#### Mar Maroun

For chamber choir, flute and two percussionists

(Volume 1 of 2: Analysis)

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April 2018

A thesis submitted to McGill University in partial fulfillment of the requirements of the degree of Master of Music

#### Abstract

Mar Maroun for chamber choir, flute and two percussionists, depicts a journey from past to present through the musical development of ancient Syro-Maronite hymns. Melodic and electroacoustic inspired processes are used to transform these hymns over time based on a large-scale pitch towards noise progression which also informs local interactions, particularly with the application of a non-pitched vocal continuum. Maronite musical tradition is alluded to with instrumental references to fourth century performance practice and cultural influences as well as through a special focus on heterophonic textures.

#### Résumé

Mar Maroun, pour chœur de chambre, flute traversière et deux percussionnistes, dépeint un parcours du passé vers le présent par le développement musical de chants traditionnels Syro-Maronite. Ceux-ci sont transformés avec le temps par des techniques mélodiques et également influencés par la musique électroacoustique à l'intérieur d'un cheminement à grand-échelle de hauteurs définis vers des progressions de bruits, façonnant également les interactions à petite-échelle, surtout avec l'utilisation de techniques vocales sans hauteurs définies. Les instruments utilisés dans la pièce font références à des pratiques musicales provenant du quatrième siècle et à d'autres influences culturelles ; la musique Maronite résonne également par le traitement particulier de textures hétérophones.

## Acknowledgments

I would like to thank God, who is my utmost source of inspiration. In my heart dwells the Holy Spirit, which I came to understand better while writing this piece. I also discovered that Maronite music and spirituality both resonate deep within me. For this, I would like to thank St. Maron (whom I named this piece after) for watching over me.

To my supervisor Jean Lesage. Words cannot express how grateful I am for having such a supporting, caring, kind and patient mentor. Jean nurtured my artistic interests in a direction that allowed me to discover who I was as a composer. His practical, rational approach to teaching composition were also vital to my education.

To Gabrielle Gaudreault, who conducted this piece with great care. I felt a genuine sense of camaraderie while working with Gabrielle and look forward to working with her again in the future.

To Jean-Sébastien Vallée, director of choral studies, for programming *Mar Maroun* for three performances last fall (premiere was on October 25<sup>th</sup>, 2017), including one in Toronto at the Canadian Opera Company.

To the Schulich Singers and instrumentalists for their heartfelt performances of my piece.

To David Rafferty for reviewing my thesis and for inspiring me to believe in myself.

To Elsa Marshall for reviewing my thesis and for being my best friend.

To Joseph Glaser for his profound knowledge of musical art and willingness to always help. Joseph also reviewed my thesis.

To my brother for helping me elaborate my ideas on spatialization and for his outstanding love.

To my friends in composition. My experience at McGill would not have been the same without you. Thank you for your friendship.

Finally, I would to like to thank my parents for their exceptional support in all that I aspire to do.

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## Chapter 1: Introduction

As I often consider the similarities between ancient and contemporary music, I sought to create a distinctive sound world inspired by traditional 4<sup>th</sup> century Syro-Maronite hymns in my composition entitled *Mar Maroun*, for chamber choir, flute and two percussionists (ca. 10 minutes). The translation of electroacoustic music techniques to choral writing, like the concept of written delay and meticulous spatial manipulation, is an important aspect of my work. My thesis also explores heterophonic texture and the use of microtonality in a melodic context similar to Middle-Eastern music traditions, as well as the confrontation and interaction of "pitched" and "non-pitched" materials, with the latter informing the overall structure of my piece. Finally, *Mar Maroun's* instrumentation is suggestive of 4<sup>th</sup> century Syro-Maronite performance practice and references aspects of Maronite history through the presentation of event-based musical allegories.

# 1.1 Inspiration

Mar Maroun (Syriac for "Saint Maron") is inspired by the evolution of Maronite Christian hymns. A branch of the Syro-Antiochean Church, the Maronite church is "one of the earliest distinct eastern churches." Maronites believe their Christian heritage reaches back to the time of Jesus and the church itself has affirmed its communion with the Holy See of Rome as early as 1180 AD. Today, more Maronites live outside of Lebanon-Syria then do in these countries. Upon attending a Maronite mass, I was astonished by the musical diversity of the hymns; some hymns were reminiscent of Gregorian chant, while others were clearly sung with Arabic maqams in a highly melismatic and ornamental manner. These were in contrast to a large number of hymns that featured major and minor tonalities, harmonized with common western classical chord

<sup>&</sup>lt;sup>1</sup>Guilnard Moufarrej, "Maronite Music: History, Transmission, and Performance Practice," *Review of Middle East Studies* 44, no. 2 (2010): 196, accessed March 15, 2017, http://www.jstor.org.proxy3.library.mcgill.ca/stable/23057157.

progressions using digital keyboard instruments. The hymns that captivated me the most were sung in Syriac-Aramaic.

This experience led me to search for scholarly articles written about Maronite music and history. After consulting a variety of sources, I came to realize that perhaps the musical diversity present in Maronite liturgy stemmed from the various political occupations throughout its history, namely from the Persian, Arab, Roman and Ottoman cultures.<sup>2</sup> Other factors came from a musical reformation that sought to accommodate the younger Arabic speaking Lebanese population (the Maronites used to speak Syriac up until the 20<sup>th</sup> century) through the composition of new, secular sounding hymns set in Arabic.<sup>3</sup> As a result, the preservation of authentic Syro-Maronite musical hymns became increasingly difficult, especially as the newly translated Arabic texts set to original hymn melodies caused an alteration of the Syriac poetic meter. Likewise, the ancient hymns accompanied by equally-tempered electronic instruments used for contemporary ceremonies altered the perception of the hymns that were originally justly intoned.<sup>4</sup>

Mar Maroun attempts to portray the evolution of ancient Syro-Maronite hymns through a linear, progressive transformation of selected ancient hymns, with the overall form being a gradual disintegration of pitch towards non-pitched materials (discussed in Chapter 2). This ultimately symbolizes the loss of authentic Maronite music and accordingly, a loss of Maronite culture.

# 1.2 Hymns and text

I quote two traditional hymns drawn from the ancient liturgical tradition of the Syro-Maronite church (Qadeeshat Aloho and Amano Moryo). They are sung in the original language.<sup>5</sup>

<sup>&</sup>lt;sup>2</sup> See Aziz Suryal Atiya, "Part Six: The Maronite Church," A History of Eastern Christianity (London: Methuen, 1968), 389-423.

<sup>&</sup>lt;sup>3</sup> Moufarrej, 198.

<sup>4</sup> Thid 210

<sup>&</sup>lt;sup>5</sup> An IPA chart for Syriac-Aramaic is included in the performance notes of the score.

The Syriac texts were acquired from Fr. Miled Tarabay, a Maronite priest and musicologist who specializes in Maronite hymnody.<sup>6</sup> The hymns' melodies, on the other hand, were transcribed by myself from memory; I also provided the English translations of the texts.

Syriac-Aramaic (western dialect) Romanization	English translation
1. Amano Moryo, Amano Moryo Moryo Amano, blilyo bi momo.	The Lord is with us, the Lord is with us. With us is the Lord, day and night.
2. Qadeeshat Aloho. Qadeeshat Hayltono. Qadeeshat lo Moyooto. Etraham alayn.	Holy art Thou, oh God. Holy art Thou, oh Mighty. Holy art Thou, oh Merciful. Have mercy on us.

Speculations about the origins of the hymns were confirmed through an article about Maronite music repertoire by ethnomusicologist Guilnard Moufarrej. According to Moufarrej, hymns that are still sung in Syriac-Aramaic are believed to be the oldest, dating back from the 4<sup>th</sup> century AD.<sup>7</sup>

Amano Moryo (Figure 1.1) is part of the Christmas Syro-Maronite Divine Office while Qadeeshat Aloho (Figure 1.2) is the standard Syro-Maronite Trisagion<sup>8</sup> proclaimed regularly in masses.

A third hymn, which I have composed for this piece, is devoid of text and based on the intervallic content of the traditional hymns in order to provide contrast and facilitate transitions between sections as well as to signal changes in texture (see Figure 1.3). The hymn's role is to comment on musical events and is only completely revealed in the final section of the piece by the flute.

