

# FOLIO Of COMPOSITIONS

Ming Him Chung

PhD

Department of Music

University of York

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## **Abstract**

This portfolio of original compositions focuses on exploring instrumentation and orchestration techniques. The eight pieces, composed between October 2010 and September 2013 represent different genres varying from solo work to full orchestra. These pieces are the results of my exploration of various compositional and orchestration techniques that I have developed over the period of research. Before examining the piece individually, general comments are provided to explain my orchestration principles and how I put them into practice.

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## List of Compositions

<b>Title</b>	<b>Instrumentation</b>	<b>Duration</b>	<b>Date</b>
<i>Shrouded Echoes</i>	Brass and strings	6'15	Autumn 2010
<i>Two Movements for Low-pitched Instruments and Percussion</i>	Lower woodwinds, lower brass, lower strings and percussion	7'	Spring 2011
<i>Red Incarnations</i>	String quartet	10'23	Autumn 2011
<i>Four Movements for Solo Piano</i>	Piano solo	12'20	Summer 2010
鏡花水月 ( <i>Mirror Flower, Water Moon</i> )	Chamber orchestra	9'42	Autumn 2011
<i>Cold Breeze</i>	2 vibraphone and 2 double Bass	6'26	Spring 2012
<i>Three Movements of Night</i>	Clarinet, double bass and Piano	9'09	Summer 2012
<i>Fractions</i>	Full orchestra	10'31	Winter 2012

# Contents of the accompanying CD

The contents on the accompanying CD consist of sound files generated from the Sibelius software and live recordings made in the workshops in which I participated. Due to the limitation of the software some instrumental techniques and notations cannot be exported into the sound samples. The scores of the pieces have also been revised since the recordings were made, so may slightly differ from the contents of the CDs

- 1            **Shrouded Echoes**  
Sibelius file
  
- Two Movements for Low-pitched Instruments and Percussions**
- 2            Mvt.1
- 3            Mvt.2  
Sibelius file
  
- Red Incarnations**
- 4            Mvt.1
- 5            Mvt.2
- 6            Mvt.3  
Sibelius file
  
- 7            **Four Movements for Solo Piano**  
Performed by Hilary Suckling  
Live Recording  
Summer 2011, Sir Jack Lyons Concert Hall, York
  
- 8            **鏡花水月 (Mirror Flower, Water Moon)**  
Sibelius file

### **Cold Breeze**

9 Mvt.1

10 Mvt.2

11 Mvt.3

Sibelius file

12 Pre-edited version

Performed by the Chimera Ensemble

Live recording

Autumn 2012, Sir Jack Lyons Concert Hall, York

### **Three Movements of Night**

13 Mvt.1

14 Mvt.2

15 Mvt.3

Sibelius file

### **Fractions**

16 Prologue

17 Mvt.1

18 Mvt.2

19 Mvt.3

Sibelius file

## **Acknowledgements**

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Finally I would like to express my utmost gratitude to my parents for their financial support, care and encouragement throughout the years I studied abroad. Without their support none of this would be possible.

## **Declaration**

I declare that all the contents in my portfolio and commentary are the works of my own and have not been submitted for examination at this or any other institution for another award.

## Introduction

While some composers dedicate themselves to creating music out of melody, harmony, texture or extra-musical material, my principal interest lies with sound-world and orchestration. To me, orchestration can be like a composer's fingerprint, and I am fascinated by those composers who have a very distinctive sound-world and orchestration language, such as Mahler, Rachmaninoff, Stravinsky, and Messiaen, as you can immediately recognize their works through their use of instrumental colour.

This research has been a process of finding and developing orchestration techniques and creating a language that defines my music. I do not imply that I have achieved that in this folio—it is an ongoing process that could take one's life-time, —but that rather I have some directions and methods that will help me to achieve this goal.

This commentary outlines the methods that I have developed through my research and comments on how these shape and affect my resultant compositions, taking in elements such as structure and instrumental quality, as well as the key features of the overall style of my compositional identity.

## My source of influence

In order to explain my compositional traits, I should clarify that I do not follow any system or mathematical methods to generate and distribute musical materials. In my early stage I started with the octatonic scale to organize pitches and harmony, however, I became more reliable to my intuition and ear after I familiarized myself with the scale. It is also correct to say that my harmonic language reflects the works for which I have most respect, such as the works of Messiaen, Takemitsu Stravinsky etc.

Even though orchestration is the main focus of my research, my harmonic language is deeply inspired by the following piano works: Messiaen's *Visions De l'Amen* (for two pianos) and Takemitsu's *Les Yeux Clos* and *Litany*. One of the most distinctive



characteristics of their harmony is the use of the octave, giving a strong timbral resonance. This kind of resonant harmonic colour has become a frequent part of my harmonic language, especially in the pieces *Four Movements for Solo Piano*, and *Three Movements of Night*.

In terms of orchestration, I am interested in the instrumental colour of Birtwistle, especially for his use of brass in conjunction with percussion, most notably in *Secret Theatre* and *Earth Dances*, and Crumb's percussion writing in his *Music for a Summer evening (Makrokosmos III)*. The erratic rhythmic pattern and the angular, heavy sound of Birtwistle's brass writing, with interjections from the percussion, and the distinctive sound-world portrayed in Crumb's percussion writing stimulated my own orchestration, especially the brass and percussion writing in my piece *Fractions*.

In order to bring contrast and balance to my orchestral language, I have also investigated the French style of orchestration, in works such as Boulez's *Cummings ist der Dichter* and Takemitsu's *Bryce* (for flute, two harps and marimba). Their light and mystic instrumental quality, especially the use of upper winds and harp, not only creates atmospheric writing, but also enriches and complements the heaviness of brass and percussion. Together with the well-blended strings and wind writing in Debussy's *Prélude à l'après-midi d'un faune* and Messiaen's *L'Ascension*, these form the key element of my orchestration in *鏡花水月 (Mirror Flower, Water Moon)*.

