# Portfolio of Compositions

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# Abstract

This portfolio comprises the nine pieces written during my PhD research at the University of York and a commentary about the process of composition. My work seeks to focus on timbre and texture as guiding parameters, with due attention to comprehensibility through unity of material. I first give an overview of my compositional processes during the years previous to my research. Then I discuss the general principles of my present approach, sketching the links between it and earlier work. Finally, I illustrate these principles by discussing individual pieces and the links between them.

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# Acknowledgements

# Author's Declaration of Originality

I hereby certify that I am the sole author of this commentary and portfolio of compositions and that no part of this commentary has been published or submitted for publication.

I certify that, to the best of my knowledge, my thesis does not infringe upon anyone's copyright nor violate any proprietary rights and that any ideas, techniques, quotations, or any other material from the work of other people included in my commentary, published or otherwise, are fully acknowledged in accordance with the standard referencing practices.

# Part 1: An Overview

## 1. Background

I was born and grew up in Mexico City, where I started my music studies. An undergraduate degree in piano was interrupted in 1989 when destiny led me to Germany where, this time, I did complete an undergraduate degree in music composition. I lived more than seven years in Nuremberg; and although my composition teacher then, Vivienne Olive, was an English woman, I was certainly imbued with the musical culture of the German-speaking region. Many years later I did a Master Degree in Glasgow, also in Music Composition, and my education is culminating now with this doctorate in York.

Although between my trips to Europe to study I always returned to Mexico, where I am based, musically I am focused on European tendencies. I appreciate Latin American folk music so much, particularly dance music such as the Cuban *son*, that I prefer to leave it untouched. In other words, I do not exploit it nor can I perceive any explicit influences on my music, apart from a particular liking for rhythm, which I consciously set aside for most of the works of this portfolio.

## 2. Previous work

My previous objective was to achieve coherence through motivic unity and economy of material. This objective was influenced by the music of Webern and his book, *The Path to the New Music*.

My compositional process rested primarily on finding what I considered interesting and flexible motivic material. As a starting point, this usually consisted of pitch constellations, presented as scales having symmetric qualities, or of a pair of scales which together completed the twelve-note row, often used in combinations that formed twelve-note aggregates. I constructed all these to be suitable for the creation of motives that would direct the development of the piece. My aim was to work with a minimum of material and exploit its potentials. The parameter of rhythm played an important role in this procedure.

In the planning process, as a consequence, I was focusing on sets of pitch-classes and rhythmic cells, on motivic and harmonic material — that is, on musical parameters that, traditionally, have occupied a higher level in the hierarchy. The macro-structure and timbral and textural qualities were a product of my material; they were the result of the melodic and rhythmic ideas and they were not a substantial part of the plan. I chose my set of instruments carefully, but I often did not exploit thoroughly their qualities. I paid attention to form but, again, only as a result of what the motives suggested. Then I ordered carefully the resulting ideas, designing the macro-structure, paying attention to tension and release, very often in symmetric forms.

With the exception of a few pieces, there had never been extramusical meaning in my work. Most of them were conceived as abstract music, with no conscious agenda. The exceptions

were pieces in which I used a text, either sung or as a source of inspiration. That still happens nowadays. But other than that, the expression of an idea able to be explained with other means than music has seldom been my purpose.

# 3. Compositional Approach

My present approach allows me explore more deeply compositional parameters which had remained in the background during the previous compositional process and enables me to develop works in which contrasting textures are among the main concerns. Furthermore, the development of my work has led me to pay attention to macro-structure and tempo relations. I shifted my focus from the generation of motives to the textural quality of musical fragments; from these I derive the macro-structure, the tempo relations and the pitch-material. With some exceptions, rather than pursuing motivic unity, I think more in terms of gestural unity.

Nevertheless, the construction of the basic elements is still very important to me. I still pursue economy and unity of material, but I do not allow this to hinder the development of other parameters. As mentioned before, this pursuit is influenced by Webern:

> Unity is surely the indispensable thing if meaning is to exist. Unity, to be very general, is the establishment of the utmost relatedness between all component parts. So in music, as in all other human utterance, the aim is to make as clear as possible the relationships between the parts of the unity; in short, to show how one thing leads to another.[1]

> Here we have an element that plays a special role: "hanging together," unity, will be necessary to make an idea comprehensible .… It is clear that where relatedness and unity are omnipresent, comprehensibility is also guaranteed.[2]

In the series of lectures published under the name *The path to the new music* Webern recreates some of the ideas expressed by Goethe in his treatise *The Metamorphosis of plants*. Webern uses Goethe's transformations as an analogue to illustrate his own thoughts about unity. As I have always been interested in these ideas, reading Webern's book led me to know both Goethe's treatise and the poem with the same name.

I used Goethe's poem in my piece *aeternae vires*, which is based principally on the *Metamorphosis* by Ovid. A link was established between these extra-musical influences (the ideas of both Webern and Goethe) and external musical influences: the metamorphosis subject took me to Richard Strauss' *Metamorphosen*. The leading motif in the second section of *aeternae vires* was inspired by the first motif (b. 1-2) of *Metamorphosen*.[3] It follows the same contour and the notes at the extremes are the same. Further, there are two veiled allusions to the start of the second theme (b. 9) of the same piece.

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[1] Webern, *The path to the new music*, 42.

[2] Ibid, 18.

[3] Strauss, *Metamorphosen*, 3-4.

*Metamorphosen* is imbued with Beethoven's Funeral March from the Third Symphony. Coincidentally or not, I had previously used the same theme as a basis for the second movement of *Ome ueuekuikani*. Thus, in addition to directly using a musical fragment like this, I often make allusions to classical works.

The influence of György Ligeti, in his use of texture and tempo relations, can be seen clearly in much of my work. In my use of polymetre the influences come also from older composers, like Igor Stravinsky and Conlon Nancarrow, and from the music of non-western cultures. In addition, I profit from Witold Lutoslawski's aleatoric counterpoint techniques. I have paid especial attention to Luigi Nono's music, and I could refer to his sound world as my model although this might not be reflected in individual pieces. Luciano Berio provides additional sources of inspiration and ideas. Further, I have found the sound worlds resulting from spectral music stimulating, even though I have not adopted its processes.

## 4. Texture

Texture is defined in general terms as 'the constitution, structure, or substance of anything with regard to its constituents or formative elements'.[4]  Specifically, it is 'the quality of sound created by the combination of the different elements in a work of music'.[5]  Traditionally these elements are melody, rhythm and harmony.

Traditional concepts of texture distinguish basically two different uses of the word. The first refers to the relationship between the voices or parts and defines three basic qualities: monophonic, polyphonic and homophonic. In more detail, it considers related qualities or subgroups: antiphony, melody and accompaniment, heterophony, free-part style. The second use refers to textural density or thickness: light or heavy, as determined by the number of parts, their range and register, the spacing between them, and doublings.[6]

Both uses thus describe woven and connected lines in terms of their vertical relationships and aggregate density. Yet, in addition, parameters like tempo, timbre, articulation and dynamics help to determine the textural quality of a fragment. Therefore, the concept of texture brings together the two ideas of lines and colours, where colours affect the interconnectedness of the lines and vice versa.

In the planning of my recent works I focus on the relations and contrasts between sound masses. These are created by conceiving subjective colours and atmospheres and realising these with the use of textures (in the traditional sense) and timbre. All this is regulated by various processes, which I will describe in relation to the individual pieces in this commentary.

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[4] Oxford English Dictionary, online.
[5] Oxford Dictionary of English.
[6] Nordgren, *A measure of Textural Patterns and Strengths*, 19-20.

# 5. Planning process

The procedure usually starts with an abstract conception of a series of textural qualities and their relations. I conceive the work in its wholeness, as a succession of events in close association and deeply related, which either transform gradually from one to another, in a smooth continuum, or are presented as a series of contrasting moments.

During this process of conceiving the different fragments and their characteristics, the macro-structure takes shape, including a general plan of dynamics and tempos. The result of these two steps is generally a first draft, often in the form of a drawing or a table with verbal descriptions.

The rhythmic and harmonic material will develop from this first draft. When the whole image of the piece is conceived, with the sections more or less designed and developed, then I choose pitch-material which suits the plan. I still create my pitch material as before, organising it as I did in the past: always trying to limit it to a minimum, flexible enough to have potential for the development of the work and also providing consistency.

The works are based on either pitch-sets, twelve-note rows, the full chromatic spectrum, or a mixture. Twelve-note rows are often used with much liberty. Occasionally, sequential segments of the row are used freely in groups, as pitch-sets. These segments can be repeated as a whole, individual pitches can be repeated within a segment and the order of the segments can be permuted. Details of these techniques will be explained when describing and analysing the material in the individual works, as needed. On occasion, however, the rows are applied in the usual way in twelve-note composition; such cases I refer to as "orthodox use" when discussing the pieces. Even if I enjoy creating symmetric rows and chords, this process is not anymore the fundamental element in the process of planning a work; it is not a starting point or the defining element of a piece.

The conception of rhythm is usually rather intuitive; the percussion duo is a notable exception, since a rhythmic plan was written in advance. Regarding the remaining pieces, the selection of rhythmic values and combinations is based mainly on the use of multipliers. When describing the individual pieces I will show some examples.

The works I am presenting in this portfolio will illustrate the language I have evolved over my course of study for the PhD. The next chapters will discuss the pieces grouped and ordered as follows, according to their conception, compositional process and the relationships between them.

1. *Yeixpan,* for violin, violoncello and piano.
2. *Matlaktli*, chamber ensemble for ten players.
3. Solo pieces:
   *piece for recorders, pars ad fagottum, pieza para guitarra, stück für bratsche.*
4. *Ome ueuekuikani,* for percussion duo.
5. *Una pieza para dos pianos.*
6. *aeternae vires - oratio Pythagorae.*

# Part 2: Individual Works

## 1. *Yeixpan*
### for violin, violoncello and piano

*Yeixpan* is a Nahuatl word and means both "three" and "three times three": three movements, three players. This piece forms a link between my previous and my present approach. The percussive quality of the piano suggested to me the use of rhythm as an important parameter, which relates to my work of the past.