<sup>&</sup>lt;sup>6</sup> I acquired the original Syriac texts with their respective French translation and Romanized version via e-mail correspondence. See Miled Tarabay, "L'Église Maronite du Liban et sa musique," Musicologie.org, 2016, accessed March 15, 2017, <a href="https://www.musicologie.org/publirem/maronites.html">https://www.musicologie.org/publirem/maronites.html</a>.

Moufarrej, 198.

<sup>&</sup>lt;sup>8</sup> A hymn with a triple invocation of God as holy.

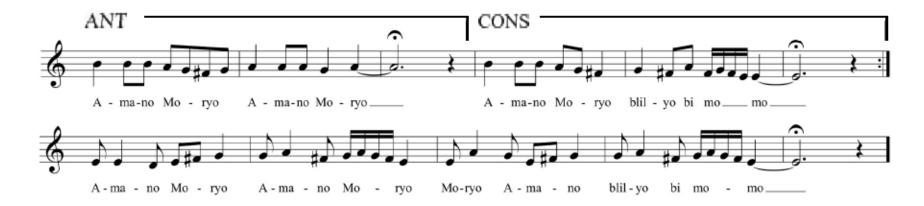


Figure 1.1 – First hymn (Amano Moryo). In order to demonstrate the effects of melodic tension discussed in Chapter 3, I labelled mm. 1-3 as the antecedent phrase (ANT) and mm. 4-6 as the consequent phrase (CONS) of the hymn.

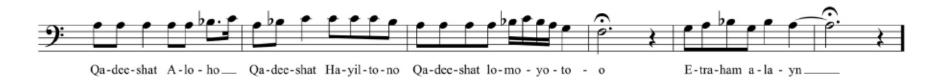


Figure 1.2 – Second hymn (Qadeeshat Aloho).



Figure 1.3 – Original hymn pitch material.

# 1.3 Referencing 4th century performance practice and cultural influences

Guilnard Moufarrej's article on Maronite music informed my choice of instrumentation for Mar Maroun for reasons of adequately producing a sacred, ancient atmosphere reminiscent of Syro-Maronite performance practice. "Traditionally, Maronite chant was performed a cappella, with the exception of percussion instruments used during processions on solemn occasions, such as Christmas and Easter. These instruments are the nagus, double cymbals, large cymbal, and marwahah." I emulate these instruments through a selection of contemporary percussion instruments considered to be descendants of the traditional ones. For example, I refer to the nagus, an ancient instrument made of "two metallic hemispheres connected to a stem that serves as a handle and played with a metallic hemisphere", with the triangle since they both share a similar metallic timbre and construction. 10 Figure 1.4 shows the contemporary percussion instruments used in Mar Maroun to their corresponding 4th century ancestors. Note that the nagus and marwahah are no longer used today.

Ancient percussion instruments (from Moufarrej's article)	Corresponding percussion instrument used in <i>Mar Maroun</i>
Naqus	Triangle
Double cymbals	Crash cymbal (I use the drum kit crash cymbal)
Large cymbal	Large suspended cymbal
Marwahah <sup>11</sup>	Sizzle cymbal

Figure 1.4 – Contemporary percussion instruments referencing specific ancient instruments used in Syro-Maronite ceremonies.

<sup>&</sup>lt;sup>9</sup> Moufarrej, 198.

<sup>10</sup> Ibid., 212.
11 "A metallic disk with small pieces of metal suspended from its rim: the disk is fixed to a wooden handle.

12 "A metallic disk with small pieces of metal suspended from its rim: the disk is fixed to a wooden handle. Performance consists of gently agitating the handle, slowly raising and lowering it-which produces a light, rustling sound." Ibid., 212.

The flute in *Mar Maroun* refers to the ancient *nay* flute, one of the oldest musical instruments in the world, which is still used today in Persian and Arab musical traditions. <sup>12</sup> Although the *nay* was not typically used in Syro-Maronite rites, the instrument is sometimes used in contemporary Maronite rites following the influence of Arabic musical culture. <sup>13</sup>

The following percussion instruments allude to traditional Arabic musical instruments, which were not typically used for ancient Maronite rites: the bass drum (tabl), tambourine (daff) and bongos (derbakeh). <sup>14</sup> I allude to traditional Arabic musical instruments mainly to show the influence that Arabic culture has had on Maronite culture. <sup>15</sup> These instruments are also used in Lebanese popular music and traditional Lebanese dance (dabkeh), particularly the tabl and derbakeh drums. Additionally, the tubular bells (chimes) used in Mar Maroun mimic church bells while the tam-tam was used only for colouristic purposes.

01/omo-9781561592630-e-0000044677.

<sup>12</sup> Scheherazade Qassim Hassan and Jean During, "Ney," Grove Music Online, accessed February 16,

http://www.oxfordmusiconline.com.proxy3.library.mcgill.ca/grovemusic/view/10.1093/gmo/9781561592630.001.00 01/omo-9781561592630-e-0000019644.

<sup>&</sup>lt;sup>13</sup> Moufarrej, 209.

<sup>&</sup>lt;sup>14</sup> Tabl dum (cylindrical drum), derbakeh (goblet drum), daff (frame drum). See Scheherazade Qassim Hassan, "Syria," Grove Music Online, accessed February 16, 2018. http://www.oxfordmusiconline.com.proxy3.library.mcgill.ca/grovemusic/view/10.1093/gmo/9781561592630.001.00

<sup>&</sup>lt;sup>15</sup> Please refer to Atiya's A History of Eastern Christianity for more details about Arabic influence on Maronite culture.

## Chapter 2: Form and structural divisions

## 2.1 Large-scale form

The piece is divided into three formal sections: A (mm. 32-64), B (mm. 65-112) and C (mm.113-149). The first and second hymns are sung individually in sections A and B, dividing each section into two subsections: A1 (features first hymn), A2 (features second hymn), B1 (first hymn returns), B2 (second hymn returns). In section C, only the texts of the two hymns are presented simultaneously; because of this simultaneous presentation, section C is undivided. Section A presents the quoted hymns in their unmodified states and slowly introduces node elements into the texture. Node elements are defined by Denis Smalley as musical elements that lie in between pitch and noise (I have replaced the "noise" elements category with "non-pitch" since none of my sounds express a purely granular timbre). Section B contains mostly node elements; here, the quoted hymns are transformed (with processes outlined in Chapters 3 and 4) yet retain some aspect of their identity (melodic contour, text or pitch content). Transformations of the hymns continue until section C, which contains mostly non-pitched elements and where the hymns are the least recognizable. The overall progression of the form is thus a progression from pitch to non-pitch.

As previously mentioned in Chapter 1, the composed third hymn does not play a structural role in defining the formal boundaries of the piece. Instead, the third hymn may be perceived as the obscuring element of the piece's form, providing a fluid textural contrast to the fixed structural divisions marked by the quoted hymns. The third hymn was also designed with the intent to break the predictability of the quoted hymns' return, providing a continuous yet brief appearance

Denis Smalley, "Spectromorphology and Structuring Processes," The Language of Electroacoustic Music, ed. Simon Emmerson (London: Macmillan, 1986), 65-67.

throughout the sections at important passages for transitions as well as to initiate changes in texture.

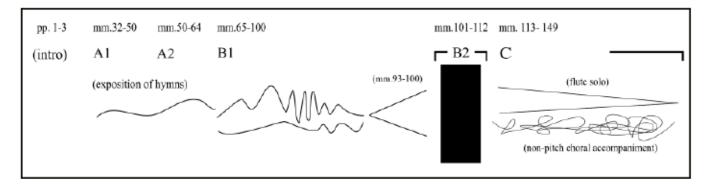


Figure 2.1 – Sketch of the large-scale form. The shapes and lines are abstract representations of distinct sonic gestures, highlighting differences in overall texture, rhythmic activity and density. The crescendo represents the textural accumulation of mm. 93-100 while the decrescendo of section C represents the gradual rarefaction of sonic activity. The thick block emphasizes the interruptive and contrasting nature of section B2. Compare to Figure 2.4.