Some of my pieces, such as *Cold Breeze*, *Four Movements for Solo Piano* and *Three Movements of Night*, display the influence of jazz idioms in terms of rhythmic ideas and harmonic language. While I have not been directly influenced by jazz composers, the jazz-like style of the pieces may have been acquired through the music of Takemitsu, who also claimed to have been influenced by jazz, and particularly by the theoretical writings of George Russell. [1]

[1] Toru Takemitsu, *Swing Journal interview*, Tokyo

## My composition methods

As most of my works are multi-movement works, it will be useful to explain the methods I use for arranging musical materials and achieving coherence among movements. Usually, intuitive material is used to develop the foundation of a movement. Instead of introducing new musical materials, distinctive musical ideas from this foundation, for example harmonic ideas or motives, are selected and used to develop other movements. A typical example from my portfolio is *Red Incarnations*, where a foundation movement (the original single movement version of the piece) was composed first, and then a new version is created by expanding and developing musical ideas taken from the foundation it.

## My choice of instrumentation

In my portfolio, the instrumentation of the pieces is chosen for one of the following reasons: 1) it is an experimental piece exploring timbre. *Shrouded Echoes*, *Two Movements for Low-pitched Instruments and Percussion* and *Cold Breeze* fall into this category. *Two Movements for Low-pitched Instruments and Percussion*, for instance is written to explore the timbre of the bass instruments' higher register, while *Cold Breeze* displays the "cold" tone colour created from exploiting the double bass and Vibraphone's peculiar instrumental techniques. 2) The instrumentation is chosen because of a particular sound-world I am trying to depict. *Mirror Flower*, *Water Moon* and *Three Movements of Night* are good examples of this, as the former uses a Debussy-like sound-world to portray something vague and surreal, while the latter uses a jazz-like, dark timbral colour to illustrate the mood of the night.

Four Movements for solo piano and Red Incarnations are two stand-alone pieces of my portfolio. While former explores complex textures on the piano, the latter are written for a string quartet workshop.

## My orchestration principles and techniques

There are two main orchestration principles that I find very useful when blending instruments. The first is similarity of sound quality. Different instruments can produce sound quality very similar within a specific register; for example, the higher register of the bassoon has a clear, thin sound quality which is equivalent to the sound of the upper strings or a muted horn in its higher register. Another method to create similar sound quality from different instruments is by the use of their various specific instrumental techniques. One example is bowed vibraphone, which delivers a bright and metallic sound quality very similar to strings harmonics. Another example is the use of mouthpiece pop in the brass with string pizzicato, as both have a similar, percussive sound quality

The second principle is the use of sustained elements as a way of connecting musical materials and achieving a blend by prolonging the duration of the pitches with different kind of techniques, such as pedaling. This method is developed from *Four Movements for Solo Piano*, in which the motivic idea is in the form of a liner material supported by two sustained chords (Figure 1). In orchestral music, by concealing the attack of a pitch and making use of the decay of sound, it is harder for the ear to distinguish what the instrument is, making the instrument more easily blended with the others. This technique is most effective when dealing with musical materials involving strings and woodwinds, as both can conceal their attack with breathing or bowing techniques.

The following are examples of how these techniques are put into use in my portfolio. The use of similarity of sound is illustrated in figure 2 and 3, with the former featuring an excerpt from *Shrouded Echoes*, in which the similarity of sound between muted brass and violin harmonics is used to create a damp and metallic timbre. Figure 3 shows an excerpt from the first movement of *Cold Breeze*, in which the ringing quality of the double bass harmonics is used to mimic the timbral colour of the vibraphone.

Figure 1: The motivic idea from Four Movements for Solo Piano

Figure 1 shows a musical score for a piano piece. The top staff is in treble clef and contains a melodic line with fingerings 5, 5, 6, and 6. The bottom staff is in bass clef and contains a bass line. Dynamics are marked as *mf* and *p*. A bracket labeled "Half" spans the duration of the piece.

Figure 2: Excerpt from Shrouded Echoes

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Figure 2 shows an excerpt from the piece "Shrouded Echoes". The score is in 2/4 time and consists of two systems of staves. The first system includes a vocal line and four piano accompaniment staves. The second system includes a vocal line and four piano accompaniment staves. Dynamics are marked as *mp* and *pp*.

Figure 3: Excerpt from *Cold Breeze*

Dry, minimal pedal

Vibraphone I

Vibraphone II

Double Bass I

Double Bass II

$\text{♩} = 60$

$\text{♩} = 60$

pizz.

$p$   $mp$   $p$   $pp$   $mf$

$pp$   $mf$   $pp$   $fp$   $pp$

$p$   $mp$   $pp$   $mf$

Figure 4 and 5 show the use of sustained elements. Figure 4 shows an excerpt from *Three Movements of Night*, in which the last crotchet on the piano part in bar 10 (E), is set against the same pitch in the clarinet, with both instruments sustaining the pitch. The clarinet is marked *sotto voce* in order to conceal the attack of the note, hence making the two part sound emerge together. Figure 5 features an excerpt from the second movement of *Fractions*. The disjointed melodic materials in the first flute and vibraphone are linked together with the use of sustained elements played by the first bassoon, first horn and strings.

Figure 4: Excerpt from Three Movements of Night

Figure 4 shows a musical score excerpt from 'Three Movements of Night'. It consists of three staves: a vocal line (top), a bass line (middle), and a piano accompaniment (bottom). The vocal line starts at measure 10 with a *sotto voce* instruction and a *pp* dynamic. A blue arrow points to the first note of the vocal line. The bass line has a *mf* dynamic and the instruction '(note highest possible)' with a *sul pont.* marking. The piano accompaniment features a triplet of eighth notes in the right hand and a triplet of eighth notes in the left hand, both marked *pp*. A blue arrow points to the first note of the piano accompaniment. The score includes various musical notations such as slurs, ties, and dynamic markings.

Figure 5: Excerpt from Fractions, second movement

Figure 5 shows a musical score excerpt from 'Fractions, second movement'. It is a full orchestral score with 15 measures. The instruments listed on the left are Fl. 1, Cl. 1, Bsn. 1, Bsn. 2, Hrn. 1, Hrn. 2, Tbn. 2, Tba, Vib., Vln. I, Vln. II, Vc, and Db. The score includes various musical notations such as slurs, ties, and dynamic markings. The dynamic markings include *mp*, *p*, *pp*, and *mf*. The *sul pont.* marking is present in the Vc part. The score is arranged in a standard orchestral layout with woodwinds, brass, and strings.