The basis for this piece is a sequence of chords constructed by means of the octatonic scale in two transpositions. The scale corresponds to Olivier Messiaen's Second Mode; but despite having in the past looked carefully at his *Technique de mon langage musical,* its use does not reflect a direct influence. Since I was accustomed to working with pitch-sets, the choice of this mode was only a natural decision. The material proved to be very flexible and multi-faceted for me, and it forms the harmonic basis for *aeternae vires* as well. The regular structure of this mode, with its four tritone intervals, is suitable for constructing symmetrical chords. The chords used in this piece are basically five different symmetrical constructs (figure 1.1).
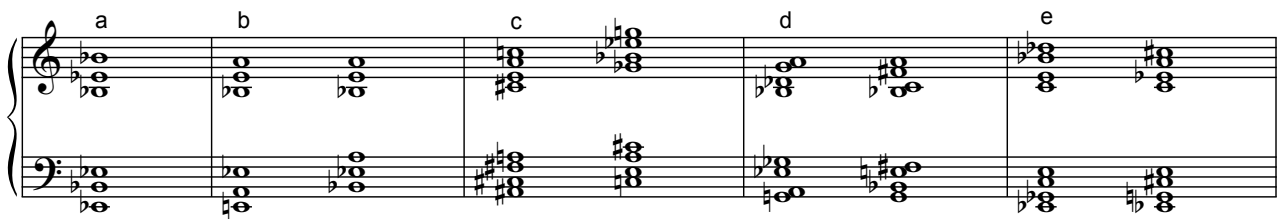


Figure 1.1. Chord types in *Yeixpan.*

- Type a: a fifth with or without octave doublings.
- Type b: eight symmetrical combinations of three-note chords in which each three-note chord consists of a tritone and a fourth or a fifth, and the axis of symmetry by which the three-note chords are combined is a fifth, a fourth, a minor second or a major seventh.
- Type c: two major/minor chords (triads with both major and minor thirds) in first inversion, superimposed with various intervals as the axis of symmetry.
- Type d: major 2nd - tritone - minor 3rd  / minor 3rd - tritone - major 2nd;
  or minor 3rd - tritone- major 2nd / major 2nd - tritone - minor 3rd;
  both with various intervals as axes of symmetry.
- Type e: minor 3rd - tritone - major 3rd / major 3rd - tritone - minor 3rd;
  or major 3rd - tritone - minor 3rd  / minor 3rd - tritone - major 3rd;
  both with various intervals as axes of symmetry.

The plan consists of a combination of the different types of chords shown above. It combines thick chords, made from up to eight different pitch classes (such as type c with a fourth as the axis), with very thin and open chords containing just two (such as the opening chord).

The three movements are based on the same chord sequence; thus the harmonic tension and release in each movement is pre-determined by the planned chord schema. Each movement is a different reading or interpretation of the same harmonic plan, showing a distinctive texture and character. Some freedom is permitted in the realisation of the sequence to allow it to better fit the character, playing techniques and texture in each movement.

Characteristic of all three movements are the ways in which the first chord gradually transforms into the third and the change of character, dynamics and texture when the fourth chord appears. Figure 1.2 shows the first four measures of the plan.



Figure 1.2. Chord plan for *Yeixpan* (chords 1-4).

In the first movement, the first chord has just two notes (E♭ and B♭) in the middle register, with no octave doublings. It moves gradually to the second chord in b. 5 and to the third in b. 8. Because the fourth chord offers more density and dissonance, the mood of this opening movement could best be sustained by using a reduced version, so it lacks the F# and E. It is heard in b. 10, *mf*:

In the second movement the texture is generally much more dense. The first chord appears with triple octaves. The second chord appears immediately in b. 2, and it remains, with its three different pitch classes, until b. 11, where the third chord enters *mf*, preparing for the tension of the fourth chord in b. 13.

The texture at the beginning of the third movement is thinner than in the previous one. In b. 3 the violin descends to the note A to form the second chord, and this chord stays, increasing in volume and density. In b. 10 the pitch E is added to form the third chord, and a *crescendo al f* continues; then the ensemble stops abruptly, very briefly. The fourth chord in b. 13 marks a radical change of texture.

The beginning of the second movement is an example of the use of multipliers to obtain rhythmic values. Figure 1.3 below shows bars 1-5, where subdivisions of the number seven are applied. The rhythmic pattern played by the piano is grouped into multiple crochets as follows:

4𝅗𝅥 + 3𝅗𝅥 | 3𝅗𝅥 + 4𝅗𝅥 | 4𝅗𝅥 + 5𝅗𝅥 (extension)

Meanwhile, starting in bar 2, the strings realise a pattern of multiple triplet crochets grouped as follows:

violin   4𝅗𝅥 + 3𝅗𝅥 | 4𝅗𝅥 | 4𝅗𝅥 | extension

violoncello   4𝅗𝅥 + 3𝅗𝅥 | 3𝅗𝅥 | 3𝅗𝅥 | extension



Figure 1.3.  Use of multipliers in *Yeixpan.* Second movement, b. 1-6.

The external influences in the conception of this piece were more conscious than for the other works in this portfolio, because I was looking for models for my new approach. For the construction of the chord plan I had Alfred Schnittke's *Trio* in mind, with its consonant harmonies turning into or "adorned" with dissonance. The texture and timbre of the beginning of the first movement was inspired by Berio's *O King*. The presence of Messiaen's *Quatuor pour la fin du temps* could be guessed in the second movement, with the piano moving in a rhythmic pattern while violin and cello move together with a certain independence. Ligeti's influence, especially works of the period of the *Chamber Concerto,* is clear in the creation of the interwoven lines of the third movement.

## 2. *Matlaktli* for ten players
### (flute/piccolo; oboe; clarinet/bass-clarinet; bassoon; horn; string quintet)

This piece is written for an ensemble of ten players; the title means "ten" in Nahuatl. Unlike the trio, the starting point for this work was an abstract conception of a sequence of episodes each having distinctive properties that would create diverse atmospheres with contrasting textural qualities.

The first step in the conception of the work was to create a list of categories and qualities, as follows.

| Categories | Colour | Dynamics | Register | Density | Relations | Tempo |
|---|---|---|---|---|---|---|
| | strident, shrill | loud | high | thick | polyphonic | fast |
| | bright | soft | relatively high | middle | imitative | slow |
| | boisterous | sharp accents | low | thin | echoes | moderato |
| | metallic | smooth | middle | irregular | monophonic | |
| Qualities | mellow | *cresc./decresc* | low/high | pointillist | homophonic | |
| | reedy | $mp/mf$ | low/mid/high | many silences | polychoral | |
| | restrained | silences | relatively low | broad register but bass-heavy | heterophonic | |
| | dark | | | | micropolyphonic | |
| | | | | broad register but treble-heavy | | |
| | pale | | | | polyrhythmic | |

Figure 2.1. Categories and qualities in *Matlaktli*.

The qualities under the category of "colour" can be considered very subjective. The description of musical colours using terms such as "bright", "metallic", or "dark" is difficult and imprecise. Consequently, what an individual means when using such terms is never completely clear. However, setting aside such nuances, I believe that there is general agreement about what these particular colours could mean. While discussing this piece and the others in this portfolio, I will refer to this aspect of music by using this subjective terminology and I will aim to clarify with detailed descriptions what I mean with such words.

The category "relations" corresponds to the traditional concept of texture — that is, the relation of rhythm, melody and harmony. This category proved to be very important while organising the piece at later stages. "Register" implies range and width. With "tempo" I am referring to the pace, the speed with which events happen and their rhythmic complexity.

The second step of the planning was to combine qualities from each category and organise these into still abstract events, ordered as they were going to happen in the piece. I tried to make the combinations independently of what I have heard before, and I tried to avoid emulating combinations I have already heard. This was a difficult task, and in the end there were certainly many similarities to works I have heard in the past. I could have made the combinations with aural

examples in my mind, but using this abstract process helped me to write a piece in which unity through the development of a single motivic idea was not the main focus.

| Events | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Colour | pale | metallic | bright | dark | boisterous | reedy | restrained |
| Dynamics | soft | *mp / mf* | sharp accents | *cresc./decresc.* | loud | soft | loud |
| Density | thin | medium | irregular | bass-heavy | thick | treble-heavy | silences, irregular |
| Register | low/high | relatively low | high | low | low/mid/high | relatively high | middle |
| Relations | monophonic | imitative | polyphonic | homophonic | heterophonic | echoes | pointillist |
| Tempo | slow | moderato | fast | moderato | fast/slow | slow | fast |

Figure 2.2. Combinations of qualities.

Then I made a draft that would be used as a general guide. This draft was comprised of drawings representing the textures of the individual sections, in the intended order, with approximate durations. The drawings included notes about the qualities — register, volume and so on. I added a new category to include possible playing techniques and combinations of instruments that I expected would help me obtain the proposed colour. At this point, I reordered the sequence (the final layout is shown in figure 2.2 above), and I thought about the transitions: whether one section would follow the previous one abruptly, or with a short caesura, or would merge with it. Finally, I decided the pitch material and transformed the drawings into musical fragments. Figure 2.3 on next page shows the drawing for the first sections.

As mentioned above, the traditional category of texture played an important role; it determined to a great extent the sequence of events and, later, the organisation of pitches.

Sections 1 and 4 share the same material: a symmetric chordal construction and variations of it as shown in figure 2.4. The superscripts 0 and 6 indicate the nature of the axis of symmetry, 0 being a unison and 6 a tritone. Chords of type b present the upper and lower halves from the type a chords in inversion, but combined around the same axis of symmetry. The chords appear in three positions: open, closed and as a cluster. I will refer to these again when discussing the individual sections.

The gestures from sections 2, 3, 5 and 7 are linked. The minor second is the leading interval and this, alternating with quarter-tones and major seconds, predominates throughout the piece.

The shaping of these related gestures starts in the first section with long sustained pitches moving up and down a quarter- or a semitone; this procedure is similar in section 4. The same motion appears as an explicit melodic gesture in section 2 and later in 6, with shorter values used in section 3. All this leads to the phrase in section 5, which consists mostly of semitones and appears fragmented in the last section. This will be discussed in detail below.

