whip. The string section includes Vc. Solo, Vln. I, Vln. II, Vla., Vc. (arco ord.), and Db. (Snap pizz.). The score is marked with various dynamics such as *sf*, *f*, *fp*, *mp*, and *pp*. The Vc. Solo part includes the instruction "ad lib." and "sim." (sustained). The Vc. (arco ord.) part includes the instruction "Snap pizz." (snap pizzicato). The Db. part includes the instruction "Snap pizz." (snap pizzicato). The score is written in a key signature of one sharp (F#) and a 4/4 time signature.

The note C sharp is taken as the starting note in next section and the pitch system is evolved and expanded in the section number two. This is explained in detail below.

## **Section number 2**

As mentioned before, in Chinese cosmology, the universe was organised into the complementary relationship of Yin and Yang out of a primary chaos of energy. The number 2 here refers to the duality of Yin and Yang. One of the greatest tenets of traditional philosophy is that there are two complementary, interconnected, interactional forces in the natural world. They are viewed as parts of a oneness that is expressed in the Tao. In Daoist philosophy, Yin and Yang were introduced in the *Tao Te Ching* in chapter 42.<sup>165</sup> Other numbers have a powerful affiliation with the number 2. Detail about the relationship of these numbers is provided below. Following this philosophical concept, the number 2 exerts a major influence on the structure of the concerto. The musical materials used in the second section are also found in the other sections, but in changed and evolved iterations.

## **Section number 3**

Eminent musicologists such as Zhao Guang have noted that from any point of view, whether in ancient times or the present, from the East or the West, whether in philosophy, metaphysics, ethics, or elsewhere, we will always find that the number 3 seems to have a mysterious and unfathomable aspect.<sup>166</sup>

In Eastern culture, the number three is endowed with a profound philosophical meaning, such as heaven, earth, human in the *I Ching*, where 3 accrues all things in Taoist belief. In the theory of Yin and Yang, heaven is Yang, the earth is Yin, and the relationship between heaven and earth is mediated by humans.<sup>167</sup> Consequently heaven, earth and humans can be thought of as integrated and complete in the number 3. In Western religious and philosophical thinking, the number three also has profound and historical connotations in cultures, including

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<sup>165</sup> Fan, Yingyuan. 宋本老子道德经. (*Tao Te Ching*). Beijing: National Library of China Publishing House, 2017, p.170

<sup>166</sup> Zhao, Guang. 解读数字“三”——在朱践耳音乐创作中的结构意义和象征意义. (*Interpretation of the Number "Three"-The Structural Meaning and Symbolic Meaning in Zhu Jianer's Music Creation*). Shanghai: Shanghai Conservatory of Music Press, 2013, p.14

<sup>167</sup> *ibid.*, p.15

the holy trinity of Father, Son and Holy Ghost in Christianity. The ancient Greek philosopher Pythagoras believed the number three to be a perfect number, as it reflected the beginning, the middle, and the end.<sup>168</sup> In the present composition portfolio, some correlations between the meaning of the number 3 and the creation of music already have been worked out in the piece *One Two Three*.

Sima Qian stated in his book, *The Records of the Grand Historian* that numbers begin with one, finish by ten, but takes shape in three.<sup>169</sup> In addition, the importance of the number three is also mentioned in some other literature in China, such as records of the warring states period (Han dynasty of China, 202 BC – 220 AD), and in Mencius (Warring States period c.770 – 221 B.C.)<sup>170</sup> Following this principle, a completed theme of the work is exposed for the first time in this section, the number three.

This idea of Sima Qian was seminal in informing the structure of the Cello Concerto. It is cast in the final section, with all the significant material being introduced in sections 1, 2 and 3, such as structure, rhythm, theme. By the end of section 3 the exposition of musical material is complete and the music then moves forward through the processes needed to render it complete. Completion is reached at the final section.

Section number four: it can be viewed as a continuation of Yin and Yang. It is recorded in the ancient Chinese divination text, *Book of Changes*, “Changes involve Taiji, which produces two modes. The two modes generate the four forms.”<sup>171</sup> More specifically, Taiji is divided into two mutually complementary but opposite sides which is Yin and Yang. The two complementary forces generate four forms which can be understood as four seasons or as four directions.<sup>172</sup> In music, the full orchestra takes on all the work in this section, as the four sections of the orchestra correspond to the meaning of the number four mentioned above: strings, woodwind, brass, percussion. Each of the four sections of the orchestra possesses a unique character, thereby linking to the constituent elements of the number four.

