Portfolio of Compositions

Conceived in Relation to an Exploration of Silence in Music

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Doctor of Philosophy

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Music

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Abstract

The compositions presented in this portfolio are unified by a common underlying theme: the idea of silence in music. The works were written between October 2012 and August 2015 during the course of my research. They were conceived as part of my exploration of three silence-related areas: the uses of silence in music; the ways of effecting a perception of silence musically; and an indeterminate approach to placing silence in a musical work. Some pieces seek to explore one major idea while the purposes of others may be manifold. But in all these compositions, silence emerges as an integral part of the overall musical structure.

Contents

List of compositions

Title	**Instrumentation**	**Period of composition**	**Duration**
String Quartet	String quartet	Oct – Dec 2012	7’40”
On the Wings of the Spring Breeze	Solo flute	Jan – Jun 2013	7’
Rude Awakening	Orchestra	Mar – Jul 2013	15’
In the Quietness of a Bamboo Grove	Solo violin	Jan – May 2014	9’-15’
Home City Dream City	Orchestra and field recordings	Feb – Oct 2014	15’
Music for a Starry Night	Strings, 2 percussion and piano	Jan – Jun 2015	15’
*Nocturne**	Solo piano	Jun – Aug 2015	9’

*This work is not specifically discussed in the commentary.

Contents of the accompanying CD

The score of some pieces have been revised since their fist performances, and so may differ slightly from the recorded versions.

Unfortunately, only an audio recording of the flute solo is available, so the theatrical acts during the performance cannot be seen.

String quartet

1. Movement I
2. Movement II
3. Movement III

   Performance:
   Quartet Diotima
   February 19, 2013
   The University of York, York, UK

4. *On the Wings of the Spring Breeze* for flute solo

   Performance:
   Diondre McKinney
   July 19, 2013
   Atlantic Music Festival 2013
   Lorimer Chapel, Colby College, Maine, US

5. *Rude Awakening* for orchestra

   Performance:
   Janacek Philharmonic Orchestra
   Ondrej Vrabec, conductor
   August 28, 2013
   Ostrava Days 2013
   Philharmonic Hall, Ostrava, Czech Republic

6. *Home City Dream City* for orchestra and field recordings

   Performance:
   Hong Kong Sinfonietta

Ken Lam, conductor
November 21, 2014
Hong Kong City Hall Concert Hall, Hong Kong

7. *In the Quietness of a Bamboo Grove* for violin solo
   Performance:
   Fabio Sarlo
   June 5, 2014
   The Sir Jack Lyons Concert Hall
   University of York, Heslington, York, UK

8. *Music for a Starry Night - Hommage à Béla Bartók* for strings, percussion and piano
   Performance:
   Violin: Finna Kurniawati, San Win Htike, Tim Chen, Patricia Erika Poblador
   Viola: Karoline Vik Hegge, Victor Williams, Jared Yapp, Kieran Welch
   Cello: Dylan Lee, Alfian Adytia
   Percussion: Matthew Lau, Austin Lamarche
   Piano: Thomas Rosenkranz
   Conductor: Chris Kim
   June 25, 2015
   Wet Link (The Modern Academy Concert Series)
   Loke Yew Hall, The University of Hong Kong, Hong Kong

Acknowledgement

No words can fully express how much I appreciate the experience of studying music in Britain where I find an enviably vibrant music scene and, even more, the special opportunity to study music composition at the University of York where I have spent three extremely fruitful years.

I owe my greatest gratitude to Professor William Brooks, my supervisor, for his guidance and unfailing support in every stage of this probe into musical silence, and, above all, for allowing me to be myself, and to roam and explore at my own pace. He never imposes his personal tastes or views on me, but when he does share his thoughts, they are always insightful and hugely inspiring.

I must express my heartfelt gratitude to Professor Roger Marsh, who has given generously of both his time and knowledge throughout the course of my studies. I would also like to thank Professor Ambrose Field and Dr. Thomas Simaku for their valuable advice and encouragement during my study in York. Special thanks are due to Mr. Ben Eyes for doing such a wonderful job in mixing the recorded ambient sounds for my orchestral work *Home City Dream City*.

I wish to extend my thanks here to all the musicians, individuals and groups, who have performed and brought to life the works included in this portfolio: Diondre McKinney, Fabio Sarlo, Quartet Diotima, Hong Kong New Music Ensemble, Hong Kong Sinfonietta, and Janáček Philharmonic Orchestra.

Finally, I must thank my parents for their understanding and relentless support, from the first day I decided to switch from a chemistry-major to a music freshman ten years ago.

Declaration

I declare that this portfolio represents my own work and that it has not been previously included in a thesis, dissertation or report submitted to this University or to any other institution for a degree, diploma or other qualifications. All sources are acknowledged as References.

Chapter 1

The Less Beaten Track

Shortly after I embarked on my exploration of musical silence, I realized that this was not a topic that kindled ready interest from fellow composers. One, upon knowing my subject of interest, frowned faintly and blurted, without the least intention to be rude, 'But that doesn't sound interesting.' The unspoken question, I guess, was: what has silence got to do with music (the converse of Charles Ives' famous dictum)?[1] And this response was not a solitary one in the circle of musicians I frequented.

Such a response is entirely understandable. I, for one, would have reacted in a similar way a few years back. For we have been taught from our first music lesson that music is composed of sound. The major thrust of a composer's concern is the generation of sounds and their arrangement into music. The burden of the musical message is conventionally seen as resting almost exclusively on the sounds that make up a composition. To the majority of musicians, silence is not a music-related subject. The absence of an article on silence in the 2001 edition of the *New Grove Dictionary of Music* serves as a case in point. The scarcity of research in this field points further to the fact that silence in music belongs to a realm that remains largely unexplored.

So why did I set out to investigate this in the first place? My interest in silence was initially derived from conceptual rather than from compositional necessity. In my undergraduate studies, I was introduced to the thought and music of John Cage, commonly acknowledged as the most influential American composer of the twentieth century. Cage cultivated a lifelong fascination for silence during the late 1940s, after developing an interest in Indian and Japanese cultures and, in particular, Zen Buddhism. He first asserted that silence is not empty: there is something in it to be attended to and to be felt about. Then, after the famous anechoic chamber experiment, he made the subsequent assertion that silence is not silent: there is something in it to be heard. To use Cage's own words, 'These [ambient] sounds can be depended upon to exist [in silence].'[2] The latter assertion stuck me as particularly enlightening. It overturned the traditionally held belief that silence means having nothing to hear. I was fascinated to practice

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[1] Jenny Doctor, 'The Texture of Silence', in *Silence, Music, Silent Music*, ed. Nicky Losseff, Jenny Doctor (Adershot, UK: Ashgate Publishing, 2007), 15.
[2] John Cage, 'Composition as Process' (1958), in *Silence* (Middletown, CT: Wesleyan University Press, 1961), 22-3.

at the time what I call 'active listening' in my day-to-day life (when I was strolling up the path leading to the university's campus; when I was standing on the platform of an underground station; when I was sitting up late in my own room), turning my ears to sounds that might have gone unnoticed. Hence I developed an interest in ambient sounds well before I entertained the idea of incorporating ambient sounds into a musical composition.

Cage wrote a series of works in which silence plays a vital role in the musical experience. The most famous is a piece written in 1952: *4'33"*, in which silence features as the most fundamental element. (A more detailed account of this work is given in Chapter 3.) But works that are not usually considered to be 'silent' pieces may also contain prolonged silences. One example is *Branches* (1976) for percussion solo, duet, trio or orchestra of any number of players. Segments of silence, up to eight minutes long, are inserted between the improvised sections. In the last six years of his life (1987-92), Cage composed a collection of about forty works, each of which named after the number of performers involved. In these late compositions, in which Cage explored his newly devised time-bracket technique, silence remains a significant compositional idea. In *Five*[2], for example, the first two time brackets for the timpani as well as the last two brackets for the English horn contain nothing but silence. In Cage's music, silence becomes a sonic or conceptual object to which a work aspires.

Cage's ideas and music have inspired a new generation of composers, including the Wandelweiser Group founded in 1992 by Dutch-born flautist Antoine Beuger and German violinist Burkhard Schlothauer, subsequently joined by other composers/performers. Taking Cage's *4'33"* as their starting point, the Wandelweiser composers incorporate prolonged silences into their pieces, which are often referred to as 'silent music'. Antoine Beuger's *calme étendue (spinoza)* begins with no less than nine minutes of silence. In yet another of Beuger's work, *ins ungebundene* (1998), any duration up to the final 80 minutes of this potentially 90-minute work can be silent. Schlothauer succinctly describes the music of this distinctive and uncompromising group in his essay *Etwas über Wandelweiser* (2002): 'Silence occupies a large share of its often extended performance durations. There is little conventional drama in this music, and the presentation of sound material is often very clear: harmony, rhythm and melody play either a subordinate role or none at all.'[3]

At the other end of the spectrum, there are composers who evaluate and bring attention to

[3] Burkhard Schlothauer, '*Etwas über Wandelweiser*', accessed July 20, 2016, http://www.kompositionskunst.de/Texte/wandelweiser.htm.

silence in a remarkably different way. I was especially attracted to the works of two Italian composers: Luigi Nono and Salvatore Sciarrino. In Nono's music, as in *Fragmente-Stille, An Diotima* for string quartet (1980), a borderland between silence and sound is sustained. On the other hand, Sciarrino uses what have been traditionally regarded as 'un-musical' sounds to bring about an impression of silence in his music. A perfect example is found in *L'opera per flauto*, a collection of compositions written for solo flute.

The examples given in the foregoing paragraphs illustrate, to some extent, the myriad forms in which musical silence can exist. Intrigued by this multiplicity, I began to nourish the idea of exploring musical silence in my own music.

By the end of the twentieth century, there was an increased awareness, among philosophers as well as composers, of the need to examine the relations between sound and silence in music. Jerrold Levinson, for instance, argues that silence is a central structural element of much music: 'there are very few imaginable musics, and no actual musics, for which silence—the space between sounds—would not be a structural principle.'[4] This growing interest has continued into the new millennium. In his article *The Poetics of Musical Silence*, Thomas Clifton explains very vividly why silence in music is a subject that is worth investigating:

> The focus on the phenomenon of musical silence is analogous to deliberately studying the spaces between the trees in a forest: somewhat perverse at first, until one realizes that these spaces contribute to the perceived character of the forest itself, and enable us to speak coherently of 'dense' growth or 'sparse' vegetation.[5]

Obviously, I am among those who believe that musical silence is a subject worth exploring. As a relatively new field of study, its appeal lies largely in the rich possibilities it offers. The two questions I sought to answer are very basic, namely: 1) what has silence got to do with music? and 2) what has sound got to do with perceived silence? These are, of course, very broad in scope, and my purpose has been simply to illuminate specific areas that are worth further investigation in more depth. (A third question, concerning distribution, has emerged, but this was not well formulated when I began my studies.)

As a composer's project, my investigation is essentially practical rather than philosophical. I

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[4] Jerrold Levinson, 'The Concept of Music', in *Music, Art, and Metaphysics* (Ithaca, NY: Cornell University Press, 1990), 270-273.
[5] Thomas Clifton, 'The Poetics of Musical Silence', *The Musical Quarterly* 62, no. 2 (April 1976): 163.

have created eight works over the past three years, one or two being written to satisfy the requirements of particular performance situations. These works can be divided into three groups according to the focus of inquiry they share. The three categories roughly coincide with the three stages of my exploratory journey. In the commentary, attention is focused on the works that were conceived directly in relation to the research. Each composition is discussed in relation to the specific aspects of silence it seeks to explore.

The commentary contained in the following chapters does not give a technical description of each work. Instead, it outlines for each piece: 1) the ideas to be explored (in respect to the functions, forms and distribution of musical silence); and 2) the strategies developed for achieving the specified ends (with references, where necessary, to ideas and works that have influenced my compositional process). The commentary is not intended to explain every note in detail. Rather, it is intended to provide an understanding of the aesthetic principles underlying each work.

In the fall of 2012, I was poised and ready to begin this exploratory journey that would span three years. And I made the first step forward with this question: what has silence got to do with music?

Chapter 2

Silence in Music: Notions and Functions

The inclusion of silence in Western music is by no means a new invention or a rare phenomenon. Quite obviously, one reason for this inclusion is the practical necessity of inhaling air in performance. Well before music appeared in notated forms, silence found its place in Gregorian chant. The singing involved a pause for breathing in the middle of each Psalm verse. These breathing pauses were also considered to provide a spiritual space, promoting meditation and communing with the Holy Spirit.[6]

After measured pauses came to be indicated by notators beginning in the thirteenth century, silence appeared in the bulk of Western art music frequently in the form of rests of varying lengths. All musicians are familiar with the rest symbols which signify a gap in the musical flow, resulting in a brief duration of silence.