Figure 2.3 Matlaktli - Drawings



Figure 2.4. Harmonic material

Section 1

The piece starts with solo strings. My interpretation of "monophonic", "thin", and "pale" was to use only a single pitch-class (D) in octaves. In a very slow tempo, almost static, *sul tasto, senza vibrato* and muted, the voices change register with glissandi, maintaining the octave intervals between them and fluctuating with semitone and quarter-tone inflections. In b. 20, there are staggered wind entries and in b. 33 the horn enters with the pitch D♯, no longer as a fluctuation on D but as part of a chord that is taking shape. From there on, new pitches are added gradually, disappearing and entering again, until in b. 46 the chord a⁶ (see figure 2.4 above) is complete in an open position. It fades out and a sustained pitch on the horn links to section 2.

Section 2 (letter A; b. 48)

In the second section the voices start to move more independently, changing pitches more frequently than in section 1, in imitative, slow gestures, focused on timbre, direction and dynamics. These gestures consist of a long pitch, sustained while changing dynamics, moving up or down predominantly a semitone and, in the case of the strings, moving from *ordinario* to *sul ponticello* to bring in a "metallic" sound. The whole is a bit more in the foreground than in the first section, now **mp** and with strings *poco vibrato*.

Section 3 (letter B; b. 63)

The next segment begins without pause and in the same tempo. The gestures, related to those in section 2, move here faster, are louder, and have more well-defined lines, obtained with shorter values and accents. They are less simple and leap further, no longer moving only in minor seconds. These gestures will lead to the phrases of section 5. The high register and the spaces between the voices and motives contribute to the desired "bright" colour.

Section 4 (letter C; b. 72)

This section relates directly to the first, with long sustained pitches, crescendo and decrescendo, with semitone and quarter-tone fluctuations. Through this, and through the low register *senza vibrato* and *sul tasto,* the "dark" colour is achieved. Compared with section 1, here the voices change pitches more often and form more complex harmonies, all belonging to the kinds described above. In b. 77 chord a⁶ appears in closed position, and in b. 80 it closes further to form a cluster. The ensemble moves to chord b⁶ in b. 82, also as a cluster; it widens and changes its position in b. 84, and opens further in b. 86 (see figure 2.4).

Section 5 (letter D; b. 96)

This section is an interpretation of heterophony for the purposes of this particular work. It is a complex weave made of simultaneous variations of a phrase. Elements of this material are intimated in sections 2 and 3 and will reappear in the last one. The main phrase (b. 96-97 in horn) is used in four forms: original, inversion, rhythmic retrograde and retrograde inversion. The four

forms are presented always in groups, all occurring simultaneously but shifted, in diverse registers, in different combinations of rhythmic values (subdivisions into either triplets, semiquavers or quintuplets), transposed through the whole chromatic spectrum and with sharp accents reinforcing certain pitches. The dynamics increase from *mf* to *ff*, and all this results in a boisterous passage. This busy section relaxes *subito* in b. 107.

Section 6 (letter E; b. 107)
This section is clearly related to section 2, whose descending semitone has an equivalent here as a quarter-tone inflection, in a slow tempo and with very soft dynamics. I will use similarly shaped echo-like imitations again in *aeternae vires*. Strings *col legno* and on the bridge add to the "reedy" colour.

Section 7 (letter F; b. 119)
In this section the figures move faster and have a more defined shape. The quarter-tone inflections are now minor seconds, allowing leaps of mostly fifths. The contrast between these two last sections is similar to that between sections 2 and 3. Strings pizzicato or *col legno battuto* reinforce the staccato short figures offered by the winds. These figures derive directly from fragments of the phrases of section 5; they appear as short motifs, clearly defined, very widely spaced and "restrained" until they disappear.

While the first piece presented in this portfolio is the link between my old and new approach, Matlaktli represents a more accomplished and more defined starting point for the pieces which follow. The textural contrast between the events is the main focus of this work, and yet all the segments are closely related.

# 3. Four solo pieces

The four pieces for solo instruments constitute a single set because they share a similar compositional process. Consequently, they have related titles; each means "piece", suggesting an abstract content. Nevertheless, as will be discussed below, the narrative style in which they all develop necessarily includes extramusical ideas, even if their precise meaning was not chosen consciously.

The procedure used to write each of the four pieces for solo instruments is related to that used to write *Matlaktli*: the starting point for each was a plan of contrasting episodes or events, represented in a graphic form. These were abstractly conceived, initially paying attention only to contrasts of colour and mood. However, when writing *Matlaktli* I transformed the graphic plan into musical passages always without extramusical intentions. I merely realised and interpreted the episodic scheme, thereby very much adhering to the original diagram. In contrast, in the solo works I allowed the quality and the characteristics of the instrument to suggest to me a structure for the musical passages that was derived from the graphic plan but took the form of a narrative.

Although this resulting narrative deviated from the structure of the original sketches, the distinctive macro-structure that gives individuality to each each piece remains as first devised. Figure 3.1 shows the first sketches of the structure for three of the pieces. *Pars ad fagottum* is vague; *piece for recorders* and *pieza para guitarra* are more detailed.
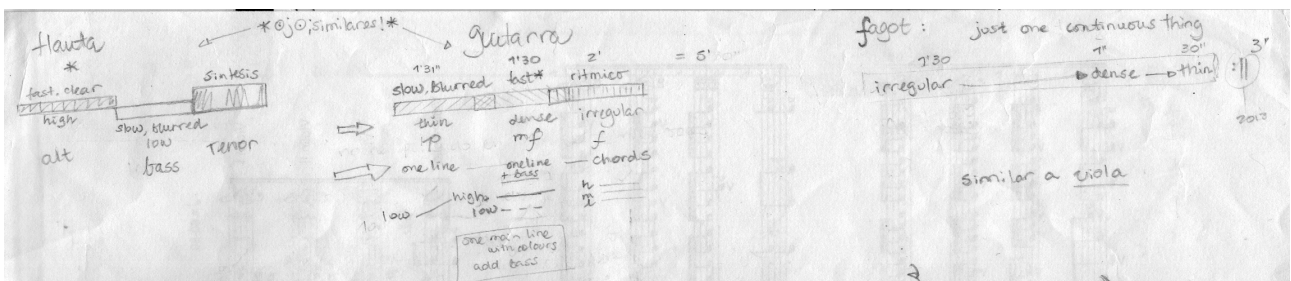


Figure 3.1. Four pieces - First sketches.

In summary, *Matlaktli* was a rather pure interpretation of the sketches, transformed into colours and playing techniques, and the plan was followed accurately. In the solo pieces, conversely, the rhetoric was more important than following the first outline.

The four pieces are analogous because they all are based on contrasts of colours and playing techniques that are idiosyncratic to each instrument. I established a relation between these elements and distinctive moods or characters, and they have an equivalent in each piece of the group. I wrote *piece for recorders* first; there, as the first step of the process, I defined three basic characters that could be obtained by different playing techniques. It was followed by *pars ad fagottum* and *pieza para guitarra*, composed simultaneously, and finally *stück für bratsche*. While

working on the later pieces I specifically attempted to link the characters and playing techniques between the four pieces. I also attempted to shape a different structure for each.

Figure 3.2 shows the intended mood and respectively the playing techniques to achieve this. I used distinctive gestures to reinforce the character of each of the qualities and to obtain the desired contrast between the events. This table represents only a general scheme: in the final scores there are mixtures, as might be expected.

| | piece →<br>character | piece for recorders | pars ad fagottum | pieza para guitarra | stück für bratsche |
|---|---|---|---|---|---|
| A | agile, light | staccato, staccato with *sf* [alt] | staccato, harsh staccato, staccato with *sf* | tremolo, pizzicati | pizzicati |
| B | blurred, tranquil | glissandi, quarter-tone inflections, wide vibrato, frullatos [bass and tenor] | glissandi, bends, quarter-tone inflections, timbral trills, alternate fingerings | glissandi, bends, left hand legatos | glissandi, quarter-tone inflections |
| C | energetic, noisy | trills tremolos [alt and tenor] | tremolos, multiphonics frullatos | chords | arpeggios |

Figure 3.2. Relation of colours and playing techniques in the solo pieces.

As mentioned above, the graphic plan underwent transformations when it was being converted into the musical compositions in order to create from it a coherent musical narrative in which the three moods were combined in different forms in each piece. Thus, the rhetorical characteristics of the individual works had a significant effect on the composition.

Figure 3.3 shows the pitch material of each piece and its approximate structure. The letters stand for A = agile, B = blurred, C = energetic. Capital letters represent substantial sections, lowercase letters represent elements within a section. When discussing the individual pieces, I will further elucidate the structure and will explain how accurately I followed the original sketches, if pertinent.

| | piece for recorders | pars ad fagottum | pieza para guitarra | stück für bratsche |
|---|---|---|---|---|
| Pitch-material | twelve-note aggregates / pitch-set | free twelve-note (full-chromatic) | pitch-sets | dodecaphonic |
| Structure | C A B [a+b+c] b | B C B A $C^A$ $B^{AC}$ A C B | $B^A$ $A^C$ $C^{AB}$ | B C B A [B+C] A B |

Figure 3.3. Pitch material and structure.

In short, the four pieces are similar in their compositional process, and they are different in the way the episodes are organised, the relations between the contrasting parts, and the pitch material on which they are based.

*piece for recorders*

As mentioned above, this was the first of the set of four pieces and for it I selected the three characters with their respective playing techniques. The piece is clearly structured in three sections for alto, bass and tenor recorders respectively. With every change of instrument there is also a change in character with smooth transitions.

The initial plan was as follows and did not change substantially:

| Introduction | First section | Middle section | Final section |
|---|---|---|---|
| C: energetic | A: agile | B: blurred | synthesis (C+A+B) |
| alt recorder | | bass recorder | tenor recorder |

Figure 3.4.1. Structure of *piece for recorders.*

In each section except the last the mood is clear; for the tenor recorder I intended to do a synthesis of the three moods. Indeed, the tenor recorder exploits the previous thematic materials and encompasses the three characters. However, both the melodic qualities and the blurred colour of the bass recorder prevail in this last section.