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<sup>168</sup> *ibid.*, p.18

<sup>169</sup> Zhang, Xiangmei. “数字三的中西文化解读及其翻译”. (Interpretation of Number Three in Chinese and Western Culture). *Journal of Dezhou University* volume 24 issue 5 (2008), p.23

<sup>170</sup> *loc.cit.*

<sup>171</sup> “两仪”. (Two Modes). Chinesethought.cn. Chinesethought.cn,

<sup>172</sup> Cao, shenggao and Liu, yinchang. *周易入门*. (Introduction to Book of Changes). Beijing: Zhonghua Book Company, 2017, pp.182-205

Example 73, *Zhong*, bars 284-290 four sections

The musical score is divided into four sections by vertical bar lines. The instruments and their parts are as follows:

- Picc.**: Piccolo, playing a rhythmic pattern of eighth notes with dynamics *pp*, *mp*, *pp*, *mp*, *pp*.
- Fl. 1, 2**: Flute 1 and 2, playing the same rhythmic pattern as the piccolo.
- Ob. 1, 2**: Oboe 1 and 2, playing a sustained note with dynamics *p*, *mf*, *mp*.
- C. A.**: Clarinet in A, playing a short melodic phrase with dynamics *mp*.
- Cl. 1, 2**: Clarinet 1 and 2, playing a sustained note with dynamics *p*, *mf*, *mp*.
- B. Cl.**: Bass Clarinet, playing a sustained note with dynamics *mp*, *p*, *mf*.
- Isn. 1, 2**: Bassoon 1 and 2, playing a sustained note with dynamics *mp*.
- Cbsn.**: Contrabassoon, playing a sustained note with dynamics *p*, *mp*.
- Hn. 1, 3**: Horn 1, 3, playing a sustained note with dynamics *mp*, *p*, *mf*.
- Hn. 2, 4**: Horn 2, 4, playing a sustained note with dynamics *mp*, *p*, *mf*.
- T. 1, 2, 3**: Trumpet 1, 2, 3, playing a short melodic phrase with dynamics *mp*.
- T. 1, 2, 3**: Trombone 1, 2, 3, playing a sustained note with dynamics *mp*.
- Tba.**: Tuba, playing a sustained note with dynamics *p*, *mp*.
- Timp.**: Timpani, playing a sustained note with dynamics *mp*, *mf*.
- Mar.**: Mallets, playing a rhythmic pattern of eighth notes with dynamics *p*, *mf*, *p*, *mf*, *p*.
- Vln. I**: Violin I, playing a sustained note with dynamics *f*, *mp*.
- Vln. II**: Violin II, playing a sustained note with dynamics *f*, *mp*.
- Vla.**: Viola, playing a sustained note.
- Vc.**: Violoncello, playing a sustained note.
- Db.**: Double Bass, playing a sustained note.

Section number five: After being absent for a while when the four sections of the orchestra were interacting, the soloist quietly steps back into the music at the end of section number four. In traditional Chinese philosophy, WuXing (Five Phases) may be seen as an interaction between five elements which are wood, fire, earth, metal, water. In this section of the concerto, the energy of the work is pushed forward by the voices from five groups of the string family: are violins, violas, cellos, double basses, and the cello soloist. Five strands of sound are intertwined and continue to move forward until the cadenza.

Example 74, *Zhong*, bars 323-328

In this section number five, timbre was generated only by the strings, which is in sharp contrast with the colourful orchestral sound of the previous section number four. The timbre gradually changes from diversification to singularity, from the colour of the whole orchestra to the string section only, and then to the solo at the cadenza.

Example 75, *Zhong*, bars 398-408 cadenza part 1

Musical score for Example 75, bars 398-408, cadenza part 1. The score is written for Taiko D. (Taiko Drum) and Vc. Solo (Solo Cello). The Taiko D. part consists of a series of rhythmic patterns. The Vc. Solo part features a complex, fast-moving melodic line with frequent changes in articulation, marked with *pizz.* (pizzicato) and *arco* (arco). The key signature has one flat, and the time signature is 4/4.