## **General features of my composition**

Due to the method I use for organizing musical materials, my compositions have a well-defined section based structure. Before the actual composition process takes place, I am always conscious of the structural division, so that I am clear which and how many musical ideas are to be put into a piece or a movement. My section-based design also suggests that the change of mood is quite frequent in my works.

In my larger scale pieces, the allocation of material among instrumental groups is evenly balanced, with no instruments being over-deployed. Along with the previously mentioned orchestration and instrumental techniques, a variety of alternatives are provided for instrument blending, which facilitates more frequent interactions among different instruments.

## ***Shrouded Echoes***

Samuel Adler, in his 'The Study of Orchestration', mentions that it is a basic orchestration approach to use the woodwind as a mediator when blending brass and string instruments. His words encouraged me to look for a different path, as my research is about developing orchestration techniques and not following conventional approaches. Therefore I decided to compose a piece for brass and string instruments, allowing me to look for other methods to blend these instruments without the use of the woodwind.

The piece is written for the following instrumentation: two horns, two trombones, tuba, two violins, viola, cello and double bass. I do not include the trumpet for two reasons: firstly, the piercing sound quality in the high register makes it very hard to blend with the other instruments, and secondly, its low register is not easy to project, especially when the brass is muted. I used the following approach when attempting to create a well-blended sound from the instruments. The volume and brightness of the two instrumental families need to be well balanced. This is achieved by dynamic control, with the dynamic levels of the brass marked lower than strings. Another way to create a better balance is to use mutes on the brass. To further dampen the volume and brightness of the brass, the harmon mute is used in places where the horns are in their higher register.

The main themes of the piece are based on sustained harmonic materials and "echoes" among the instruments. The sustained chords are derived from a detuned version of the violin's open strings (E Flat, A Flat, D and G). The chords are transposed throughout the piece and sometimes set against its "in-tune" harmonic version (bar 4). The echo consists of two forms. One example is in bar 2 and 3, in which the mouthpiece pop on the brass and the string pizzicati are echoing each other. Another example is the recurring triplet motif introduced in bar 12 and 13. The transformation process of the main theme is slow but gradual until reaching bar 56, where the sustained harmonic material ceases and the triplet motif becomes more erratic in terms of pitch. From bar 78 to 90 the sustained chords and triplet briefly recur in a sparse form, with the violins accompanying in *jetè*. The original version of the main theme returns one last time in bar 98, before the piece comes to an end.



The significance of the piece is twofold. In terms of orchestration techniques, the piece offers a new perspective. Instruments normally regarded as “hard to blend” can still produce similar sound effects by using specific techniques. For instance, both the brass and strings can produce a percussive effect by using their respective techniques, such as mouthpiece pop and key clicks on the brass and pizzicato and col legno on the string. This approach allows me to create a sound effect which does not feature in major schools and styles of conventional orchestration (such as the Russian style of Rimsky Korsakov and French style of Debussy), for example, the “metallic sound” in the last movement of my orchestral piece. In terms of structure, the piece set the course for how to maintain coherence and uniformity by developing and transforming musical material from its most simple form. Most of the material in the piece is created from the sustained chords and recurring motif, with alteration and transformation regarding their pitches, rhythmic pattern and articulation.

The title of the piece refers to both the sound quality and the structure of the piece. The word “Shrouded” represents the sound of the muted brass with its brightness dampened, while “Echoes” describes the repetitive nature of the triplet motif. With its muffled sound quality and “detuned” harmony, the piece has a general dark and atmospheric character. The piece was composed in Autumn 2010.

## Reference

Adler, Samuel. *The Study of Orchestration*. 3rd ed, New York: W. W. Norton, 2002, pp. 63-64 , p.65.

## ***Two Movements for Low-pitched Instruments and Percussion***

When writing for a specific instrument, a composer generally to look for its most effective range to produce the best quality of sound and consistent timbre. Yet, sometimes it is possible to get results beyond our expectation by exploiting the range which is less commonly used, as in Stravinsky's the *Rite of Spring*, where the haunting sound quality of the high register bassoon makes the opening of the piece one of the most memorable moments. In my piece, *Two Movements for Low-pitched Instruments and Percussion*, I have selected a group of musical instruments which have a similar range but different sound quality in different registers. I aim at exploring the contrasting timbral effects within the registers which are generally regarded as less effective, for example the high register of horn and bassoon. While both instruments are less versatile and resonant in their high register, their pale and thin sound quality are exploited in the piece, contrasting to the deep and more resonant of their lower register.

The instrumentation of the piece is focused on low-pitched instruments (two bassoons, two trombones, tuba, two celli and double bass), and some percussion (anvil, bass drum, cymbals and marimba). While lacking high-pitched instruments, some high-pitched material is allocated for bassoons and celli. As a result, material in higher registers has a rather light and thin tone quality (figure 1 and 2). Fast and more articulated materials are also given to the bassoons and celli as they are more versatile in tackling fast passages. Percussion instruments are mainly used for embellishment and highlighting articulated materials from the sustain pitches of the winds and strings, with the exception of the marimba which is used for harmony and fast-flowing passages.

The first movement is composed of four sections. The first section (bar 1 to 27) begins with the bassoons and cellos set against each other, while the double bass and brass serve as harmony and accompaniment. The first bassoon and the cellos are taken up to the higher register in order to achieve a thin and transparent timbre. The second section starts at bar 28, introducing a syncopated motif played by winds and brass in their low to mid register. Together with percussion, the motif's timbre resembles that of a wind band. The motif is further developed in bar 37 by emphasizing the

syncopated rhythm. The third section (bar 41 to 60) begins with melodic material played by the trombones in the high register, while the bassoons serve as counter subject, with light and percussive accompaniment provided by string pizzicato and marimba. The fourth section is a reiteration of the previous sections, with material transformed and modified from the first and second sections employed in bar 60 to 68 and bar 83 to 96 respectively.