While writing this piece I worked very closely with the performer, Charlotte Pugh. During the composition process, I made many small changes after discussing certain passages with her, like modifying awkward glissandi. These happened particularly in the tenor part: there, instead of using rigorous twelve-note aggregates, I worked in a free, fully chromatic idiom so I could use effective and comfortable tremolos. I also constructed the transitions with her and adjusted the score in order to make them as smooth as possible.

I looked closely at various scores for solo recorders, such as Thomas Simaku's *Soliloquy V*, Ishii's *Tenor-recorder piece* and Sinohara's *Fragmente for tenor recorder.* These gave me plenty of ideas about colours and techniques which I then applied with a different intention and aesthetic.

The alto recorder introduces the piece with an "energetic" character, with trills at a loud volume. The introduction (systems 1-4 in the score) uses two twelve-tone aggregates that are treated with some freedom, in that there are some repetitions of pitches before the new aggregate starts. This will happen in *pars ad fagottum* as well.

The introduction is followed by the first main thematic material, which has an "agile"

character. In fast staccatos interrupted by sudden $sf$, the alto recorder ascends gradually from its lowest register to the top, following a pitch-set of eight elements with fixed register. This is shown in its three transpositions in figure 3.4.2.
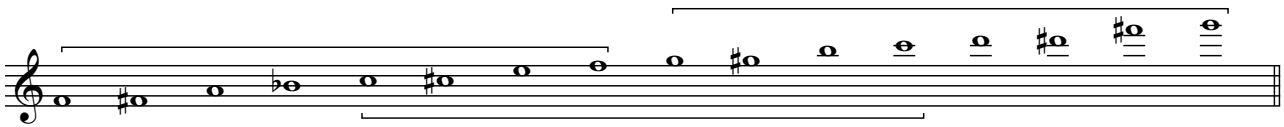


Figure 3.4.2. Pitch-set for *piece for recorders.*

This pitch-set is used in groups of four pitches with an added "salient pitch" (B, in the first stave of figure 3.4.3, below). The first group, in the lowest register, transforms gradually (see the second stave in the same figure) until it becomes a new group, starting with pitch 3 (the third stave in the figure); then, ignoring the first "salient pitch", a new one, D, is added. This new group transforms gradually until it becomes a transposition of the first, a perfect fifth higher (fourth stave in the figure); this group completes the first set of eight pitches and starts a new one (see the previous figure 3.4.2). This process continues until the recorder reaches its highest register and the twelve chromatic notes have been heard (see systems 5-16 in the score).
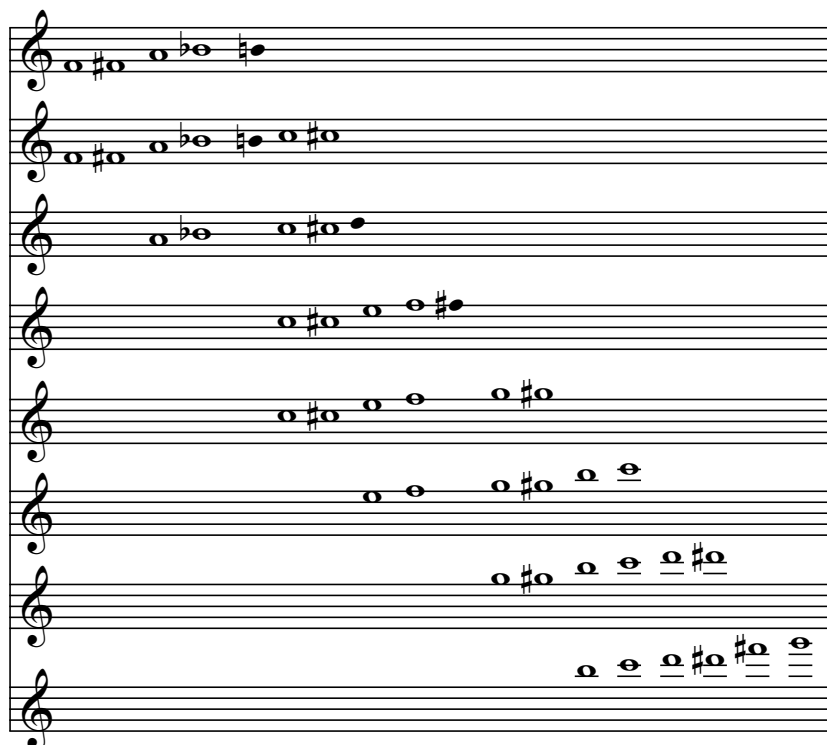


Fig. 3.4.3. *piece for recorders*: developing of the pitch-sets.

The first section ends with a tremolo mostly in $f$. This is the "energetic" character again, and it will return in the final part.

The transition to the second section occurs on system 19, still with alto recorder; the dynamics are now soft, and the gestures and the first pitch of the next section are announced. The player should aim here to continue into the next part without interrupting the flow. This can be achieved because the last two pitches of the alto recorder and the first of the bass can be played with one hand.

In the second part the bass recorder plays the second thematic material. The contrast in colour is marked not only because of the lower register and softer dynamic of the new instrument but also because of the distinctive gestures: pronounced crescendos, *frullatos*, quarter-tone inflections, glissandi*,* and a wide, irregular *vibrato* executed with one hand opening and closing the labium. These gestures create the desired "blurred" atmosphere.

The bass recorder uses twelve-tone aggregates. In systems 20-22 (see score) the first aggregate is organised as three tetrachords; these are the same as a constituent element in *aeternae vires* that I shall term tetrachord $\partial$.[7] This tetrachord is used in *pars ad fagottum* as well. Written in an ascending order, it consists of a semitone, a perfect fourth and a semitone. As an instance, one sees the pitches G - A♭ - D♭ - D on systems 20-21, ignoring the quarter-tone inflections.

The tenor recorder presents the final part. It makes use of the full chromatic scale, with freedom. The colour and gesture of the starting phrase links this section to the previous one. It continues with a figure that relates to the introduction, and from there it follows a series of events having a mixed character: energetic trills and tremolos, mostly $f$, contrast with $pp$ glissandi and quarter-tone inflections, reminders of the nebulous colours of the previous section.  The piece ends with a long quotation of the ideas from the bass recorder, whose character and colour are predominant in this section, as mentioned above. This was a result of the close work with Charlotte, as I discovered that the *labium vibrato* and glissandi on the tenor recorder were quite satisfactory.


*pars ad fagottum*


This piece was composed in response to a workshop given by Doug Spagniol at the University of York. The first ideas emerged during his seminar and were enriched by studying the contemporary repertoire for solo bassoon. Specially relevant as influences in my compositional process were Isang Yun's *Monolog für fagott*, Elliot Carter's *Retracing* and, particularly, Luciano Berio's *Sequenza XII*. This piece demonstrates the great flexibility of the instrument; I profited from this work and used it as a kind of catalogue of colours and extended techniques.

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[7] It is called tetrachord $\partial$ because it appears twice in the row termed $\partial$ in *aeternae vires.*

*pars ad fagottum* is built as a single long episode, with a continuous transformation of atmospheres. It is constructed from the three characters or moods mentioned before. Each of these characters remains only for a while and each can be interspersed with the others. Although there are no definite subdivisions, there is a hint of a reprise in b. 38, with clear reminiscences of the gestures of the opening measures.

| | First Section | | | | | Second Section | | | |
|---|---|---|---|---|---|---|---|---|---|
| mood: | B | C | B | A | C<sup>A</sup> | B<sup>AC</sup> | A | C | B |
| bar: | 1 | 10 | 12 | 20 | 24 | 38 | 53 | 56 | 61 |

Figure 3.5.1. *pars ad fagottum* - structure.

To structure the piece I applied a system of vectors regulating dynamics and tempo. The characters were freely assigned, but I avoided pairing the same mood with the same dynamic. Figure 3.5.2 shows the final version of the general plan. The first line shows the speed; the second line shows the dynamics followed by later transformations to them, made to better fit my purpose. The next line indicates the moods:

I blurred (B in fig. 3.2)
II agile (A in fig. 3.2)
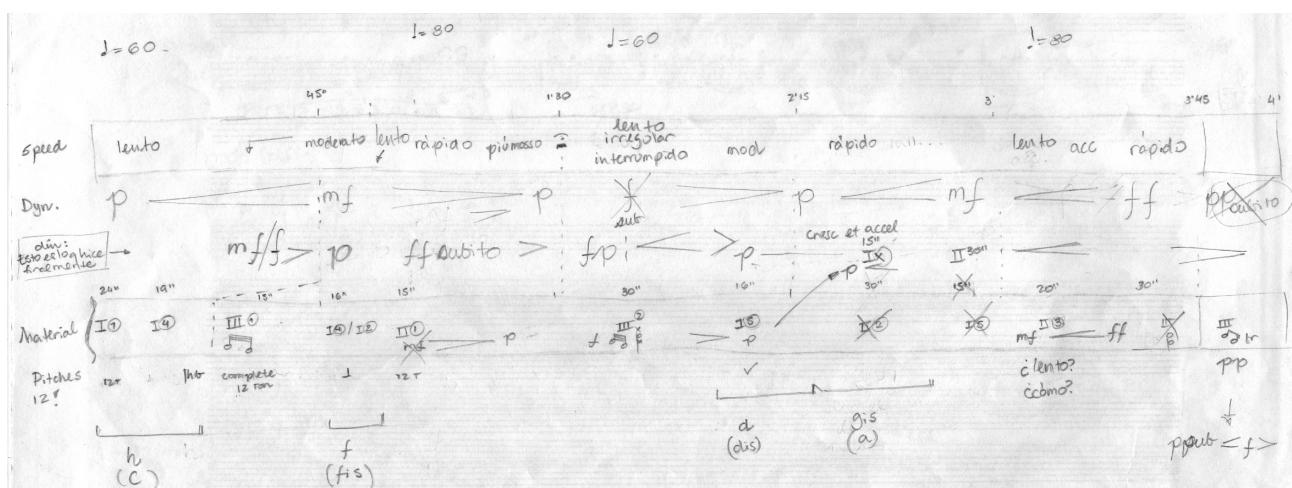III noisy (C in fig. 3.2)
And finally the pitches.