Musical score for Example 75, bars 402-408, cadenza part 1. The score is written for Taiko D. (Taiko Drum) and Vc. Solo (Solo Cello). The Taiko D. part continues with rhythmic patterns. The Vc. Solo part features a complex, fast-moving melodic line with frequent changes in articulation, marked with *arco* and *pizz.* (pizzicato). The key signature has one flat, and the time signature is 4/4.



Musical score for Example 75, bars 405-408, cadenza part 1. The score is written for Taiko D. (Taiko Drum) and Vc. Solo (Solo Cello). The Taiko D. part continues with rhythmic patterns. The Vc. Solo part features a complex, fast-moving melodic line with frequent changes in articulation, marked with *arco* and dynamic markings *pp* (pianissimo) and *f* (forte). The key signature has one flat, and the time signature is 4/4.

## Cadenza

A cadenza can often be regarded as an iconic part of a concerto. Therefore, the construction of the cadenza follows the core concept of this piece, confrontation and co-existence. This is reflected in two aspects, one of which is the energy between solo cello and drums in a series of busy, flying notes. Another contrasting strength comes from the two solo parts, which is an extremely peaceful melody gradually emerging after a fierce section, and then keeping moving slowly toward to the end of the cadenza.

Example 76, *Zhong*, bars 440-452 cadenza part 2

Musical score for Example 76, bars 440-452, cadenza part 2. The score is written for Vc. Solo (Solo Cello). The Vc. Solo part features a complex, fast-moving melodic line with frequent changes in articulation, marked with dynamic markings *p* (piano), *mf* (mezzo-forte), and *mp* (mezzo-piano). The key signature has one flat, and the time signature is 4/4.

## Final section

In the final section, all the previous numbers converge: the musical materials from previous sections are revisited and transformed. To be more specific, the final section begins with the single note motive from the section number one and then moves forward to the two-note theme of section number two.

Example 77, *Zhong*, bars, single note motive moves to the two notes theme

The musical score for Example 77, *Zhong*, is presented in a multi-staff format. The top staff, marked with a box containing the letter 'K' and the number 453, begins with a *ppp* dynamic and a tempo marking of  $\text{♩} = 100$ . The initial notation features a single note motive, followed by a section labeled "sul pont." with the instruction "(as soft as possible) begin imperceptibly". The score then transitions to a two-note theme, which is introduced by the woodwind and string sections starting at measure 459. The woodwinds (Bsn. 1, 2; Cbsn.; Tbn. 1, 2, 3; Tba.) and strings (Vc., Db.) play this theme with dynamics ranging from *mf* to *p*. The Violoncello Solo part (Vc. Solo) features a complex rhythmic pattern, starting with *ppp* and moving to *mf*, with an "ord." (order) marking above it. The overall structure shows the convergence of musical materials from previous sections into this final section.

## Pitch collection

To make a connection with the five numbers, I created five independent matrices that possess similar characteristics as the pitch system of the work. The five matrices of the pitch collection are given below.

Example 78, *Zhong*, pitch matrices

Matrix 1

	I <sub>0</sub>	I <sub>7</sub>	I <sub>10</sub>	I <sub>9</sub>	I <sub>5</sub>	I <sub>3</sub>	I <sub>2</sub>	I <sub>4</sub>	I <sub>1</sub>	I <sub>11</sub>	I <sub>6</sub>	I <sub>8</sub>	
P <sub>0</sub>	F#	C#	E	D#	B	A	G#	A#	G	F	C	D	R <sub>0</sub>
P <sub>5</sub>	B	F#	A	G#	E	D	C#	D#	C	A#	F	G	R <sub>5</sub>
P <sub>2</sub>	G#	D#	F#	F	C#	B	A#	C	A	G	D	E	R <sub>2</sub>
P <sub>3</sub>	A	E	G	F#	D	C	B	C#	A#	G#	D#	F	R <sub>3</sub>
P <sub>7</sub>	C#	G#	B	A#	F#	E	D#	F	D	C	G	A	R <sub>7</sub>
P <sub>9</sub>	D#	A#	C#	C	G#	F#	F	G	E	D	A	B	R <sub>9</sub>
P <sub>10</sub>	E	B	D	C#	A	G	F#	G#	F	D#	A#	C	R <sub>10</sub>
P <sub>8</sub>	D	A	C	B	G	F	E	F#	D#	C#	G#	A#	R <sub>8</sub>
P <sub>11</sub>	F	C	D#	D	A#	G#	G	A	F#	E	B	C#	R <sub>11</sub>
P <sub>1</sub>	G	D	F	E	C	A#	A	B	G#	F#	C#	D#	R <sub>1</sub>
P <sub>6</sub>	C	G	A#	A	F	D#	D	E	C#	B	F#	G#	R <sub>6</sub>
P <sub>4</sub>	A#	F	G#	G	D#	C#	C	D	B	A	E	F#	R <sub>4</sub>
	R <sub>10</sub>	R <sub>7</sub>	R <sub>10</sub>	R <sub>9</sub>	R <sub>5</sub>	R <sub>3</sub>	R <sub>2</sub>	R <sub>4</sub>	R <sub>1</sub>	R <sub>11</sub>	R <sub>6</sub>	R <sub>8</sub>	