Figure 1

4

The musical score for Figure 1 is a page of orchestral music, likely from a symphony or concerto. It features the following instruments and parts:

- Bsn. (Bassoon):** Two staves. The upper staff has dynamics *mf*, *f*, *ff*, and *mp*. The lower staff has dynamics *p*, *mp*, *mp*, *mf*, *ff*, and *mp*. It includes a *sw* (sustained woodwind) marking and a *3* (triple) marking.
- Tbn. (Trombone):** Two staves. The upper staff has dynamics *mf*, *f*, *ff*, and *mp*. The lower staff has dynamics *ff* and *mp*. It includes a *3* (triple) marking.
- Tba. (Tuba):** One staff. Dynamics are *mp*, *mf*, *ff*, and *mp*. It includes a *3* (triple) marking.
- B. D. (Bass Drum):** One staff. Dynamics are *f* and *p*.
- Cym. (Cymbal):** One staff. Dynamics are *mp* and *p*.
- Vc. (Violin):** Two staves. Dynamics are *mp*, *f*, *p*, and *f*. It includes a *3* (triple) marking.
- Db. (Double Bass):** One staff. Dynamics are *mp*, *f*, and *mf*. It includes an *arco* (arco) marking.

The score is marked *13 A tempo* at the beginning. The music is written in a key with one flat (B-flat major or D minor) and a 4/4 time signature. The notation includes various dynamic markings (*mf*, *f*, *ff*, *mp*, *p*), articulation marks (accents, slurs), and performance instructions like *sw* and *arco*.

Figure 2

The musical score for Figure 2 is written in 4/4 time and spans measures 73 to 80. It features four staves: two Bassoon (Bsn.) staves, two Trombone (Tbn.) staves, and one Tuba (Tba.) staff. The top staff (Bsn.) begins with a dynamic marking of *p* and includes a series of sixteenth-note runs. The second staff (Bsn.) has a dynamic marking of *mp* and features a melodic line with a slur. The third staff (Tbn.) has a dynamic marking of *mp* and includes a melodic line with a slur. The fourth staff (Tbn.) has a dynamic marking of *mp* and includes a melodic line with a slur. The fifth staff (Tba.) has a dynamic marking of *mp* and includes a melodic line with a slur. The score concludes with a dynamic marking of *pp* in the final measure.

The second movement begins with a fast and agitated passage in the low register of the instruments, which comprises string chromatics and the syncopated motif from the first movement. Gradually slowing down and moving to a higher register, the passage evolves into a more static section, with the chromatic materials moved to the brass and bassoons and the strings providing sustained notes as harmony. In bar 22 the texture of the movement lightens as the syncopated motif recurs while the bassoons play solo-like material. The musical material of the static sections is restated in bar 30 in a lighter texture and higher register, with the second trombone playing a melodic idea in the high register. The melodic material is taken over by the second bassoons at bar 38 before the movement comes to a solemn end.

This was an experimental work for me, offering me some perspective on orchestration. For each instrumental family, methods of demonstrating timbral variety can be very different. The strings can achieve varied timbral colour by the use of different bow and articulation techniques. The winds, while generally having the least consistency

of sound as a whole, can easily show different sound quality in different register. With their thin and transparent sound quality in high register, the brass is more easily blended with the strings and the bassoons, especially when they are in similar registers. The use of different kinds of mute (or muting effect) can also be used to create different sound effect. These findings have allowed me to explore deeper techniques of blending instruments, and to develop further my own language of orchestration.

*Two Movements for Low- pitched Instruments and Percussion* was composed in Autumn, 2010.

## **Reference**

Stravinsky, Igor. *The Rite of Spring: in full score*. New York: Dover, 1989

## ***Red Incarnations***

When preparing to write this string quartet, I was not able to settle on what materials and method to use, until discovering the “background story” of Stravinsky’s *Three Pieces for String Quartet*. This piece was actually an arrangement from a four-hand piano work, and later a large orchestral version of the piece was published. This reminded me of John Corigliano’s *Red Violin Caprice*, which also existed in 2 arrangements, the Caprice version and the Chaconne version. It was after I had decided to write a string quartet based on Corigliano’s work, and I am amazed that the outcome of my work bears some similarities to the piece by Stravinsky, as both pieces consist of movements of dance-like characters and chordal structure.

The piece was written for a workshop given by the **Kreutzer String Quartet**. I have taken and modified the theme of *the Red Violin Caprice*, using it as the base material for the string quartet. Figure 1 shows the theme from the Caprice, while figure 2 and 3 illustrate how the theme is modified and used in my String Quartet.

Figure 1: The theme of the *Red Violin Caprice*



Figure 2: The modified theme of the *Red Violin Caprice*

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

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

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

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

*sul pont.* *nat.* *sul pont.* *nat.* *sul pont.* *nat.* *sul pont.* *nat.*

Figure 3: another example of the modified theme of the *Red Violin Caprice*

III

Fast (♩=230)

Violin I *fff*

Violin II *fff*

Viola *fff*

Violoncello *ppp* *segue*

*pizz.*

The piece was originally written as a single movement. In the original version, the piece started with a tonal opening (G flat minor), then gradually moved away from the tonal centre until the tonality completely disappeared. This idea, however, did not have full support from the audience and players during the workshop due to the inconsistency of the harmony, and it was later discarded. The material from the original tonal opening does not feature in the new version. Instead, I have taken several sections from the original version and expanded them into three movements. Figure 4, 5 and 6 show the sections of the original version used for development of the three movements

Figure 4: The base section of first movement

4

The musical score for the base section of the first movement consists of two systems of four staves each. The first system starts at measure 31 and includes the following markings: *rall.*, *Più mosso* with a tempo marking of  $\text{♩} = 50$ , and dynamic markings *p*, *f*, *pp*, *p*, *mp*, *p*, *mf*, and *mp*. The second system starts at measure 35 and includes performance instructions *sul pont.* and *nat.*, along with dynamic markings *mf*, *p*, *pp*, *mf*, *p*, *mp*, *mf*, *p*, *mf*, *p*, *mf*, *p*, *mf*, *p*, *mf*, *p*, *pp*, *mp*, *mf*, *p*, *pp*, *mp*, *mf*, *p*, *pp*, *mp*, and *p*. An arrow points to the first measure of the second system (measure 35).