Figure 3.5.2. *pars ad fagottum* - general plan.

The first colour, "blurred", is depicted in b. 1-9, interrupted briefly in b. 10-11 by the character "loud and energetic" with *frullato* and tremolos (see score and b. 7-11 in figure 3.5.3 below). In b. 20 a harsh staccato, *furioso,* starts an "agile" passage (see figure 3.5.4). From bar 24 to 37 the

noisy element appears again and the fragment finishes with a smooth transition to the second section.

Considering pitch-material, the piece is also divided in two sections. In the first section (b. 1-37) the prominent pitches are B and F; in the second section (b. 38-62), D and G#, with all four pitches alternating with the notes a semitone higher. In bar 45 the prominent pitch should have been D. I chose to use D# because it works much better to obtain the change of colour with various keys.

In this piece I worked with fully chromatic materials, using twelve-tone aggregates. In some parts of the piece the procedure is very rigorous and easy to identify; in other parts, it is treated with certain liberties, prioritising some pitches through repetition.

Figure 3.5.3 below shows a twelve-note aggregate with some repetitions stressing the notes C and B and without B♭. The quarter-tones are not taken into account, as the intention is to use these for nuances of colour and they need not have an accurate intonation.
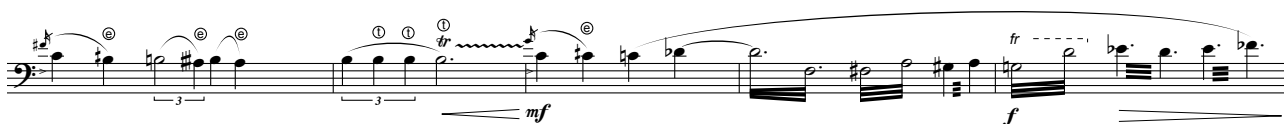


Figure 3.5.3. *pars ad fagottum,* b. 7-11.

The next figure shows three rigorous twelve-note aggregates, depicting the "agile" character. The first four notes form what I termed tetrachord ∂ when discussing *piece for recorders,* and these are followed by transpositions of the same tetrachord.
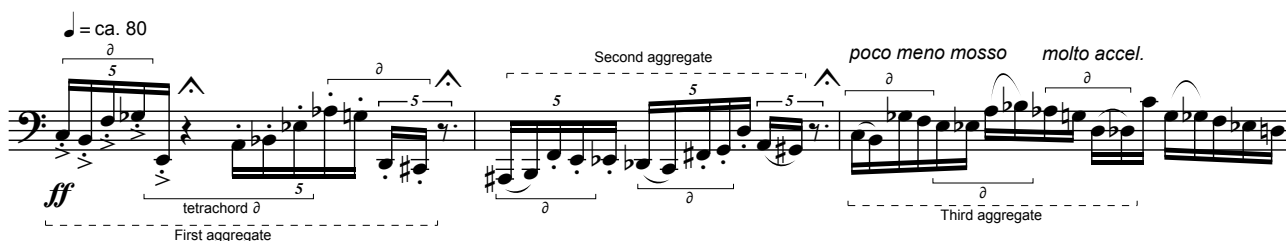


Figure 3.5.4. *pars ad fagottum,* b. 20-22.

Thanks to Doug Spagniol's valuable advice I made some changes to my initial plans, such as substituting awkward glissandi with bends — that is, just  letting the pitch drop, which produces a related effect. Moreover, we discussed carefully the practicality of tremolos, and he fingered the multiphonics.

There are some fragments, like b. 15-17, where the sound of the timbral- and quarter-note trill might be disturbed by the sound of the bassoon keys. In a future work for this instrument, I will probably choose more carefully the pitches for such colour effects, so that the sound of the keys is not louder than the music itself. This might, however, prove to be a difficult task, because the noisiness of its keys is one of the bassoon's peculiarities.

*pieza para guitarra*

The structure of this piece resembles that of *piece for recorders* in that it is made up of three sections with an established colour and character in each. Furthermore, as in the recorder piece, the third section is a synthesis of the previous two, although in this case it synthesises the pitch-material.

In general terms, the first section is blurred, the second is agile and the third, energetic. However, there are disruptive elements in each: the mood is continuously interspersed with foreign elements either recalling or anticipating the others. The main interruptive element prevails during the following section. Thus, the transitions are important constituents: the piece remains in one defined character and playing technique and moves gradually to the next.

The piece begins with a gentle character and blurred colours (B), interspersed with a few chords as well as note repetitions that anticipate the *tremolando* of the second section (A, b. 22-51). This section flows rather smoothly, but it is in its turn interrupted by loud chords, only to continue at a regular pace. From bar 52 the *rasgado* chords (C) acquire more prominence; they remain as the characteristic colour in the last section, but they are nonetheless interrupted by tremolos and elements from the first section, such as glissandi and bent pitches.

| mood: | B$^A$ | A$^C$ | C$^{AB}$ |
|---|---|---|---|
| bars: | 1 - 21 | 22 - 51 | 52 - 79<br>[64 -71 A+B] |

Fig. 3.6.1 *pieza para guitarra* - structure

The piece is based on two unordered pitch-sets of six notes each, together completing the chromatic scale (see figure 3.6.2 below). The first part uses set *a*, the second set *b*, and the third a combination of both. Displayed as a scale, one can observe that the sets are symmetrical, allowing for consistency in the melodic lines.



Figure 3.6.2. Pitch-sets for *pieza para guitarra*.

Once the three sections were defined in terms of playing techniques and character, I made drawings showing the musical textures and contours, without any pitches but with hints to the pitch material and chords. Fig. 3.6.3 shows bar 57-61 and 68.

Fig. 3.6.3. Sketch for the third section from *pieza para guitarra*
(b. 49 in the manuscript became b. 57 in the final version).

I was not directly influenced by any piece, but again Berio and his *Sequenza XI per chitarra* provided me with ideas of colours and extended techniques. I read carefully Robert Allan Lunn's *Extended Techniques for the Classical Guitar* and got some ideas like the use of bi-tones.

The repertoire for guitar is familiar for me: there are plenty of guitar students at music departments in Mexico and I am used to constantly hearing guitar music, especially from Latin American composers like Ponce, Villalobos, and Brower. Thus it was not problematic to start writing the piece without regular or direct communication with a player. Besides, I borrowed a guitar which, in spite of its bad quality, helped me to try out the chords, glissandi and bent notes. However, I was not able to hear the real effectiveness of the soft effects until I heard the piece live in concert.

Before the premier, I had only had online conversations with the performer, Diego Castro Magaš, and these gave me only approximate ideas, particularly about the loudness of the "blurred" effects. We discussed the viability and effectiveness of the glissandi and left hand *legatos* and as a result of these conversations I made small changes like plucking the note at the end of a glissando (as in bars 18-20) or changing the duration of a left hand legato (as in bar 6). Before the first performance it was agreed to use a small amount of electronic amplification in order to increase the effectiveness of such techniques.

One of the difficulties when writing for guitar, as a non-player, is the construction of comfortably playable chords that can be managed with easy transitions from one position to the next. After noting those difficulties between certain chords, while rehearsing with Diego, I decided to add some explicit breaks between bars 74-75 and 78-79, and I was satisfied with the outcome.

## stück für bratsche

*stück für bratsche* is written in linked episodes, without distinct divisions, and it works as a single unity. The structure resembles that of *pars ad fagottum* but is less fragmented; and it differs from the structure of the guitar and the recorder pieces, which have a clear division between sections. However, it relates to *pieza para guitarra* in that every episode is interspersed with elements from the other episodes.

My first idea was to build a series of short contrasting events, so as to have a structure A - B - C - D - E. But once I had my first musical ideas for the piece, I decided to preserve the unity with the rest of the pieces of the set and remain solely with the three contrasting characters, but mixed. This decision, as well as the general mood and the intention, was highly influenced by listening to Bruno Maderna's *Viola*, which contains various episodes with mixed colours. Unlike Maderna, though, my narration is fixed.

This piece is based on a twelve-note row. Only the original form of the row is used. This, with the transposition at a tritone, predominates, with the only exceptions being appearances $O^2$ and $O^8$ in b. 53-82. The row is constructed with three tetrachords: pitches 3-6 form what I shall term, for practical reasons, the first tetrachord; pitches 7-10 form the second tetrachord, which is a transposition down a minor third of the first tetrachord. The third tetrachord comprises two minor thirds: pitches 11-12 and 1-2.
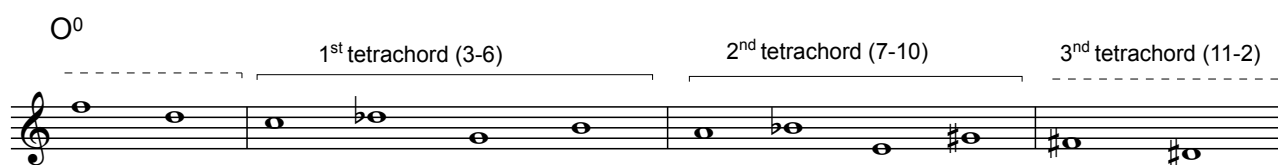


Fig. 3.7.1. Row for *stück für bratsche.*

When the row is used in an orthodox manner, it begins with pitch 1 in the usual way. When the row is used as three pitch-sets (as explained in Part 1)[8] the row often starts with the first tetrachord, that is, pitches 3-6. The third tetrachord (pitches 11-2) is used predominantly in double-stops in a recurrent gesture noteworthy for its glissando and pronounced crescendo.

The piece starts with a line using the first tetrachord, with quarter-tone inflections and glissandi, interrupted by a chord using the same pitches. It returns immediately to the starting tranquil character (using the second tetrachord) only to become disquieted again with *tremolo sul ponticello, crescendo*. The third tetrachord, in b. 7-8, brings the gesture mentioned above. With the reappearance of the second tetrachord in b. 9, the mood again becomes placid (see figure 3.7.2 below).