These moments of silence were placed in a musical structure for a variety of purposes. Master composers in the classical era (Mozart, Haydn and Beethoven) demonstrated in their works how it was possible to use silence in a most imaginative way in articulating and expressing a musical idea. An oft-quoted example is the extended pause preceding the recapitulation in the first movement of Mozart's *Piano Concerto in G major*. The silence creates a heightened sense of anticipation. Another illustrative example is found in Haydn's *String Quartet Op. 21, No. 3* where silence is introduced in the very first bar as a motivic ingredient. This interplay between silence and sound becomes a 'central structural element' of the entire work.[7]

John Cage identified three major functions of silence in music:

> Silence was the time lapse between sounds, useful towards a variety of ends, among them that of tasteful arrangement, where by separating two sounds or two groups of sounds their differences or relationship might receive emphasis; or that of expressivity, where silences in a musical discourse might provide pause or punctuation; or again, that of architecture, where the introduction or interruption of silence might give definition either to a

[6] Emma Hornby, 'Preliminary Thoughts About Silence in Early Western Chant', in *Silence, Music, Silent Music*, 143.
[7] Jerrold Levinson, 'The Concept of Music', 270-273.

predetermined structure or to an organically developing one.[8]

Put simply, silence is useful in fulfilling three functions: arranging, punctuating and structuring. Obviously, the first two functions are related to the capability of silence to add value to the composed sound: making it more clearly-phrased or more expressive. In these cases, the significance of silence lies in its use in serving the neighbouring musical notes: silence is subservient to sound. New notions of silence, however, have emerged from musical developments in the twentieth century. Silence has come to acquire an independent status which puts it on a par with traditionally-acknowledged musical attributes – pitch, rhythm, timbre and dynamics. Silence is regarded as a concrete object which exists in its own right. This new conception has enabled composers to use silence in ways fundamentally different from its traditional, ancillary functions. And it was this very last idea in Cage's account given above – silence serving as a structuring device – that first caught my imagination.

Cage's account outlining the uses of silence within a musical framework could be taken as a starting point for my present experimental inquiry. It inspired me initially to create two new works – a string quartet and a flute solo – in which I explored the uses of silence in my own music.

String Quartet

I consider the *String Quartet* as my first ever attempt to deliberately incorporate silence in my music. This seven-minute long work comprises three short yet highly characterized movements. The brevity of the movements (each about two and a half minutes in length) might call to mind Webern's *Bagatelles* for string quartet. All six pieces in that collection are very short, lasting only two minuets. In my case, as it is believed to be in Webern's, the brevity underlines an approach to composing that takes silence as the foundation for sound.[9] I tend to agree with Vladimir Jankélévitch who contends that short pieces, in a way, tie music closer to silence, as sound emerges from and retreats into quiet within a diminished span of time.[10]

Silence is used lavishly, in particular in the first two movements, but virtually throughout the entire piece. Apart from framing the musical utterance and dividing the movements, pauses of

[8] John Cage, 'Composition as Process', 22.
[9] Jenny Doctor, 'The Texture of Silence', 28.
[10] Vladimir Jankélévitch, *Music and the Ineffable*, trans. Carolyn Abbate (Princeton: Princeton Univ. Press, 2003), 141.

varying lengths are placed in all three sections for a variety of purposes. They aid in punctuating, arranging, and, above all, in structuring. The primary goal of this work is to explore the role of silence as a structural parameter.

Figure 2.1 gives the opening lines of the first movement. It is immediately evident that the musical material is basically pointillistic in nature. It contains a collection of isolated sounds or sound gestures with pauses placed between them. There are as many pauses as there are notes.

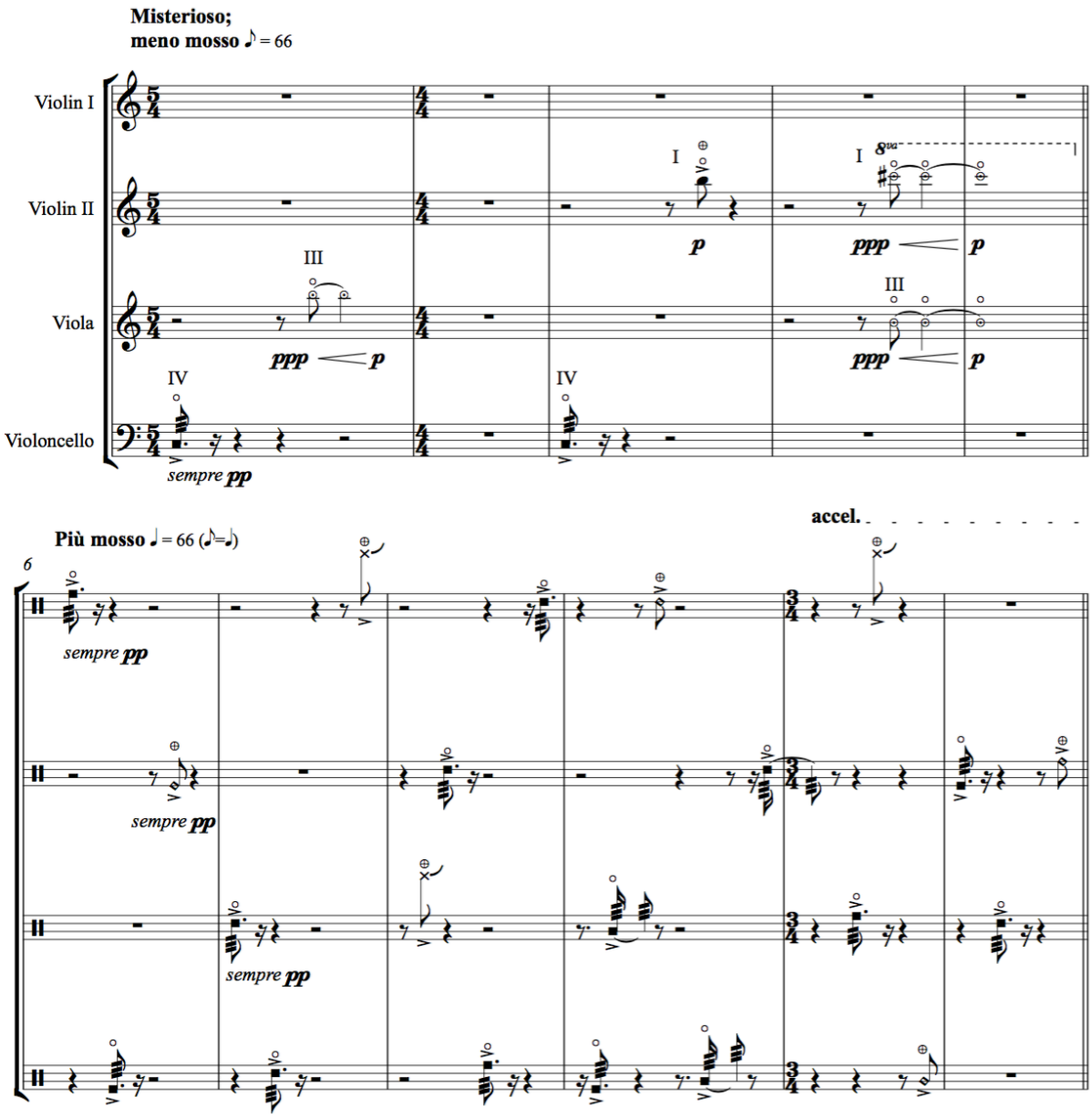

Figure 2.1. *String Quartet*: opening lines of Movement I.

These pauses are used to separate the sounds, for the purpose of 'tasteful arrangement' (in

Cage's words). But at the same time, recurring silence serves to bind together the otherwise unconnected sounds. Silence in repetition takes on the role of a pattern-forming attribute, defining the shape of this movement. The empty 4/4 bar (bar 2) right after the sounding of the first two notes affirms silence as an active structural element. Silence is as important as sound as a building block in the overall design of the musical structure.

The isolated sounds or sound gestures are intended to represent the tiny, needle-like raindrops falling softly on to the ground. These sounds are produced by means of an extensive use of extended techniques. I have assembled around ten of these techniques, exploring different bowing and sounding possibilities. Some of them are chosen for the quiet sonorities they produce. The sounds are so fragile that they seem to be struggling to keep just above the surface of silence. In the first bar, for instance, the cellist plays a harmonic by *col legno battuto jete* while the violist slides the bow along the fingerboard at very quiet dynamic levels.

Silence also occurs in the form of brief pauses. As illustrated in figure 2.1, these pauses appear mostly as crochet rests, quaver rests and semiquaver rests. They are imitative of the narrow, uneven spaces between the raindrops. The juxtaposition of tiny points of sound and silence gives an overall shimmering effect.

Movement II features numerous long, prominent pauses, large stretches of quiet as opposed to the fissure-like spaces in Movement I. Instead of fleeting time lapses lasting only one to two seconds, the pauses are extended to span up to sixteen seconds (see figure 2.2, which gives bars 44-55 in Movement II). They are placed between chords built from natural harmonics.

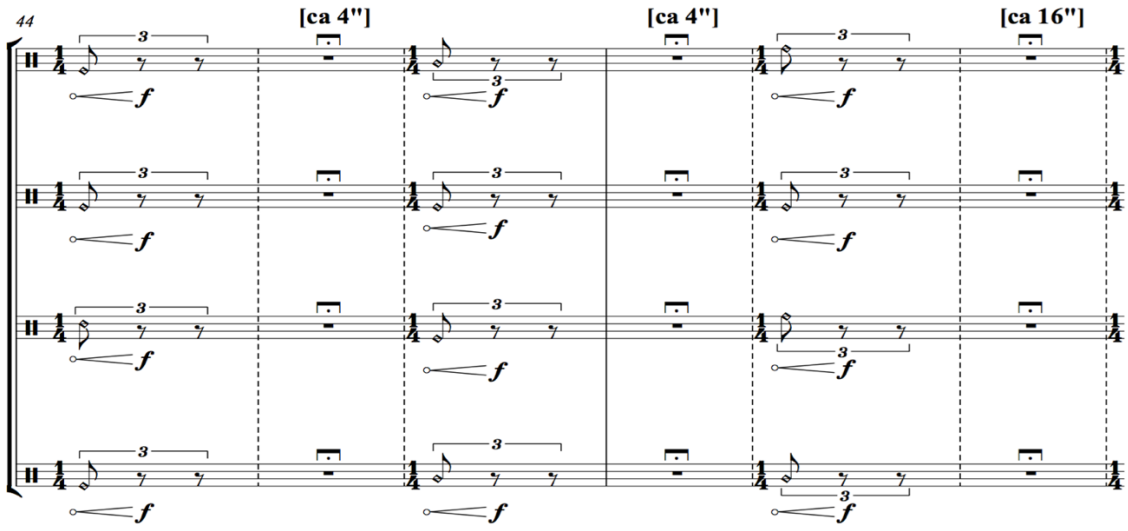

Figure 2.2. *String Quartet*: Movement II, bars 44-49.

The pauses are designed in this way in order to achieve two ends. First, they give a sense of space with sparse activity. Second, the extended duration compels the listener to attend to silence. Silence becomes a presence that refuses to be ignored. As in the previous movement, silence is a structural parameter as important as sound. And again, recurrent silences act like an organizing factor, giving coherence to the overall structure. Indeed, in Movement II, silence seems to take over and becomes the 'theme'; the brief, sparsely-spaced sonorities emerge like arid branches shivering in the bareness of the cold air.

The musical idea in Movement II, as in Movement I, is articulated largely through timbre, reflecting the contours of sound brought about by differences in pitch levels rather than the actual pitches. While Webern, a serial composer, fixed all his pitches in his *Bagatelles*, I have chosen to leave the choices open to the performers. In the score, a four-line staff is used in Movement II and in parts of Movement I. Each line represents an open string of the instrument. A note on the line indicates *not* a specific pitch, but one on the specified string the performer deems best-suited for the purpose of producing the desired timbre. This kind of indeterminate approach will be picked up again and further explored in a later stage of my investigation. I will discuss it in greater detail in Chapter 4 of this commentary.

In contrast to the previous two movements, the climactic passage in Movement III is characterized by an extremely dense texture created by means of tone clusters, rapid vibrato and changing accents in loud dynamics. The energetic, yet seemingly static, sound mass thus created gives a simultaneous sense of motion and immobility. This kind of musical texture is a distinctive feature of works like Penderecki's *Threnody to the Victims of Hiroshima.* I was keen on experimenting with a texture having a similar effect in the last movement of my string quartet, a structural goal to which all the sound activities are directed.