Matrix 2

	I <sub>0</sub>	I <sub>7</sub>	I <sub>9</sub>	I <sub>11</sub>	I <sub>2</sub>	I <sub>4</sub>	I <sub>10</sub>	I <sub>8</sub>	I <sub>1</sub>	I <sub>6</sub>	I <sub>5</sub>	I <sub>3</sub>	
P <sub>0</sub>	A#	F	G	A	C	D	G#	F#	B	E	D#	C#	R <sub>0</sub>
P <sub>5</sub>	D#	A#	C	D	F	G	C#	B	E	A	G#	F#	R <sub>5</sub>
P <sub>3</sub>	C#	G#	A#	C	D#	F	B	A	D	G	F#	E	R <sub>3</sub>
P <sub>1</sub>	B	F#	G#	A#	C#	D#	A	G	C	F	E	D	R <sub>1</sub>
P <sub>10</sub>	G#	D#	F	G	A#	C	F#	E	A	D	C#	B	R <sub>10</sub>
P <sub>8</sub>	F#	C#	D#	F	G#	A#	E	D	G	C	B	A	R <sub>8</sub>
P <sub>2</sub>	C	G	A	B	D	E	A#	G#	C#	F#	F	D#	R <sub>2</sub>
P <sub>4</sub>	D	A	B	C#	E	F#	C	A#	D#	G#	G	F	R <sub>4</sub>
P <sub>11</sub>	A	E	F#	G#	B	C#	G	F	A#	D#	D	C	R <sub>11</sub>
P <sub>6</sub>	E	B	C#	D#	F#	G#	D	C	F	A#	A	G	R <sub>6</sub>
P <sub>7</sub>	F	C	D	E	G	A	D#	C#	F#	B	A#	G#	R <sub>7</sub>
P <sub>9</sub>	G	D	E	F#	A	B	F	D#	G#	C#	C	A#	R <sub>9</sub>
	R <sub>10</sub>	R <sub>7</sub>	R <sub>9</sub>	R <sub>11</sub>	R <sub>2</sub>	R <sub>4</sub>	R <sub>10</sub>	R <sub>8</sub>	R <sub>1</sub>	R <sub>6</sub>	R <sub>5</sub>	R <sub>3</sub>	

Matrix 3

	I <sub>0</sub>	I <sub>7</sub>	I <sub>9</sub>	I <sub>11</sub>	I <sub>2</sub>	I <sub>4</sub>	I <sub>6</sub>	I <sub>10</sub>	I <sub>8</sub>	I <sub>1</sub>	I <sub>5</sub>	I <sub>3</sub>	
<b>P<sub>0</sub></b>	A#	F	G	A	C	D	E	G#	F#	B	D#	C#	<b>R<sub>0</sub></b>
<b>P<sub>5</sub></b>	D#	A#	C	D	F	G	A	C#	B	E	G#	F#	<b>R<sub>5</sub></b>
<b>P<sub>3</sub></b>	C#	G#	A#	C	D#	F	G	B	A	D	F#	E	<b>R<sub>3</sub></b>
<b>P<sub>1</sub></b>	B	F#	G#	A#	C#	D#	F	A	G	C	E	D	<b>R<sub>1</sub></b>
<b>P<sub>10</sub></b>	G#	D#	F	G	A#	C	D	F#	E	A	C#	B	<b>R<sub>10</sub></b>
<b>P<sub>8</sub></b>	F#	C#	D#	F	G#	A#	C	E	D	G	B	A	<b>R<sub>8</sub></b>
<b>P<sub>6</sub></b>	E	B	C#	D#	F#	G#	A#	D	C	F	A	G	<b>R<sub>6</sub></b>
<b>P<sub>2</sub></b>	C	G	A	B	D	E	F#	A#	G#	C#	F	D#	<b>R<sub>2</sub></b>
<b>P<sub>4</sub></b>	D	A	B	C#	E	F#	G#	C	A#	D#	G	F	<b>R<sub>4</sub></b>
<b>P<sub>11</sub></b>	A	E	F#	G#	B	C#	D#	G	F	A#	D	C	<b>R<sub>11</sub></b>
<b>P<sub>7</sub></b>	F	C	D	E	G	A	B	D#	C#	F#	A#	G#	<b>R<sub>7</sub></b>
<b>P<sub>9</sub></b>	G	D	E	F#	A	B	C#	F	D#	G#	C	A#	<b>R<sub>9</sub></b>
	<b>RI<sub>0</sub></b>	<b>RI<sub>7</sub></b>	<b>RI<sub>9</sub></b>	<b>RI<sub>11</sub></b>	<b>RI<sub>2</sub></b>	<b>RI<sub>4</sub></b>	<b>RI<sub>6</sub></b>	<b>RI<sub>10</sub></b>	<b>RI<sub>8</sub></b>	<b>RI<sub>1</sub></b>	<b>RI<sub>5</sub></b>	<b>RI<sub>3</sub></b>	

