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Inside is the Sky FOR MEZZO SOPRANO AND CHAMBER ORCHESTRA

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FACULTY OF MUSIC

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Abstract

Inside is the Sky is a musical composition for mezzo soprano and chamber orchestra. It is a collection of four songs using poems by renowned Canadian poet Lorna Crozier: *A Summer's Singing, In Moonlight, Tautologies of Summer,* and *Inner Space.* The composer wishes to connect music and poetry on a fundamental level. The approach is to write music that responds not to the mere surface of the poems, but rather to their central poetic themes, by means of parameters intrinsic to music: harmony, rhythm, melody, and registral expanse.

Inside is the Sky est une composition musicale pour mezzo soprano et orchestre de chambre. C'est un recueil de quatre chansons utilisant des poésies de la poètesse Canadienne renommée Lorna Crozier: *A Summer's Singing, In Moonlight, Tautologies of Summer*, et *Inner Space*. La compositrice veut relier la musique et la poésie à un niveau fondamental. Le projet est de composer une musique qui répond au thème poétique existant au cœur de la poésie au lieu de s'en tenir uniquement à la surface, avec l'aide de paramètres musicaux tels que l'harmonie, le rythme, la mélodie, et l'expansion des registre.

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Infinite appreciation goes to Lorna Crozier who wrote the poems that are part of these songs. These poems have lived in me for three years, and they continue to be inspiring. Without them there would be no music.

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1. Introduction

1.1 Instrumentation

Mezzo-Soprano and Chamber Orchestra of 18 players: 2*(1.+picc., 2.+alto fl.)-1*(+eng. hn.)-2*(1.+e flat clar., 2.+bass clar.)-1*(+c-bsn.)/ 1-1-1-0/2 perc, 1 hrp, 1 pno/1-1-1-1

1.2 Text Sources

The composition consists of four songs. Each song uses one poem as its text source:

Song I: A Summer's Singing Song II: In Moonlight Song III: Tautologies of Summer Song IV: Inner Space

The text is by Canadian author Lorna Crozier, and is used with the permission of Lorna Crozier and McClelland & Stewart Publishers. The four poems are from three different publications that span almost two decades of the poet's career: *Everything Arrives at the Light* (M&S, 1995), *The Garden Going on Without Us* (M&S, 1985), and *Inside Is the Sky* (Thistledown Press, 1976).

1.3 Initial Observations: literary commonalities between the poems

Initial observations such as consistent emotional style and shared images, especially sensuous ones, easily reveal how these poems work together as a collection even though they come from different books.

First, there is a unified style of emotional expression. Though the poems are certainly not clinical or emotionless, nor emotionally restricted, there is a more intellectual sense of emotion in these poems. We are not bombarded with a profusion of emotionally drenched words. Crozier expresses emotion with refinement, restraint, and an understated sensuousness. This forces the listener to patiently care for the slightest nuance of expression, and results in a greater intimacy.

There are many common images that connect the poems.¹ Both *Tautologies of Summer* (Song III) and *A Summer's Singing* (Song I) begin with morning imagery

¹ Refer, in this sub-chapter, to the full text of the poems: page ten (*A Summer's Singing*), page twenty (*In Moonlight*), page thirty-five (*Tautologies of Summer*), and page forty-three (*Inner Space*).

associated with birds. The first and last poems (*A Summer's Singing* and *Inner Space*) both contain the crucial word "inside." Also, both these poems are grounded in words relating to vocalization. *Inner Space* describes how "redtails shriek in my throat" while *Summer's Singing* asks, "Where does that singing start, you know, that thin sound," and then refers to bird songs with "feathered throats warm with meaning." The choir or chorus also is mentioned in the second stanza of *Summer's Singing*.

Many of the shared images are highly sensuous: nature, anatomy, desire, and motion. Nature appears in all the poems. Reference to "summer" is in both *A Summer's Singing* and *Tautologies of Summer*. Birds appear in three of the poems: *A Summer's Singing* ("not the birds at false dawn"), *Inner Space* ("redtail"), and *Tautologies of Summer* ("sparrows," "heron"). Two poems contain plants: *Tautologies of Summer* has "rhubarb leaves," while *In Moonlight* mentions "seeds" and "garden." Planetary images are found in *Inner Space* ("earthbound," "sun") and *In Moonlight* ("earth," "moon"). Anatomical references are also common to all the poems. Both *Inner Space* and *A Summer's Singing* refer to "throat." *Inner Space* mentions "ribcage" and "brain." *A Summer's Singing* talks of "blood" and the "heart." Finally, *In Moonlight* contains "fingers." The image of a mysterious motion is referred to in *Tautologies of Summer* ("while desire moves just below the surface") and *In Moonlight* ("something moves just beyond the mind's clumsy fingers"). Desire is an emotion shared by *A Summer's Singing* ("the old desires a ruined chorus") and *Tautologies of Summer* ("In spite of pain desire repeats itself again and again", and "desire moves").

1.4 Approach towards Formal Coherence: Poetic Theme As Unifying Force

In this composition, the union of words and music stems from a thorough analysis of the poems well beyond emotional tone and imagery. A poetic theme runs through all the poems, one with strong connections to the anthropological theories of Joseph Campbell and Carl Jung, and one that many artists of all genres have pursued.

In each of these poems there is a hidden, submerged element that, suggests Crozier, eludes humanity's understanding. Each poem is concerned with a different submerged element that acts in its own way (a synopsis of the individual poems' relationship to the poetic theme appears at the beginning of each chapter pertaining to the individual songs).

Joseph Campbell speaks about this theme as a quality of myths in *The Power of Myth*, especially in the chapter entitled *The Journey Inward*: "myth opens the world . . . to the realization of the mystery that underlies all forms" (38). "It is a *mysterium*, a mystery, *tremendum et fascinans* - tremendous, horrific, because it smashes all of your fixed notions of things, and at the same time utterly fascinating, because it's of your own nature and being" (45).

The unknown or the submerged now becomes a major source of musical possibilities. By basing musical processes upon this poetic theme, the textual and musical meanings unite. Music might express localized details via word painting or convey the overall emotion of a text, but when music expresses the very core meaning of a text in a manner directly linked to various musical elements or parameters, as is the focus here, a more important level of coherence is created. Music and poetry can then connect on a fundamental level.

Figure 1, below, summarizes the literary and musical manifestations of the poetic theme for each song. As in the poems, the element that is submerged varies. From song to song, the poetic theme musically manifests itself in its own way and by way of a different musical parameter (rhythm, melody, etc.). For example, in Song I, *A Summer's Singing*, the submerged elements are the origin of singing (literary) and harmony (musical).

Figure 1

Song	Element Serving the Poetic Theme				
	In Literary Form	In Musical Form			
I A Summer's Singing	Origin of Singing	Harmony			
II In Moonlight	Nature's Spirit	Rhythm			
IV Tautologies of Summer	Desire	Melody			
V Inner Space	Human Spirit	Registral Expansion			

At A Glance: Literary and Musical Elements of the Poetic Theme

A more detailed investigation of each song will draw more specific parallels between the two elements serving the poetic theme – one literary, the other musical.

1.5 Overall Approach to Text Setting

Another aspect exemplifying the intertwinement of music with poetry in *Inside is the Sky*, is the overall approach to setting the text, which aimed to achieve the most natural rhythm and melodic inflection of speech. The rhythmic setting was never determined by abstract musical structures. Instead, the approach was like that of an orator, who considers the various possible rhythms, accents and pauses (silence) as a means to imbue the text with his interpretation. Coroniti elaborates on this issue in *Poetry as text in Twentieth-Century vocal music*:

Anyone who has ever read a good poem aloud and been moved by its sound, its rhythms, without fully understanding its sense, and then gone on to think more about the poem, knows that the initial soundscape was not in addition to, or in any way separate from, the poem's sense – it is all one. The form not only reveals the content, it will at times precede it. A fuller intellectual understanding is often a fortifying of that initial aural response. (Schoenberg's method of song composition again comes to mind.). (8-9)

2. Song 1: A Summer's Singing

A Summer's Singing

Where does that singing start, you know, that thin sound – almost pure light? Not the birds at false dawn or their song when morning comes, feathered throats warm with meaning. A different kind of music.

Listen, it is somewhere near you. In the heart, emptied of fear, stubbornly in love with itself at last, the old desires a ruined chorus, a radiant, bloody choir.