The silence component is worked into the musical fabric of Movement III in a rather different way from its appearances in the two movements before. The presence of silence within the composed sound is not obvious to the listener. However, prolonged pauses are included in the individual lines of each voice (see figure 2.3). These silent 'breaks' provide a time and a space for each voice to listen attentively and responsively to the sound mass that surrounds it.

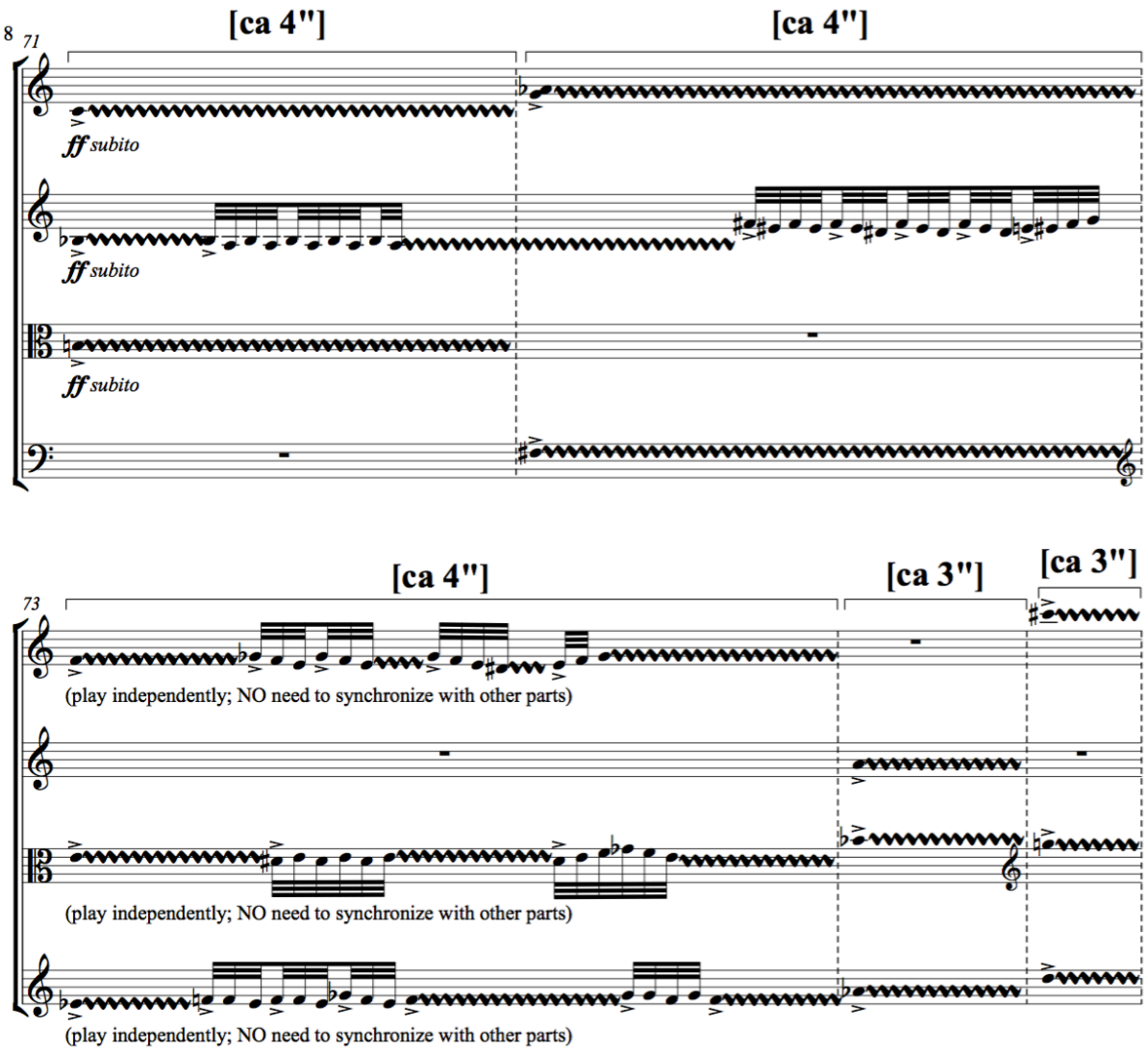

Figure 2.3. *String Quartet*: Movement III, bars 71-75.

Looking back on this string quartet, I have found it both crude and significant: crude as it was the very small, first step with which I began my exploratory journey; significant because it contained many of the ideas – though in a rudimentary form – that proved to be worth further development in subsequent stages of my exploration.

On the Wings of the Spring Breeze

On the Wings of the Spring Breeze was inspired by a centuries-old poem, *Hearing a Flute in Luoyang on a Spring Night*, by LI Bai (ca. 701-762) who is one of the best-known Chinese poets of all centuries. The theme of the poem is one of homesickness. The flute solo is not intended to echo the narrative flow of the poem but to capture the mood and emotion contained in it and to express them musically in a contemporary context.

This piece is the first of a series of works, three of which are included in this portfolio, which use traditional poetry as a source of literary inspiration. The choice is, first of all, simply natural: as a Chinese composer, these verses come to me more readily than those in a second language. The choice is also deliberate. There are two features common to almost all forms of traditional Chinese poetry. One of them is brevity. A poem may be as short as four lines, with each line containing no more than five or seven characters. At the same time, the lines are only loosely connected, with pauses rather than verbal linking devices. This explains why I have turned often to traditional Chines poetry to find suitable context for a musical expression that features silence as an important compositional idea.

This piece also exemplifies some of the major ideas embodied in my compositional approach. I usually start with a collection of four to five musical gestures which I find interesting and useful in putting together my current assignment. The collection is bound to include gestures associated with differentiating timbre as I frequently rely on timbre as a major means of articulation. The colors of sound, rather than pitch relations, supply the necessary condition for recognition of the underlying musical structure. In this respect, I must acknowledge the influence of Debussy.[11]

The collection of gestures used for composing the opening lines of this solo piece includes: a breathy sound or sound segments, a small glissando sliding upwards, a sforzando attack, an erratic cadence in a downward motion and a long pause. These gestures are combined in different ways to form the three introductory phrases given in figure 2.4. To a certain extent, these opening lines are suggestive of the structural composition and layout of the main body of music that follows.

[11] It has been observed in Debussy's music that timbre emerges as a musical idea as complete and fundamental to the musical structure as a motive in traditional Western music. See André Hodeir, *Since Debussy* (New York: Grove Press, 1961), 157.

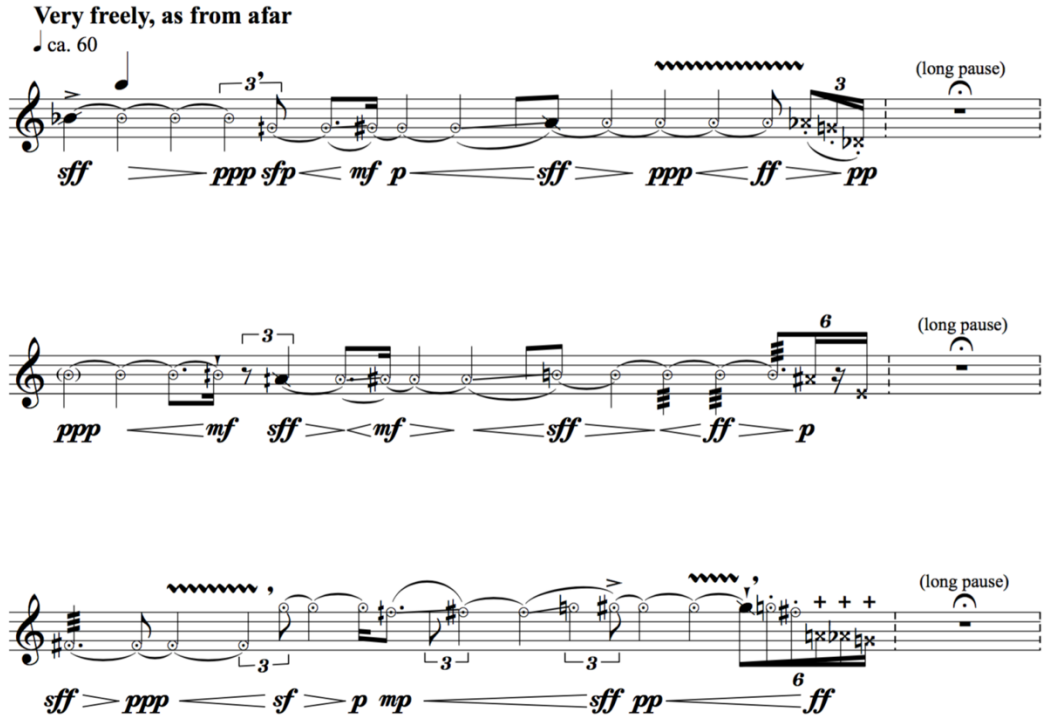

Figure 2.4. *On the Wings of the Spring Breeze*: the three introductory phrases.

The introductory phrases are followed by a succession of musical events which again can be categorized into four groups according to their sound characteristics: long, breathy phrases (usually in soft dynamics); short, erratic fragments (in loud dynamics); brief melodic fragments (in soft dynamics); and long pauses. The long, breathy phrases give a sense of hushed quietness while the short, erratic fragments serve as disruptive sounds that fracture the quietness and create a renewed sense of perspective. The prevalent use of pauses promotes an awareness of the pervading silence.

Last of all, the melodic fragments operate more or less like refrains, appearing at a number of crucial structural moments (see figure 2.5). They represent the other sound world portrayed in the poem, 'the sound of the solitary flute heard by the sojourner'. They have a pitch content different from that of the other musical events.[12]

[12] The melodic fragments are based on intervals of major 2nd and minor 3rd, decorated with some 'outside' intervals (for instance, minor 2nd and tritones). In contrast, the other materials are based on intervals of minor 2nd, perfect 4th and 5th, tritones and major 7th.

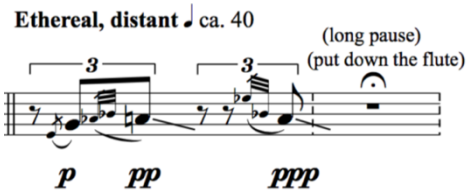

Figure 2.5. *On the Wings of the Spring Breeze*: an example of the melodic fragment.

Two processes are involved in developing the basic gestures into a more extensive, higher-level structure. The first process acknowledges repetition as an essential part of musical patterning. While some twentieth-century composers refrain from repetition for fear of monotony and redundancy, I am not ashamed to admit that repetition is commonly present in my music. It serves the dual purpose of developing and organizing the musical events. This compositional approach underlines my subscription to the notion that conceivable patterns are essential to the recognition of an underlying musical structure. Recent studies have confirmed the importance of repetition as a structural cue in atonal pieces, enabling the listener to make sense of the musical form.[13]

However, the overuse of repetition will inevitably produce monotony and redundancy. Repetition never operates alone in my music. It is invariably accompanied by the process of variation. A reiteration rarely appears as an exact duplication. It is always modified and developed into an intricately different form. Variation in this piece is effected by means of exploring all kinds of sound and sounding possibilities – from the simple act of varying the length and shape of the musical events to the incorporation of less familiar performing techniques and theatrical elements.

I will use the long, breathy phrases to illustrate how the two processes of repetition and variation are at work together. At its first appearance, as shown in figure 2.6(a), the long, breathy phrase is articulated by inhaling into the embouchure hole and fluttertonguing at the end of the phrase. In figure 2.6(b) where it reappears, the phrase starts with a harmonics cluster and is articulated by fluttertonguing in the middle of the phrase. In yet another instance given in figure 2.6(c), the phrase is accompanied with the human voice humming the notes into the flute. The result is that the listener will hear two layers of sound: one vocal and the other instrumental. This technique of using the human voice has become increasingly popular since

[13] Adam Ockelford, 'The Role of Repetition in Perceived Musical Structures', in *Representing Musical Structure*, ed. Robert West, Peter Howell, Ian Cross (London; San Diego, Calif.: Academic Press, 1991),139-140.

its adoption by a handful of celebrated twentieth-century composers.[14]

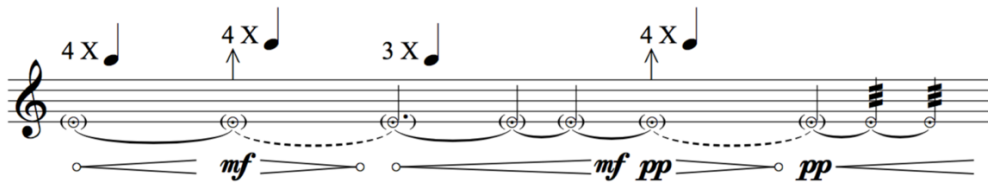

Figure 2.6(a). *On the Wings of the Spring Breeze*: long, breathy phrase 1.