Matrix 4

	I <sub>0</sub>	I <sub>7</sub>	I <sub>9</sub>	I <sub>10</sub>	I <sub>2</sub>	I <sub>4</sub>	I <sub>8</sub>	I <sub>6</sub>	I <sub>11</sub>	I <sub>1</sub>	I <sub>5</sub>	I <sub>3</sub>	
<b>P<sub>0</sub></b>	A#	F	G	G#	C	D	F#	E	A	B	D#	C#	<b>R<sub>0</sub></b>
<b>P<sub>5</sub></b>	D#	A#	C	C#	F	G	B	A	D	E	G#	F#	<b>R<sub>5</sub></b>
<b>P<sub>3</sub></b>	C#	G#	A#	B	D#	F	A	G	C	D	F#	E	<b>R<sub>3</sub></b>
<b>P<sub>2</sub></b>	C	G	A	A#	D	E	G#	F#	B	C#	F	D#	<b>R<sub>2</sub></b>
<b>P<sub>10</sub></b>	G#	D#	F	F#	A#	C	E	D	G	A	C#	B	<b>R<sub>10</sub></b>
<b>P<sub>8</sub></b>	F#	C#	D#	E	G#	A#	D	C	F	G	B	A	<b>R<sub>8</sub></b>
<b>P<sub>4</sub></b>	D	A	B	C	E	F#	A#	G#	C#	D#	G	F	<b>R<sub>4</sub></b>
<b>P<sub>6</sub></b>	E	B	C#	D	F#	G#	C	A#	D#	F	A	G	<b>R<sub>6</sub></b>
<b>P<sub>1</sub></b>	B	F#	G#	A	C#	D#	G	F	A#	C	E	D	<b>R<sub>1</sub></b>
<b>P<sub>11</sub></b>	A	E	F#	G	B	C#	F	D#	G#	A#	D	C	<b>R<sub>11</sub></b>
<b>P<sub>7</sub></b>	F	C	D	D#	G	A	C#	B	E	F#	A#	G#	<b>R<sub>7</sub></b>
<b>P<sub>9</sub></b>	G	D	E	F	A	B	D#	C#	F#	G#	C	A#	<b>R<sub>9</sub></b>
	<b>RI<sub>0</sub></b>	<b>RI<sub>7</sub></b>	<b>RI<sub>9</sub></b>	<b>RI<sub>10</sub></b>	<b>RI<sub>2</sub></b>	<b>RI<sub>4</sub></b>	<b>RI<sub>8</sub></b>	<b>RI<sub>6</sub></b>	<b>RI<sub>11</sub></b>	<b>RI<sub>1</sub></b>	<b>RI<sub>5</sub></b>	<b>RI<sub>3</sub></b>	