An excerpt of the third hymn in a compositional context is illustrated in Figure 2.2 below. Here, the motive F-D-G-A-F of the hymn is outlined vertically through vocal entries and functions as a transition towards the second half of section A. The choir hums these pitches to imitate the sympathetic resonance of the chimes' cylinders; this provides a timbral and textural contrast to the quoted hymns (previously sung with an horizontal texture) while acting as a bridge between parts one and two of section A (see Figure 2.1 for the measure number ranges of the formal sections). The composed hymn is also used to signal changes in texture. For instance, in measure 85, the chimes begin to play motive F-D-G-A-F, sparking a change in the choral texture of the section; the choir begins to hum a new melody in reaction to the chime's attack and in imitation of the cylinder's sympathetic resonance (see Figure 2.3).

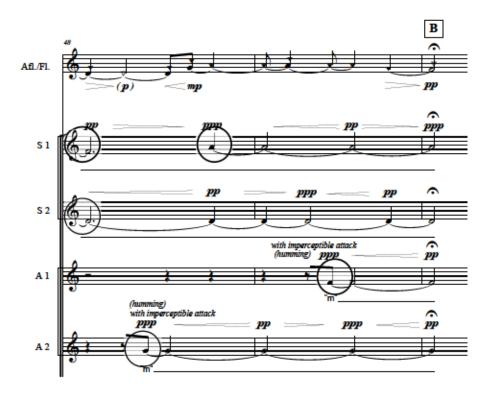


Figure 2.2 – Verticalization of motive F-D-G-A-F extracted from third hymn (mm. 48-50). Vocal entries outline motive. See score, m. 47 for the soprano vocal entries.



Figure 2.3 - Motive F-D-G-A-F (mm. 85-88) signals a change in the choral texture of section B.

## 2.2 Opening materials and foreshadowing elements

An introduction was composed with the aim of presenting important musical materials which are developed in subsequent sections or brought back in different musical contexts. The introduction is also a replica, reproducing on a smaller scale the piece's overall form yet distinguished by a reversal of the pitch to non-pitch progression and serves to foreshadow fundamental gestures while alluding to specific larger formal sections. Figure 2.4 features a sketch of the introduction's formal gestures. The black markings representative of the chimes in the sketch act as markers for the replica's formal divisions (labelled as a, b and c) to demonstrate the introductions' relationship to the large-scale formal divisions.

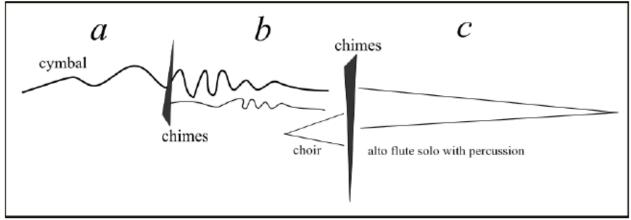


Figure 2.4 – Sketch of the introduction's overall form.

The piece begins with a non-pitched percussion instrument, a large suspended cymbal scraped with a barbecue skewer (score, page 1). <sup>17</sup> The cymbal texture is then imitated in the chimes where the percussionist is instructed to brush (using a snare brush) the chimes anywhere between and along the E4 and B4 cylinders (score page 1, end of second system). As the percussion elements begin to decay in gestural activity, the choir begins to whisper, in eight short consecutive entries, the word "holy spirit" in four different languages: Arabic, Hebrew, Greek and Aramaic (p.

<sup>&</sup>lt;sup>17</sup> There are no measures on pp.1-2.

2). This gesture is interrupted by a fortissimo attack from the chimes, struck with the standard chimes hammer and stopped with the hand in order to activate the upper partials of the cylinders via sympathetic resonance (p. 2). The result is a harmonic layer which prepares the entry of the incoming alto flute solo accompanied by subtle non-pitched percussion (mm. 17-31). The overall form of the introduction is thus a progression from non-pitch to pitch, a reversal of the large-scale pitch to non-pitch progression.

With the exception of the opening cymbal gesture, events in the introduction allude to large-scale formal sections or serve to foreshadow fundamental gestures. More specifically, sections B and C in the piece are represented at the micro-level in the introduction. For example, section B or the "node section", is foreshadowed by the introductory cymbal and chimes combination illustrated above in section b. The combination of both instruments produces a mixture of non-pitch and pitch elements, alluding to the developmental section B at the macro level. Furthermore, the alto flute accompanied by non-pitched percussion in the introduction (section c) prefigures section C since the latter also includes a flute solo accompanied by percussion; non-pitch vocal techniques and non-pitched percussion (with the exception of the brushed chimes) function as accompaniment for the flute in section C (see Figure 2.1).

Note that although the instrumentation is relatively the same, the introduction ends with pitch as the most dominant timbral element while in section C all pitch material is dissolved, with the exception of the flute, which remains unaffected by the general dissolution of pitch in the piece, being off-stage since measure m. 65, and therefore not participating in the overall transformation of the sonic environment. I chose to identify section c in the introduction with section C in the piece according to similarities in instrumentation as opposed to timbre.

The individual gestures of the introduction are also represented at the macro-level throughout the piece. For example, the whispered gesture in the b section of the introduction (p. 2), foreshadows a similar choral passage from mm. 93 to 100 (see Figures 2.5 and 2.6). Both gestures are marked by a gradual increase in density. The whispered gesture in the b section features a more rapid increase in density within the span of four seconds while the choral gesture in section B1 (mm. 93-100) presents an accumulation of node materials (*sprechgesang*) over the span of seven measures and at a moderate tempo (75bpm). Both gestures also share a similar succession of vocal entries.

In addition, the whispered gesture in section b of the introduction is situated proportionally at the same point in time as the choral gesture in section B1 (mm. 93-100) in the overall form. Compare the whispered gesture of section b of the introduction in Figure 2.4 to the temporal position of mm. 93-100 in Figure 2.1; The position of the choral gesture at the end of section B1 is represented at relatively the same moment in time at the micro-level in the introduction. Another foreshadowing event is the second chimes attack (p. 2), which interrupts the whispered gesture in section b, marking the end of section b and the start of section c in the introduction (see Figure 2.4). Similarly, the contrasting texture of mm. 101-112 featuring the return of the second hymn (section B2) also functions as an interruption of the *sprechgesang* accumulation in mm. 93-100 (see Figure 2.1).

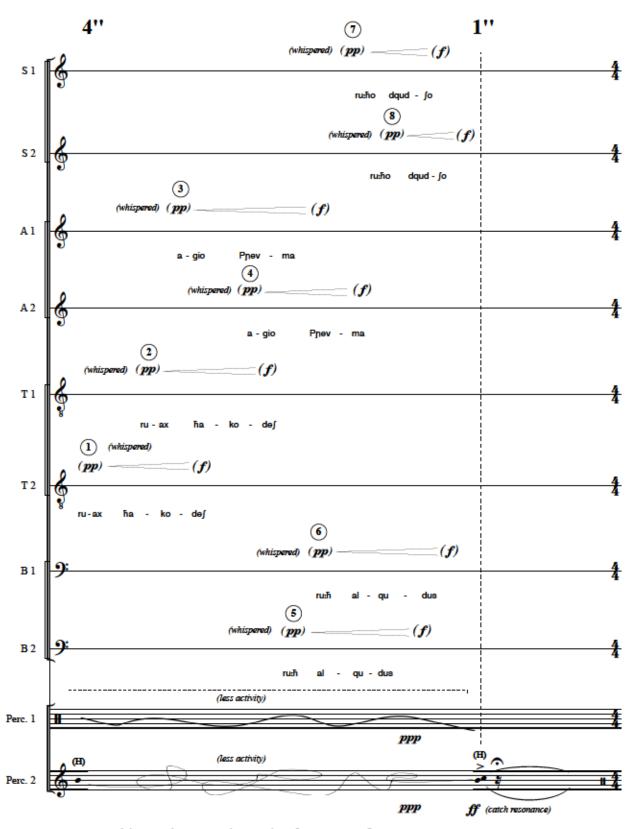


Figure 2.5 – Whispered gesture in section b, page 2 of score.



Figure 2.6 – Section B1, mm. 93-100. Beginning of sprechgesang accumulation.