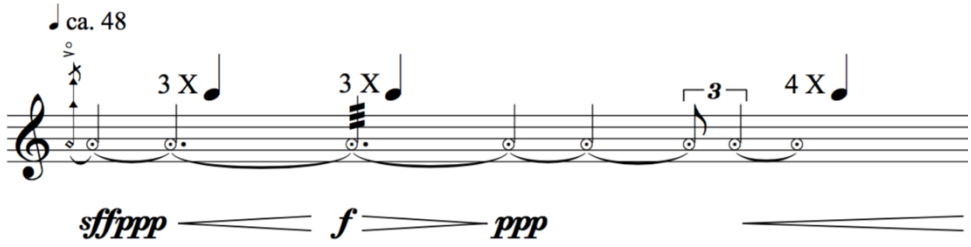

Figure 2.6(b). *On the Wings of the Spring Breeze*: long, breathy phrase 2.

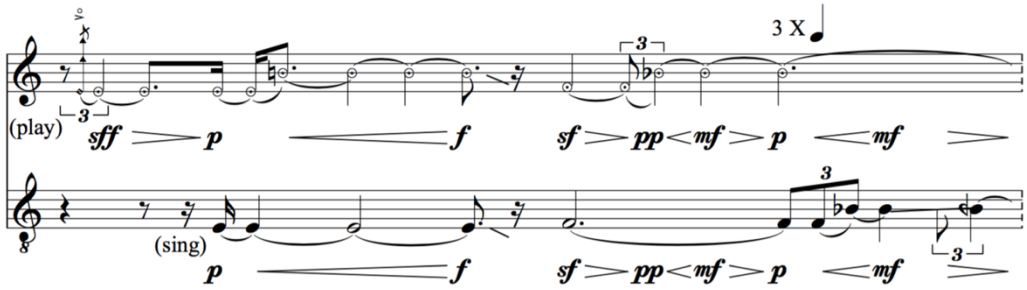

Figure 2.6(c). *On the Wings of the Spring Breeze*: long, breathy phrase 3.

The result of juxtaposing all the musical events (including the pauses) in succession is a musical work of additive structure. Though the musical shape is relatively free, the total structure is essentially the same as the sum of the parts. Such a scheme allows a high degree of flexibility in arranging the component events and contributes to the episodic character of my music.

I will now turn to the uses of silence in the flute solo. Silence in this work falls into two major categories according to its length and its purpose. First, there are brief pauses (semiquaver rests and triplet rests) placed between two sound events for the purpose of tasteful arrangement. Second, there are the more extensive pauses (suggested to be around eight seconds). Apart

[14] For instance, the technique was used by Crumb in *Vox Balaenae* (1971), Takemitsu in *Voice* (1971), and Sciarrino in *Canzona di ringraziamento* (1985).

from serving as structural markers, these prolonged pauses are put to a special use – that of *accent*.[15]

I do not intend to cite, from this piece, examples in relation to the functions of arranging and structuring. Instead, I will discuss in greater detail how a preceding silence is used to put accent on a specific event.

As mentioned earlier, two sound worlds are depicted in the piece, one denoting the surrounding silence and the other the 'solitary flute sound' soaring in the evening air. An extended pause is placed before each appearance of, and also after, the 'solitary flute sound' that is represented by the brief melodic fragments. The pause functions like a spotlight, illuminating the 'flute sound' that is soon to appear (see figure 2.7).

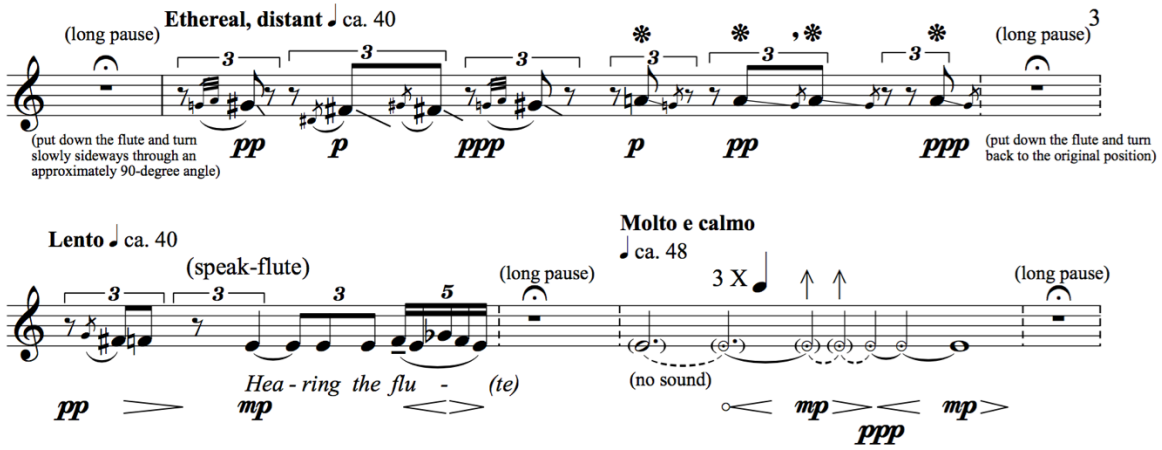

Figure 2.7. *On the Wings of the Spring Breeze*: page 3, the first two systems.

To make silence a stronger presence, these pauses are accompanied with some simple theatrical acts. At the start of the pause, the performer puts down his flute. He then turns slowly sideways through an approximately ninety-degree angle. In this new position, he picks up his flute again in preparation for the sounding of the ensuing melodic fragments. So picking up the flute is always linked to the onset of the 'flute sound', anticipating and highlighting its emergence from silence.

The introduction of theatrical elements into a musical composition can ben seen in the works of Hüber, Kurtág, Gubaidulina and Lachenmann, to name just a few. Performance actions are

[15] This is the fourth use William Brooks adds to Cage's list of the functions of silence. See William Brooks, 'Pragmatics of Silence', in *Silence, Music, Silent Music*, 99.

often specified in conjunction with silent durations, creating a kind of 'theatre'. One major purpose of incorporating these acts is to promote a heightened sense of silence. I have introduced such acts into the flute solo to achieve a similar end. During the time lapse within the long, breathy phrase, the performer holds the posture of playing a note but does not actually produce a sound (see figure 2.7, the third bar of the second system). The attention of the audience is thereby brought to the resultant silence.[16] Such mute moments also allow the performer to attend to silence himself.

Finally, these periodic pauses which are sprinkled across the entire musical tapestry function more or less like breaks between sound activities. Instead of appearing in an unbroken succession, the sound events in this piece are interspersed with spaces which set them apart one from another. This treatment of silence is in line with the idea embodied in the Japanese aesthetic *ma*, posited by Takemitsu.[17] I have designed the moments of silence in such a way that they are long enough to be attended to, and yet not too long to lose their hold on one's attention. These space intervals indicate a possibility for a change in direction or decision to make a movement. As such, they give rise to a sense of unhurried pace and unintentionality as is experienced by the listener in hearing Takemitsu's *Voice*, and, hopefully, also in hearing this flute solo.

On the Wings of the Spring Breeze is essentially a quiet piece. In the course of writing this work, I began looking into ways of depicting silence in music, which led me to the next stage of my exploration.

[16] As posited by Brooks, '… when there was *nothing* where there should be *something*, the absence, the silence, was a matter 'of a note' – something to which one attended, about which one *felt*.' See Brooks, 'Pragmatics of Silence', 99.

[17] According to *ma*, silence is conceived as a sensually perceived space or time between events. See Bruno Deschênes, *Aesthetics in Japanese Arts*, accessed July 20, 2016, http://thingsasian.com/goto_article/article.2121.html.

Chapter 3

Silence in Music: Silence Perceived as Sound and Sound Perceived as Silence

Can we make or create silence? This is the question that confronted me when I was probing the means by which silence was musically depicted. One's answer to this question often depends on one's conception of silence.

To this question, Cage answered in the negative. He arrived at this conclusion after the famous anechoic chamber experiment that led him to conclude that absolute silence is a physical impossibility. In the supposedly total silence of the anechoic chamber, he could hear two distinct sounds arising from his nervous and blood circulatory systems.[18] But before then, Cage made a series of attempts to create silence within a musical framework. In *Sonatas and Interludes* (1946-1948), silence emerged as a featured absence to be attended to. In *Experiences* (1948), prolonged silences were featured as objects of attention in their own right.[19] To Cage, silence was not empty. There was something in silence that might be experienced but that something was not sound. By the mid-1950s, Cage, then firmly convinced that silence is an 'audible' presence, had come to formulate the idea of 'heard' silence. I will return to his point when I come to discuss the second of my orchestral works *Home City Dream City*.

In a similar assertion, the Italian composer Salvatore Sciarrino contended that, 'even in an empty room there are again the beatings of the heart: as long as there is man, there is not silence, and where there is perception, there is music.'[20] Sciarrino shared Cage's view that silence is a matter of perception in the mind of the listener. But he adopted a totally different compositional approach to silence. Instead of creating long stretches of 'silence' as Cage did, he created musical settings that conjured aspects of silences. While Cage used quiet sounds to affirm his belief that absolute silence does not exist, Sciarrino, conversely, used very quiet sounds to facilitate the perception of silence. So in Sciarrino's music, silence emerges not as an absence, but rather as a kind of presence.

Dictionary definitions also point to the dichotomy that exists between conceptions of silence. According to the Concise Oxford Dictionary, silence is defined as an 'abstinence' from speech

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[18] John Cage, 'Experimental Music' (1955), in *Silence*, 8.
[19] Brooks, 'Pragmatics of Silence', 97.
[20] Megan Re Lanz, 'Silence: Exploring Salvatore Sciarrino's Style through *L'opera per flauto*' (DMA diss., University of Nevada, Las Vegas, 2010). This is the author's English translation. The original Italian text is given as follows: Salvatore Sciarrino, 'Entretien', *Entretemps* 9 (1991): 139.

or noise.[21] This definition highlights the negative aspect of silence – an absence. Musical silences in the classical tradition are to be understood in this sense. On the other hand, the Collins Cobuild Advanced Dictionary gives as one of its meanings 'extreme quietness', denoting quality of silence where sound is a presence rather than an absence.[22] A common form of silence encountered in twentieth-century compositions creates just such a sensation.

Composers like Webern, Feldman, Nono and Sciarrino typically place their music on the border between sound and silence to invoke a feeling of quietness in the listener. The means by which such an effect is achieved include chromatic clusters played very softly, extended stretches of low dynamics, and short, murmured phrases which quickly yield to nothing.[23] And what I find most interesting is exactly this shadowy and vague region where the boundary between silence and sound is hard to define. It is the basis on which some of my works (including the two orchestral pieces) were composed. It has led me to explore facets of sound that I had previously overlooked.

Stillness, alongside quietness, is another form in which silence frequently emerges in modern compositions. A variety of strategies have been developed to approximate this structural quality of silence. They include long, sustained sounds and an extremely slow tempo bordering on immobility. Examples of both are found in Messiaen's short organ work *Le banquet céleste*.[24]

To stillness and quietness, I will add a third quality: fragility. Despite its total and all-encompassing nature, the surface of silence is easily disrupted by the slightest stir of sound. Fragmentation features prominently in the music of Webern as a means to bring about an impression of 'being shattered'.[25]

Evidently from the foregoing discussion, silence in modern compositions does not exist in a single form. David Metzer observes that 'silence is a state that often exists in multiplicity, made up of distinct, individual forms of the state.'[26] The borderland scene set by many modern

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[21] *The Concise Oxford Dictionary*, ed. J. B. Sykes (Oxford: Oxford University Press, 1983), 984.
[22] *Collins Cobuild Advanced Dictionary*, ed. John Sinclair (Boston: Heinle Cengage Learning, 2009), 1455.
[23] David Metzer, 'Modern Silence', *The Journal of Musicology*, vol. 23, no. 3 (summer 2006): 334, accessed October 15, 2015, http://www.jstor.org/stable/10.1525/jm.2006.23.3.331.
[24] Jan Christiaens, 'Sounding Silence, Moving Stillness: Olivier Messiaen's *Le banquet céleste*', in *Silence, Music, Silent Music*, 67.
[25] See a detailed discussion of Webern's use of fragmentation in his music in David Metzer's article 'Modern Silence'.
[26] Metzer, 'Modern Silence', 339.

composers depends on this plurality. A combination of strategies is required to sustain the realm, even if for only brief stretches. It is interesting to note that all the strategies involved are sound-related. This is ultimately a musical paradox: sound as an evocation of silence; something, as a means to convey a sense of nothingness.