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[8] Part 1. Section 2. Compositional Approach. Planning Process, p. 4

Figure 3.7.2. *stück für bratsche:* Row P⁰ as pitch-sets (b. 1-10).

The remainder of the first episode consists of analogously contrasting events. It is "blurred" in some phrases, but it also has well-defined melodic lines, as well as bright passages obtained by harmonics and tremolos on the bridge. In this piece, consequently, a better word might be "tranquil". Nevertheless, it is still equivalent in mood to the "blurred" material in its sister pieces, in that it moves in a slow tempo at a prevailing soft dynamic and it works as a peaceful contrast to the energetic sections.

The second episode — *energico*, equally irregular, but faster and overall louder — starts in b. 19, characterised by triple- and quadruple-stops. For the third episode, the material of the first returns in b. 30 with a new element: a fragment in two-part counterpoint (see b. 37-44), with glissandi and quarter-tone inflections that evoke the tranquil mood. This use of counterpoint was directly influenced by Stravinsky's *Élégie.* The double-stops characteristic of the second episode return briefly in b. 45-50 and the fourth episode follows: *grazioso*, agile and light, in pizzicati with occasional glissandi and *arco* (see b. 52-65).

I had initially planned to write a fifth episode equivalent in mood to the first and third, as a ritornello - character. Consequently, the material from those episodes reappears again in b. 67, but it is interrupted by the energetic character and double-stops of the second episode, which finally prevail, culminating in *ff* arpeggios that lead to the last episode in bar 86. This consists of fast arpeggios, *arco* and *legato*, in a gradual crescendo to *ff*, and from there *molto diminuendo* to finish with a brief reminiscence of the first material.

| Episodes | 1st | 2nd | 3rd | 4th | 5th | 6th | Coda |
|---|---|---|---|---|---|---|---|
| Character | tranquillo (B) | energico (C) | tranquillo (B) | grazioso (A) | tranquillo/ energico (B+C) | rapido (A) | tranquillo (B) |
| Bars | 1 - 18 | 19 - 29 | 30 - 51 | 52 - 66 | 67 - 85 | 86 - 115 | 116 - 117 |

Figure 3.7.3 Structure of *stück für bratsche*


At the time of writing this commentary, Noelia Gómez is rehearsing this piece for its first performance in Mexico. After discussing the piece with her, I decided to add a performance note indicating that all the pitches of a triple-stop should be kept for its whole value even if the sound is rather dirty; otherwise the tendency could be to omit one or two notes while sustaining the chord to get a softer sound.

From *stück für bratsche,* as well as from the other pieces of this set, I learned the importance of adding performance indications to the score regarding the intended character. Here, for example, I added *tranquillo*, *energico* and *grazioso* after the first talk with Noelia. I tend to think that the intention of my music is clear, but the performers at their time all agreed that even if they correctly guessed my intention, they would rather have a verbal description of it. From now on I will be more aware of the performer's desires for the sake of the expressivity of my own music.

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# 4. *Ome ueuekuikani*
## for percussion duo

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Apart from the last work in this portfolio, *aeternae vires*, this is the only piece with an extramusical inspiration: it is dedicated to the many victims of violence in my country in recent years. The first movement depicts a festive atmosphere, showing movement and dance. It is followed by a Funeral March, which is sad and solemn as usual. *Ome ueuekuikani* means "two drum players" in Nahuatl; the word "ome" (two) is significant as it indicates the dualism between festivity and mourning.

This work is written solely for instruments of indefinite pitch. Therefore rhythm is a very important parameter; but, in opposition to my previous work, rhythm is subordinated to texture, which is in the foreground.

The division of the ensemble in *aeternae vires* was devised for good contrasts in colour. Similarly, the two groups of instruments in this piece show contrasting colours, not only because of the distinct instrumentation of each but also because of how they are used. This contrast is very clear in the second movement, where the players move at their own paces, with their own materials, dynamics and playing techniques, creating polymetric events. In the first movement the players unite to form a single texture, and the contrasting colours are perceived through the different variations.

## I Variations

This movement is based on a stylised 12-beat dance pattern from the region of former Rhodesia. I have always been interested in African music, but this is the only composition in the portfolio in which I make direct use of an African rhythmic pattern, which I shall refer to as the kernel.



<div align="center">

Figure 4.1. Dance-pattern of Rhodesia (fragment).[9]

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A basic rhythmic line of eighty-four quavers derives from this kernel, with motifs of various lengths that are grouped to form three patterns of twenty-four quavers plus the kernel. The line starts with three similar groups of seven and what I call a "break" of three; then follow two groups of ten quavers and a break of four. It continues with two groups of twelve (which in their retrograde

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[9] Jones, *African Rhythm*, 44. The pattern shown by Jones is more complex.

form will become a recurrent element which I call "prominent phrase"); and finally the kernel, twelve quavers long, completes the eighty-four quavers pattern.

The basis for developing the rhythmic line is, then, twenty-four-beat patterns with different groupings and accents. The kernel takes form gradually until it is presented in the middle of the line.
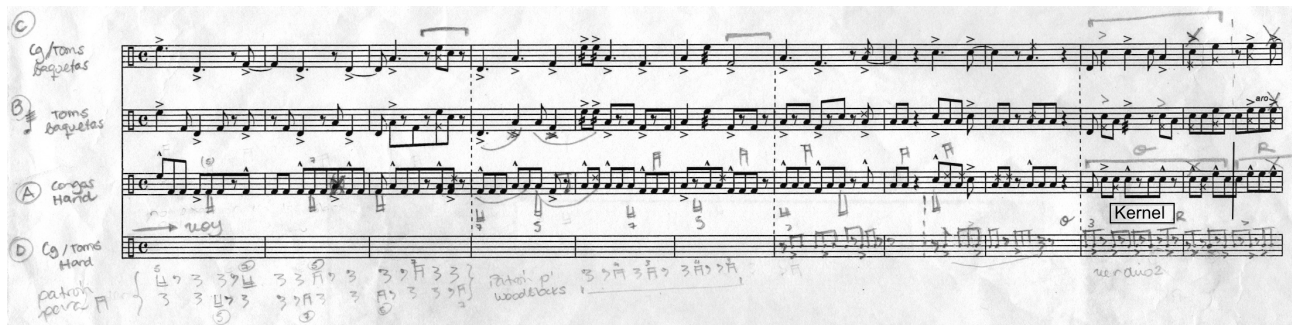


Figure 4.2. Basic rhythmic line of eighty-four-quavers and beginning of its retrograde.

After this point, the pattern of eighty-four quavers is presented in retrograde; that is, the rhythmic line can be read from the beginning of the line to the middle point (when the kernel finishes) and from the end of it to the same middle point. The line is thus symmetrical in its structure and consists of motifs derived from the kernel.

The title "Variations" is not used in the regular sense, as in "Variations on a Theme". The title refers to transformations of the basic rhythmic line, whose structure remains essentially the same in all four variations. What varies is: the rhythmic subdivision or basic pulse (this will be made clear when discussing each segment), instrumentation, colour and density. Occasionally, the line is treated freely to achieve the desired textures.

Variation 1 presents the basic rhythmic line, with its quaver subdivisions and pulse. The texture is thin, obtained with skins and woods played with hands in a rather high register. Figure 4.3 shows the kernel in its original and retrograde form followed by the above mentioned prominent phrase (player 2). Simultaneously, player 1 plays motifs in triplets (log drum and then maracas) which are variations of the same main cells. This material will be used again in variation 4.

In Variation 2 the rhythmic line is simplified, with longer values and fewer subdivisions; crotchets prevail in a lower register with soft mallets and many rolls to obtain a dark colour.

Variation 3 goes a step further, and the rhythmic line is simpler still, with no quaver subdivisions: longer values, mainly crotchets and dotted crotchets, but always the same accentuation as in all the variations. This variation is energetic and dense, with hard mallets and many rolls on skins and loud metals.

Variation 4 offers the most complex subdivisions and is constructed much more freely. The colour is bright and the texture is thin and high in pitch, utilising mainly high-pitched metals (tin cans, cowbells, temple blocks; drums and toms on rim) as well as wood blocks, with rapid figurations and including the motifs in triplets (b. 92 in player 1) used in Variation 1 as well.

Figure 4.3. Variation 1, b. 11-16.
Kernel in original and retrograde forms; prominent phrase. Motifs in triplets.

The variations in pulse and colour do not prevent certain phrases from being highly recognisable. I aimed to give them prominence, and they are not greatly modified in their rhythmic characteristics through the variations. As examples, see the above-mentioned motifs in triplets in Variations 1 and 4 and the last twelve quavers of each variation.

To observe the difference in handling the rhythmic line, compare the centre of each variation, that is:

Variation 1: b. 12-13, as shown above.

Variation 2: upbeat to b. 38-41.

Variation 3: upbeat to b. 64-66.

Variation 4: upbeat to b. 88-90.

## II Funeral March

The energetic character of the first movement acts as a prelude to the sombre character of the Funeral March. The performers each play a different march, each with its own tempo, as if one were hearing two different processions in a small, quiet town. The direct inspiration for this procedure was hearing exactly this while visiting Antigua, Guatemala: simultaneous processions during the Holy Week Celebrations. Of course the same idea has been used before, notably in Charles Ives's "Fourth of July". The Funeral March is then polymetric, heeding the combinations of and contrasts between the different contours.

The main theme is based on Beethoven's Funeral March from the Third Symphony. It follows the rhythms of its source with some variations, and it imitates the melodic line as far as possible, given the obvious limitations of the indefinite pitch of the instruments. When played with drums/toms with hands (as in systems 3-5 player 1) or with congas/bongos (as in systems 5-6 player 2) the source of inspiration is expected to be very recognisable.

Fig. 4.4. Beethoven's Funeral March, 1st Violin (b. 1-8)[10] and below, mine (systems 2-3).



Figure 4.5. Liszt's 'Marche funèbre'[11] and below the introduction to my 'Funeral March'.

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[10] Beethoven, Third Symphony, second movement, *Marcia funebre: Adagio assai.*

[11] Liszt, *Années de pèlerinage*, 'Marche funèbre' (b. 1-12).