Matrix 5

	I <sub>0</sub>	I <sub>2</sub>	I <sub>5</sub>	I <sub>3</sub>	I <sub>10</sub>	I <sub>9</sub>	I <sub>7</sub>	I <sub>4</sub>	I <sub>8</sub>	I <sub>6</sub>	I <sub>11</sub>	I <sub>1</sub>	
<b>P<sub>0</sub></b>	C	D	F	D#	A#	A	G	E	G#	F#	B	C#	<b>R<sub>0</sub></b>
<b>P<sub>10</sub></b>	A#	C	D#	C#	G#	G	F	D	F#	E	A	B	<b>R<sub>10</sub></b>
<b>P<sub>7</sub></b>	G	A	C	A#	F	E	D	B	D#	C#	F#	G#	<b>R<sub>7</sub></b>
<b>P<sub>9</sub></b>	A	B	D	C	G	F#	E	C#	F	D#	G#	A#	<b>R<sub>9</sub></b>
<b>P<sub>2</sub></b>	D	E	G	F	C	B	A	F#	A#	G#	C#	D#	<b>R<sub>2</sub></b>
<b>P<sub>3</sub></b>	D#	F	G#	F#	C#	C	A#	G	B	A	D	E	<b>R<sub>3</sub></b>
<b>P<sub>5</sub></b>	F	G	A#	G#	D#	D	C	A	C#	B	E	F#	<b>R<sub>5</sub></b>
<b>P<sub>8</sub></b>	G#	A#	C#	B	F#	F	D#	C	E	D	G	A	<b>R<sub>8</sub></b>
<b>P<sub>4</sub></b>	E	F#	A	G	D	C#	B	G#	C	A#	D#	F	<b>R<sub>4</sub></b>
<b>P<sub>6</sub></b>	F#	G#	B	A	E	D#	C#	A#	D	C	F	G	<b>R<sub>6</sub></b>
<b>P<sub>1</sub></b>	C#	D#	F#	E	B	A#	G#	F	A	G	C	D	<b>R<sub>1</sub></b>
<b>P<sub>11</sub></b>	B	C#	E	D	A	G#	F#	D#	G	F	A#	C	<b>R<sub>11</sub></b>
	<b>RI<sub>0</sub></b>	<b>RI<sub>2</sub></b>	<b>RI<sub>5</sub></b>	<b>RI<sub>3</sub></b>	<b>RI<sub>10</sub></b>	<b>RI<sub>9</sub></b>	<b>RI<sub>7</sub></b>	<b>RI<sub>4</sub></b>	<b>RI<sub>8</sub></b>	<b>RI<sub>6</sub></b>	<b>RI<sub>11</sub></b>	<b>RI<sub>1</sub></b>	

When my doctoral research gradually entered its final stage, I realized the importance and irreplaceability of numbers in my creative works. When I am considering the convergence of Eastern and Western cultures, numbers serve as a core hub to connect with different voices. The role of numbers is not only reflected in the compositional technique, such as organizing pitch, rhythm and structure, but also reflected in a philosophical thread that coexistence of different cultures and musics runs through my entire PhD research. As mentioned in my previous work *Ji* (极) for piano and violin duo, there is confrontation and harmony in all things in the world, through which we need to find a balance, like Yin and Yang.

## **Coexistence**

In the concerto, cultural coexistence is reflected in the relationship between the soloist and the orchestra, the relationship between the individual and the group, the relationship between the East and the West. In particular, between oneness and diversity in this piece. This contrast has penetrated into the work that will be explained below.

From the rehearsal mark G, bar 247, the continuously flying sixteenth notes are played on woodwinds while a slow and peaceful melody is presented by soloist. These two types of strongly contrasting rhythm move forward in alternation until the climax at end of this section at bar 283. This idea is inspired by the technique ‘jinda manchang’ from the Peking Opera which has been explored and explained in my previous work and analysis as well.

Example 79, *Zhong*, bars 250-254

44

250

Picc. *mf* *pp*

Fl. 1, 2 *mf* *pp*

Ob. 1, 2 *mf* *pp*

C. A. *mf* *pp*

Cl. 1, 2 *mf* *pp*

B. Cl. *mf* *pp*

Bsn. 1, 2 *mf* *pp*

Vc. Solo

Vln. I

Vln. II

Vla.

Vc.

Db.



252

Picc. *ppp*

Fl. 1, 2 *ppp*

Ob. 1, 2 *ppp*

C. A.

Cl. 1, 2 *ppp*

B. Cl. *ppp*

Bsn. 1, 2 *ppp*

Vc. Solo *p* *mp*

Vln. I

Vln. II

Vla. *p*

Vc. *p*

Db. *p*

In terms of acoustic relationship and contrast, the music from the beginning until bar 49 is composed of percussive sounds and the single note C sharp. After that, the work continues the previous sonorous characteristics that emphasize the single note but evolve more strongly into rhythmic shapes.