Where does that singing start? Here, where you are, there's room Between your heartbeats, as if everything you have ever been begins, inside, to sing.

Crozier, Lorna. <u>Everything Arrives at the Light</u>. Toronto: McClelland & Stewart Inc., 1995. 3.

2.1 Synopsis of the poem in relation to the poetic theme

In this poem, the author is trying to discover the origin of singing, before it has begun. An awareness of where singing starts emerges progressively and is revealed to us by the end. Crozier talks through the problem until she has finally, in the last stanza, fully understood its source: a most intimate place that is easily overlooked.

2.2 Text Setting

Structurally, the text is evenly dispersed throughout the song. The lines flow uninterrupted until the climactic words "radiant, bloody choir" (m. 18), after which there is a very brief pause in the text, with instrumental music sounding. Subsequently, the text flows more meditatively, with some gaps between the lines. The movement concludes with a brief instrumental section beginning in measure 34.

2.3 Vocal Melody

Before describing the vocal melody, it is important to realize that a description of the melody only partially explains the singer's role in this song. She is the embodiment of the poem as she searches for her singing voice. Much of her music contains nonpitched or vaguely pitched materials which function as the transitional sounds towards an ordinary vibrato singing method. Therefore, the melody sometimes appears fragmented, within an otherwise non-melodic music.

The pitches of the vocal melody are drawn entirely from the harmonic series based on $B_{\flat}1$, and only the nine pitches that fall within her vocal range are used²:

Figure 2.1

Pitches of the Vocal Melody from the Harmonic Series on B_b1



The melody is monosyllabic throughout in order to maintain a simple style of singing and avoids any florid setting, which would be unsuitable in a song that depicts the primordial stages of singing. Repeated pitches were often employed and help create the impression of chanting (see measures 15, 16, 17, 26, and 28-29). The chant-like quality of the melody is emphasized by frequent returns to a previously sounded pitch after only one intermediary pitch (e.g. mm. 8, 14, 29). This melodic circularity, characteristic of chant, is a direct result of the limited pitch content available.

There is a gradual yet methodical rising line starting on measure fifteen, with B_b3. A more agile melody starts at measure sixteen, respecting a contour rule in which melodic intervals change direction after every leap, but still maintaining the overall rise towards the climactic A_b5 in measure eighteen on the word "choir." The contour rule also applies for measure twenty-nine and onward.

² With the exception of an $E_{\flat}4$ (m. 27) and an A4 (m. 8)

It is no coincidence that the first sung pitch falls on the same pitch class as the fundamental (B_b), which is also used to highlight the last word of the second line ("light") in a pure, non-vibrato sound (m. 5). The next pitched singing doesn't appear until measure eight, on the words "morning comes", also sung without vibrato. The first instance of vibrato singing appears soon after, on "meaning" (m. 10), which symbolically suits a richer sound.

2.4 Synopsis of the music in relation to the poetic theme: Harmony and Form

HARMONY

An unfolding harmonic series represents the gradual emergence of truth in this song. The pitches of a harmonic series (see figure 2.2 below) are gradually presented, beginning with the sixty-fourth partial and expanding downward until the fundamental pitch ($B_{b}1$) is finally revealed.



Because the poem is so focused on one topic (the source of singing), the harmony is also unitary. No other harmonic source is introduced.

Figure 2.3, below, offers a harmonic reduction of the music up to the song's climax (mm. 6-24). The downward (and sometimes upward) progress of the bass line is the salient feature of this example. Certain moments stall the lowering of the bass line (mm. 11-15 and mm. 19-22), but inevitably the fundamental B_b appears (m. 23), and the harmonic series makes its fullest appearance one measure later.

Figure 2.3







FORM

The form of the song was greatly inspired by the poem's sense of geography. Indeed, the perspective of the poem changes and the music attempts to follow this journey. In stanza one, the perspective is distant, then it becomes closer in stanza two, and in the third and final stanza, the perspective is internal.

Apart from the increase in harmonic density and registral expanse, other musical parameters help to convey the change of perspective from far away to inside. The primary process of harmonic emergence is prepared by an introductory process of pitched sound emerging out of un-pitched sound. As well, the song follows the birth of melody. The singer progresses from whispering to speech and finally to pitched singing, with vibrato gradually introduced.

Sections 2.5, 2.6, and 2.7 examine this changing perspective in more detail, both textually and musically. A summation chart, figure 2.4, appears at the end of section 2.7.

2.5 Stanza One

In stanza one, the topic of singing is exterior to the narrator, and thus it is distant to the reader (and musically, to the listener, as will be later explained). The choice of using "that singing" may not seem important until the last stanza is reached, where practically the same phrase is used except for one seemingly minor change: "the singing". Every word, no matter its size, must be accounted because nothing is inattentively set in poetry. It is this first problem of "that" versus "the" which makes one initially aware of a distinct sense of perspective. Why make this change? Because "that singing" is more impersonal than "the singing," though subsequently the narrator says "you know." Obviously, at this point, the reader does not know because he has not yet been given any information in order to understand what the narrator means. "You know" can also give the impression of a mild plea, urging the reader to simply understand because "that singing" is not so easily described in words. The narrator is hoping for a leap of faith or an immediate connection that might save her from ruining the subject by trying to put it in words. Yet the gap is simply more apparent with this added plea. The narrator offers an image of sound and light, but then chooses to describe more elaborately images that are not what she means. This peculiar turn also supports the idea that the narrator is having trouble speaking directly about this "singing" and chooses to talk about other, more describable things. Perhaps through the process of elimination the reader will understand what she means. Also, the bird image touches on strongly sensual imagery, but it is fleeting. It ends with a short phrase that immediately distances us and dismisses this intimate idea: "A different kind of music."

Likewise, the music itself is distant. The harmonic density is the thinnest of the three stanzas, ranging from zero to eight pitches at any time, and the average density is 2.6 pitches. Furthermore, the strength of pitch is tenuous. The first line of the poem is spoken (not sung) and is without musical accompaniment. Orchestration techniques such as very low bow pressure in the strings, whisper tones in the flutes, harmonic glissandi in the upper extremities, and frequent muting, contribute to vagueness in pitch. The dynamic range is soft, from *ppp* to *mp*. The singer's tessitura covers narrower range than the other stanzas, a major sixth (F4-D5), and most of her time is spent speaking, using *sprechgesang*, or singing in a whispery tone. All these elements combined make the music seem far away.

2.6 Stanza Two

Stanza two begins with a demand to "listen", because this singing is now *near* the reader. The narrator at this point chooses to address the reader directly ("you"), which is crucial in increasing the sense of intimacy with the topic. The singing is "in the heart," a very personal place, but it is still *a* heart, not *your* heart, and so it is not yet as close as it can be. The phrase "old desires a ruined chorus, a radiant, bloody choir" combines three strong images of singing (chorus, choir), energy (radiant) and the heart (bloody). To radiate means to emit in all directions from a central point. Here, blood is not meant to be grotesque. It is a brilliantly strong image, normal and essential to life - the continuous process of the blood emitting energy, and the heart radiating blood to all the different regions of the body. The choice of a choir is important. No longer is it a "thin sound" or the sound of delicate birds. A choir is many voices singing. There is strength: a multiplicity of energies.

Because of the stronger, more sensuous images, the music now has room to be more grandiose. Indeed, the singer's role is more uninhibited. She weaves a more elastic melody that covers intervals at a faster pace. Her tessitura is much wider, covering almost two octaves (B_b3 - A_b5). There is still a fair amount of weaker vocal tone such as whispering, speaking, or singing without support. However, twenty-five percent of her music requires the ordinary vibrato singing, and fifty percent requires non-vibrato singing (which still will produce a prominent sound). Furthermore, the text is set at a noticeably faster pace compared with the other stanzas. With six lines and a total of forty-one syllables, it takes up sixteen percent of the song's total duration. This is much less than the first stanza, which has almost the same number of syllables (forty-two) but takes up twenty-seven percent of the song's total duration. Also, the harmonic accompaniment has thickened three-fold, with an average of six pitches sounding at one time. The orchestration includes more prominent techniques such as *sul ponticello tremolo*, as well as multiphonics in the bassoon and bass clarinet. Additionally, the dynamic range intensifies to include *forte*.