The introduction to the movement and the secondary theme are based on Liszt's 'Marche funèbre, en mémoire de Maximilian I, Empereur du Mexique' from *Années de pèlerinage,* Book 3. The introduction (b. 1-9) is an interpretation of the rhythmic line and character of b. 1-9 from Liszt's 'Marche'. The secondary theme follows the rhythm of b. 10-15, left hand, imitating the pitches of the piano piece. As I use only the line in the left hand, I doubt that the reference is perceptible (see figure 4.5 above).

The main theme appears constantly as the *ostinato* of a passacaglia in both players but never simultaneously and not strictly alternately, keeping always the same tempo ($\downarrow$ = 48). This is combined with the second theme, which flows at its own tempo ($\downarrow$ = 60) with occasional disruptions of the mournful atmosphere by fast figurations ($\downarrow$ = 72). These figurations derive from a typical funeral march rhythmic-motif which I subjected to permutations accomplished, for example, by the use of  retrogrades, or by shifting one quaver or one semiquaver, thus displacing the accents.

The individual tempos are not expected to synchronise completely. Cues are marked in the score to indicate points where the two players should coincide, ensuring that they will not become too uncoordinated. This procedure is indebted to Lutoslawski's aleatoric counterpoint.

Each presentation of the themes is coloured differently. By way of illustration, the main theme (second system) is presented delicately by drums and toms with brushes, followed by a new presentation with the same instruments played with hands and louder dynamics. Meanwhile, player 2 offers the second theme, also with a delicate character created by congas struck with hands, then colouring this with metals (third system) to prepare the new added colour (fourth system), the figuration in cowbells. In system 7 (p. 3) the main theme appears for the fourth time in player 2, coloured by metals with brushes, with the rhythmic pattern less prominent and rather insinuated. Meanwhile player 1 plays the figurations on log drum, then on woodblocks, *forte*; this more disruptive passage is followed by a short presentation of the second theme with toms coloured with metals.

It might be that the above mentioned sources of inspiration for this movement are not perceived by the listener. I actually didn't make anything up: I copied directly the rhythms and converted the pitches to approximate indefinite pitches, but my intention was never to make them distinct. I used them rather as a symbolic background: Beethoven's March because of the significance of his music in my own compositional processes; Liszt's *Marche*, principally because of its dedication to Maximilian I, *Empererur du Mexique,* notwithstanding my disagreement with the Austrian context for the dedication.[12]

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[12] Without justifying the empire and the French invasion, Maximilian's good deeds and intentions are appreciated by many in Mexico.

## 5. *Una pieza para dos pianos*, for two pianos

This piece is related to the percussion duo in that it focuses on rhythm and metre and in that the pianos are used rather for their percussive than their lyrical quality. As an inspirational source I should mention Ligeti's 'Monument' from the *Three Pieces for Two Pianos*. The construction of the melodic line and the slow pace of events were inspired by Morton Feldman.

The work is constructed through the use of Fibonacci numbers, which determine the appearance and recurrence of the different gestures, the density of the chords, the length of the figurations and the rhythmic values.



Figure 5.1. Recurrence of figurations determined by Fibonacci numbers.

The piece involves combinations of the following three main materials:
• a slow melodic line (♩ = 48)
• fast figurations (♩ = 60)
• chords with varying densities  (♩ = 72)

All of these materials are interrupted by prominent silences, which play an important role in this piece, making it different from the others. The different fragments are constructed with combinations of two of the main materials, and they develop independently on both pianos, each having a different metre and pulse. The fourth fragment (letter C) is an exception; here, both players proceed in the same tempo, combining the three materials. The development of the fragments results in textural qualities where contrasts of sound and silence, of high and low density, are in the foreground.

The pitch material is related to that used for the alto recorder section in *piece for recorders*. It consists of a set of three notes, linked with its transposition a fourth higher. This material is used both melodically and harmonically. The melodic line moves up gradually from one pitch-set to the next, as shown in figure 5.2 below, third stave. The chords use one transposition when they consist of one, two or three pitch classes. Chords of five and eight pitch classes are comprised of two or three pitch-sets respectively. No more than three pitch-sets are used simultaneously.

Figure 5.2. *Una pieza para dos pianos*: pitch-sets.

To avoid significant phase shifts between the players I marked points of coincidence. I did the same in *Ome ueuekuikani,* and since the performance of it was successful I trust that *Una pieza para dos pianos* will be effective as well.

# 6. *aeternae vires - oratio Pythagorae*

*aeternae vires* is a secular cantata for solo countertenor, choir and chamber orchestra. It comprises three main parts, each consisting of various combinations of soloist or choir with different instrumental accompaniments, as well as purely instrumental sections. It uses traditional techniques such as polyphony and has strong tonal implications in some passages. It is imbued with the character of Bach cantatas, rather than with that of modern models, specially regarding the use of the voices. The title means "The eternal forces - the speech of Pythagoras".

## Text

This piece differs from the others in that it is based on a text. I used verses 143 to 235 from Book XV of Ovid's *Metamorphoses*. These concern Pythagoras' teachings, and I present them in the original Latin.[13] At the end of the piece I use one paragraph from Goethe's poem *The Metamorphosis of Plants* in the original German.[14]

As mentioned in the first part of this commentary, Webern's *The Path to the New Music* led me to Goethe's *Metamorphosis of Plants;* and from this, I continued to Ovid's *Metamorphoses* and the precise selection of verses. Although Ovid (in the voice of Pythagoras) and Goethe do not deal with this theme from the same point of view, they complement each other, exploring different facets of the same idea. My desire to use Latin reinforced the decision to choose Ovid as the main text. Such a text was suited to be the most substantial piece of this portfolio, and it also warranted the use of large forces. Furthermore, the text suggested some instrumentational details, and it was the starting point for the development of the various sections of the work, with their particular colours and textures.

The verses I selected from Ovid talk about the constant mutation of everything, animate and inanimate. Our bodies change constantly until they die, and then our souls will wander to another animal, human or otherwise. The selection concludes with a description of time's eventual consumption of everything, bringing eternal death. The last verses from Ovid are gloomy and fatalistic, although on a cosmic scale this destruction is just one more transformation.

> Time, the devourer of things, and you, jealous old age,
> you destroy all things and, after blighting them with the teeth of age,
> little by little you consume all things in slow death.[15] (v. 234-236)

After these verses are sung, we hear a short instrumental epilogue, and then Goethe's verses are heard, in reassuring tones, reminding us of the enduring forces of nature.

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[13] The version of the text I use is at *The Latin Library* (online).

[14] Goethe, *Die Metamorphose der Pflanzen*.

[15] Ovid, *Metamorphoses XIII-XV*. trans. D.E. Hill, 97. English translations of Ovid's verses will be always taken from this book.

Goethe's poem is similar in content to his treatise *Der Versuch die Metamorphose der Pflanzen zu erklären*. Both describe the continuous transformation of plants, everything being contained in the seed.

> … when the root has fastened itself in the soil, the plant brings to the light the first organs of its upper growth, which were already there, hidden under the seed-coat.[16]
>
> … and [we] shall learn to understand those laws of transformation by which she [Nature] produces one part out of another and creates the most varied forms by the modification of one single organ.[17]

Or, as Webern paraphrases: 'And what is manifest in this view? That everything is the same; root, stalk, blossom'.[18]

The verses I selected reaffirm the idea that life continues eternally. With the seeds hidden in a fruit, a cycle of nature finishes, but a new cycle immediately begins:[19]

> Deep in the bosom of the swelling fruit
> A germ begins to burgeon here and there,
> As nature welds her ring of ageless power,
> Joining another cycle to the last,
> Flinging the chain unto the end of time -
> The whole reflected in each separate part.[20]

*Aeternae vires* concludes with these lines, but they tell us that this ending is only illusory. In fact they announce the beginning of a new cycle, a new link in the eternal chain. So the piece is not really finished yet; it could start again, being the same piece but different. As Webern says: 'It's always the same; only its manifestations are different'.[21]

## Ensemble

The ensemble is divided into three groups seated separately on the stage; this allows for contrasts in colour between the different parts, antiphonal passages, and passages in which the sound moves from one side of the stage to the other.

Soprano and Tenor belong to group I, stand close to it, and are always accompanied or doubled by the instruments of this group; the same happens for Alto and Bass and group II. The unpitched percussion instruments and piano form group III.

The inspiration for such relationships was Berio's Coro, although because the forces are much smaller in my work, I didn't go to the extreme of pairing a single voice with a single instrument. In addition, various combinations are used, for example, winds only or just strings. The ensemble is thus always the same, but it is made to appear different in each section.

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[16] Goethe, *The Metamorphosis of Plants*, 22.

[17] Ibid, 20.

[18] Webern, *The path to the new music*, 40.

[19] The first two verses quoted here are not used in the piece

[20] Goethe, *The Metamorphosis of Plants* (poem), online, [no name of translator], 34.

[21] Webern, *The path to the new music*, 40.