Example 80, *Zhong*, bars 53-64 Pitch density contrast, from single note C sharp to colourful sonority

8

The musical score is presented in three systems, each separated by a double bar line. The first system (bars 53-56) includes Piccolo, Flutes 1 & 2, and Violoncello Solo. The second system (bars 57-60) includes Piccolo, Flutes 1 & 2, Oboes 1 & 2, Clarinet in A, Clarinet in Bb, Violoncello Solo, Violins I & II. The third system (bars 61-64) includes Piccolo, Flutes 1 & 2, Oboes 1 & 2, Clarinet in A, Clarinet in Bb, Bass Clarinet, Violoncello Solo, Violins I & II, and Viola. The score shows a dynamic range from ppp to f, with various articulations and phrasing.

From the above example, we can see that the repetition of the single note is tightly rhythmical. The continuous sixteenth note rhythmic pattern keeps reiterating the single note uninterruptedly, accompanied by irregular accents. In terms of pitch collection, the notes gradually move from the centre note C sharp to both sides by semitone. In the above example, and the following paragraph, the process of moving from single note to cluster can be seen in detail.

The trajectory of the notes starts from the centre note C sharp at bar 49 that played by piccolo. It then moves to notes C, D, B, D sharp, A sharp, E, F, A, to create a pitch cluster. At the same time, microtones around the centre note C sharp are played by the soloist. Compared with the single tone sonority in the previous section, the aim here is to enhance the richness of the sound.

## **Complementarity**

Complementarity has become one of the most important methods for me to prove my argument in my PhD research. The analysis above demonstrated how the pitch of the work spreads forwards around the centre note C sharp under the energy driven by the rapid 16th notes, which gradually form a pitch cluster. The density of the sound suddenly disappears at the bar 75 and the music returns back to the repetition on the centre note C sharp.

Immediately after that there follows a strong crescendo and glissando on the notes F sharp, G, G sharp, C sharp that pushes the music onwards to the next movement. Excepting the centre note C sharp, the other three notes are the 'exotic voice' that did not exist in the previous cluster. The reappearance of the C sharp can be seen as a common space to connect and embrace the two group of notes. The idea of complementarity has been explicit throughout all the pieces in this composition portfolio too: it is a constant, propelling, creative principle.

Example 81, *Zhong*, bars 77-80 complementarity

The musical score for Example 81, *Zhong*, bars 77-80, illustrates complementarity. The score is divided into two systems. The first system includes woodwinds (Cl. 1, 2; B. Cl.; Bsn. 1, 2; Cbsn.), horns (Hn. 1, 3; Hn. 2, 4), trumpets (C Tpt. 1, 2, 3; Tbn. 1, 2, 3), tuba (Tba.), timpani (Timp.), taiko drum (Taiko. D.), triangle (T.-t.), and bass drum (B. D.). The second system includes strings (Vln. I; Vln. II; Vla.; Vc.; Db.).

Key features of the score include:

- Woodwinds:** Cl. 1, 2 and B. Cl. play continuous sixteenth-note patterns. Bsn. 1, 2 and Cbsn. play a sustained note with a *ppp* dynamic.
- Horns:** Hn. 1, 3 and Hn. 2, 4 play a sustained note with a *ppp* dynamic.
- Brass:** C Tpt. 1, 2, 3 and Tbn. 1, 2, 3 play a sustained note with a *sfp* dynamic and *con sord.* marking. Tba. and Timp. play a sustained note with a *p* dynamic.
- Percussion:** Taiko. D. plays a sustained note with a *ppp* dynamic. T.-t. and B. D. play a sustained note with a *pp* dynamic.
- Strings:** Vln. I, Vln. II, Vla., Vc., and Db. play a sustained note with a *gliss.* marking and a *f* dynamic.

I believe *Zhong* is a summary and zenith of all the previous works of this portfolio in terms of compositional technique and philosophy. The essence has been extracted from the creative practice over the past few years. The sonority and its embodiment of creative principles in this work provide a conclusion to my PhD research.