2.7 Stanza Three

In the last stanza, the poem moves even closer, and is aimed at the reader's inner recesses. It begins with a repeat of the opening question, only now it is "Where does *the* singing start?" instead of "Where does *that* singing start?" The singing is personal this time. We now know which singing is expressed, and it is now the only singing that is important (not like the first stanza, which mentions bird song). Unlike previous stanzas, the entire third stanza addresses the reader directly, always using "you" or "your." It is now "*our* heartbeats" (not *a* heart). It is interesting, though, that the two images in the first and last stanzas have a similar sense of closeness. The words selected for the birds in stanza one (though they are not what is meant) make the reader feel as if he is touching them. They are warm, feathered throats, a most vulnerable part, where they sing, where they breathe, where they mustn't have constriction in order to live. It is the passageway for air, for oxygen needed to feed our blood. The images are equally intimate in the last stanza. They venture right inside the very core of our bodies "*between* our heartbeats" - those moments of anticipation, so delicate and vulnerable.

For music to feel like it is inside you, as if you are breathing it, as if it is the moment of conception, it must exude a great, unassuming strength, but cannot be violent. Of course, these requirements validate the choice of the harmonic series, and it is in this stanza where the fundamental pitch of the series is introduced (on the word "you" m. 14) and where the fullest chord holds with a total of thirty-three pitches. This section, overall, contains the most harmonic density with an average of twenty pitches, though the dynamics are delicate. Music that is inside must strive to be as haptic as possible. One can feel everything inside, so one should hear every pitch. Naturally, optimal resonance is also an important contributor to feeling the full capacity of sound, and so the instruments play in their most resonant range whenever possible. The singer's music is more delicate, but her pitch is well-defined (as opposed to the beginning). Her range is less than in stanza two, but wider than the first stanza, covering a major tenth (Bb3-D5). Stanza three returns to an even slower text setting than stanza one. With the least number of syllables (thirty-three), it takes up twenty-four percent of the total duration of the song. There is still some whispery singing, singing without support, and sprechgesang, but seventy-four percent is normal, vibrato singing. This move to a comfortable, chant-like,

even incantational delivery intensifies the sense of arrival conveyed by the song's text and harmonic progression. Figure 2.4

Summation of Stanzas in Terms of Perspective

Perspective	Stanza	Lowest Bass Note	Harmonic Density (average # of pitches	Singer's Range	% sung with vibrato	Other singing styles	Melody	Dynam- ic Range	Orchestration Comments
DISTANT	1 (mm. 1-12)	Аь4	2.6	F4-D5 (M6)	0%	speech, <i>sprechgesang,</i> very whispery	Almost non- existant	ppp-mp	Low bow pressure, Mutes, Whisper tones, Harmonic gliss. in upper extremities
NEAR	2 (mm. 13-19)	G2 (C ¹ /4b2)	6	B♭3- A♭5 (m14)	25%	speech , singing without support, <i>Sprechgesang,</i> 50% non vib.	Agile	ppp-f	<i>sul pont.trem.</i> multiphonics
INSIDE	3 (mm. 20-33)	B⊧1	20	B⊧3-D5 (M10)	74%	whispery singing, singing without support	Chant-like	ppp-f	optimal resonant ranges

2.8 Instrumental Ending Section as Framing Device

A bird song image frames the song. The more lyrical and ornamental music of the instrumental ending section completes the framing device that the text first introduced in stanza one: "Not the birds at false dawn or their song/when morning comes, feathered throats/warm with meaning." Instead of text that describes a bird song image at the song's beginning, a violin melody sounds the image at the song's conclusion. Though the ending section's violin melody grows out of the singer's last phrase, it quickly becomes too inhuman to symbolize the *bel canto* style the singer herself has only briefly managed to achieve. Instead, a gap is delineated between the chant-like style she mostly uses and the ornamental style of the violin melody, which evokes the sounds of birds. This aligns the music even more with stanza one of the poem, which expresses a difference between human song and bird song: "a different kind of music".

3. Song II: In Moonlight

In Moonlight

Something moves just beyond the mind's clumsy fingers.

It has to do with seeds. The earth's insomnia. The garden going on without us

needing no one to watch it

not even the moon

Crozier, Lorna. <u>The Garden Going On Without Us</u>. Toronto: McClelland & Stewart Ltd., 1985. 123.

3.1 Synopsis of the poem in relation to the poetic theme

This poem is directly about the unknown. The speaker points out the limitations of comprehension. There are things beyond mankind's understanding and control, specifically, the force of nature. Thus the poem is unclear and ambiguous about the workings of this force. The only revelation is the impossibility of revelation.

3.2 Synopsis of the music in relation to the poetic theme: Rhythm

Rhythm was chosen to represent the enigmatic force of nature, which needs "no one to watch it", because rhythm as a parameter seems to be autonomous. A rhythm can manifest itself without pitches, whereas pitch cannot manifest itself without duration. The poem provides an awakening awareness of the limitations of human perception, while the structural underpinning of the composition consists of a gradual yet severe rhythmic transformation that persists beyond the listener's ability to perceive. This transformation is carried out upon a rhythmic gesture consisting of fifteen attacks, which in its initial appearance consists of a gradual and systematic acceleration:



While the total duration of this rhythmic gesture remains one-hundred-and-twenty sixteenth-notes, and the number of attacks remains fifteen, the rhythmic gesture transforms fourteen times before it becomes, by the song's end, a deceleration:

Figure 3.02

Deceleration: 15th level of Transformation



The number square, figure 3.03, demonstrates this gradual process of transformation:

Figure 3.03

Acceleration to Deceleration

Each unit repres	sents	one siz	xteentl	h-note											
Transformation:															
1 st (accel.)	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
2 nd	14	14	13	12	11	10	9	8	7	6	5	4	3	2	2
3 rd	13	13	12	11	11	10	9	8	7	6	5	5	4	3	3
4 th	12	12	11	11	10	9	9	8	7	7	6	5	5	4	4
5 th	11	11	11	10	10	9	9	8	7	7	6	6	5	5	5
6 th	10	10	10	10	9	9	8	8	8	7	7	6	6	6	6
7 th	9	9	9	9	9	8	8	8	8	8	7	7	7	7	7
8 th neutralized	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9 th	7	7	7	7	8	8	8	8	8	8	8	9	9	9	9
10 th	6	6	6	6	7	7	8	8	8	9	9	10	10	10	10
11 th	5	5	5	6	7	7	7	8	9	9	9	10	11	11	11
12 th	4	4	5	5	6	7	7	8	9	9	10	11	11	12	12
13 th	3	3	4	5	6	6	7	8	9	10	10	11	12	13	13
14^{th}	2	2	3	4	5	6	7	8	9	10	11	12	13	14	14
15^{th} (decel.)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This procedure lasts the whole song as a constant presence, a subterranean structure.

Once it is combined with pitches, it is known as the mechanical layer.

3.3 Melody

Like the isorhythmic technique of 14th Century music, a melodic motive (or color) of eleven pitches is mapped onto this rhythmic gesture (or talea) of fifteen attacks, helping to insure that repetition is not perceived. In fact, the mapping of eleven pitches onto fifteen attacks creates a cycle so long (165 units) that the color and talea realign only once during the course of the song. Unlike traditional procedures, the talea and color are transformed independently with every restatement. The melodic motive (known in this song as the Tautologies Motive) is derived from the first eleven pitches of the pitch series from *Tautologies of Summer* (see figure 4.2, chapter four), but undergoes twenty-one increments of intervallic diminution and augmentation, as well as transposition (figure 3.04, below). Unlike the rhythmic gesture, the original statement does not occur until the sixth transformation, where it resides in an unmodified state save for it being transposed down a diminished fifth from the original transposition in *Tautologies of Summer*. Interestingly, the eighteenth transformation presents the same pitches as the original, but with octave transpositions.

Figure 3.04

Melodic Transformations of Mechanical Layer (In Moonlight)



In order to impart a sense of the music's outward expansion, the Tautologies Motive undergoes intervallic diminution, augmentation, and transposition procedures (with the axis of symmetry being E_b4). The chart below (figure 3.05) demonstrates the mathematical procedures of diminution and augmentation, whose result is figure 3.04. Since each transformation consists of ten intervals, they are labeled as A to J in number of semitones. For transformations seven through twenty-one, intervals expand in relation to the original (the sixth transformation). For example, the seventh transformation is an addition of one semitone to the interval content of the original: A=2+1 (3), B=5+1 (6), C=2+1 (3), and so-on. The eighth transformation is an addition of two semitones in relation to the sixth transformation: A=2+2 (4), B=5+2 (7). The transformations are then transposed in order to have Eb4 as its axis, as seen in figure 3.04. For transformations one to five, the intervallic content is diminished by subtracting semitones, again by using the original (transformation six) as the point of reference. If a negative number results, zero is used instead, since the size of an interval cannot be less than zero. For example, the last interval (J) in transformation one is derived by taking the last interval in transformation six (of three semitones), and subtracting five from it. The result is zero.