Rude Awakening

Rude Awakening, an orchestral work, was inspired by a couplet from a Chinese poem by *Yuanchen* (ca. 779-831). The couplet gives a perfect description of the phenomenon of *chunle* (spring thunder) that marks the end of winter and the beginning of spring. A paraphrase of the couplet in English is given below:

There's a sudden clap of thunder,
followed on by another,
rudely awakening
the nestling swallows
and the hibernating snakes.

The piece is scored for a triple-wind orchestra, with five percussionists. It may seem paradoxical that such a large instrumental force is used to evoke silence. The piece provides a musical setting which conjures qualities commonly associated with silence: stillness/stasis, quietness and fragility. It is through these traits that an impression of silence is brought about. I will organize my discussion of this piece around these three traits.

The music comprises three sections. The first section is intended to invoke in the listener a feeling of restless quietness as the barren earth awaits the first flash of lightning. The second section announces the sudden arrival of the spring thunder. All kinds of living creatures are roused from their dormancy into a commotion of activities. This climactic passage is characterized by an extremely dense texture. The final section returns to a quiet atmosphere as the fields look forward to the sprouting of the first new shoots. For the purpose of this discussion, examples are drawn primarily from the first section and from the final section.

The first section (bars 1-68) yields a compendium of the ways in which I approached silence in this piece. Consider the first page of the score. The very first few bars set the scene for subdued quietness. The music opens with a conventional gesture – a rolled tam-tam that gradually grows from nothing to *ppp*. The quiet atmosphere is then enhanced by the breathy

cluster in the flutes before it is interrupted. A tongue-ram trumpet phrase breaks the pervading silence by entering at a relatively 'loud' *pp* and growing to a *sffz*. It is subsequently picked up by the echo-like responses in the other two trumpets. This tongue-ram gesture is intended to suggest a voice calling out into the silence and echoing across the vast expanse of quietness. The trumpet phrases then fade away to nothing. Only the rolled tam-tam is left to absorb the faded echoes.

The long, sustained sounds articulated by the rolled tam-tam bring about an impression of constancy or stillness (one meaning of which is lack of motion), a quality inherent in total silence. In order to build these sound segments into a more extended tract, I have adopted a technique similar to the idea of Schoenberg's *Klangfarbenmelodie*. Instead of assigning a melodic line to just one instrument, Schoenberg splits it into parts and spreads them across different instruments or different sets of instrument. What I have done is this: instead of assigning the role of articulating the stillness sonorities to only one instrument, I have divided the role among different instruments or different sets of instrument. The result is a continuous flow of sustained sound segments, shifting through the spectrum of instrumental colors. Consider page 7 of the score. The long notes in the clarinets are picked up by the flutes, the violas, and the cellos, and carried on in the form of toneless noise in the horns and the rolled suspended cymbal. The stillness sonorities then continue in the trombones before they are taken up by the basses. The use of different instruments adds timbre and texture to the repeating line. All the sounds grow from nothing to *ppp*, then back to nothing. The extremely soft dynamics and very subtle changes in timbre serve as signposts in the borderland between silence and music.

A noticeable feature of the first section is that there are large stretches of sound produced with very soft dynamics. This is a common but effective way to approximate musically the dynamic quality of silence. I have used *ppp* very extensively in this section. A musical gesture typically grows from nothing to *ppp* and then swerves back to nothing (figure 3.1). Keeping the dynamics at a constantly low level brings about an impression of a quiet atmosphere that permeates the entire section.

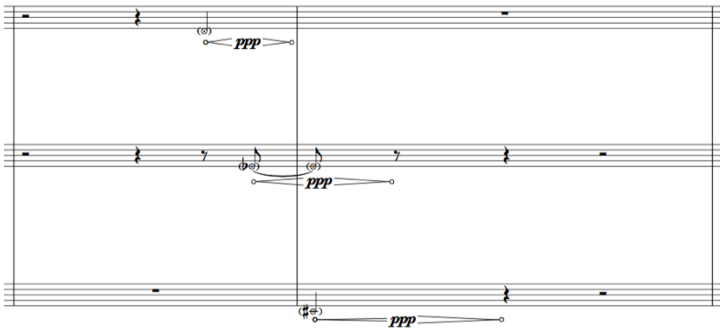

Figure 3.1. The flute parts, *Rude Awakening*, bars 10-11.

In addition to an extensive use of low dynamics, I have introduced a collection of highly-characterized sonorities into the first section. Three major types of sonorities, each displaying a distinctive sound quality, are used to approximate, in musical terms, the acoustic characteristics of heard silence. They are all produced by means of extended performing techniques. The collection includes: 1) murmured or breathy sounds resembling hushed whispers in the woodwind or the brass; 2) toneless noises hinting at hollowness, produced by blowing air into the wind instruments; and 3) thin, splintery sounds in the strings, frequently sounded behind the bridge. Played with very soft dynamics, these sounds create in the mind of the listener a sensation of instability and uncertainty: Is the sound there? Or is it only in my imagination? The first two sonorities are commonly used to represent what Sciarrino called 'microscopic sonorities', murmuring infinitely in perceived silence.[27] These sonorities are more easily audible in the quiet of the night. Thus, they are featured in many modern compositions depicting a night or tranquil scene.[28] The sparse quality of this section enables attention to be brought more clearly to the quality of individual sounds and the way in which they emerge from and return to silence.

The mixtures and alternations of these microscopic sonorities, in conjunction with the stillness sonorities created by the long, sustained tones, build up layers of silence, at the same time active and static. As such, they are intended to invoke in the listener a feeling of subdued anticipation.

[27] Salvatore Sciarrino, 'Entretien', *Entretemps* 9 (1991): 139.
[28] In the third movement of his *Five Pieces for Orchestra, Op. 16*, Schoenberg depicted a summer morning by a lake through a sustained collection of chromatic clusters that constantly changes tone color. In *Wozzeck* (*III/iii*), Berg chose a similar means to create a very different lake scene, the nighttime quiet that emerges after *Wozzeck* is drowned. Night has especially attracted the use of such patterns and sonorities, as heard in Ives's *Central Park in the Dark* and Bartók's 'night music' (*Out of Doors Suite, iii*).

These minute sounds appear mostly as fragments in repeating patterns. While the same or quasi-identical patterns are often maintained throughout a movement in the works of Schoenberg, Berg and Ives, the fragments in *Rude Awakening* are made to undergo a process of fragmentation as they are repeated. Consider, for instance, the trumpet tongue-ram, one of the most distinctive gestures in the first section (figure 3.2a). When the gesture first appears near the opening, it is spread across three trumpets (bars 4-5). The original phrase is punctuated by small rests, lending it a fragmentary character. The reiterations function more or less like echoes. In these reiterations, the shape of the phrase varies with the dropping out of just one, or occasionally two, of the trumpets. The phrase diminishes in length as it breaks apart during the withdrawal, until ultimately it contains only two short notes (figure 3.2b).

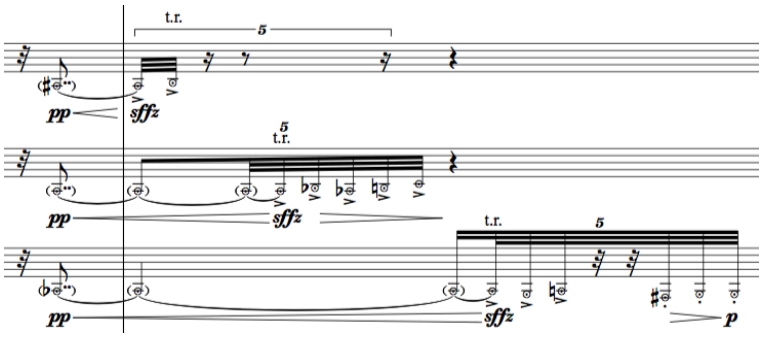

Figure 3.2a. *Rude Awakening*: the trumpet tongue-ram gesture in its first appearance, bars 4-5.

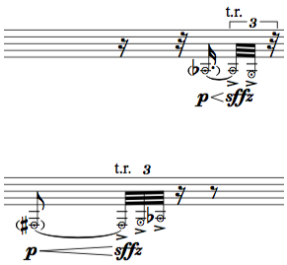

Figure 3.2b. *Rude Awakening*: a fragmented trumpet tongue-ram gesture, bar 59.

The breathy phrases performed by the woodwind and the brass are variations of the opening trumpet tongue-ram gesture. They are built around narrow melodic orbits and consist of notes that share key intervallic correspondences (mainly major/minor 2nd) with the trumpet gesture (compare the contrabassoon line performed without reed and the echo-like responses in the flutes in bars 21-24; figure 3.3). The reiterations see the gradual diminution in length of the original phrase, creating a crumbling effect as in the case of the trumpet tongue-ram gesture.

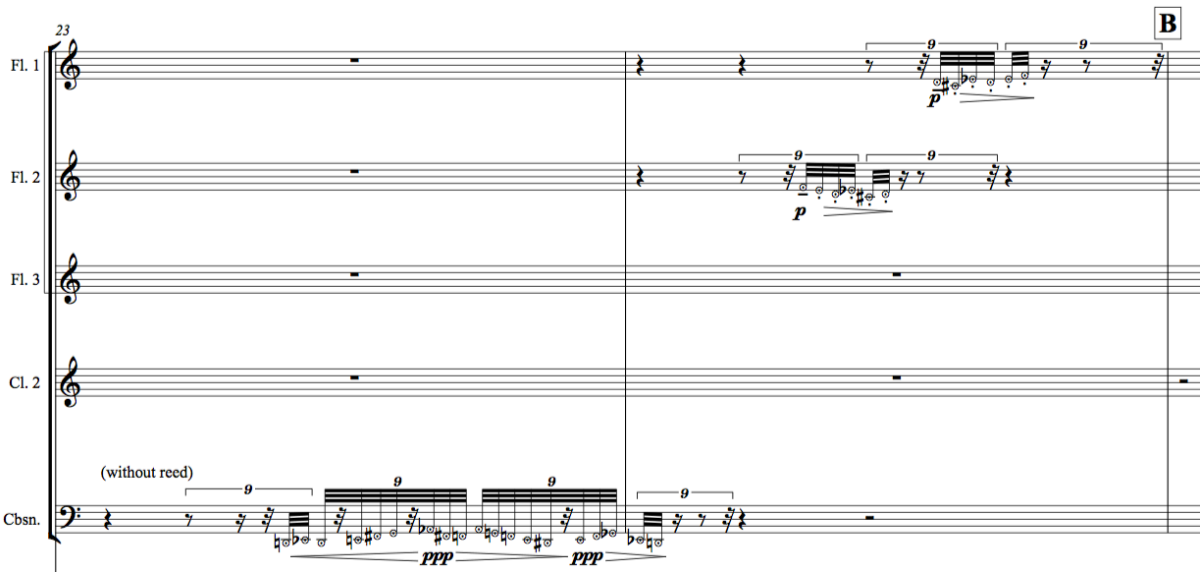

Figure 3.3. *Rude Awakening*: the contrabassoon and the flutes parts, bars 21-24.

The process of fragmentation brings to light one of the contradictions in the nature of silence. Silence is readily disturbed by the slightest stir of sound. Yet when sound recedes, silence quickly resumes. It remains the unbroken continuum surrounding the composition, surrounding each individual sound event. Silence is as resilient as it is fragile.

The brief chordal gesture performed by the strings also highlights this fragile-resilient aspect of silence. The chord is based on a six-note cluster dispersed over different registers (figures 3.4a and 3.4b). Each reiteration represents a variation of the original cluster, displaying subtle changes in pitch content, rhythmic value or sound production technique. The clusters, punctuated by the percussive sound of the vibraphone and the antique cymbals, are very short, lasting only a split second. The energy quickly dissipates into silence as the gesture comes to an abrupt end. Silence is momentarily broken by the brief surfacing of sound but it resumes as swiftly as it is interrupted.

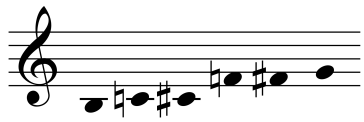

Figure 3.4a. *Rude Awakening*: the six-note cluster in its original form.