Photograph 4: rehearsal of *Zhong* for solo cello and orchestra. Auckland Chamber Orchestra with soloist Matti Balzat, conductor Peter Scholes

### **A note on the recordings**

The live recording included in the portfolio is a chamber version. To create this version some parts necessarily were omitted from the original score for full orchestra. The chamber version was recorded in Auckland, New Zealand by the soloist Matthias Balzat with Auckland Chamber Orchestra and conductor Peter Scholes.

To provide a fuller idea of the original character of *Zhong*, a MIDI recording of the original score for full orchestra is included in this portfolio. The concerto was going to be recorded by New Zealand Symphony Orchestra in 2020, however it was postponed until 2022 due to restrictions caused by the coronavirus pandemic.

*Zhong* was commissioned by the Wallace Foundation

## CHAPTER 8

### **Concluding reflections on the portfolio**

The goal of the creative practice research in this composition portfolio and accompanying reflective analysis is to offer a creative solution to the artistic question of how to create a common space in music that enables the coexistence of interacting different cultures.

Importantly, the aim is to allow the music of each culture to retain its individual qualities and not be compromised, as can be necessary for ‘fusion’ music to be created. Instead, the ‘common space’ in my compositions is intended to allow both musics to interact without blending, without compromise.

The proposed solution is to find the junction points amongst the diverse musical sources and resources. The method of locating common spaces is driven primarily by two intellectual disciplines that exist in both East and West: philosophy and arithmetic.

The six principal compositions of the portfolio present a wide range of artistic works from solo display piece through chamber works to orchestral music including a large-scale work, the cello concerto. The works in the portfolio aim to demonstrate how a unique set of compositional techniques and innovations can work in practice to create common creative space.

The solo piano work *Mo* shows how a common space might be derived from the philosophy of the proverb *less is more* which can be found in both West and East. The cello octet work *Sun Wukong* demonstrates how the organization of pitch and rhythm can be shaped by the concept of mutual conversation. The other works, violin and piano duo *Ji*, piano trio *One Two Three*, and cello concerto *Zhong* each shows in a different way how the theory of numbers has been utilized to build musical structure, pitch collection, tempo, timbre, and rhythm of the work. In doing so, the aim is to produce a new technique of organizing diverse elements in artistic practice. The compositional innovation inspired by the concept of cross-culture and arithmetic might be termed complementarity. This approach plays a central role in creating themes, the pitch organization, and the structure of the compositions, as can be observed in all the works mentioned above, and in the cello duo *Glow*.

In summary then, the portfolio of the compositions aims to demonstrate that an individually devised and considered use of methodology can be effectively used when composing each new piece. The common spaces that have been built permit a creative coexistence of different cultures and diverse elements in music. External indicators such as positive reviews, repeat performances, recordings, broadcasts and score publications of the works may be considered to support the evidence presented in the composer's own analytical notes.

While the avant-garde composers are busy with the experience of fusing exotic elements, some tags for cross-cultural compositions have emerged in recent years: 'synthesises', 'fusion', and 'integration', for instance.<sup>174</sup> When two, or more than two, different cultures fuse, I think it will inevitably be that each of them will lose some their own features. Excessive attention on fusion will result in the loss of independence. Therefore, the prime question we need to address when creating cross-cultural works is how to preserve the original features of each culture as much as possible. For me, a 'common space' is the way to achieve that. This will allow for the creation of works with a wide scope for cultural diversity.

I believe that common space exists not only in the matter of compositional techniques, pertaining to rhythm, pitch collection, and structure; but also amongst different genres, like painting, philosophy, poetry, mathematics, and calligraphy. It intuitively feels to me that everything in the universe originated from a single point; different disciplines and diverse cultures transpire after long-term development and evolution, which makes me believe that there are connections and similarities amongst everything. There exist common parts between all the fields. My PhD research has been somewhat carried out in flashback along the research timeline. I have been engaged in pursuing that meeting point of the origin of everything, and trying to create common spaces encompassing different disciplines and diverse cultures.

I aim to grasp the essence of Western and Eastern cultures, embody my own characteristics, sensibilities, aesthetic goals, ideological stances, and make the different cultures of West and East live harmoniously in my creative works. My hope is that these mutual understandings between people who have different cultural backgrounds will also help make the world more peaceful.

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<sup>174</sup> Vir, "*Embracing otherness-creating a world for raga fields.*", nN.p. Web. 10 Jun. 2016

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