Figure 3.05

Transformation of the Tautologies M	Motive
All numbers represent semitones	

I D Ē F G H J B Ċ Ι A Transformation -5 1) ♠ 2) -4 3) -3 4) -2 5) -1 6) Original Tautologies Motive 7) +1+28) +3 9) 10) +4 11) +5 12) +6 13) +7 14) +8 15) +9 **16)** +10 $1\overline{2}$ 17) +11 18) +12 18) +13 20) +14 21) +15

Е A L S Ν Т R V

Thus, the tessitura expands outwardly from a single pitch of E_b (1st transformation) to one that reaches over five octaves (15th transformation). Using the pitch collection from *Tautologies of Summer* helps to unify the song cycle as a whole, but also foreshadows *Tautologies of Summer*, since the latter directly follows *In Moonlight*.

Furthermore, a contrapuntal layer appears three different times during *In Moonlight*. It consists entirely of motives whose pitch collections originate from the singer's melody (mm. 140-158), figure 3.06.³

Figure 3.06





The motives follow certain general rules of contour. A wide leap is often followed by a step in the opposite direction. Also, a step is often followed by a leap in the opposite direction. Falling minor seconds are common, appearing in motives A, B, D, and E. Fifths (diminished, perfect, and augmented) are also prevalent, found in motives B, D, and F. The Tautologies Motive from the mechanical layer is also used as material for the contrapuntal layer. It appears in its original form shared between the flutes, mm. 45-52. See figure 3.07, below.

³ Also note measure 153 in the vocal part, which is a return of the repeated E_b in the mechanical layer, transformation one (see figure 3.04).

Figure 3.07



The motives undergo transposition, inversion, retrograde, and retrograde inversion. See figures 3.08, 3.09, and 3.10 for examples. A complete catalogue of the motives, as they appear in the music, can be found in figure 3.11.

Figure 3.08







Figure 3.10



Figure 3.11

Catalogue of Motives – In Moonlight

Motive A	•		
Form	Transposition	Entry point (measure number)	Instrument
Original	F	36	Cb.
Inversion	G	44	cl. II (b. cl.)
Retrograde Inversion	Е	53	cl. II to cl. I
Original	Gb	57	Bsn.
Retrograde	F#	69	Ob.
Retrograde Inversion	C	71	Ob.
Original		71	Bsn.
Retrograde	C#	75	Tbn.
Original	A#	73	cl. I
Retrograde Inversion	F	92	Piano – Cb.
Retrograde Inversion	G#	93	Vl. I
Original, +1 after every pitch	A	117	Marimba – fl. II
Original, +1 after every	G#	122	Tbn. – cl. I
pitch, altered slightly			
Original	Gŧ	123	Fl. I – Marimba

Motive B

Form	Transposition	Entry point (measure number)	Instrument
Inversion	Α	31	Cb.
Retrograde Inversion	C	35	Vlc.
Inversion	F#	38	Vlc. + Cb (F#)
Inversion	Е	66	Ob. – Tpt. (last
			note)
Retrograde, 1 st pitch 8va	Α	70	Cl. II (b. cl.)
Inversion (last pitch	В	74	Cl. I
transposed 8vb)			
Original	Eμ	93	Fl. I
Inversion, permutation	E	97	Tpt.
Inversion	Α	123	Cl. I
Retrograde, 2 nd pitch lowered	F	126	Ob.
a semitone			

Motive C

Form	Transposition	Entry point (measure number)	Instrument
Inversion, last note altered	Bb	33	Cb.
Original	D#	42	Vlc.
Inversion	Ab	54	Hn.
Inversion	D	69	Bsn.
Inversion	A	73	Vla.
Retrograde	D	74	Fl. I
Retrograde Inversion	В	94	Vl. I
Retrograde	В	122	Fl. II
Retrograde Inversion	G#	123	Fl. II
Retrograde Inversion	Ab	125	Cl. I
Retrograde	A	126	Cb.

Motive D

Form	Transposition	Entry point (measure number)	Instrument
Retrograde	Е	23	Cb.
Original	F	37	Cb.
Inversion, 2 nd F transposed	E	53	Cl. I
down semitone, last pitch			
8va			
Retrograde Inverson	A	55	Piano/harp/Cb.
Retrograde Inversion	C	60	Tpt.
Original	C	66	Ob.
Original	G	68	Cl. II (b. cl.)
Inversion	B	69	Tbn. (Cl. II
			doubles 1 st note)
Retrograde	F#	73	Cl. II (b. cl.)
Inversion, last pitch	D	75	Cl. I, pno. (last
transposed down semitone			pitch)
Original	В	75	Hn.
Inversion	D	93	Ob.
Retrograde Inversion, some	E	93	Vla.
pitches 8va			
Original	С	93	Tpt.
Retrograde Inversion	В	123	Tpt.
Original	Α	124	Cl. II (Bb cl.)
Retrograde Inversion	F	127	Cb.

Motive E

Form	Transposition	Entry point (measure number)	Instrument
Inversion, A _b lowered to A	С	38	Cb.
Retrograde Inversion	В	51	Cl. II (b. cl.)
Original	F	56	Hn.
Retrograde, 1 st note omitted	С	56	Ob. (eng. hn.)
Original	F#	71	Vla.
Inversion	A#	72	Cb.
Inversion	А	73	Fl. I
Retrograde Inversion	F	97	Tpt.
Retrograde	Ab	98	Ob.
Original	В	122	Tpt.

Motive F

Form	Transposition	Entry point (measure number)	Instrument
Original, 5 th pitch omitted	C#	40	Vlc.
Inversion (altered)	G	43	Cl. II (b. <u>cl.</u>)
Retrograde	E	46	Cl. I
Original	E	55	Ob. (eng. hn.)
Retrograde Inversion	E	56	Bsn.
Original	A#	67	Vlc.
Retrograde, 4 th pitch omitted	D#	71	Bsn.
Retrograde	Α	72	Cl. II (b. cl.)
Inversion	D#	72	Bsn.
Original	A#	75	Vla. (piano last
		_	pitch)
Retrograde	A#	76	Hn.
Inversion	Е	94	Vl. I
Original, 2 nd pitch lowered a	A	94	Fl. I
semitone			
Retrograde Inversion	D	99	Ob.
(fragment)			
Original (last note altered)	A	120	Bsn.
Inversion	A	127	Tbn. + Bsn.

Tautologies Motive

Form	Transposition	Entry point (measure number)	Instrument
Inversion	В	45	Piano
Inversion (fragment)	В	50	Bsn.
Retrograde Inversion	В	50	Vlc.
Original (fragment, 4 th pitch	С	56	Ob. (eng. hn.)
lowered a semitone)			
Inversion	С	67	Vlc.
Retrograde (fragment)	A	74	Hn.

Retrograde Inversion	F	75	Tbn.
(fragment, 1 st note lowered a			
semitone)	_		
Retrograde Inversion,	C#	75	Cb.
accidental alterations			
Retrograde Inversion	E#	75	Fl. I
Inversion (permutated)	Ab	94	Vlc. + Bsn.
Inversion (some pitches	Ab	96	Fl. I
15ma)			
Inversion	C	97	Hn.
Retrograde Inversion	E	97	Vl. I
(fragment)			
Inversion (fragment)	В	124	Ob.
Original	Еb	126	Cl. I
Original (fragment)	Bb	127	Ob.

3.4 Form

Because of the strong forward motion of the poem, it required a continuous text setting with little instrumental music between the lines and a steady flow from beginning to end. The instrumental music appears before the poem, occupying the larger percentage of music for the entire song. The poem proper sounds for only thirty-five seconds out of the total duration of three minutes and forty seconds.

The song has five distinct sections that have the potential to contain up to four different types (layers) of music: Chords, Counterpoint, Residual Pitches, and the Mechanical Layer. Figure 3.12 provides a proportionally accurate graphical rendering of the entire song. Noticeably, the mechanical layer unwaveringly sounds during the entire song. Like nature itself, it continues to operate with or without help from other forces (or musical elements).