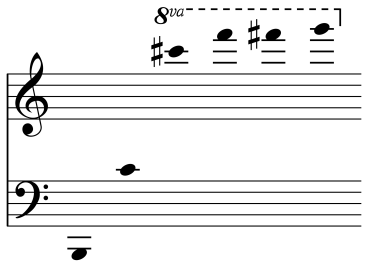

Figure 3.4b. *Rude Awakening*: the six-note cluster dispersed over different registers (bar 10).

A similar quiet atmosphere dominates the last section, which can be divided into two parts. The whole section is based on an octatonic scale (the second mode of limited transposition devised by Messiaen), with the note F# as a centered pitch (figure 3.5). I have chosen this mode for two reasons: 1) its rich harmonic colours; 2) its static character with respect to time. The second mode of limited transposition also happens to be one of Messiaen's favorite modes. He used it in his *Le banquet céleste*, effectively creating a sensation of stillness and stasis in the mind of the listener.[29]

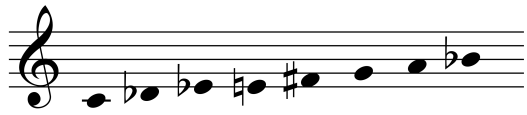

Figure 3.5. The second mode of limited transposition devised by Messiaen.

An indeterminate approach to metric arrangement adds further to the feeling of stillness and stasis in the last section. Consider rehearsal U (cue 1), where the orchestra is divided into five groups (pages 32-34 of the score). The conductor conducts the main group and cues the entry of the other four groups (I, II, III & IV) respectively at specified points. Groups I, II, III & IV perform independently without attempting to be rhythmically synchronous. When the conductor cues at rehearsal V (cue 6), groups I & IV stop immediately and start playing rehearsal V. Meanwhile, groups II & III finish the concurrent segment and fade out separately before getting ready for the entry at rehearsal X (cue 8). In doing this, I was trying to create a feeling of 'motion without forward movement', a state of stasis in which latent energy is quietly being accumulated.

A variety of extended techniques are introduced to enrich the sounding possibilities. For

[29] Jan Christiaens gives an in-depth analysis of how this effect is achieved in his essay, 'Sounding Silence, Moving Stillness: Olivier Messiaen's *Le banquet céleste*', 60.

instance, toneless noise is produced by the violins by pressing the finger halfway, as in producing a harmonic, but without bow pressure. The sound is created behind the bridge, effecting very subtle changes in tone (within a quarter tone around the given pitch). The violas, on the other hand, play directly on the bridge to produce a breathy noise without a defined pitch. These gestures are to be maintained at very low dynamic levels and sustained for a duration of about ten seconds. As a result, layers of fragile sonorities are piled up, one upon another. Two fragmentary violin solos function more or less as the trumpet gestures in the opening of the first section, standing in relief against the 'silence' texture.

The second half of the last section features the strings, which represent heard silence. As the music draws to an end, the listener is made aware, in the silence of the strings, of the sound of a rising wind imitated by the human voice (all the wind players are assigned to this role, except flute 1 and 2). The idea of introducing this animate sound on top of the textural drone is to bring about a heightened impression of silence which, one hopes, will linger on after the music stops.

Home City Dream City

In my first orchestra work, *Rude Awakening*, I experimented with various forms of silence in music, at the same time exploring generally the interaction between sound and silence. In my second attempt at orchestral writing, I focused my attention on the relations that exist between music, silence and ambient sounds in a reconstructed form.

The presence of ambient sounds in silence is a phenomenon which was conventionally dismissed until the mid twentieth century. After the anechoic chamber experiment, Cage was intent on sharing with his contemporaries the experience that he recalled in the 1955 essay 'Composition as Process': '… silence becomes … not silence at all, but sounds, the ambient sounds. The nature of these is unpredictable and changing. These sounds (which are called silence only because they do not form part of a musical intention) may be depended upon to exist.'[30]

Obviously, the experience had left its mark on Cage. It had a profound impact on Cage's later music and thought. Over a period of four decades, Cage wrote an immense body of works, including his last collection now known as the *Number Pieces* (1987-1992), in which he probed

[30] Cage, 'Composition as Process', 22-23.

silence and attended to what was to be found in it. The composition of his first 'silent piece' *4'33"* (1952) is believed to be an immediate response to the anechoic chamber experience.[31]

4'33" comprises three silent movements of different lengths. During the performance, the listener hears not a 'composed' sound, but the ambient sounds made audible in the silence. The listener relies on the performer's actions which indicate the beginning and ending of the movements to differentiate the 'music' (the silence to be attended to) from the 'silence' that frames the composition. As Cage himself posited, it is the intention, rather than the presence or absence of sound (composed or otherwise), that marks the boundary.[32] Ambience appears both as 'music' and 'silence' in *4'33"*, but the ambience to be heard as 'music' differs with each listening.

Interestingly, about a half-century before, ambient sounds appeared in another form as 'music' in Ives' *Central Park in the Dark* (1906). There are two strands of sound in the work: the strings which represent the 'silence' in the background, made up of chordal gestures of regular intervals constructed in a systematic manner. This 'silence' is interrupted by ambient sounds recreated by Ives which represent the 'music' in the foreground. The ambient sounds are derived from daily life situations. They appear in the form of music (marches, pop songs, dance music) and noise (sounds of newsboys, a fire engine, a cab horse). These were familiar sounds to New Yorkers at the time. Ives creates both the 'silence' and the 'music' by means of sounds but the sounds that constitute the 'silence' are very different in character from those that constitute the 'music'. It is this contrast in sound-qualities that enables the listener to establish an implied relation that allows 'silence' to be differentiated from the 'music'.[33]

Ives demonstrated in this piece the possibility of incorporating ambient sounds in a reconstructed form into a musical composition and allowing them to interact with a separate strand of composed sound. I decided to try it out for myself in the next orchestral work.

Home City Dream City is an orchestral work commissioned by the Hong Kong Sinfonietta to be premiered in their November concert in 2014. 2014 was a challenging year for Hong Kong, the city which I came from. What used to be a city that embraced divergent opinions was soon to be torn apart by polarized political views. When I went home for the summer, I noticed changes that gave me a rather strange feeling: the city had become at the same time familiar

[31] Brooks, 'Pragmatics of Silence', 125.
[32] Ibid.
[33] Ibid., 104.

and unfamiliar. *Home City Dream City* is a sound portrait of Hong Kong as it was impressed on me in 2014, as it was remembered to be.

Like Ives' *Central Park in the Dark*, there are two strands of sound in this work: an orchestral part and a pre-recorded soundtrack. The orchestral part represents a musical reconstruction of the major traits of the city as it appeared to me: a city of high mobility, a city of rapid development, a city of growing unrest, a city of natural beauty. The soundtrack, on the other hand, contains a collection of the most familiar ambient sounds known to anyone who was lived in the city for a while. These ambient sounds were carefully chosen and constructed. But unlike Ives' piece, these sounds were extracted and brought to the attention of the audience by means of electronic manipulation. They include: sounds from busy traffic, sounds from construction, sounds from protest parades, and sounds from the countryside. The third item on the list is a sound increasingly common over the last decade. This part of the sound track was actually extracted from a field recording of the July 1st march in 2014.

The composition comprises six sections as given below:

- Quotation from Beethoven's Symphony 7th (bars 1-17)
- Street episode (bars 18-81)
- Construction episode (bars 82-137)
- Transition (bars 138-145)
- Parade episode (bars 146-241)
- Nature episode (bars 242-278)

The opening features a fragmented quotation from the first movement of Beethoven's *Seventh Symphony*. The quotation is broken into smaller phrases, separated by pauses or long, sustained rolled cymbals. The idea of opening a piece of new music by a well-known quotation from Western classical music is, obviously, to play around with the audience's expectation. A more important reason, however, for using a familiar quotation is that it embodies a dual identity. It is, in the first place, a composed sound often heard in concert halls or as film music. And then it is also a common ambient sound (from the TV next door or from the piano in the adjacent apartment). From this fragmented quotation diverge the two strands of sound that follow: a composed sound performed by the orchestra, and a collection of ambient sounds on the soundtrack. These two strands of sound interact to form the main body of the composition.

This particular quotation from Beethoven was chosen for two reasons. First, it is the theme

music of *Nodame Cantabile*, a popular Japanese television series (subsequently made into a major movie) that was a hit at the time among the young people in Hong Kong. Second, the quotation's rhythmic vigor, largely attributable to a special rhythmic figure (), gives a sense of vigorous energy, a trait of Hong Kong's city life. This rhythmic figure is later picked up in the drums in the construction episode. The opening quotation leads to a succession of "episodes" juxtaposed to create a musical form that is essentially episodic, analogous to the mosaic character of the city's urban development.

The two strands of sound underlying all the episodes emerge as separate entities which are not necessarily required to interlock in conformity with time-related compositional rules. While the relations between the strings (the 'silence' in the background) and the ambient sounds (the 'music' in the foreground) remain more or less unchanged in *Central Park in the Dark*, the implied relations between the orchestral sound and the recorded ambience are more complex and change from episode to episode in this work.

In the street episode (bars 18-81), the orchestral sound features chiefly the strings and the percussion instruments. It represents the silent darkness that begins to fall over the city at dusk. The silence, characterized by a continued rumbling of minute sounds, is frequently broken by loud interjections articulated by the woodwind and the brass (refer to page 10 of the score, bars 54-57). It resembles the kind of silence that is heard in the commercial areas of Hong Kong after dark. The strategies for creating such a silence are similar to those developed for the first section of *Rude Awakening*: soft dynamics; long, sustained notes; disruptive noises. The disruption is made all the more acute by fortified entrances with hard attacks on the percussive instruments: the vibraphone, the crotales, the piano and the harp. The momentary, abrupt changes in dynamics in the orchestral sound are intended to echo the fluctuating dynamic profile of the recorded ambience.

The two strands of sound are mixed in such a way that considerable ambiguity arises in the relations between the orchestral sound and the recorded sound. The street episode, at times, gives the effect of listening to music through earphones amidst heavy traffic (in which case the 'music' is interrupted by the incessant flow of ambient sounds from the road traffic). At other times, it creates a sensation of hearing music from a shop on a busy street (in which case the ambience from road traffic is, conversely, interrupted by the 'music'). The amplitude of the orchestral sound more or less matches that of the recorded sound, making it difficult for the listener to differentiate the foreground material from the background sound.

The start of the construction episode (bars 82-137) is marked by the onset of pile-driving sounds from a construction site, which make a sudden appearance in the foreground. The composed sound is made up of a number of noises imitative of the piling sounds. Methods of sound production include: banging the bass drum and the low tom-tom; the woodwind playing loud multiphonics; blowing into the mouthpiece of the brass instruments; tapping the keys of the clarinet with fingers. The rhythmic figure in Beethoven's quotation is picked up here in the drums, adding to the impression of vigorous energy (figure 3.6). The two strands of sound are not made to synchronize. Rather, they appear as separate entities engaged in a dialogue. Each is as much a component part of the foreground 'music' as the other is.

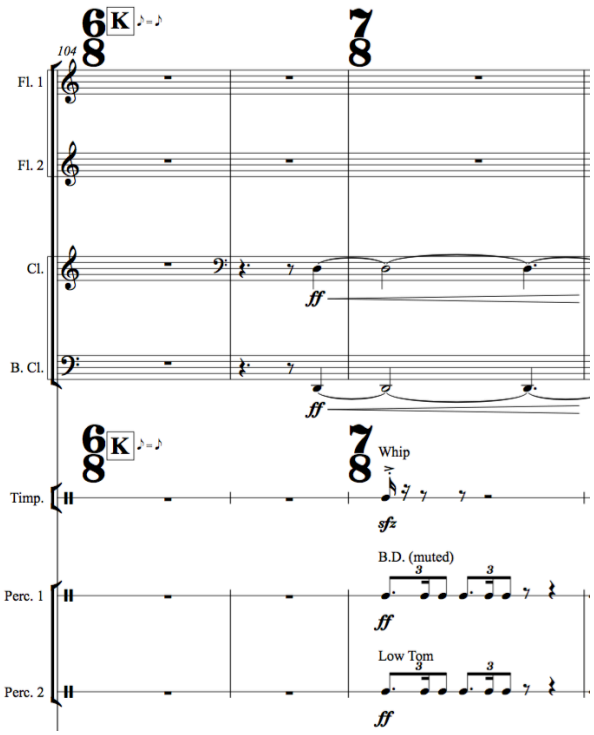

Figure 3.6. *Home City Dream City*: bars 104-106.