## Chapter 3: Melodicism

#### 3.1 Modes and their transformations

The first and second hymns are built using two Gregorian modes: The first hymn is in Aeolian while the second is in Phrygian. Through the alteration of particular scale degrees, these modes transform into traditional Arabic maqam scales. Figure 3.1 shows the Gregorian modes of the first and second hymns (left measure) alongside their Arabic maqam equivalents (right measure). Alterations only affect the first tetrachord of each scale. By lowering the second scale degree of the Aeolian scale by a quarter-tone, the first hymn becomes modally equivalent to the Arabic Bayati scale. For the second hymn, I raise the third scale degree by a semi-tone, which creates an augmented second, to transform Phrygian into the Hijaz scale. It is worth noting that the first half of the Hijaz scale is also equivalent to the double harmonic minor scale, a highly oriental sounding equal-tempered scale. <sup>18</sup>

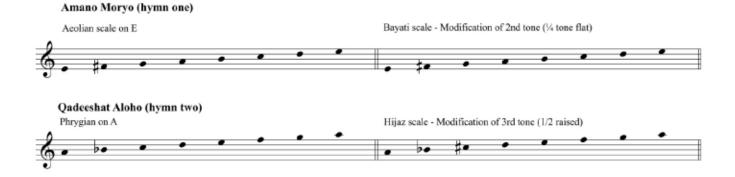


Figure 3.1 – Modal transformation of quoted hymns.

One of the functions of these transformations is to introduce melodic tension without the use of dissonant vertical sonorities. For example, Figure 3.2 reveals the first instance of modal

<sup>&</sup>lt;sup>18</sup> In byzantine chant, this scale is more formally known as the hard chromatic minor scale. See "Orthodoxia Radio," Orthodoxia Radio and Kelfar Technologies, 2002-2012, accessed February 16, 2017, http://www.kelfar.net/orthodoxiaradio/HChromatic.html.

transformation where the initial Aeolian mode of the first hymn is transformed into the Bayati scale. The F-sharp in the texture (the second scale degree) which dominates the antecedent phrase is gradually replaced with a F-quarter-tone-sharp at the consequent phrase of the hymn (a microtonal alteration). The hymn's antecedent, also sung by the full choir, is shown in Figure 3.3. Listeners having entrained to the hymn sung with F-sharp, because of the monophonic exposition of hymn one (mm. 32-38), hear the microtonal alteration in the consequent phrase starting at m. 42 as unexpected, dissonant, and therefore causing melodic tension.

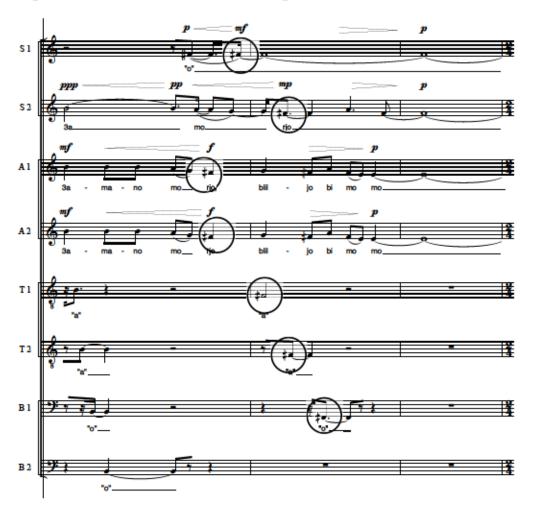


Figure 3.2 – F quarter-tone sharp alterations (circled tones). Modal transformation starting at the consequent phrase of the first hymn (mm. 42-44). Note that the main melody (first hymn) is featured in the alto section.

<sup>&</sup>lt;sup>19</sup> Please refer to Chapter 1, Figure 1.1 for the first hymn's melodic structure (antecedent and consequent divisions).



Figure 3.3 – Section A1 (mm. 39-41). Antecedent phrase of first hymn. Flute pitch material is generated from the first hymn (alto section).

# 3.2 Pitch-node-noise at the micro-level

In addition to pitched alterations, the melodies of the respective hymns continuously transform with vocal extended techniques. The "pitch" against "noise" dichotomy (I refer to

"noise" elements here as anything performed non-pitched) is evident in the mix between normal vocal singing and techniques such as *sprechgesang*, whispering, murmuring, speaking or rapid articulations of arbitrary consonances. I have classified these techniques according to their timbre as well as their definite/indefinite qualities in Figure 3.4. For instance, *sprechgesang* may be classified as a "node" element since it requires the performer to half-sing, half-speak the melody ultimately blurring the definite quality of the pitches. For techniques such as whispering, a definite and equally-tempered pitch cannot be discerned, therefore classifying it under the non-pitched (noise) vocal category.

Pitch	Node	Non-pitched (noise)
Equal tempered pitch	Sprechgesang	Speaking
Microtones		Murmuring
		Whispering
		Rapid articulation of arbitrary consonances

Figure 3.4 – Pitch-node-noise classification table for vocal techniques.

In György Ligeti's Aventures (1964) and Nouvelles aventures (1966), vocalists successively transition from one non-pitched technique to the next. Instead of merely colouring melody with a gradual transition from pitch towards non-pitched sounds, a melody could transition from being spoken, murmured and then whispered, resulting in a gradual change of vocal timbre using non-pitched vocal techniques alone. I have adapted a non-pitched vocal continuum inspired by the performance notes from Ligeti's Aventures (see Figure 3.5). The continuum begins with the non-pitched technique whose intonation levels may be easiest to discern (speaking) and ends with the hardest (rapid articulation of arbitrary consonances technique).

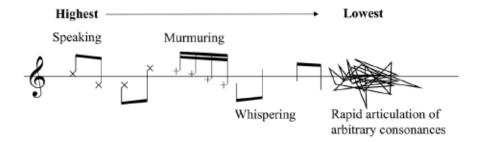


Figure 3.5 – Non-pitched vocal continuum from highest to lowest intonation discernibility inspired by the performance notes of Ligeti's *Aventures*.

# 3.3 Monodic techniques in the music of José Evangelista

The impact of the middle-eastern musical tradition on my aesthetic has lead me to organize my music using melody as the most fundamental component in my compositions. I adapt techniques devised by Montreal-based composer José Evangelista, whose music is based exclusively on melody, in order to produce heterophonic textures generated from a single melody with simultaneous ornamentation. The following discussion will demonstrate my use of Evangelista's melodic techniques in my composition.

Evangelista avoids using traditional harmony in his approach, compensating for this by verticalizing his melodies in order to provide contrast from horizontal layering.<sup>20</sup> In my composition, I verticalize the first, second and third hymns for the same reasons. The four examples in Figures 3.5 and 3.6 feature the verticalization of the first three notes of both hymns one and two. An example of the third hymn verticalized is illustrated in Chapter 2 (see Figure 2.2).

<sup>&</sup>lt;sup>20</sup> José Évangelista, "Pourquoi composer de la musique monodique," *Circuit* 1, no. 2 (1990): 63, accessed March 10, 2017, <a href="http://www.erudit.org/en/journals/circuit/1990-v1-n2-circuit3597/902017ar/">http://www.erudit.org/en/journals/circuit/1990-v1-n2-circuit3597/902017ar/</a>.



Figure 3.5.1- First hymn (excerpt)



Figure 3.5.2 – Verticalization of first hymn (mm. 74-75). Soprano section and alto one outline the first three pitches of the first hymn [B-A-G].



Figure 3.6.1 – Second hymn (excerpt)

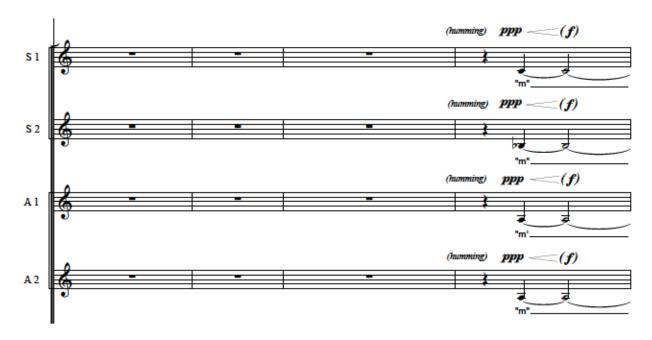


Figure 3.6.2 – Verticalization of second hymn (mm. 57-60). Soprano and alto section hum the first three pitches of second hymn [A-Bb-C].