Figure 3.12

Form: Graphical Representation (In Moonlight)



3.5 Harmony

Section IV introduces the residual pitch layer, which consists of 'pitch residue' from the mechanical layer. Eventually, the accumulation of this residue becomes the basis for the total harmonic substance of the music. This can be perceived as another emerging concept in a harmonic guise: the result of the accumulation of pitches in a melody, where a horizontal pitch field generates a vertical pitch field.⁴ Figure 3.13 organizes a reduction of the end of Section IV (mm. 132-143) in terms of the different layers (shown graphically in figure 3.12). Dotted lines show which pitches of the mechanical layer are treated as residual pitches.



For most of the song, segments of the Mechanical Layer are analyzed according to their tendency towards a particular key centre, helping to direct the choice of motives in contrapuntal sections, as well as chords in the chord layer, to those that work in the key centres (see figure 3.14 for a list). This analysis also influences the choice of pitches from the mechanical layer that are held as residual pitches, giving preference to those that are contained in the key centre.

⁴ This technique is notably used in the music of Ligeti, sometimes referred to as *interval crystallization*.

Figure 3.14

Select List of Key Centres: In Moonlight

<u>Region</u>	Key Centre	
(measure)		
26-37	FM	
38-44	D major/D harmonic minor	
45-51	A major	
49-55	F harmonic minor	
55-57	F major	
58-60	D major	
60-62	C major	
63-65	C# major	
66-70	G major	
70-72	E harmonic minor	
72-73	B _b harmonic minor	
74-76	B harmonic minor	
92-99	C harmonic minor	
100-104	F# harmonic minor	
105-110	E, major	
111-115	B _b major	
116-121	F major	
122-125	B major	
125-132	A _b major	

Section III forms the middle of the song. It is the point at which the accelerating rhythm of the Mechanical Layer neutralizes to 15 equal attacks in half-note values. This moment of rhythmic stasis is emphasized by also neutralizing the independent contrapuntal lines and replacing them with chords in homorhythm with the Mechanical Layer. The result is a solo chord progression. The primary objective in creating and ordering the specific chords was to produce juxtaposition in terms of density, registral expanse, and degree of dissonance.⁵ Eleven chords are used, with four of the chords repeated once to make up the fifteen-chord progression:

⁵ This approach influences, to a greater extent, the music of *Inner Space*. See Section 5.3.
Figure 3.15





One technique used to derive harmony was to take sections of the Mechanical Layer and reorganize them via octave transpositions. For example, chord 3 (mm. 79 and 86) summarizes almost the complete pitch content of the Mechanical Layer in mm. 78-91, which also comprises most of Section III:

Figure 3.16





Chords from the Section III progression also provide the material for Sections II and IV of the chord layer, whereby they are transposed in accordance with the key centre. For example, the very first appearance of the chord layer (m. 41-44: Vln. I, Vln. II, Vib., Cb.) uses chord six of the progression, now transposed to suit the key centre of D Major.

4. Song III: Tautologies of Summer

Tautologies of Summer

Every morning there are sparrows and rhubarb leaves. Somewhere a heron mimics shadows

while desire moves just below the surface. In spite of pain

desire repeats itself again and again like the snake who

looking for its lost skin traces its shape in the sand simply by moving forward.

Crozier, Lorna. <u>The Garden Going On Without Us</u>. Toronto: McClelland & Stewart Ltd., 1985. 13.

4.1 Synopsis of the poem in relation to the poetic theme

The submerged element is desire, identified as a subconscious force - "desire moves/just below the surface." The poem compares desire to the incessant slithering of a snake that, paradoxically, moves forward by continually looking back at itself. The snake strives to reclaim its lost past: "looking for its lost skin/ [it] traces its shape in the sand/simply by moving forward." However, desire is rendered unstoppable by its inscrutability. One cannot directly address desire and so cannot prevent it from recurring. Thus, the snake, oblivious, relentlessly pursues its goal, searching for the skin whose very shape is constantly imprinted beneath it.

Joseph Campbell validates and elaborates upon this interpretation when he explains the role snakes traditionally play in myths:

The snake is the symbol of life throwing off the past and continuing to live. . . . The serpent sheds its skin to be born again, as the moon its shadow. . . .

The serpent represents immortal energy and consciousness engaged in the field of time, constantly throwing off death... There is something tremendously terrifying about life when you look at it that way. And so the serpent carries in itself the sense of both the fascination and the terror of life. (Campbell 52-53)

4.2 Form: Text & Music

The poem consists of four stanzas with three lines each. Unlike *A Summer's Singing*, sentences flow past the breaks between the stanzas. In this way, the poem has a sly tool for communicating beyond the means of words and grammar. Certainly the true sentence is received: "Somewhere a heron mimics shadows while desire moves just below the surface." Likewise the second sentence: "In spite of pain desire repeats itself again and again..." Yet, these two sentences can be combined to form a 'false' sentence, "while desire moves just below the surface in spite of pain...," because it is separated to make up the second stanza. Like a shadow, this sentence is not real, but it mimics the real sentence's meanings. Both versions reveal the co-existence of desire and pain. The real sentence expresses how desire repeats itself in spite of pain, while the 'false' sentence expresses how desire can move below the surface in spite of pain.

The music consists of six sections (see figure 4.1). The setting of the text does not exclusively follow either the sentence or stanza divisions of the poem. The first sentence, which consists of line two and part of line three in the poem, is adhered to; there is a considerable break of seven and a half beats after "rhubarb leaves." However, the singing then unfolds in a continuous manner, with no instrumental interlude. The text flows almost without rest all the way to the end of the second stanza with the word "pain" sustained prominently. Therefore, there is no distinction, by way of held notes or rests, between stanza one and two, but neither is there a distinction at the end of the second sentence. The first and second lines run together without musical interruption, followed by a noticeable break of five beats. At this point, the text is set with more breathing space. The separation of the lines, as they are handled in the poem, is similarly delineated in the music, with short instrumental moments (1-3 beats) between them.

Figure 4.1

Section	Measures	Function	# of Parts	# of Pitch-Series Segments	Remarks
A	1 – 14	Instrumental Introduction	1	7	Initial Introduction of pitch series
В	15-23	Stanza #1	2	4.3	Heterophonic
C	24 - 28	Stanza #2	2	0.75 + 0.2	Heterophonic
D	29 - 36	Stanza #3	2	0.7 + 0.9	Heterophonic
E	37 - 46	Stanza #4	2 - 3	0.2 + 1	Heterophonic
F	47 - 54	Instrumental	1	1	Complete
		Conclusion			statement of pitch
					series

Synopsis of Form

4.3 Pitch Series

As will be described in section 4.3, the musical representation of the poetic theme is carried out in the melodic domain, through the repetition of a 'slithering' melodic fragment that gradually expands in length to reveal a complete twenty-four-note pitch series containing all twelve pitch classes:

Figure 4.2





While the pitch series has an overall descending tendency, with the starting pitch on D5 and the ending pitch on B $_{3}$, the goal was to create a serpentine contour. One means was to create a series that was continually self-similar. A melodic contour, consisting of two descending intervals followed by a single ascending interval, is traced six times. See figure 4.3.

Figure 4.3

Pitch Series: Melodic Contour



Another means of achieving a 'slithering' pitch series was to limit the intervallic content. There are no large skips. Intervals range from minor seconds to perfect fourths. There is a high concentration of major seconds (thirty-nine percent), followed by minor seconds at twenty-two percent. Minor thirds (and augmented seconds) contribute thirteen percent of the total intervallic content; perfect fourths contribute nine percent, while major thirds (and diminished fourths) contribute seventeen percent. Also, except through pitches six to nine, there are no more than two skips in succession (whether in the same direction or not), and most of the time there is only one skip. Another rule that achieved desired results was to "precede and/or follow a skip with a step or steps in the opposite direction" (Schubert 22).⁶

4.4 Structure: Unfolding Melody Expresses Poetic Theme

Melody is the primary structure enforced in this song. As introduced in section 4.1, the form of the melody consists of gradually expanding repeating segments of the pitch series until all twenty-four pitches sound. The process requires adding new pitches with every repetition. Figure 4.4 brackets the first nine segments and the beginning of the tenth, that constitute the instrumental introduction as well as part of stanza one:

Figure 4.4

Unfolding of the Melody Selected Example mm 1-20



⁶ A number these methods of composing the pitch series were stimulated by the book <u>Modal Counterpoint</u>, <u>Renaissance Style</u>. by Peter Schubert. See bibliography.