Figure 5: The base section of second movement, with the harmonic materials used to develop into the second movement

Meno mosso (♩=40)  
rall. . . . . A tempo

Violin I: *mp* — *f* *espress.* — *p* *mf* — *f* *pp* — *mf* — *pp* *p*

Violin II: *mp* — *f* *mp* — *p* *mf* — *f* *pp* — *mf* — *pp*

Viola: *mp* — *f* *mp* — *p* *mf* — *f* *pp* — *mf* — *pp* *p*

Cello/Double Bass: *mp* — *f* *mp* — *p* *mf* — *f* *pp* — *mf* — *pp* *p*

Figure 6: The base section of third movement

♩=100 Fast and Brutal ♩=80

Violin I: *mf* — *f* *mf* — *fff* *fff* — *mp* *fff*

Violin II: *nat.* *mp* — *mf* *sul pont.* *fff* *arco* *fff* — *mp* *fff*

Viola: *arco* *mp* — *mf* *sul pont.* *fff* *fff* — *mp* *fff*

Cello/Double Bass: *arco* *mp* — *f* *mf* *pizz.* *fff* *arco* *fff* — *mp* *fff* *pizz.* *mf*

Violin I (measures 52-54): *mf* *sul pont.* *p* — *mp* *sul G* *spiccato* *f* — *ff* *♩=50* *mp* — *p* *♩=33*

Violin II (measures 52-54): *mf* *sul pont.* *p* — *mp* *spiccato* *fff* *pizz.* *fff* — *mp* *arco* *nat.* *p*

Viola (measures 52-54): *sul G* *mp* — *fff* *sul pont.* *arco* *p* — *mp* *pizz.* *fff* *pizz.* *mp* — *p* *arco* *p*

Cello/Double Bass (measures 52-54): *mp* — *fff* *sul pont.* *arco* *p* — *mp* *gliss.* *fff* *pizz.* *mp* — *p* *arco* *p*

The first movement retains the texture of the original version, with the instruments often sharing the same rhythmic pattern while building up a chorale like structure. The intervals between instruments are carefully designed in order to avoid extreme range, with the exception of bar 45 to 49, where the intervals between the first violin and cello are slightly wider. The tempo varies frequently, resulting in the overall unsteady feel of the movement

The second movement is announced by a pizzicato motif, which recurs throughout the movement while dividing the movement into sections. The movement also exploits the idea of the same pitches (or very similar intervals) played on different instruments and articulations. One example is bar 14, in which the violins and viola all play the same pitch (G) on different strings. Another example is bar 30 to 31, in which all the instruments stay on the same pitch (B Flat) using different strings, and with the cello using pizzicato.

The third movement is in three sections. The first (bar 1 to 32) and the third section (bar 33 to 49) are based on a main theme (bar 1 to 10), which comprises a melodic idea and accompaniment. The former is played by the first violin and the latter by the other instruments. The pattern of the accompaniment is designed to give the theme an agitated and dance-like character. Double stoppings are heavily employed to build up a dance texture and harmonic quality. The theme is used as a recurring element while being transformed in terms of length, tempo and pitch. The second section is sparser in terms of texture and harmony, with a more laid-back character compared to the other sections.

The meaning of the title, *Red Incarnations* is twofold. Firstly it refers to the Corigliano piece, from which I draw my inspiration. Secondly, it is a precise description of how the piece was developed from its most original version to its final state (from a single movement work to a three- movement work). The premiere of the original single movement version was given by the **Kreutzer String Quartet** in Spring 2011.

## Reference

Corigliano, John. *The Red Violin Caprices*. G.Schirmer, Inc, 2001

Corigliano, John. *The Red Violin Chaconne for Violin and Orchestra*. G.Schirmer, Inc, 2002

## ***Four Movements for Solo Piano***

In a seminar at the University of York in 2012, Thomas Simaku declared that: “The piano is not just a solo instrument. It is the whole orchestra in one package.” Indeed, the range of the piano covers that of an orchestra and with the use of pedaling and extended techniques, it is capable of producing different timbres and complex textures. Simaku’s words inspired me to compose a solo piano work with complex “orchestral” texture.

I used the following design when composing the piece: Beginning with the fourth movement, I created the outline of the piece using dynamic linear materials with thick chords providing the harmony. The fourth movement was the first to be completed, serving as the foundation for other movements. The motif of the fourth movement (bar 4) comprises three musical lines in the mid register, which are bounded by two four-note chords in the high and low register (figure 1).

*Figure 1: The three musical lines, one in the left hand, and two in the right hand (the stressed notes indicates a separated set of musical line)*

The image shows a musical score for a piano piece. It consists of two staves: a treble clef staff (right hand) and a bass clef staff (left hand). The treble staff contains three distinct musical lines, each starting with a stressed note (indicated by a vertical line through the note head) and followed by a series of eighth notes. The first line is in the high register, the second in the mid register, and the third in the low register. The bass staff contains a single musical line of eighth notes. Dynamic markings 'mf' and 'p' are placed below the treble staff. A bracket labeled 'Half' spans the duration of the piece. The key signature has two sharps (F# and C#), and the time signature is 4/4.

As the movement develops, the musical lines push beyond the boundary of the chords and overlap with each other (figure 2). The same motif is used in both the first and second movements, but in a simplified form. The second movement begins with two chords derived from the opening of the fourth movement. No longer bounded by the

two chords, the musical lines are used individually from bar 20 to 28 (figure2). In the first movement the pedal notes and the opening chords are formed by the taking and redistributing the pitches (in a thinner manner) from the opening chord of the fourth movement, while the musical lines are shortened, forming much shorter phrase. The third movement makes reference to the other movements rather than directly transforming the accompaniment pattern from the fourth movement (see figure 4 and 5). The chromatic bass line at the opening is derived from the passage in the fourth movement at bar 12-15. The materials in bar 12 to 14 are modified versions of bar 41 to 43 of the first movement. With the shortest duration, the third movement serves as a bridge between the second and fourth movement.

Figure 2: The overlapping musical lines

3

The musical score for Figure 2 consists of three systems of staves, each with a treble and bass clef. The first system (bars 8-10) features a complex texture with overlapping lines. The bass line starts with a chromatic passage, and the treble line has a melodic line with a fermata. Dynamics include *fp* and *pp*. The second system (bars 9-11) continues the overlapping lines, with a *Sostenuto* marking in the bass line. Dynamics range from *mp* to *pp*. The third system (bars 11-12) shows further development of the overlapping lines, with dynamics of *mf* and *ff*. The score includes various musical notations such as slurs, ties, and dynamic markings.