However, as mentioned in Chapter 2, the verticalization of the third hymn also serves to signal the end of a section or subsection as a means to transition. The second hymn fulfills the same function once verticalized, signaling the end of section A after the exposition of the quoted hymns (mm. 59-64).

In order to create heterophonic textures, Evangelista stacks multiple melodic lines generated from an initial cantus firmus. Each additional line contrasts rhythmically with the cantus firmus, creating the illusion of polyphony, a notion which Evangelista calls "false polyphony". Figure 3.7 is an example of heterophonic texture from Evangelista's *Clos de vie*, extracted from his own article on heterophonic music. The first melodic line from the top in Figure 3.7 is an ornamented variation of the cantus firmus while the second and third lines were generated from the ornamented line.

<sup>&</sup>lt;sup>21</sup> Évangelista, 62.



Figure 3.7 – Score example from Evangelista's *Clos de vie*. Heterophonic texture generated from ornamented melodic line.<sup>22</sup>

An example of this technique from section A1 in my piece is illustrated in Figure 3.3 on page 17. A highly ornamented flute passage based on the first hymn functions as background texture to the unaltered version of the hymn sung in the alto section. The section's vertical sonorities result from the superimposition of multiple melodic lines and the flute's pitches were generated from the first hymn's pitch content. The same technique was used in section A2 (mm. 50-58) shown in Figure 3.8; Here, the flute is based on the second hymn and continues to function as a background texture to the same hymn featured in the bass section.

<sup>&</sup>lt;sup>22</sup> Evangelista, 62.



Figure 3.8 – Section A2 (mm. 51-53). Flute melody is an ornamented variation of the second hymn and functions as background texture to the bass section.

Another example of heterophonic texture as "false polyphony" is explored in mm. 85-93 of section B1 and is shown in Figure 3.9. A new cantus firmus in the alto section (a variation of the first hymn) begins the passage followed by an imitative entry in the tenor section and finally in the bass section. In order to generate melodic lines for the tenor and bass sections, I use one of

Olivier Messiaen's augmentation/diminution rhythmic techniques known as *augmentation* classique.<sup>23</sup> This consists of extending the initial length of a rhythm through an addition of its own rhythmic value. I apply this operation to the cantus firmus' initial rhythms; the result is a melodic augmentation of the cantus firmus, alluding to counterpoint yet creating a purely heterophonic texture.



Figure 3.9 – Section B1 (mm. 84-88). "False polyphony" passage.

Furthermore, the position of the new secondary melodic lines carried by the tenors and basses was determined through specific time intervals. In measure 87, the tenor section begins on F-sharp, with a time interval difference of three quarter-notes between the cantus firmus in the alto

Olivier Messiaen, Traité de rythme, de couleur et d'ornithologie, volume II (Paris: A. Leduc, 1994), 49-51.

section (the time interval was calculated beginning on the fourth beat of measure 85). The following entry in the bass section is one quarter-note away from the tenor entry and begins the delay from the fourth beat of m. 87 of the cantus firmus. I subtracted one beat from the G4 half note from the tenor line (see alto section, second beat of m. 87) and the F<sup>#</sup>4 quarter note duration (alto section, first beat of m. 88) from the bass line in order to create asymmetrical augmentations of the cantus firmus.

## Chapter 4: Electroacoustic Music Influences

#### 4.1 Written delay

The utilization of Digital Audio Workstations for contemporary music composition, particularly the software Logic Pro X, has inspired me to think of ways of transferring electronic music effects to vocal or instrumental acoustic composition. Composers influenced by electronic music, particularly Helmut Lachenmann, Salvatore Sciarrino, Jonathan Harvey as well as many others grouped in the "Spectral" school, have also inspired me to think metaphorically with regard to electroacoustic music for the composition of acoustic pieces. The notion of written delay and spatialization in the context of a standard SATB choir informed how melody was developed in my piece.

Electronic delay was historically produced by adjusting the read and write heads of a given magnetic tape. With today's technologies, the audio effect is applied directly to a recorded or synthesized audio file via digital plug-in designers: users can specify tap-ins/out lengths and sustain time as well as the time intervals between each delay line, among other processes. Written delay consists of creating an artificial delay line, comparable to an electronic audio delay effect, for a given melody by prescribing a specific duration, resonance and time interval for each subsequent reiteration of the delayed material. An example of a long written delay line can be seen in Figure 4.1.

The first hymn in the alto section is accompanied by a secondary, augmented version of itself in the soprano section. The delay effect was created by adding a dot to the first hymn's initial rhythmic values, generating a secondary melody to sound simultaneously with the original melody. As the melody features the same intervallic content and frequently arrives in unison with the

original hymn, the result is an artificial echo heightening the perceived resonance of the hymn and functioning as a colouristic effect.



Figure 4.1 – Sopranos perform long written delay of alto melody (first hymn). Male section vocal entries produce short delay segments of first hymn organized through specific time interval sequences (time interval =  $16^{th}$ -note figure).

To further emphasize the secondary nature of the soprano delay, the sopranos only sing selected syllables of the text with softer dynamics (ppp-p) in comparison to the altos (mp-f) who sing the full text of the hymn. Examples of short delay segments are found in the male vocal sections illustrated in the same Figure. In comparison, the short delay segments exhibit an additional function of re-emphasizing certain structural pitches of the first hymn, notably B4 and  $F^{\#}4$ . Vocal entries were stacked consecutively and separated by a specific sequence of time intervals (time interval =  $16^{th}$  note figure) to mimic the effect of an electronic delay passage. In measure 29, the distance between each subsequent vocal entry was organized with the following time-intervallic sequence: 1, 1, 3 (16-note difference). In measure 30, the sequence is the following: 2, 3, 5. In contrast to the alto and soprano lines, the male vocal sections only sing the vowels of the first hymn, resulting in three distinct layers: one with full text, one with partial text and another with vowels only. This technique references what listeners retain from a delayed sound which is often relative to the sound's frequency levels, among other acoustical factors, at the time of the delay.

Statistical data gathered from a number of experiments on melodic recognition within the field of aural perception have revealed that individual parameters such as rhythm and contour may carry perceptual information for the recognition of a melody in a compositional structure.<sup>24</sup> In other words, the isolation of a melody's rhythm from a particular melody, for instance, may still be perceived as belonging to that melody in a compositional context. As a result, I've applied

<sup>24</sup> See Judy Edworthy, "Interval and Contour in Melody Processing," *Music Perception: An Interdisciplinary Journal* 2, no. 3 (1985): 375-88, doi:10.2307/40285305. See also Jay W. Dowling, "Context Effects on Melody Recognition: Scale-Step versus Interval Representations," *Music Perception: An Interdisciplinary Journal* 3, no. 3 (1986): 281-96, doi:10.2307/40285338.

written delay to other musical parameters such as rhythm and text, allowing for a greater manipulation of melodic components as relevant to my artistic approach.

Figure 4.2 illustrates a *written delay* based on the second hymn's text and rhythm. The bass section's rhythm functions as a rapid delay (or echo) of the tenor section's rhythm, as though the text was reverberated in a large hall; the text is reiterated in full in the bass section to emphasize the delay. Another example of rhythmic/text delay is presented in Figure 4.3, where the delay was constructed using a combination of augmentation techniques. As with the *written delay* applied to a melody's pitch, the secondary nature of the delay line is emphasized by having the tenors whisper the text in order to produce a softer timbre in relation to the delayed rhythmic cell spoken by the altos. At the second reiteration, the roles change among the voices; the alto section becomes the "source" to be delayed while the tenor section produces the new delay.

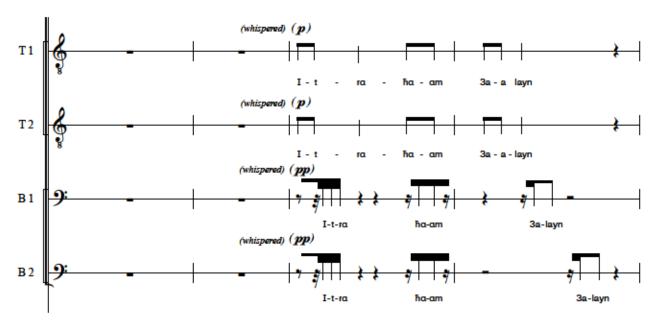


Figure 4.2 – Written delay based on second hymn's rhythm and text (mm. 57-60).