The melodic form communicates the backward-looking aspect of the snake in the poem since any given melodic phrase contains more previously heard pitches from the pitch series than new material. The melody expands at a slow pace, ranging from zero to six new pitches per segment, and most often by only one pitch. The hesitant unfolding of the pitch series contributes to the subconscious aura of the music, and the resulting repetitive melody mirrors the text: "desire repeats itself/again and again." Not until the last section of the song (section F) does the full pitch series sound. Indeed, the melodic form is continuous, self-replicating, and periodic.⁷ Figure 4.5, below, is an exhaustive account of the pitch series is covered in each pitch segment. Occasionally, a pitch in the segment is omitted, and this is indicated in brackets. Number ranges in the second column refer to the number names of pitches in the series, as it is established in figure 4.3.

Figure 4.5

Order of Pitch Series Segments S = segment

Section A (mm. 1-14) S1 1 S2 1 - 2 S3 1-2 S4 1-3 S5 1-4 S6 1 - 6 S7 1 - 7 Section B (mm. 15-23) S8 1 - 8 S9 1 - 11 S10 1- 11 (omits pitch 5) S11 2 - 11 (omits pitch 1) S12 1 - 4 (1 - 12 in total)

Section C (mm. 24-28) S12 4 - 12 (continued) (omits pitch 9) S13 3 - 4 (3 - 13 in total) (omits pitch 1, 2)

⁷ In literary terms, a periodic structure is one in which the grammatical form and the meaning are not complete until the end is reached. In this case, the literary term applies to a melody.

<u>Section D</u> (mm. 29-36) S13 5 - 13 (continued) (omits pitch 11) S14 1 - 17 (1 - 19 in total) <u>Section E</u> (37-46) S14 17 - 19 (continued) S15 1 - 22 (overlaps with L14) (omits pitch 8)

Section F (47-54) S16 1 - 24 full pitch series, instrumental

4.5 Melody: Heterophony

A tautology, as in the poem's title, is "the useless repetition of an identical meaning in different terms."⁸ Disregarding the question of uselessness, a heterophonic approach to the music is this very same idea, except that the repetition takes place at the same time as its original source: heterophony is the "simultaneous variation of a single melody" (Cooke 1). In particular, this song takes inspiration from the accompanied vocal music of the Middle East and East Asia "where the instrument provides and embellished version of the vocal part" (Cooke 1). However, in the case of this song, the instrumental part does not always provide the embellished version – the vocal melody sometimes takes this role instead, while the instrument takes the original melody (see mm. 21-22). The image of the heron and its shadow game (last line of the first stanza) also comes to mind, in that the mimicking melodic parts shadow the true melody above or below. Figure 4.6 shows how, through rhythmic variations as well as auxiliary-type melodic embellishments, the heterophonic treatment heightens the characteristic of a 'snake-like' melody:



⁸ Webster's Encyclopedic Dictionary. Canadian Edition. New York: Lexicon, 1988.

4.6 Pitch Centricity

Through the course of the song, certain pitches are emphasized as pitch centres. Pitch centres exist primarily as a means to change the perception of the repeating pitch series and to renew its impact. Over the course of the sixteen pitch series segments, monotony is avoided by emphasizing a diversity of the series' pitch classes and not dwelling on a previous pitch centre. Figure 4.7 presents the pitch centers in order of appearance:

Figure 4.7

Pitch Centers

Measure:	Pitch:
5-7	D
8	G
12	С
13	A
16-17	G
19	В
20-21	G (with some F)
22	A
24-25	A
27	F
28	E
30-31	В
33	Ab
35-37	G♭
36-37	D+E _{Crotale}
38-40	D
41-42	F
44-47	D+C

Apart from omitting pitches (which, as seen in figure 4.5, was not a common approach), an effective means to create pitch centricity was to vary the rhythmic emphasis so that different pitches become the arrival point of the melodic contours. Equally, certain pitches of the series are treated as grace notes, in order to de-emphasize those whose sound has already been exhausted, and to create new phrasings.

Also, certain attacks of the melody were sustained by residual tones in exactly the same manner as in *In Moonlight* (see section 3.5). The particular held pitch colours, by association, the melodic pitches that sound above or below it, so that their impact is renewed.

4.7 Orchestration

As outlined in section 4.2, there are no held notes or rests between stanza one and two that would help delineate them in a temporal manner. In this case, the stanzas are defined by a change in instrumentation, where the beginning of stanza two is marked by the passing-over of the instrumental melody to a new instrument (from bassoon to clarinet, m. 24).

Another important aspect was the free use of octave transposition, which engendered a 'winding' orchestration. It gave more freedom for the instrumental part of the melody to move more drastically from one sonority to another. For example, in measure thirty, the melody exchanges between the first clarinet on B4 and the bass clarinet on B2.

5. Song IV: Inner Space

INNER SPACE

my spaces are vast are blue

winds rip through my ribcage

redtails shriek in my throat

with a dry puckered mouth the sun sucks my brain

i look small and earthbound

but inside/

is the sky

Uher, Lorna. Inside is the Sky. Thistledown Press, 1976. 42.9

5.1 Synopsis of the poem in relation to the poetic theme

The poem is the narrator's declaration that, contrary to appearances, her spirit is vast and strong despite the potential oppression of outside forces. In this way the reader is made aware of something that is already thriving, triumphant and that has emerged in reality, but is visually imperceptible.

5.2 Synopsis of the music in relation to the poetic theme: Registral Expanse & Harmony

Registral expansion is used to portray the difference between the narrator's true spirit and the way it appears to the outside world. The narrator's *vast spaces* are

⁹ Uher is Lorna Crozier's maiden name, under which she has been officially published.

represented by music covering a wide registral expanse, while the music portraying her "small and earthbound" appearance is registrally constrained. Explicably, registral expanse conveys the two versions of the narrator's spirit: the superficial, visible version (registrally constricted), and the true, internal version (registrally expanded). The link between the two versions of the spirit is made by representing both with the same harmonic source material, the harmonic and the sub-harmonic series based on B_{b} . The sub-harmonic series is created by taking the harmonic series (figure 5.1) and inverting it (figure 5.2).¹⁰ Here, it was also transposed up an octave.

Figure 5.1



Figure 5.2



Though narrow and wide registral expanses represent both the violent forces and the narrator's spirit, harmony maintains a distinction between the two forces by portraying the antagonistic, attacking forces through dissonant¹¹ chords, and using

¹⁰ The sub-harmonic series follows the theory of undertones as outlined in New Musical Resources by Henry Cowell pp. 21-29. Unlike Cowell, it is used on the premise that it is an artificial construct that goes against the laws of overtones (harmonic series).

Dissonant, here, means harmony that is highly unstable, chromatic, and not diatonic.

consonant¹² chords to portray the protagonist's force - the effortless spirit of the narrator. As mentioned previously, however, both the dissonant and consonant chords are derived from the same harmonic sources: the harmonic series and the sub-harmonic series.

Figure 5.3 shows the chords used in the song, presented in order of increasing registral expanse. Numbers enclosed in triangles show the registral expanse in number of semitones. The chords in figure 5.3 are also loosely organized into three types of sonorities: dissonant, mildly-dissonant, and consonant. The diagram also indicates whether the chord is derived from the harmonic series (h.s.) or the sub-harmonic series (s.h.s.), and numbers in square brackets indicate what partials are present. Some chords are voiced such that a partial's pitch class appears in more than one octave.

¹² Consonance, here, means harmony that is either wholly diatonic, or at least emphasizes the diatonic construct.



Besides the link to Song I, *A Summer's Singing*, which uses the harmonic series based on B_b, the sub-harmonic series provides a potentially intense, dissonant, and highly restless harmony suitable for the violent action in the poem. And yet there is also intentional manipulation of the two series in order to heighten the ambiguity between the harmonic and sub-harmonic series. By achieving the same general results from two aurally-opposing frameworks, the question is raised as to what musical roles they take in representing the antagonist and the protagonist in the poem. In fact, they take both roles: as seen in figure 5.3, both series grace each category so that the sub-harmonic series and the harmonic series yield both consonant and dissonant harmonies.