Figure 3: The thinned pedal chords and shortened musical lines in first movement

Musical score for Figure 3, showing piano and bass staves. The piano staff begins at measure 14 with a dynamic marking of *p*. The bass staff has dynamic markings of *mp*, *p*, *sf*, *f*, *p*, *pp*, and *mp*. Fingerings are indicated with numbers 3 and 6. A *sfz* marking is present in the piano staff. A *Ped.* marking is at the end of the bass staff.

Figure 4: The opening of the third movement, showing the accompaniment pattern.

III

Musical score for Figure 4, showing piano and bass staves. The tempo is marked  $\text{♩} = 80$ . The piano staff has dynamic markings of *ff*, *fp*, and *pp*. The bass staff has a blue arrow pointing to the beginning of the accompaniment pattern. Fingerings are indicated with numbers 3 and 6. A *rit.* marking is present in the piano staff.

Figure 5: Motif accompaniment pattern of the fourth movement



In order to deal with the complex texture of the piece, the use of the pedal becomes very important, not only for timbral effect but also for outlining the different voices. The piece makes use of both the sustain and sostenuto pedal to create these effects as well as linking musical phrases. The depth of the pedal is also carefully controlled, and the suggested depth of pedal is precisely marked on the score. Apart from pedaling, dynamics are also controlled in great detail. On some occasions each voice has its own dynamic marking.

While not directly connected to the central concern in my research (orchestration), *Four Movements for Solo Piano* is a significant element of my folio. Firstly, it has provided me with a different way to organize the materials for later pieces, which is to think of the texture in a reduced form before expanding it. I have found it particularly useful during the early stages as it is clearer and simpler to have the materials in the most condensed form. Secondly, having written this piece I found myself more settled

in my own harmonic language. It is accurate to say that in terms of harmony, the piece set a model for my later works, especially in the piano writing in *Three Movements of Night* and *Fractions*. Thirdly, the idea of sustaining sound has become one of the most crucial elements in my final orchestral work, creating atmospheric effect and helping to blend and connect musical materials.

The piece was workshopped and premiered in summer 2011 by Hilary Suckling.

### **Reference**

Takemitsu, Toru. *Litany in memory of Michael Vyner - for piano*. Schott Japan, 1990

Takemitsu, Toru and Tateno, Izumi. *Piano works* [sound recording]. Warner Classics, 1997

## 鏡花水月 (*Mirror Flower, Water Moon*)

I have always been interested in French impressionist music. What I find particularly interesting, however, is not the frequent eschewing of tonality in much of Debussy or Ravel's music, but the ethereal quality of the instrumental colour. After settling on the title 鏡花水月 (*Mirror Flower, Water Moon*), I immediately decided to adopt the French style of orchestration for the work, as the best way to depict the meaning of the title.

The title literally means the reflection of a flower in the mirror and the reflection of the moon in water. It is a Chinese phrase describing one seeing and desiring something which is a dream and cannot be grasped, just as the reflection of a flower and the moon cannot be held in one's hand. When looking into the title by character, the character 鏡 (mirror) and 水 (water) are the elements causing reflection. The character 花 (flower) and 月 (moon) are the substances of the reflection. Therefore my instrumentation is divided into 2 categories. The ethereal impressionist orchestration (flute, clarinet, horn and strings) is used to describe the reflection, while the more concrete sound of the percussion and brass represent the substances of the reflection.

The piece also makes references to the meaning as well as the characters of the title. It starts with a well-blended tutti section, with all instruments (except piano) sharing equal importance in terms of musical materials. The piano occasionally pierces through the layers of sound with high-pitched chords, creating a surprising, mysterious effect. From bar 12 to 19, the flute and clarinet shadow the vibraphone, so that the clarity of the latter is dampened. The above examples relate to the idea of "something surreal and hard to grasp". In bar 70 to 73 the arpeggio chords on vibraphone and tremolando on flute represent ripples on the water, and the musical materials mirror each other. In bar 47 to 48, the piano and vibraphone also mirror each other rhythmically, and in bar 59 to 60 the chords on piano mirror the pitches of the vibraphone.



The idea of contrast between reflection and substance is further illustrated by the overall structure of the piece, being based on a structure of contrasting sections. Sparsely orchestrated sections are placed between tutti sections. One example is the tutti section from bar 1 to 19 and the sparse section from bar 20 to 35. While the tutti section has a more ethereal tone colour and less distinctive musical materials, the sparse section is clearer in terms of articulation, with a more solid tone colour and distinctive musical materials. The alternate pattern of full and sparsely orchestrated sections is one of the most prominent features of the piece.

Being the third big ensemble piece written, *鏡花水月* demonstrates a change in direction in terms of my style of orchestration. While the previous two ensemble works are more uniform in terms of instrumental colour and texture, *鏡花水月* shows more contrast. The compositional approach I used also differed from the previous works. During the composing stage, the sound-worlds came into my mind first, and then I allocated the different sound-worlds into sections. Also, I did not fill in the details of musical material until the instrumental structure was finalized. These approaches are adopted in my later works.

Examples can be found in *Cold Breeze* and *Fractions*. The former's sound-world was designed during the composition stage of *鏡花水月*, however, it was taken out and used to develop into *Cold Breeze* by integrating the sound-world with different sets of motives and rhythmic patterns. The later, with contrasting thematic ideas featured in each movement, is composed by paring and drafting the instrument combinations with respective thematic ideas before putting in the pitches and other music materials. Further explanation can be referred in the individual commentary of the works

*鏡花水月* is a chamber orchestral piece in single movement. In some respect the title refers to the nature of how I compose: intuition can be hard to grasp and explain, and I am more intuitive than methodical when it comes to generating musical materials and pitches. Although adopting an overall instrumental colour, that of impressionist music, the timbre and texture constantly change throughout the piece. While the musical materials in the tutti sections are flowing and coherent, the solo passages are more disjointed in order to serve as punctuations in the music. The piece was written in Autumn 2011.