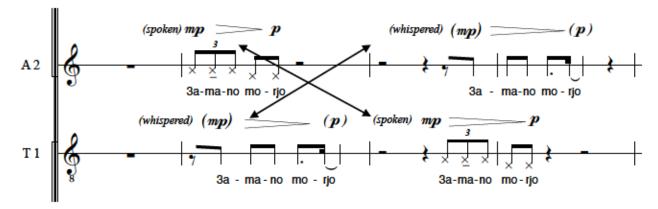


Figure 4.3 – Written delay of first hymn's text and rhythm (mm. 65-67).

# 4.2 Choral spatialization

In my composition, I treat the choir as an 8-speaker configuration, in the spirit of an acousmatic piece, with the goal of exploring the spatial dimension of melody. I use one of the standard SATB choral setups with divisi (female voices in the front row and male voices in the back) as an invariable map in order to manipulate the spatial movement of melodic fragments. For example, the sound could travel from right to left, back to front, oblique and centre by assigning melodic fragments to the various choral sections (SATB with divisi). Instructions were given to the conductor to follow the choral setup depicted in Figure 4.4 to ensure that the spatialization remains the same for every performance.

$$T_1 T_2 B_1 B_2 S_1 S_2 A_1 A_2$$

Figure 4.4 – *Mar Maroun's* choral stage arrangement as shown in the performance notes of the score. Standard SATB arrangement with divisi.

Although the spatial outcome of all melodic material was taken into account throughout the piece, the choir in Section C alone (mm. 113-149) is highly spatialized and was composed using the sketch in Figure 4.5.

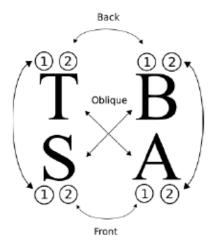


Figure 4.5 – SATB with divisi map for choral spatialization. The numerals-in-circles refer to the section's divisi.

The separation of the choir into 8 parts allows for a greater number of spatial permutations. I have composed section C by using two spatial permutations illustrated in Figures 4.6.

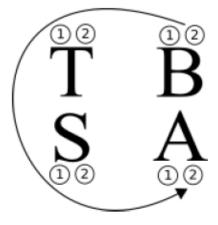


Figure 4.6.1 – First spatial permutation. Simple counter-clockwise rotation (-360°). Rotation begins in second bass section and ends in second alto section.

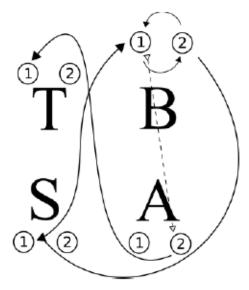


Figure 4.6.2 – Second spatial permutation. The first spatial motion begins in bass two, travelling towards soprano one and returning to bass two. The arrival of the first spatial motion in bass one initiates a new spatial motion starting in alto two which ultimately ends in tenor one.

The first spatial permutation (Figure 4.6.1) is a simple counter-clockwise rotation which travels through every section's divisi, beginning in the second bass section and ending in the second alto section (exact spatial order: B2, B1, T2, T1, S1, S2, A1, A2). The second permutation (Figure 4.6.2) is more complex as it features two independent spatial motions (one starting in B2 and the other in A2). The exact spatial order may be understood as follows:

- 1) First motion: B2, B1, B2, A2, A1, S2, S1, B1, B2
- 2) Second motion: A2, A1, T2, T1

The second spatial motion is initiated once the first spatial motion reaches bass one as depicted by the dashed arrow in Figure 4.6.2. Score examples of the two spatial permutations from section C are illustrated in Figures 4.7 and 4.8.

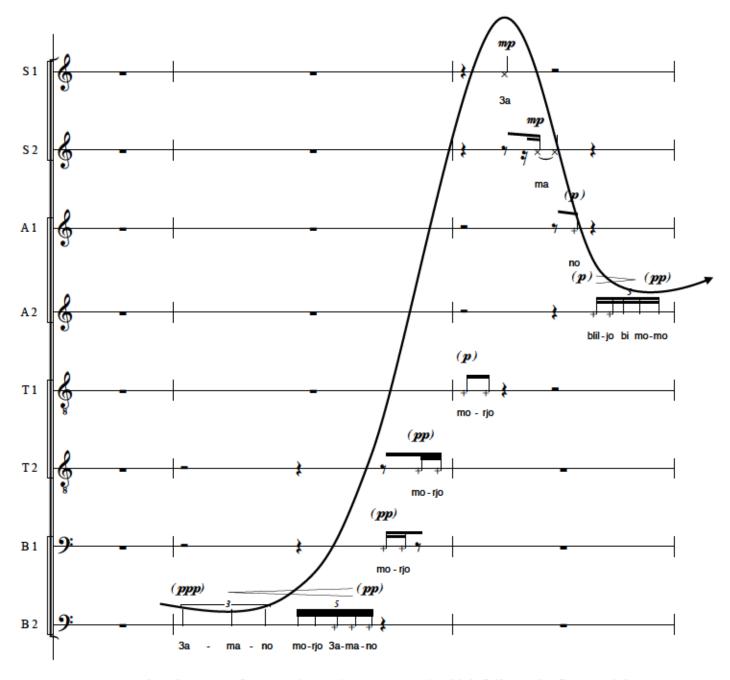


Figure 4.7 — Choral passage from section C (mm. 118-120) which follows the first spatial permutation (counter-clockwise rotation).

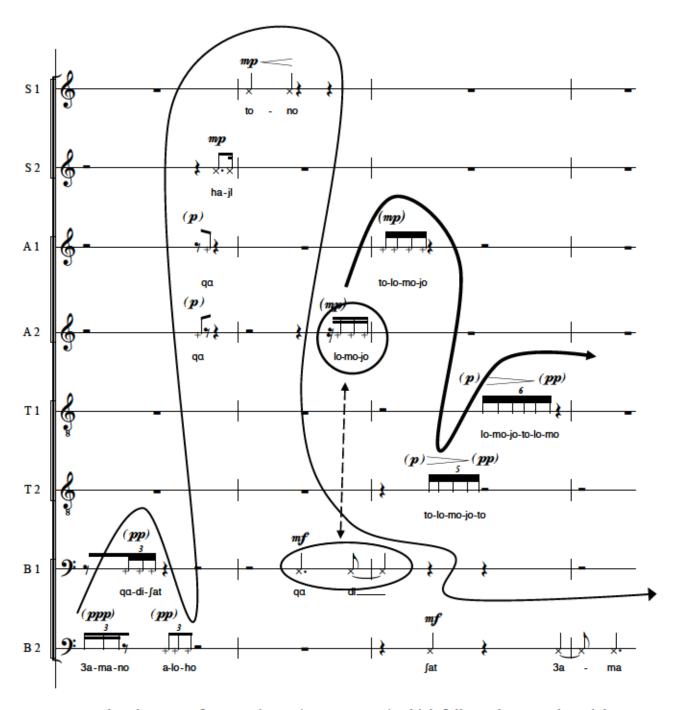


Figure 4.8 – Choral passage from section C (mm. 121-124) which follows the second spatial permutation. The longer, thinner curved arrow represents the first spatial motion while the shorter, thicker curved arrow represents the second one. Once the first spatial motion reaches bass one, the second spatial motion is initiated in alto two.

Since the choir in my composition does not surround the audience as in an electronic octophonic speaker setup, I wrote very specific dynamics for section C's material, alternating between loud and soft, to create the illusion that the sound is near or distant from the audience. I

also varied the timbre of the sounds based on the continuum of non-pitched vocal techniques discussed in Chapter 3 to complement the perception of the material's density and intensity. For instance, in Figure 4.7, bass two begins the spatial motion by whispering the text very softly (ppp with invisible noteheads), gradually rising in intensity towards murmuring (+ symbol). The sound is then distributed to the tenors followed by the sopranos (x symbol), simultaneously increasing in loudness at every subsequent non-pitched vocal technique within the continuum of techniques. The highest dynamic level is achieved in the sopranos (mp), where the text is spoken (x symbol). Upon reaching the continuum's peak (speaking is the highest technique in the continuum in terms of intonation discernibility), dynamic levels gradually return towards being very soft, ending with alto two whispering the text in the same manner as did bass two. It is worth noting that I have assigned, in a general manner, softer dynamics to non-pitched vocal techniques positioned lower in the continuum since they are already perceived as soft, as well as moderately loud dynamics to techniques positioned higher.