One method of obtaining harmonies from the two series' was to select only certain partials, while maintaining their original positions within the series. This approach can be compared to a filtering process, whereby the full harmonic or sub-harmonic series forms a large chord, but some or many of the partials are kept from sounding. In some cases, segments of the series, or consecutive partials, are singled-out, as in chord D1 where we hear partials 10, 11, 12, 13, 14, 15, and 16 of the sub-harmonic series based on B_b7. The same approach was used to create D2, S1, and C2. In other cases, non-consecutive partials are chosen, but still in a rather systematic manner. For example, the widest consonant chord, C16, is made up of odd partials of the harmonic series based on B_b1: 1, 3, 5, 7, 9, 11, 13, 15, and 17. In chord S10, the odd partials are also chosen - this time from the sub-harmonic series based on B_b7. An additional thinning of the partials occurs by removing every other partial, starting from the bottom one. In still other cases, partials are selected less systematically, such as in chords C9, C10, C14, S3, S11, and D5. In chord C9, the partials are selected for their B dominant seventh sonority as a contribution to the consonant chord collection.

An altogether different method of obtaining harmonies from the two series' was to select certain partials and treat them as pitch class collections to be freely re-voiced. At times, consecutive partials are selected and re-voiced so they make wider configurations. In chord S9, partials 7-12 of the B_b0 harmonic series are re-voiced so that they actually remap onto the harmonic series. See figure 5.4.

Figure 5.4 Creating Chord S9



Certain chord-generating procedures are carried out in an attempt to obfuscate the disparity between the harmonic series and its mirror image. For example, chord S4 is made up of partials 14-19 of the harmonic series, while chord S5 contains partials 14-19 of the sub-harmonic series. An interesting phenomenon occurs here, in that the same segment of partial numbers in both series' yields very similar pitch class content. Five out of six pitch classes are shared: B, A, C, Bb, and Ab. Additionally, the two chords are voiced as similarly as possible. Remarkably, chord D8 represents both series' segment 20-25, since the two partial segments yield identical pitch class content.

5.3 Form

Like *In Moonlight*, this poem lends itself to a setting of the text that is uninterrupted from one line to the next by instrumental music. This approach also preserves the further meaning that develops when the end of one line in the poem can flow to the beginning of the next line. For example, "ribcage" appears at the end of line 3, while "redtails" appears at the beginning of line 4. Though the two words each belong to separate lines, their immediate proximity conjures new relationships. Mentioning birds after "ribcage" invokes the image of a caged bird, and provokes issues of the wild versus the tamed. The wild is not tamed by the narrator. Her cage is insufficient to tame these violent birds that attack her throat – but neither does the wild defeat her.

Both *Inner Space* and *In Moonlight* have instrumental introductions, but the introduction for *Inner Space* takes a much smaller portion of the overall duration of the

song. It takes on the role of foreshadowing the climactic material of the song, where the use of juxtaposition as the general approach to ordering chords can be seen in its most extreme state.

Providing contrasts in any discipline makes the desired expression reach its full potential. The poem itself provides strikingly juxtaposed images. It personifies the sun, depicting it, with its "dry, puckered mouth", as an old, withered person. This desiccated image provides a vivid contrast to the pristine image of a vast, blue sky and underlines through juxtaposition, the immortality and endurance of the narrator's spirit. "Rip", "shriek", and "suck", are all words that promote the idea that forces are trying to subvert the narrator, to tear her apart, to mutilate and destroy her inside and out. They too, by jagged comparison, emphasize the calm omnipresence of the narrator's spirit. Indeed, two main images are used to show the great disparity between the true, open spirit of the narrator, and her constrained physical appearance: the sky and anatomy. A blue sky represents her spirit, but the outside world sees first her ribcage, then throat, and then brain. Indeed, her exterior façade appears "small and earthbound."

Providing contrasts in harmony also strengthens the affect of sonorities. A soothing, calm, open chord sounds even more so when one has just heard an extremely dissonant harmony. Therefore, the ordering of the chords depends on the principal of alternating dissonance and consonance, as well as alternating expansion and contraction of the registral expanse. Like the solo chord progression of *In Moonlight*, the main focus was to create a progression of chords whose properties were constantly fluctuating. In this case, the homorhythmic setting of the chords pervades the entire song rather than only fourteen seconds.

After the introduction, the rate of harmonic change shifts from eighth-note values to, on average, whole-note values. A wide registral expanse in consonant chords occurs at the first line of the poem (mm. 14-25). The piece is gradually infiltrated by the more dissonant chords as it progresses, and the chords – especially the consonant ones – become narrower. The alternation between narrowing consonant chords and wider dissonant chords creates an increasingly fragmented discourse, heightened by the increase in the rate of harmonic change. By m. 34, the rate of harmonic change briefly returns to eighth-note values and then gradually slows until it reaches its last, long-held, chord (C2) at m. 39. Figure 5.5 charts the progress of the chords throughout the song in terms of

registral expanse. The alternation of chords (in terms of consonance, dissonance, and mild-dissonance) is clear, since the chord names are given (C = consonant, D = dissonant, and M = mild-dissonant).

F	igure	5	.5
	ω		

	har	Chord	Registral expanse in # of
	Uai	Chord	semitones
Introduction	7	<u>C5</u>	
(for a shadowa alimay)	/	M11	18
(Ioreshadows chinax)			
			55
	1		50
			5
		D6	48
		C2	5
		M6	41
	8	D4	38
		M4	33
		D3	23
		M10	70
		D5	41
		D7	50
	9	C2	5
		D6	48
		C2	5
		M6	41
		M2	16
		D8	50
		M9	54
	10	C6	20
		D2	11
		M2	16
		M11	72
		C6	20
	11	D6	48
		M6	41
		C1	3
		C14	55
		C5	18
		M11	72
	12	C8	27
	12	108	50
	13		
		M3	30
		C^{2}	50
	15	C^2	5 27
	15	L0	21

Ordering of chords

The Poem	18	(C8)	-
	10	C7	26
	10	M7	43
	19	C15	45
	20		55
	20	(CIS)	-
		C11	36
	21	C16	60
	22	M9	54
	23	C15	55
	24	C16	55
		M10	70
	25	(M10)	_
	25	C12	40
	20	(C12)	40
	20	(C13)	-
		M8	4/
	27	D8	50
		C12	37
		D6	48
	28	C9	28
		D9	71
		C7	26
	20		11
	2)	D_{2}	27
			27
		D_3	23
	30	(D3)	-
		C10	34
		D6	48
	31	C11	36
		D9	71
		C3	5
		M5	33
		M4	33
	32	(M4)	
	32	$(\mathbf{W} + \mathbf{y})$	-
			10
	22		
	33	D10	72
	34	C5	18
		M5	33
		C6	20
		D8	50
		C2	5
		D6	48
		C^2 1	3
		M6	41
			20
	0.5	D4	66
	35	M4	33
		D3	23
		M2	16

36	D2	11
37	D2	-
	D1	8
38	M1	6
39	C2	3
41	C2+C15	3 (55)
	(filtered)	

Figures 5.6 and 5.7 graphically clarify the highly juxtaposed nature of the chord progression. Figure 5.6 graphs the total chord progression of the song in terms of each chord's registral expanse. However, it does not show each chord's contribution to the total duration of the song. Figure 5.7 does reveal each chord's contribution over time, as well as indicating the fluctuation of consonance, mild-dissonance, and dissonance, for each chord in the song.







Figure 5.6

Narrowing the register of the consonant chords means that the full boundary of the sound potential, in terms of register, is gradually shrinking. This process represents the invisibility of the narrator's true spirit, her true potential. All we ultimately see is a "small and earthbound" portion, and all we prominently hear by the song's end is the narrow diatonic cluster C2.

The poem undermines the forces that bind us, that keep us from our full freedom. This could be simply our own physical state, or it could be external states, as in the poem. Nonetheless, they are ultimately meaningless because "inside", in the core, where truth counts the most, is absolute liberty: "the sky" (physically, mentally, temporally). Inside the narrator's body "is the sky", so if "redtails shriek", or if the "sun sucks" pieces of her away, she is limitless and vast. Nothing is lost.