The parade episode (bars 146-241), the climax of the piece, is characterized by an extremely dense musical texture unleashed by a full *tutti*. The orchestral sound decreases from *fff* (bar 162) all the way to *pp* (bar 228) over a long stretch of time (sixty-four bars; more than three minutes). The instruments drop out one by one, causing the texture to fade from the full *tutti* to a very soft drone performed by the double basses. Conversely, the recorded ambience starts with an extremely soft sound and crescendos slowly in the course of the episode. The recorded ambience, which is drowned by the *tutti* sound at the start of the episode, begins to emerge from the background into the foreground when the orchestra slowly dies away. The ambient

sounds from the protest parade increase to a deafening roar before suddenly cut off. The two strands of sound play interchangeable roles in a shifting relation in this section. The orchestral sound, which represents initially the foreground 'music', ends up as 'silence' in the background whereas the recorded ambience, which represents the background 'silence' at the start, becomes the foreground 'music' in the end.

In the final nature episode (bars 242-278), the recording features sounds from the countryside. These include: sounds of rolling waves; the chirping of birds; the loud, high-pitched drone produced by the cicada. The orchestral sound is produced by a full *tutti*, creating a sensation of silence that is quiet but audible, static but active. The strategies for bringing about this sensation are similar to those adopted in the final section of *Rude Awakening*. These strategies include: an indeterminate approach to metric alignment, extended performing techniques as means of sound production, and long, sustained segments punctuated by prolonged rests. The orchestral sound and the recorded sound intermingle to form an organic whole. The recorded ambience becomes an almost indistinguishable part of the overall music. Towards the close of the episode, a vivid chirping sound produced by the bird whistles is heard soaring above a textural drone in the strings, ending the piece on a peaceful, hopeful note.

After completing the two orchestral works, I felt as if my exploration was standing at a crossroads. I was wondering what was the next step to take, and was rather surprised when it led to what seemed at first to be a side track.

Chapter 4

Silence in Music: The Question of Whens and Wheres

Before proceeding to the next and final stage of my exploration, I need to go back a little in time. When I was probing the uses of silence, I pondered, though briefly, the possibility of applying the Chinese aesthetic principle *liubai* to music, with silence being used for the purpose of balance. In Chinese brush paintings, there are parts of the work that are deliberately left uncoloured or unpainted. Such blank spaces, known as *liubai*, balance the painted parts with a high density of details. For example, the water and the sky are frequently left uncoloured to balance the luxuriance of wooded hills. Obviously, such a use of blank space is closely related to the way silence could be distributed in relation to sound in a musical context.

My interest in ambience has also prompted me to look for a more indeterminate placement of sound and silence. To me, much of the attraction of ambience lies in its unpredictable and ever-changing nature. Opening the distribution of sound and silence to on-the-spot decisions seems to offer an option for capturing in music the variability revealed in the natural world.

In searching for a musical form that would accommodate variable elements, I was brought back to Cage. In the early 1950s, Cage created a number of works, including *Concerto for Prepared Piano* (1950-51) and *Imaginary Landscape No.4* for twelve radio receivers (1951), which feature a high degree of indeterminacy. In the latter example, Cage fixed the musical parameters (wave lengths, durations, dynamic levels) to be set on all the radios by means of chance procedures. The score is fully determinate but what is heard depends on what is being broadcast.

The pursuit of open form, rather than a fixed, closed format, was popular among avant-garde composers (Stockhausen, Boulez, Berio, Brown) in the 1950s and 1960s. Ways were sought to include chance or choice in musical composition. An open-form composition typically presents the player with a large array of material that may be combined in numerous ways. Each composition has its own rules for the players to follow in choosing a route through the maze of alternatives. Take, for example, the 'two first classics of open form': Stockhausen's *Klavierstück XI* for solo piano (1956) and Boulez's *Third Piano Sonata* (1955-57). [34]

[34] Paul Griffiths, 'Mobile Forms: 1956-61', in *Modern Music and After* (New York: Oxford University Press, 2010), 109.

Stockhausen's piece consists of nineteen discrete passages scattered over a single large sheet of paper. The sequence of material to be performed is to be determined by where the performer's glance happens to fall. In *Constellation-Miroir*, one of the two published formats of Boulez's *Third Piano Sonata*, a collection of fragments is sprinkled over several large pages. The performer is asked to prepare a route through a network of alternative paths. In both cases, there is an interplay of compulsion (represented by the composer's instructions) with choice (represented by the performer's actions).

As suggested by the German musicologist and composer Walter Gieseler in his book *Composition in the 20th Century* (*Komposition im 20. Jahrhundert*), open form can be broadly divided into two categories: 1) variable form and 2) multi-dimensional form.[35] A variable form is fixed in its global, overall dimensions but is indeterminate with respect to the details of the local sections. Multi-dimensional form is just the reverse: its global form is not fixed or predetermined but results from the variable permutation of its local sections, the details of which are, however, fixed. Many examples can be given for both categories. Stockhausen's *Klavierstück XI*, alongside with Pousseur's *Mobile* (1957-58) and Haubenstock-Ramati's *Jeux* (1960), would fall into the category of multi-dimensional form while two of Stockhausen's works – *Zyklus* (1959) and *Refrain* (1959) – together with Berio's *Circles* (1960) and Lutoslawski's *String Quartet* (1965) belong to the first category, in which the composer controls more strictly the ultimate form.

The distinction between the two models depends largely on the part of the compositional intention that is open to choice: global dimensions or local details. But in both models, there is an interplay between design and chance. To illustrate again with Stockhausen's works, in *Klavierstück XI*, the performer is instructed to begin wherever his eye falls on the sheet and then proceed to the next passage he happens to glance at. Once a passage is played three times the performance comes to an end. The overall form is, therefore, subject to chance but the individual component retains its designed identity in terms of pitch and duration. In contrast, in *Zyklus* for solo percussionist, the performer is free to start at any point on the spiral-bound score. But once the starting point has been decided, the player progresses from one page to another in a fixed linear sequence. The trajectory through the score is fixed, but alternatives

[35] John Dack, 'The Electroacoustic Music of Henri Pousseur and the "Open Form"', in *The Modernist Legacy: Essays on New Music*, ed. Björn Heile (Farnham, UK: Ashgate Publishing, 2009), 178-9. This is the author's English translation. The original German text is given as follows: Walter Gieseler, *Komposition im 20. Jahrhundert* (Celle: Moeck, 1975).

are provided at the local level (rhythm, dynamic, timbre). In other words, the overall form results from design rather than chance, but chance contributes to the specifics of the actual musical shape.

Between these polarized forms, there is a spectrum of mixed models. But in all these models, there is a similar interplay between compulsion and choice, design and chance. It is not surprising, therefore, that I should find in open form a ready option for approximating in music the nature of ambience, and even of the nature of life as I see it. Consequently, I decided to experiment with open form in my next works.

In the Quietness of a Bamboo Grove

The title of this composition is taken from the first line of a Chinese poem called *Zhu Li Guan***,** by WANG Wei. The poem describes moments of solitude in the quietness of a bamboo grove. An English translation of the poem is provided below:

I sat alone
    in the quietness of a bamboo grove,
Pluck-playing the *qin*
    whilst whistling into the wind;
The grove was deep inside the wood,
    unknown to the boisterous crowd;
Only the moon came to shine above me,
    bearing me company with its silvery glow.

This piece is written for solo violin. I was trying to depict musically the sensation of quiet the poet experiences as he sits in a bamboo grove, hearing his own music, even his own voice, as part of the ambience.

There are six sections (A, B, C, D, E and F) in this open form composition. Section A contains twelve segments. An interesting feature of the poem *Zhu Li Guan* is the poet's sense that 'noise' emphasizes the extreme quietness he feels. In my composition, 'noise' is represented by the 'segments' contained in the first section. These segments are basically long, sustained notes in generally low dynamics, typically growing from nothing to *pp* or *p* before fading into silence again. They are mostly played on the two 'prepared' strings (strings III and IV each with a metal paperclip affixed to it). The altered strings produce a buzzing noise.

Each of the other sections (B, C, D and E) contains a set of brief 'events' with distinctive sound qualities. These include: pointillistic gestures, small glissandi, melodic fragments, and arpeggio-like gestures. They are intended to represent the microscopic sounds heard in extreme quietness. Silence is the common 'event' to be inserted anywhere between events chosen from B, C, D or E. Silence may be as brief as a comma or last up to twelve seconds. Unlike Cage's time-bracket pieces, in which silence is placed within specific time lengths, the distribution of silence in the violin solo is open to the performer's choice. Finally, section F contains a climactic passage developed from materials that have appeared in the previous four sections.

The 'segments' in section A are to be performed in strict succession. But between the 'segments', the player may insert any number of 'events' (from zero to ten) in any order from sections B, C, D and E. Upon completing all the twelve 'segments', the violinist proceeds to section F and performs from the score until the end. Hence, the trajectory is basically fixed, as in Stockhausen's *Zyklus*, but flexibility is provided in my piece through the chance insertion of 'events' which allows the music to stray, as it were, to a side track before returning to its assigned course. The musical form is not dependent on chance or improvisory action but it is free at a more local level. The violinist is given the freedom to decide on the duration of each 'segment' a well as the number and order of 'events' to be inserted. However, the basic quality of a 'segment' or an 'event' is clearly defined in terms of pitch, rhythm and dynamic level, leaving little to chance (except in section B). In this respect, the violin solo is akin to *Klavierstück XI*. The outcome of this combination of compulsion and choice, design and chance, is a music that never repeats itself. And that is just what I have found in perceived ambience.

Opening music to on-the-spot decisions enables the performer to achieve a stronger sense of spontaneity. The indeterminacy of the violin solo allows the performer to imagine himself being immersed in the quietness of the bamboo grove, hearing and responding to the interplay between his own music and the surrounding silence.

Open-form composition invites the performer to make a contribution to the music, a role many performers will need time to accommodate. But I believe that given practice, performers would come to appreciate the experience of being engaged in such an interactive process of generating music. And I speak from my own experience as a jazz pianist who has enjoyed moments of improvised action and reaction, though of a somewhat different nature.

Before I actually proceeded to write the next work, I tried out some of the ideas I had formulated in my mind in a short piano piece entitled *Nocturne*. I wanted to see how these ideas worked out in practice and whether they offered a feasible option at all. *Nocturne*, therefore, could be taken as an exercise that turned out to form a blueprint for my subsequent work written, this time, for strings, percussion and piano. A set of procedures, very much similar to those employed in the piano piece, are adopted for this new ensemble piece. These procedures are intended to allow for a greater flexibility in placing the musical silences. I will describe how they operate in greater detail in the ensuing discussion.

Music for a Starry Night

This piece is a kind of homage to Béla Bartók. For one thing, the instrumentation resembles that of Bartók's *Music for strings, percussion and celesta*; but more importantly, the work pays tribute to the Hungarian composer's 'night music' in a more general way. I have always been fascinated by the sounds of the night, even more so since I came to study in York, where I was delighted to find myself so very often surrounded by music played by nature's own ensemble in the dark. It seemed natural to me that the very last piece to be included in the portfolio should be a nocturne.

As a final piece, the work embodies the major ideas explored in this investigation, namely: the use of silence as a structural parameter; the creation of 'perceived silence' by approximating the physical properties of silence; the use of indeterminacy in a musical structure to allow for greater variability. For me, the greatest challenge lay in the application of the open-form concept in a large-scale musical work. Instead of a single violin in the previous solo piece, the instrumentation involves an ensemble comprising strings, percussion and piano.

The instrumentation can be divided into three groups: 1) piano and two percussionists; 2) string quartet; and 3) string orchestra. The string orchestra, which plays a central role in defining the music, has a conductor and plays from notated parts. However, the order of material to be performed is variable, with the sequence left to the discretion of the conductor. The string quartet provides a background drone by repeating a series of chords. A great deal of flexibility is given to the pianist and the two percussionists, who are provided with a choice of options. They are free to perform their own material under a given set of guidelines without the need to synchronize with other instruments.

The music begins with a few sporadic gestures from the pianist, which are soon echoed by

percussionist 1. Both performers perform from a set of mobile sections that contain material of differing sound characteristics. For instance, percussion 1 has two mobile sections: one containing un-pitched rhythmic patterns (derived from the piano material) to be played on any un-pitched percussion instrument; and the other, pitched material to be played on the xylophone. As in the violin solo, silence is considered as an independent event equal to sound. Silence, up to a duration of twelve seconds, may be inserted anywhere between two consecutive gestures.