The first half of section C (mm. 113-130) was composed by alternating between the two spatial permutations discussed above. In order to renew the perception of these spatial permutations through economic means, I begin to assign softer dynamics to higher non-pitched techniques and louder dynamics to lower ones, as the section progresses, to alter the perception of the material as the sound travels within the choir. The same principle is applied to the non-pitch vocal continuum; lower vocal techniques which begin the permutation, for instance, are replaced with higher techniques within the same spatial permutation. The second half of the section (mm. 130-149) deviates from the initial scheme for artistic purposes (mainly to break the permutation cycle and to conclude the section).

### Chapter 5: Conclusion

In *Mar Maroun*, I have attempted to push the boundaries of melodic writing by exploring the capabilities of individual parameters: timbre (non-pitched vocal continuum), rhythm (*written delay*) and space (choral spatialization). My interaction with electroacoustic music provided me with an up-to-date perspective, informing my choice of exploring space and perceived resonance as a component of melody in the 21<sup>st</sup> century. For future projects, I wish to apply the techniques used in *Mar Maroun* to purely instrumental composition, such as for orchestral or chamber orchestral configurations. Working on electroacoustic music composition, familiarizing myself with the latest innovations in technology while reading theoretical papers about the subject may help me acquire more knowledge of digital music processes. This would allow me to develop a stronger vocabulary based on the translation of electroacoustic processes to instrumental writing.

Studying traditional heterophonic music from other Eastern traditions (e.g Balinese Gamelan, Japanese Gagaku, Andalusian music, etc.) would deepen my relationship with eastern music, revealing more technical and artistic possibilities for composition. The juxtaposition of ancient eastern practices with contemporary western classical ones in *Mar Maroun*, also promotes, I believe, a universality which transcends borders and time periods; I wish to continue exploring this relationship in my artistic practice. "What we must do is find what is genuine in ourselves, the unique qualities in ourselves and affirm these in a universal fashion". Takemitsu

<sup>&</sup>lt;sup>25</sup> Töru Takemitsu, "Contemporary Music in Japan," Perspectives of New Music 27, no. 2 (1989): 204.

### Bibliography

### Articles/Websites

- Dowling, Jay W. "Context Effects on Melody Recognition: Scale-Step versus Interval Representations." Music Perception: An Interdisciplinary Journal 3, no. 3 (1986): 281-96. doi:10.2307/40285338.
- Edworthy, Judy. "Interval and Contour in Melody Processing." *Music Perception: An Interdisciplinary Journal* 2, no. 3 (1985): 375-88. doi:10.2307/40285305.
- Évangelista, José. "Pourquoi composer de la musique monodique." *Circuit* 1, no. 2, (1990): 55-70. Accessed March 10, 2017. http://www.erudit.org/en/journals/circuit/1990-v1-n2-circuit3597/902017ar/.
- Farraj, Johnny. "Maqam World." Accessed March 15, 2017. Site now discontinued. http://www.maqamworld.com/index.html.
- Hassan, Scheherazade Qassim and Jean During. "Ney." Grove Music Online. Accessed February 16, 2018.

  <a href="http://www.oxfordmusiconline.com.proxy3.library.mcgill.ca/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000019644">http://www.oxfordmusiconline.com.proxy3.library.mcgill.ca/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000019644</a>.
- Hassan, Scheherazade Qassim. "Syria." Grove Music Online. Accessed February 16, 2018.
  <a href="http://www.oxfordmusiconline.com.proxy3.library.mcgill.ca/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000044677">http://www.oxfordmusiconline.com.proxy3.library.mcgill.ca/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000044677</a>.
- Moufarrej, Guilnard. "Maronite Music: History, Transmission, and Performance Practice." Review of Middle East Studies 44, no. 2 (2010): 196-215. Accessed March 15, 2017. http://www.jstor.org.proxy3.library.mcgill.ca/stable/23057157.
- "Orthodoxia Radio." Orthodoxia Radio and Kelfar Technologie. 2002-2012. Accessed February 16, 2017. <a href="http://www.kelfar.net/orthodoxiaradio/HChromatic.html">http://www.kelfar.net/orthodoxiaradio/HChromatic.html</a>.
- Takemitsu, Tōru. "Contemporary Music in Japan." *Perspectives of New Music* 27, no. 2 (1989): 198-204. http://www.jstor.org/stable/833410.
- Tarabay, Miled. "L'Église Maronite du Liban et sa musique." Musicologie.org. 2016. Accessed March 15, 2017. <a href="https://www.musicologie.org/publirem/maronites.html">https://www.musicologie.org/publirem/maronites.html</a>.

### Books

- Atiya, Aziz Suryal. A History of Eastern Christianity. London: Methuen, 1968.
- Messiaen, Olivier. Traité de rythme, de couleur et d'ornithologie. Paris: A. Leduc, 1994.
- Schaeffer, Pierre. "Traité des objets musicaux: essai interdisciplines." Paris: Édition du Seuil, 1977.

Smalley, Denis. "Spectromorphology and Structuring Processes." The Language of Electroacoustic Music. Edited by Simon Emmerson. London: Macmillan, 1986.

### Scores

- Évangelista, José. Clos de vie. Montréal: Centre de musique canadienne au Québec, 1983.
- Harvey, Jonathan. Scena: for violin and chamber ensemble of nine players. London: Faber Music, 1999.
- Leroux, Philippe. Voi(rex): pour voix, 6 instruments et dispositif électronique. Paris: Gérard Billaudot, 2004.
- Ligeti, György. Aventures: for 3 singers and 7 instrumentalists. New York: C.F Peters, 1964.
- Ligeti, György. Lux Aeterna: for sixteen-part chorus mixed a cappella. New York: C.F Peters, 1968.
- Ligeti, György. Nouvelles aventures: for 3 singers and 7 instrumentalists. New York: C.F Peters, 1966.
- Messiaen, Olivier. Sept haïkaï: esquisses japonaises: pour piano solo et petit orchestre. Paris: Alphonse Leduc, 1966.
- Takemitsu, Tōru. November Steps: for orchestra. New York: C.F. Peters, 1967.
- Saariaho, Kaija. Light and Matter: for violin, violoncello and piano. London: Chester Music, 2014.
- Sciarrino, Salvatore. Da gelo a gelo: 100 scene con 65 poesie. Roma: Edizioni Musicali Rai Trade, 2006.
- Sciarrino, Salvatore. *Autostrada prima di Babilonia: per flauto*. Roma: Edizioni Musicali Rai Trade, 2015.
- Vivier, Claude. Lonely Child: pour soprano et orchestre de chambre. Saint-Nicholas, Québec: Les éditions Doberman-Yppan, 1994.
- Vivier, Claude. Et je reverrai cette ville étrange: for mixed ensemble. New York: Hendon Music Inc., 1981.

# Mar Maroun

for chamber choir, flute and two percussionists



Maria Atallah

# **Instrumentation**

Chamber choir (approx. 24 voices)

Flute in C (db. alto flute)

Two percussionists:

- Tam-tam
- Bass drum
- Tambourine
- Bongos
- Tubular bells (chimes)

- Two suspended cymbals
- Two sizzle cymbals
- One drum set crash cymbal
- Triangle

# Performance notes

Stage Arrangement

$$T_1 T_2 B_1 B_2 S_1 S_2 A_1 A_2$$

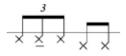
General notes (for all)

- Quarter-tone sharp (or quarter-tone flat from a regular sharp).
- (f) Dynamics in parentheses indicate the intended volume and not the resulting volume.

PB Indicates a slight pitch bend from or to a designated pitch.

# Choral techniques

The following techniques are scored in relation to the middle line therefore suggesting either high, medium or low intonation levels. Vocalists are encouraged to breath at different moments in time when required to sustain pitches.

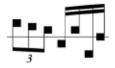


- (x) shaped noteheads indicate that the text must be spoken.
- ++++
- (+) shaped noteheads indicate that the text must be murmured.

<sup>\*</sup>Score is written in concert pitch.