Chord C15 eschewed all processes in its creation. It is the only chord in the song that was created in an intuitive manner, and it is used to represent this true, inner spirit of the narrator. It has the second widest registral expanse of the consonant chords. The poem uses imagery as a framing device, where the first line relates directly with the last line because it contains the image of the sky. Likewise, the music uses chord C15 as its framing device. It sounds faintly in the background during the more violent introduction (mm. 7-16). It colours, more prominently this time, the first line of the text (mm. 16-23). On the very last word of the poem, "sky" (mm. 45-50), chord C15 sounds very faintly in the background while the narrow cluster chord C2 sounds more prominently in the foreground. Symbolically, chords C2 and C15 are the two versions of the narrator's spirit, sounding together at the end.

There are four images of nature (wind, birds, sun, sky). All but "sky" are positioned to be forces working against the narrator, yet the three undermining forces (wind, birds, sun) depend on the sky, and, as the poem expresses, the sky is inside the narrator. The polychord at the song's end (C2 + C15) seems especially fitting when one realizes there is this envelope within an envelope.

5.4 Rhythm

Inner Space has the steadiest sense of metric rhythm of all the songs. The attacks of the harmonic accompaniment occur quite regularly. Syncopated rhythm is perceived when the chords alternate between highly contrasting registral expanses and sonorities.

The wide chords are perceived as the dominant beat, while the narrow chords sound like weaker beats.

In measure fourteen, the harmonic rhythm drastically changes to become very slow in order to prepare for the singer's first entrance of the song. After the climax (m. 34), the constant harmonic changes in eighth-notes decelerate to become frozen into one chord that holds for many measures.

5.5 Melody

The first stage in the composition of this song was the rhythmic setting of the text (using the method described in section 1.5) which formed the basis of the melody. The second stage was the establishment of the instrumental accompaniment, both its harmonic and rhythmic setting. Therefore, the approach used to select the pitches of the melody was different from that of In Moonlight. Instead of choosing pitches for the melody before creating the accompaniment, the pitches of the melody were chosen after, and in relation to, an accompaniment whose pitch content and rhythm were predetermined. Roughly half of the poem's syllables are set to a pitch class that is also contained in the chord (or chords) that accompany it. For example, in m. 28, there are two chords that accompany the melodic pitch of D#5 (on "shriek"): the first chord (C9) contains D#5, and the second chord (D9) has the D# transposed an octave higher (D#6). Moreover, approximately one fifth of the syllables are set to a pitch class that is not contained in the chord or chords that accompany them, but do combine with the accompaniment to form a major or minor scale (or subset thereof). For example, in m. 21, the word "are" sounds across two different chords. It does not share its pitch class with either chord, and yet in both cases its addition results in a pitch aggregate that follows the scalar patterns of a diatonic scale: C15, the first chord, is diatonic with the G in the melody (it fits in a D Major scale, and the lowest note of the chord is D) and C11, the second chord, fits within the F melodic minor scale of which the G in the melody is also a member. Furthermore, other syllables intentionally add more dissonance to the harmonic backdrop by specifically adding more consecutive semitones to the pitch class set. This motivation generally comes from the poetic meaning of the text. For example, on the word "throat" in m. 30, the melodic C#4 fully completes the harmony's nearly full chromatic segment from A3 to Eb4. In some cases where the syllables sound across two different chords, the melodic pitch has a different relationship with each of its accompaniment chords. For example in m. 31, the first chord for "dry" (D3) is dissonant with the pitch class of the melody (E), while the second chord (C10) does contain the pitch class E. Another instance is found in m. 27: the first chord for "cage" (S8) contains the melodic pitch (A), while the second chord (D8) is dissonant with the pitch class A.

The melody of *Inner Space* has the most intervallic variety of all the songs, so that the melodic phrases continually cover a fairly wide register. Poetically, this makes sense, since, in the poem, the narrator's spirit is boundless. This is represented by the melody through the freedom at which it moves about the mezzo soprano range, especially from the beginning and up to the climax (mm. 18-33). Nonetheless, the melody does not simply jump about haphazardly. There is a clear overall ascending direction towards the climactic word "brain" (m. 32).

5.6 Timbre

A series of six timbral changes occurs in measures 40-49 on the continuously sounding chord C2. The progression begins with a soft woodwind sound created by bassoon, alto flute, clarinet, and flute. The second sonority is *tremolo sul ponticello* in the strings, followed by solo vibraphone *tremolo*, then brass trills, then a rich woodwind combination, and finally, a slightly rhythmic gesture in harp and piano. In each case, the changes in orchestration occur gradually by introducing the new instruments and silencing the older instruments one by one. On a subtle level, these timbral changes help express the poetic theme; the fluctuation between pale and rich timbres signify the fluctuation between the meaningless exterior of the narrator and the richer, more vast reality of her inner spirit. This is especially fitting since C2 is the narrow chord that represents the narrator's exterior façade. It fluctuates from pale to rich timbres while the wide C15, representing the interior spirit, faintly emerges to form a polychord. The timbral struggle within chord C2 is the impetus for the arrival of chord C15.

Conclusion

Coroniti describes what this composition attempts to achieve:

We cannot know the truth or meaning of poetry through musical imitation, we can only embody it in the distinct language of musical expression. (Coroniti 93)

When a song responds to the poetic theme of its text, rather than the mere surface of the poetry, it exists on par with the poem and is no longer simply a superficial accompaniment. To create a synergy between the technical and the conceptual is not an easy task. But it is still possible, as this composition hopefully has shown, to conceive a poetic theme with parameters intrinsic to music, such as harmony, rhythm, melody, and registral expanse. Even when the poetic theme is the very foundation of the music, it does not require the listener to be consciously aware of its presence in order to prevail. It is merely another facet of the poetic theme itself which is the great mystery of what lies beneath all things.

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Signed: Lørna Crozier 1886 Cultra Ave.

Saanichton, B.C. V8M 1L7

Dated: October 1, 2002

Part II: Score

Inside is the Sky

for Mezzo Soprano and Chamber Orchestra

text by Lorna Crozier

composed by Emily Hall

© Emily Hall 2004

Instrumentation:

- 2 Flutes (1st doubling piccolo, 2nd doubling Alto flute in G)
- 1 Oboe (doubling English Horn)
- 2 Bb Clarinets (2nd doubling Bass Clarinet)
- 1 Bassoon
- 1 Horn 1 C Trumpet 1 Trombone

2 Percussionists (see below for details)

Harp

Piano

2 Violins

1 Viola

1 Violoncello

1 Contrabass (with extension)

Percussion 1

Suspended Cymbal (large) 2 Maracas Glockenspiel Vibraphone (shared with P2) Triangle wood Plate Drum Marimba (4 1/2 octaves; F2-C7) Large Guiro (mounted) Chimes (3 pitches: C4, F#4, G4) Large Wood Block Covered Tom (medium) Ratchet

Percussion 2

Crotales 2 Wood blocks (medium & large) 3 Thai Gongs, pitches A4, D4 & G4 Vibraphone (bow required) Small Bass Drum or Surdo Chinese Suspended Cymbal, large Wooden Frog (Thai, preferably c. 12 cm length) Large Guiro (mounted)

Approximate duration: 15 minutes

The score is in C

All instruments sound as written, except usual octave transpositions: piccolo: sounding one octave higher than written. crotales, glockenspiel: sounding two octaves higher than written contrabass: sounding one octave lower than written, including harmonics

Percussion: all music is laisser vibrer unless indicated by \oplus

Microtonal Indications:

- # = quarter sharp
- ↓ = quarter flat
- $\frac{1}{4}$ = sixth tone sharper than a sharp
- **b** = sixth tone flatter than a flat
- | = sixth sharp
- | = sixth flat

A Summer's Singing













.










In Moonlight







































10 Č. Piccolo FLI 📕 p FI,II Ľ, A MY 6 1 Ŧ L Ł J. p mf>p Ob. 6 P p p Cir. I ŧ ł Cir. II 9: _____ p > pppp = #f === - P 8sn Hm. Tpt Ć Tbn. Mba. med. ya Glockenspiel (sounds 15ma) med. yarn ı Vib. motor on slow ppp Perc ord. sft. ym. mal. 🕈 11 1 (<u>____</u>p ppp pp Ŧ -. . 4 P Hp. ł 6 Pno Ð Ťa. = 42_46 10 rit. _ V. E √гу вюга ing there are non trem. -Vin. I 6. -pp pp poco a poco trem. sul III • \$ non tren Vin. II PP 'n Ē ō non trem. poco a poco t - 1 ÷ Vla. . ppp pizz. Vic. pp ŵр =#f= p -> pp `**e** • Сь. pp ,

















*starting pitches are imprecise begin at the extreme point of the strings



102

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