The piano, on the other hand, has five mobile sections. The material in the earlier mobile sections is basically gestural in character, resembling the material in *Music for strings, percussion and celesta (Adagio)* and *Mikrocosmos (No. 107 and No. 144* in particular*)*. These fragmentary gestures represent the tiny sounds heard in the dark: the chirping of birds, the humming of insects, the sighing of the wind. As the music unfolds, the pianist is given the option to string together a greater number of gestures to form a longer continuity, creating greater fluidity in the musical flow. At the same time, the material becomes increasingly lyrical in the later mobile sections. Eventually, in rehearsal F, the pianist plays a short lyrical passage, intended to suggest hearing intermittent piano melodies amid all the sounds of nature.

Percussion 2 and the string quartet join in the nocturnal chorus at rehearsal C. From rehearsal C to E, percussion 2 performs either a softly-audible stroke (using a soft beater/mallet or a double bass bow) or a roll on the tam-tam, the suspended cymbal, or the Chinese gongs, allowing a pause of six to eight seconds between two consecutive gestures. Such long, low-density, low-volume sonorities create an impression of quietness and stillness. All this time, the string quartet produces a ceaseless succession of chords derived from the string music in rehearsal G. Maintained at a very low dynamic level (*ppp* with mute), these chords, alongside the stillness sonorities produced by percussion 2, function in a similar way to the string music in Ives' *Central Park in the Dark*. They create a continuous, ever-changing, ambient flow, against which other nocturnal sounds appear. The idea to put the string quartet off-stage (on the balcony facing the stage) owes something to the way Bartók divides up the strings and place the two groups antiphonally on opposite sides of the stage in *Music for strings, percussion and celesta*, thus creating a sense of spaciousness.

The string orchestra enters at rehearsal D. There are eight composed 'mobiles' for the string orchestra. The conductor is free to call for them in any sequence, allowing pauses of eight to ten seconds between two consecutive 'mobiles'. The 'mobiles' are developed from mixtures and alternations of a collection of gestures that approximate in music the physical and dynamic

characteristics commonly associated with perceived silence. These fragmented sonorities, often produced by means of extended performing techniques, are intended to capture the intricacies of the nocturnal sound world. The collection includes: chromatic melodic fragments that imitate the fragile character of silence (figure 4.1); long, sustained notes that create a sensation of stasis (figure 4.2); and thin, splintery sounds in harmonics and glissando to bring about an impression of quietness (figure 4.3). There are also occasional brief, abrupt dynamic changes in the orchestral sound to imitate the fluctuating dynamic profile of the nocturnal ambience.

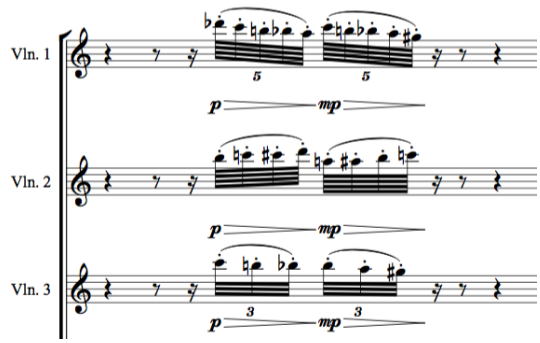

Figure 4.1. *Music for a Starry Night*: chromatic melodic fragments (‘mobile’ 7, bar 3).

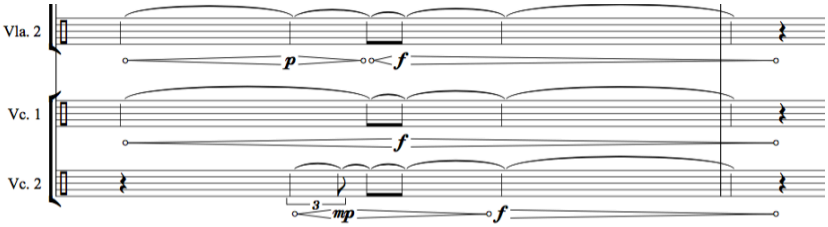

Figure 4.2. *Music for a Starry Night*: long, sustained notes (‘mobile’ 1, bars 1-2).

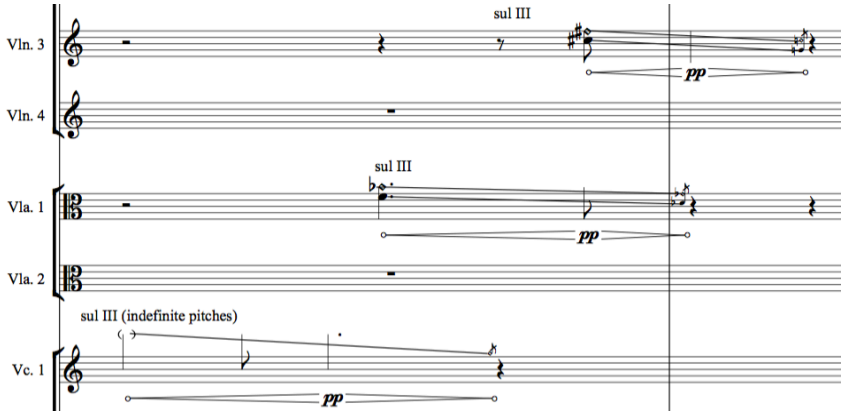

Figure 4.3. *Music for a Starry Night*: thin, splintery sounds in harmonics and glissando (‘mobile’ 5, bars 1-2).

The use of 'mobile' in rehearsal D may recall Brown's *Available Forms I* and *II*. Composed in 1961, Brown's *Available Forms I* consists of six pages of score with four or five numbered musical events on each page. These numbered events may be performed in any order, at the discretion of the conductor. Hence, the form is, as in my piece, open to on-the-spot decisions. In Brown's work, however, indeterminacy exists also at the local level. The score contains notes with no rhythms, squiggly lines indicating only gesture formations, or horizontal lines indicating general durations. Obviously, there is far greater control in my work. The 'mobiles' in rehearsal D are fixed in detail. I have cut down the variable elements for two reasons. One is the practical difficulty of rehearsing a large-scale work that is highly indeterminate and dependent on performer's contribution. The other is more personal – I wish my work would have a sure identity, despite all its variability. While no two performances will have the same formal design, the work retains its identity from performance to performance through the unchanging basic character of the musical material.

After all the eight 'mobiles' have been performed, the string orchestra proceeds to rehearsal E which is fully notated. A special feature of this section is its erratic dynamic contour which rises and falls sharply in a succession of quick crescendos. The gestures are frequently performed in harmonics or trills. All these help to create a somewhat eerie atmosphere commonly associated with darkness. This textually rich section is followed by a short solo in the piano (rehearsal F) that quickly leads to the final chorale-like passage in rehearsal G. Both rehearsals F and G are notated in the traditional manner.

In rehearsal G, the string orchestra plays a fully notated passage built from chords of stacked intervals. The melody (in the first violin) moves up and down in a circular manner, measuring time in irregular units (figure 4.4). The slow tempo and uncertain cadences further add to the static sensation. The string music is reminiscent of the beginning of Bartók's *Piano Concerto No. 2, Movement 2*, a classic example of his 'night music' style. The chords that have appeared all along in the string quartet ultimately reveal themselves as the material that builds up the orchestral sound. In other words, what has been previously heard as ambience in the background has now emerged as music in the foreground. After more than fifteen minutes of fragmented sonorities, the music finally culminates in a luminous string 'chorale', giving a sense of design and direction to what may have seemed non-directional sound mass bordering on disorder.

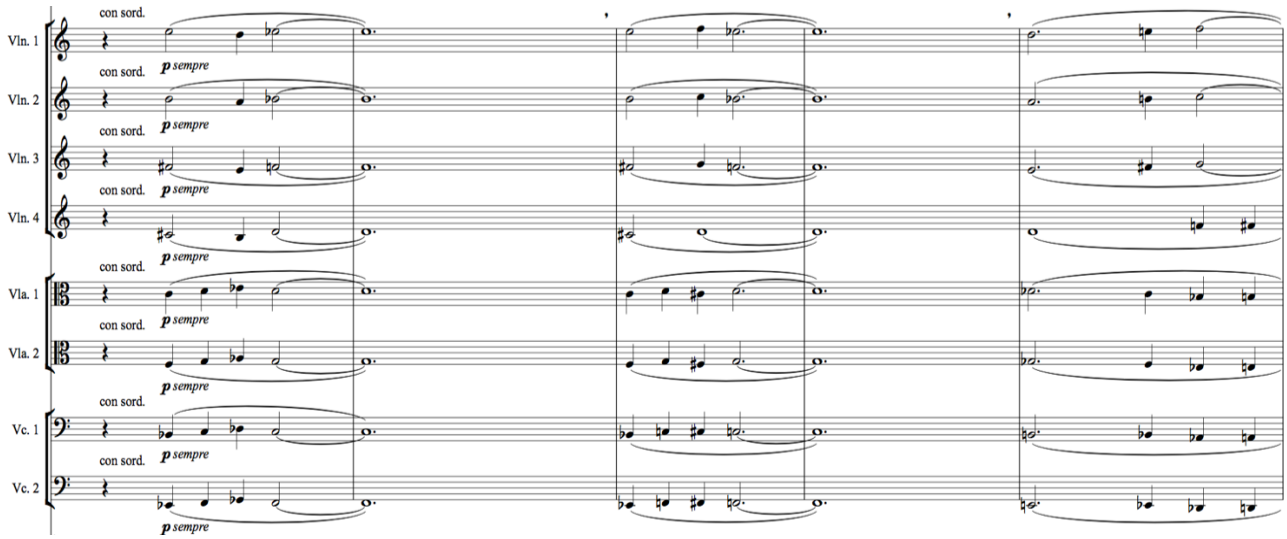

Figure 4.4. *Music for a Starry Night*: rehearsal G.

Conclusion

What has silence got to do with music? Silence, in the form of rests and pauses, plays a vital role in arranging, punctuating and structuring music as can be seen from the first two works included in this portfolio. Besides these more conventional functions, silence can be used for *accent*, for illuminating an ensuing sound event. The effect is made even stronger when the silence is accompanied with appropriate theatrical acts (as in the flute solo). Silence has a role in creating certain sensations: for instance, in evoking an atmosphere of expectancy (as in the string quartet) or in bringing about an impression of unintentionality (as in the flute solo). Silence may also provide a reflective or meditative space, a use that has not been explored in any of my works. The idea of using silence as balance also remains to be investigated, and this continues to be a possibility worth probing.

What has sound got to do with silence? Paradoxically, sound is the very means by which an impression of silence is brought about in both of the two orchestral works. A variety of strategies have been developed for approximating in music the acoustic and physical properties of perceived silence, namely quietness, stillness and fragility. My attention and energy have been largely directed to highlighting the contradictions that exist in these traits: silent yet audible; static yet active; fragile yet resilient. The strategies explored include: (for quietness) prolonged stretches in extremely low dynamics, and highly-characterized sonorities produced by means of extended preforming techniques; (for stillness) the *Klangfarbenmelodie* technique borrowed from Schoenberg, and an indeterminate approach to metric arrangement; and (for fragility) the use of disruptive noise and fragmentation.

My interest in ambient sounds has, in part, led me to create an experimental work for orchestra and field recording. *Home City Dream City* is my first attempt to explore the relations between the composed sound and ambient sounds in a reconstructed form. The ambient sounds in this work have been subjected to only slight modifications of volume and speed. Greater modifications are possible: for instance, the ambient sounds may be distorted or deconstructed and then re-assembled. Such modifications are likely to give the ambient sounds a more ambiguous character, enabling them to interact with the composed sound in an even more intriguing manner.

My venture into open form has led me to find a new way to distribute silence. More importantly, it has led to my conviction that accommodating chance and choice into composition provides

a possible option for approximating the unpredictable and ever-changing nature of ambience in music. Opening music to on-the-spot decisions also makes the music-making process more spontaneous and interactive. For some, open form seems to be a passing fashion, one that has passed its heyday.[36] But I believe that its potential to create a music that is 'a site of actions and reactions rather than an object'[37] can be further developed.

In all the works included in this portfolio, silence is *not* presented as the antithesis to sound. Instead, it appears as either extreme quietness in which microscopic sounds are brought to attention (as in *Rude Awakening*) or as sound placed in a contrasting relation to noise (as in the flute solo). Such a presentation of silence is, of course, reflective of my own concept of it.

At the end of this journey, I was rather surprised to find, though in retrospect quite predictably, that after all it is sound, always sound, that has captured my imagination, whether it be sound that finds existence in nature in perceived silence, or sound that comes into being through human invention and creativity. I cannot imagine a world without sounds, but equally, I cannot imagine a world with never-ending sounds and without treasured interludes of silence. In a musical context silence provides just those treasured interludes.

[36] Paul Griffiths, 'Mobile Forms: 1956-61', 126.
[37] Ibid., 125.

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