Invisible noteheads indicate that the text must be whispered following the precisely notated rhythm. When no rhythms appear on the staff, the text may be whispered freely. When asked to sustain a whisper, the resulting sound and technique will resemble that of a slow "exhale".



Square-shaped noteheads indicate *sprechgesang* (spoken-singing). All *sprechgesang* sections should be performed *portamento* (sliding from one pitch to the next).

Square-shaped noteheads indicate a relative high or low frequency in proportion to the middle line (comfortable register). Pitches are not required to be exact. Large, undefined intervals are required when the noteheads are distant from each other.



Square-shaped grace notes are sung as portamento, starting from the notated pitch towards the main note.



Indicates a wide vibrato which fluctuates in pitch, never exceeding a quarter-tone. The vibrato should give the impression of microtonal singing.

English translation



Syriac-Aramaic

The following symbols indicate rapid articulation of arbitrary consonances, as though one is crunching a piece of paper.

### Text

I quote two original hymns drawn from the ancient liturgical tradition of the Syro-Maronite church (*Qadeeshat Aloho* and *Amano Moryo*). They will be sung in the original language.

The following is the main text written in Syriac-Aramaic (in Romanized letters) along with its English translation.

Syrac Patrice	
Qadeeshat Aloho.	Holy art Thou, oh God.
Qadeeshat Hayltono.	Holy art Thou, oh Mighty.
Qadeeshat lo Moyooto.	Holy art Thou, oh Merciful.
Etraham alayn.	Have mercy on us.
Amano Moryo, Amano Moryo Moryo Amano, blilyo bi momo	The Lord is with us, the Lord is with us. With us is the Lord, unto ages of ages.

# Main Text in IPA

qadi∫at aloho. qadi∫at hajltono qadi∫at lomojoto Itraham 3alayn 3amano morjo, 3amano morjo morjo 3mano, bliljo bi momo

Syriac-Aramaic (western dialect) IPA chart

IPA	English approximation	West Syriac letters (Sertā)
q	a hard "k", somewhat close to c in scar	9
α	Like father but shorter	<i>\</i>
3 (7)	No English equivalent, Arabic equivalent to $\epsilon$ ('ayn), ''aa''	<b>~</b>
d	dash	?
İ	see	•
l	she	··
a	trap	7
t	sting	1
I	left	-
0	own	•
h	he	o o
ħ	No English equivalent, Mexican jota	<u> </u>
j	yes	<u> </u>
n	no	
m	man	p
r	run	, ·
b	bee	۰
U:	rule	0
у	you	~
I	sit	7

On page 2, the word "Holy Spirit" is whispered in four languages: Hebrew (tenors), Greek (Altos), Arabic (basses) and Syriac-Aramaic (sopranos).

Hebrew (הַקֹּדֵשׁ רוּחַ) Romanization: "Ruach Hakodesh"

IPA	English approximation	Hebrew letter
a	father	Ō
٤	bed	Ö
X	Scottish "loch"	п
r	French "rouge"	7
ħ	No English equivalent, like hen with the tongue against the pharynx	П
u	boot	Ó
k	skin	Ð
0	story	-
d	dark	7
ſ	she	שׁ

IPA: ruax hakode

Greek (Άγιο πνεύμα) Romanization: "Ágio pnévma"

IPA	English approximation	Greek
		letter
a	father	α
ε	bed	3
İ	neat	ı
g	again	γ
р	s <b>p</b> y	π
'n	o <b>ni</b> on	ν
m	<b>m</b> en	μ
0	story	0
V	vet	υ

IPA: agio pnevma

Arabic (روح الفدس) Romanization: "Rūḥ al-Qudus"

IPA	English approximation	Arabic letters
a	father	1
q	a hard "k", somewhat close to c in scar	ڧ
T	left	J
d	dash	7
r	run	J
ħ	No English equivalent, Mexican jota	7
S	see	س
u	put	Ó
uː	rule	و

IPA: ru:h al-qudus

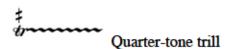
Syriac-Aramaic Romanization: "ruho dqudsho"

IPA: ru:ho dqu:d∫o (see chart above)

\*Double consonances do not indicate a new sound. For example in "dqu:dso", d and q are both pronounced consecutively and sound as written.

### Flute techniques

\*\* Sections for the alto flute part are transposed.





"cluster" harmonic

The flautist must overblow hard enough to activate the 7th, 8th, and 9th partials of the fundamental. These overtones must resonate as a result of the attack.



Triangle-shaped noteheads indicate wind tones. Note is to sound mostly like air, no actual pitch.



Stems with triangles indicate air tones (or wind tone with pitch). 1:2 ratio of pitch and air.

a.t -----

All pitches under the brackets are to be played as air tones.

\_\_\_\_\_

An arrow indicates a gradual change from one technique to the next.



Dashed beams indicate that the beat must be played as fast as possible.

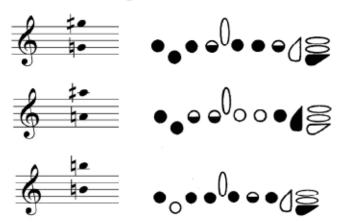


Non-pitched key clicks.



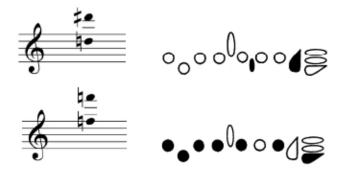
Pitched key clicks.

# Flute in C Multiphonics

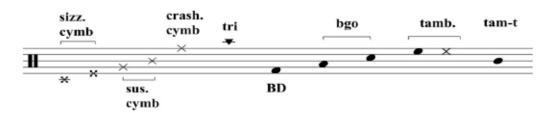


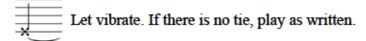
# Alto flute multiphonics (written pitches)





### Percussion techniques





\*\*All cymbals are to be played with drumsticks unless otherwise indicated.

### Chimes

Pedal must be held throughout unless otherwise indicated.



Indicates that the chimes should be brushed between E4 and B4. Player may brush anywhere from the bottom to the top of the cylinders. The lines in the graph are a representation of the sound and need not to be followed meticulously. Use two brushes for more sound when required.

(H) indicates that pitches should be played with the usual chimes mallet (hammer).

### Suspended cymbal

The larger suspended cymbal, mounted on a stand, will be played with a metal barbecue skewer. The player should place the tip of the skewer on the cymbal and scrape lightly while following the contour of the notated graph, around the edges of the cymbal. The general speed of the curves is determined by the performer. The thicker the line, the more pressure must be applied towards the cymbal, resulting in a louder and denser scrape. This technique is notated proportionally with seconds for duration.



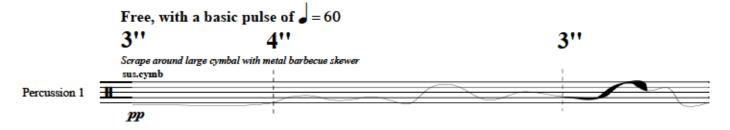
The circle covered noteheads indicate to hit the cymbal's side with the side of the same skewer.

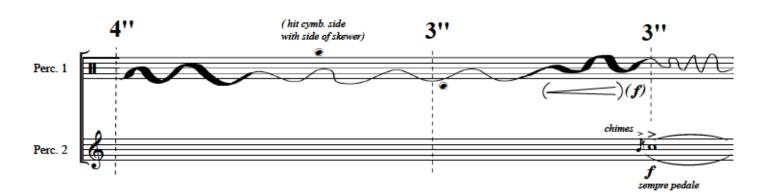
Note: In measure 66, this technique is to be played freely (the lines do not suggest contour in this passage).

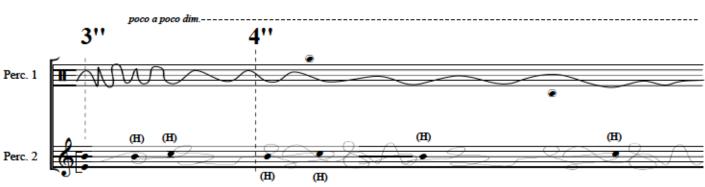
# Mar Maroun

for chamber choir, flute and two percussionists

Maria Atallah







(brush cylinders while striking chimes with hammer)