## ***Cold Breeze***

The process of composing involves a number of steps: creating materials, developing them and, sometimes, discarding them. Yet, those “fallen from grace” materials might not be unworthy, but simply not suited to certain settings. On some occasions they can even become a stand-alone composition. If not told, who would ever know that the famous *Souvenir d'un lieu cher* is actually scrapped materials from Tchaikovsky's Violin Concerto?

The musical materials of *Cold Breeze* are taken from the discarded materials originally intended for my chamber orchestral piece *Mirror Flower, Water Moon*. These ideas were not used in the latter because the sound-world did not fit. The materials were first written for double bass and vibraphone, then modified and expanded to incorporate the two double basses and two vibraphones. They are based on particular instrumentation techniques, especially Bass harmonics, bowed vibraphone, and bass pizzicato. Although the timbre of these techniques is quite different, the character created by them is very similar. They all generate a “cold” and transparent atmosphere (thus *Cold Breeze*).

After a brief opening (bar 1 to 6) the jazz-like main theme of the first movement is introduced. The bass parts are mainly pizzicato in syncopated rhythm, while the jazz inspired harmony is played by vibraphones. The pedaling on vibraphones is used sparingly to match the timbre of the bass pizzicato, which results in the overall very dry timbre for the first movement. Another well-defined feature of the movement is the short musical phrases, frequently shifting among the instruments and, hence, resulting in the dialogue-like structure and dynamic pace of the movement.

The second movement is developed from the motif from bar 27 of the first movement (figure 1), where chromatic triplets are set against bass glissandi. The motif transforms throughout the movement in terms of pitch and phrase length. In order to bring contrast to the first movement, short and sparse sections are placed between the motives so that the pace becomes less steady. In terms of timbre the use of pedaling is more frequent than in the first movement, creating a more resonant sound quality.

Figure 1

8

The musical score for Figure 1 consists of four staves. The top two staves are for Vibraphone (Vib.), and the bottom two are for Double Bass (Db.). The score begins at measure 26. The first Vib. staff starts with a *p* dynamic and a *arco* instruction, followed by a series of triplets marked *mp* and *pp*. The second Vib. staff starts with a *ppp* dynamic and a *arco* instruction, followed by a series of triplets marked *mf* and *pp*. The first Db. staff starts with a *p* dynamic and a *arco* instruction, followed by a *gliss.* instruction. The second Db. staff starts with a *p* dynamic and a *arco* instruction, followed by a *ppp* dynamic. The score concludes with a *rit.* instruction and a *pizz.* instruction.

The piece was originally composed as a four movement work. After the first performance, I decided that the duration of the piece was too long. Also, while the first and second movements have their own characters, the third and fourth movements were too similar in terms of materials and instrumentation. I discarded these movements, and replaced them with a single third and final movement. The material from the original third movement is used to expand the new last movement. Compared to the previous movements, this final movement has a less rigid structure. The movement's most prominent feature is its ringing quality of sound, achieved through the prominent use of bowed and tremolo vibraphone as well as bass harmonics.

As mentioned earlier, the instrumentation for this piece is an expansion of the vibraphone and double bass duo of the chamber orchestral material to two vibraphones and two double basses. I made this change for two reasons. Firstly, it reduces the strain on the players, as the frequent use of rapid pizzicato and changing from sticks to bow can be quite demanding. Secondly, it allows me to use more complex materials and richer harmony. After expanding the number of instruments, I spent most of the time allocating and developing existing materials. In short, the process of writing the piece consisted more of arranging than of actual composing, as

the musical materials had already existed before the beginning of the process. Examples can be found in the first and third movements. Some of the double bass pizzicato phrases were originally assigned for a single. After considering the length of the phrases might be too long and difficult to be played in a fast tempo, they are split and assigned to 2 double basses. With four instruments, the linear and chordal materials of the third movements can transform in terms of intervals, hence enriching the it's harmonic flavor.

The premiere of the original four movement work was given by the Chimera Ensemble in Autumn 2012. This is the version on the accompanying CD.

# Three Movements of Night

Many contemporary composers tend to avoid repeated pitches, especially octaves, when creating musical materials and harmony, occasionally some composers do not follow that trend. In Takemitsu's solo piano work *Litany*, there is the frequent use of octaves in the harmony, which is, in my opinion, not only appealing to the ear but also very distinctive. While finding Takemitsu's piece quite inspiring, I decided to take that inspiration in a different direction. This is why I combined that specific harmonic language with jazz idioms, and *Three Movements of Night* is the result of that combination.

In Takemitsu's *Litany*, the composer features the use of octaves in the harmony. The dark and extra-resonant sound-world is what I tried to capture in my piece. In figure 1 and 2, the piano part shows how I put octaves to use in my own harmony.

Figure 1

Three Movements of Night

I

Ming Him Chung

Clarinet in Bb

Double Bass

Piano

Moderato ♩=80

*mp* *espress.* *mf* *p* *mf* *p*

*mp* *espress.* *mf* *p* *arco*

*p* *mp* *p* *mp*

duration c.a 9 minutes 18 seconds

Figure 2

2

The image displays a musical score for three systems. The first system consists of a single staff with a treble clef, starting at measure 5. It features a melodic line with dynamics *mp*, *p*, *mp*, *f*, and *pp*. The second system has two staves: a bass clef staff and a grand staff (treble and bass clefs). The bass clef staff includes a *pizz.* marking and dynamics *mf*, *p*, and *f*. The grand staff includes dynamics *p*, *mp*, *p*, and *f*. The third system also has two staves: a bass clef staff and a grand staff. The bass clef staff includes dynamics *p*, *mp*, *p*, and *f*. The grand staff includes dynamics *p*, *mp*, *p*, and *f*. Various musical notations such as slurs, ties, and articulation marks are present throughout the score.

I chose the clarinet for the deep sound quality of its low and mid registers, and also because of its versatility in tackling fast running passages, which is a feature of the first and final movements. The double bass was also added to the instrument line-up as double bass pizzicato fits well with the overall jazz style of the piece.

The first movement starts with a tutti section, with clarinet and double bass playing melodic materials while the piano provides harmony. From bar 11, the music begins a section in which the clarinet and double bass pizzicato form a dialogue in a jazz-like theme, with the piano outlining the harmony only at the cadence point. From bar 19 the tutti section recurs briefly, until moving into sections of piano- double bass duo and clarinet-piano duo from bar 28 and 38 respectively. The jazz-like theme returns in bar 47 before the movement ends.

The second movement begins in minimalist style. Played by the piano, the minimal materials are derived from the final bar of the first movement, with the octaves in the right hand highlighting a separate set of melodic material (figure 3). The clarinet and double bass use various kinds of instrumental techniques (harmonics, pizzicato, key clicks, col legno etc) to accompany the piano, adding an atmosphere of mystery.

The climax of the piece starts in bar 22, where the rhythm of the minimal material starts to become more complex, with the clarinet and double bass joining in the rhythmic pattern at bar 24. After the climax the movement comes to a sudden and still end.

Figure 3: The minimalist idea and melodic material in octaves

The musical score for Figure 3 consists of three staves. The top staff is for the clarinet, the middle for the double bass, and the bottom for the piano. The clarinet part starts with a sustained pitch, marked with 'low C#' and 'low F#'. It includes dynamics like *p* and *pp*, and performance instructions such as 'N' (noisy) and 'sotto voce'. The double bass part features a rhythmic pattern with dynamics like *pp*, *p*, and *ppp*, and performance instructions like '(half pressed)', 'sul pont. (glassy)', and 'gliss.'. The piano part provides harmonic support with chords and a steady rhythm. The score is marked with '2' and '3' at the beginning of the first and second staves respectively.

The third movement is based on the materials from the previous movements. It starts with the clarinet playing a sustained pitch with glissando effect, accompanied by the piano motif derived from the minimal idea from the second movement. In bar 16, the Jazz-like thematic material of the first movement returns and develops into a section of fast running linear materials in bar 23. The pace and the mood of the music gradually ease as the jazz-like theme briefly recurs in bar 31, and, after stating the minimal motif one last time the movement comes to an end.

Several of the works in my folio experiment with different timbre and instrumental colour, such as the transparent and impressionistic timbre in *Mirror Flower*, *Water Moon*, and the metallic and cold tone colour in *Cold Breeze*. Together with the dark and resonant sound quality of *Three Movements of Night*, they form the most

important elements of my orchestration language. The instrumental colour and techniques employed in these works serve as the foundation of my final full orchestral piece.

*Three Movements of Night* was composed in Summer 2012, and its title refers to its dark harmonic and timbral quality, as well as to the overall soft dynamic of the piece.

## **Reference**

Takemitsu, Toru. *Litany in memory of Michael Vyner - for piano*. Schott Japan, 1990



## ***Fractions***

During the pre-composition stage, I asked the question: “what is the unique sound-world that best represents the orchestra? Is it a certain style of orchestration or instrumentation?” I did not find a satisfactory answer until, while listening to a live recording of a concert, the tuning and warming up of the orchestra caught my ears as I heard the sound building up from the concert pitch A. It began with just a few players, and then gradually the whole orchestra became involved. That chaotic yet very distinctive sound-world became the starting point of my final piece.

The piece is in 4 movements: Prologue, Movement I, Movement II and Movement III. Each successive movement is based on the idea of contrast and change of soundworld. The Prologue begins with a messy and loosely orchestrated section resembling the tuning and warming up of the orchestra. In order to signal to the audience that it is the actual start of the performance, there is a short chromatic passage played by the piano at the beginning of the section. The section gradually becomes more systemically orchestrated until it finally evolves into an organized and conventional movement. While dealing with this opening section, I decided to fully notate the tuning and warming up, so that the transition between the two sections will be smoother and more controlled.

In Movement I, I play around with the idea of two sets of contrasting elements. One of them is the idea of heaviness and lightness in terms of orchestration. This is achieved by combining the use of percussive instruments and brass in the mid to low register (piano, vibraphone, harp and lower brass) as the dark and heavy force, while using the high registered woodwinds and upper strings as the bright and light force. To allow the two forces to be well linked together, the harp and clarinets act as a bridge between them. The other set of elements is the idea of sustain and discontinuity. Rather than solely relying on sustained chords, I use the ringing and pedaling of the percussion to produce a sustaining effect. The discontinuity is allocated to the wind section (bar 36 to 40).

“Clarity versus obscurity” became the main theme of Movement II. A thick sound mass serves as the background of the movement. While at the beginning of the movement the audience can hear instrumental lines fading in and out, or merging together, it is not possible to distinguish any distinctive lines inside the sound mass until the flute enters in bar 12. This musical gesture is repeated and transformed throughout the movement. An example can be seen in bar 16, where the flute has an entry highlighted and echoed by the vibraphone. Another example is in bar 26, where the gesture is shared by the woodwinds.

The main theme of Movement III, first introduced by the tubular bells and vibraphone at the beginning of the movement, is repeated and modified in terms of timbre throughout the movement. Each time it is repeated, the timbre becomes less “solid” and clear until it disappears completely (at bar 20). This effect is achieved by employing different instrumentation and articulation techniques. For example, first stated by brass staccato, the theme is repeated by string pizzicato and then half col legno and col legno.

*Fractions* was composed from Winter 2012 to early Spring 2013. Its title refers to both the structure and texture of the piece. All four movements have short duration and rather sudden endings. Movements I to III are all based on the same musical material, first introduced in the percussion section at the end of the Prologue (bar 36 to 38). While the material (in different form and length) serves as a recurring motif, I use different instrumentations to create different settings for the motif to recur. As the final work for my PhD portfolio, the piece demonstrates orchestration techniques developed over the three years, from the most conventional style to my own kind of orchestration language.

## Conclusions

Looking through the works composed during these three years, I think I have stayed on more or less the same path in my way of composing, while showing an increased depth of thinking and more mature use of compositional techniques. I am able to harness my skills better and put them to use with increasing sophistication, which is also demonstrated by the increasing musical complexity in my pieces.

As stated in the introduction, the goal of this research—finding and developing the orchestration language that defines my music, — is “an ongoing process that could take one’s life-time”. While I feel that my language of orchestration has gradually taken form, however, (Influenced by innovations and inspirations of other composers), this research will certainly be the basic of my future work and further development in composition.

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