Conductor

Soprano                                                                                          Alto

Tenor                                    Countertenor                                    Bass

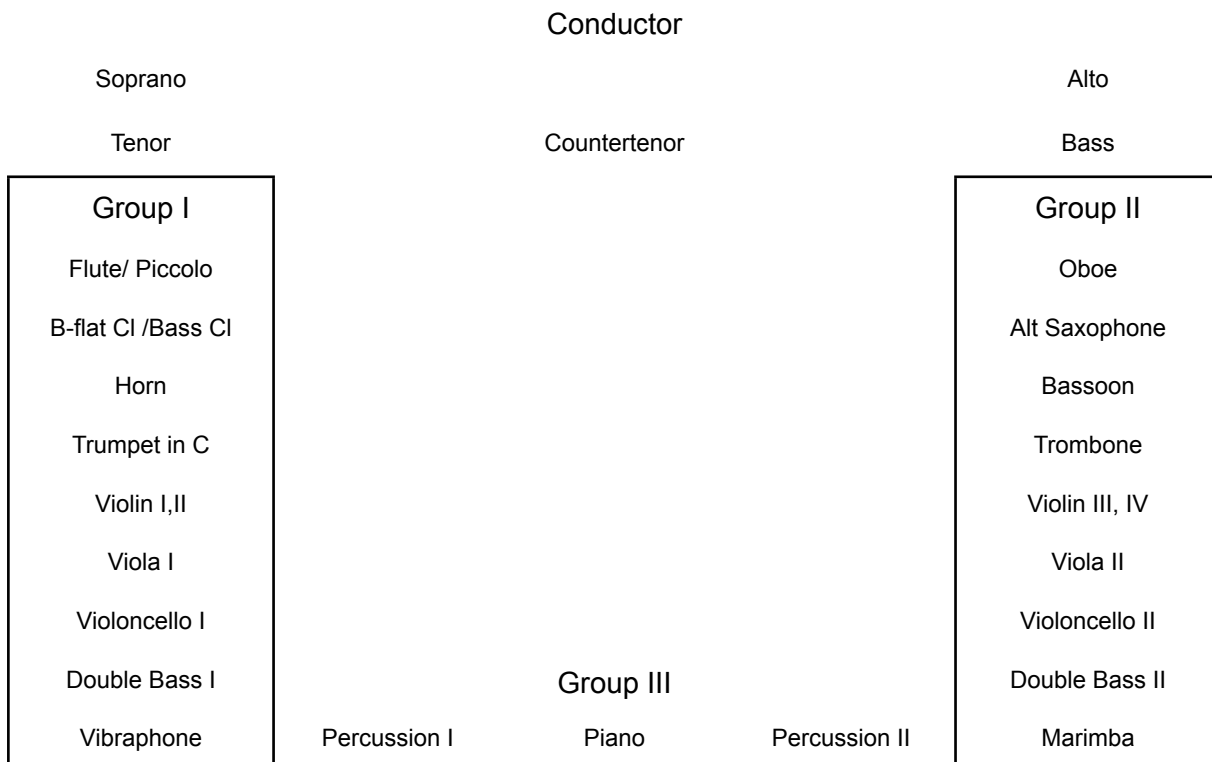| Group I | | Group II |
| --- | --- | --- |
| Flute/ Piccolo | | Oboe |
| B-flat Cl /Bass Cl | | Alt Saxophone |
| Horn | | Bassoon |
| Trumpet in C | | Trombone |
| Violin I,II | | Violin III, IV |
| Viola I | | Viola II |
| Violoncello I | | Violoncello II |
| Double Bass I | Group III | Double Bass II |
| Vibraphone | Percussion I    Piano    Percussion II | Marimba |

Figure 6.1. Ensemble:
Countertenor, choir SATB 4x4 and chamber orchestra (21 players).

## Structure

The piece is structured in three parts, each divided into six, three and six sections respectively according to the character of the text, which determines the instrumentation, the texture and the harmonic material. Figure 6.2 on next page shows the structure.

## Pitch material

The selection of verses were decisive in devising the pitch material. The basic material is an octatonic scale. Some sections are written solely with this scale, while others are dodecaphonic, using rows derived directly from octatonic potentials. This way I'm also presenting material that is always the same, but always different.

| Parts | first part (9'15") | | | | | | middle part (3'15") | | | | | final part (9') | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sections | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| Bars | b.1-22 | b.23-40 | b.40-61 | b.62-76 | b.79-111 | b.112-164 | b.165-182 | b.194-197 | b.197-204 | b.205-214 | b.239-289 | b.290-309 | b.310-331 | b.332-345 | b.346-372 |
|  | introduction | | | | recitative | | ≈ 2 | ≈ 3 | transition | ≈ 5 | ≈ 6 | | | epilog | |
| Duration | 1'15" | 1'15 | 1' | 1'15" | 1'30" | 3' | 1'45" | 1' | 30" | 2'15" | 2'30 | 1'15 | 1'15" | 45' | 1' |
| Verses | v.143-144 146-147 | no text | v.147-149 | v.151-152 | v.153-154; 158-159 | v.165-167; v. 168 Ct | no text | no text | v.176-177 | v.178-180 | v.181-185 | v.214-216 | v. 234-236 | no text | Goethe |
| Voices | Ct | - | Ct | Ct | Ct b.98 +Choir 158-159 | Choir b.159 Ct solo | - | - | Ct | Choir | Choir | TBCt | SA | - | Ct/Choir |
| Orchestra | hr/sx | group I/III | | group II | II/III | I/II | strings | I/II/III | III/winds | III | I/II/III | I/II | I/II | - | I/II/III |
| Pitch material | row ∂ | | octatonic | | row ß | row ∂ row ß (Ct) | | octatonic | | row ∂ | octatonic | | row ∂ | | row ∂ |

b. = bars
v. = verses (from Ovid's Metamorphoses Book XV)
I, II, III = instrumental groups
Ct = countertenor
≈ = correlated with

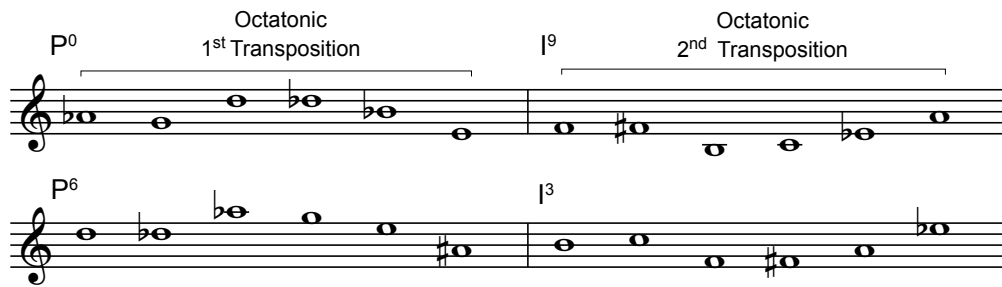Figure 6.2 *aeternae vires* - structure

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## Twelve-note Row $\partial$



Figure 6.3. Twelve-note row $\partial$ - $P^0$ and $P^6$.

Row $\partial$ is related to the main phrase of section 2. The second hexachord is the inversion of the first, transposed up a major sixth ($I^9$). In its original form ($P^0$) the first hexachord is part of what I will call the first transposition of the octatonic scale, and the second hexachord is part of the second transposition. If the entire row is transposed up an augmented fourth ($P^6$, second stave in figure 6.3), the two series ($P^0$ and $P^6$) have exactly the same pitch content in the tetrachords formed by notes 1-4 and 7-10, as well as in the remaining notes (5-6 and 11-12). Thus, the order of the pitches in both transpositions is just slightly varied. I use the rows frequently in pairs, shifted, to obtain alternate perfect and diminished fifths.

The tetrachord 1-4 also appears in the second hexachord of $P^2$ and $P^8$ in a slightly different order. In certain segments combinations of such rows are used rather like a tonality. For example, $P^0 + P^6$ can be followed by $P^2 + P^8$; all four rows appear simultaneously in section 6. Tetrachord 1-4 (and 7-10, which is the inversion of the first, as said) is what I called tetrachord $\partial$ in *piece for recorders.* In this work it appears regularly as a line or as a chord.

As in other pieces, sometimes the row is used in aggregates, as unordered pitch-sets.

Because all of these characteristics, it was not necessary to use the other forms of the row (I, R, RI).
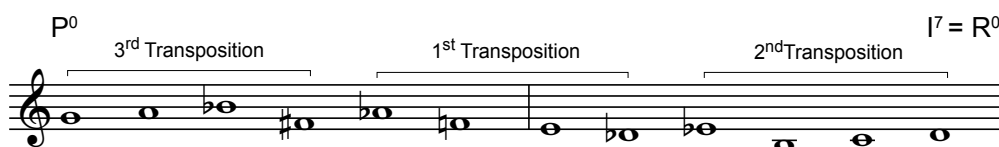
## Twelve-note Row ß



Figure 6.4. Twelve-note row ß - $P^0$.

In this symmetric row, the retrograde is identical with the inversion transposed up a perfect fifth ($I^7$). Each of the tetrachords is a fragment of the octatonic scale in a different transposition and each has a strong tonal implication: the first is in the region of g-minor, the second could be

considered f-minor or D-flat and the last points to c-minor. The  symmetry ensures homogeneity of melodic lines and of the chords constructed from the row. Only the original form is used.

## Part 1

In the first verses that I use in this work Pythagoras reveals his doctrine of the transmigration of the soul: metempsychosis.[22] The forces enter one by one, starting with solo countertenor and a wind duo, followed by the instrumental group II, then group I and finally group III and choir, as will be discussed below.

## Section 1

In the first section Pythagoras expresses a desire to give his message to humankind. This introduction is sung by the solo countertenor accompanied by horn, joined in b. 13 by saxophone. The character of this section is cheerful, Pythagoras announcing:  'Of great things not tracked down by the ingenuity of those before us and which have long been hidden I shall sing' (v. 146-147).

The introduction is dodecaphonic; the fundamental octatonic material emerges only in section 2. For the introduction I use what I termed row $\partial$.

In section 1 I use simultaneously two transpositions of row $\partial$ a minor third apart: first $P^6$ and $P^9$ (countertenor b. 1-9, horn b. 2-11) and then transposed: $P^5$ and $P^8$. In this way I get harmonies of minor thirds if the rows are used in parallel and major thirds if they are shifted by one note. I emphasise this interval to depict the high-spirited character, and it is used with the same intention in sections 3 and 8.

## Section 2 (letter A; b. 23-40)

I wrote this instrumental section first, involving group I and piano. It displays all the harmonic material that is used in the piece, presents certain phrases that will prevail in most of it, and establishes its general mood and character. It is purely octatonic, and it is the source of the two tone-rows described above:  row $\partial$ and row ß.

The primary phrase of this section is comprised of pitches 1-6 in row $\partial$. This phrase develops with woods and winds in a polyphonic texture and in a high register. It first appears with the upbeat to b. 25, starting with the clarinet and picked up by the flute in b. 26, while the horn plays a counterpoint. Later, at the upbeat to b. 29, the inversion of the leading phrase is heard in the flute, while clarinet and horn play the counterpoint. The same phrase in retrograde appears on the upbeat to b. 33, in flute again, with the rest of the winds in counterpoint. Meanwhile the muted strings, *sul tasto*, have been sustaining chords, with occasional breaks of short lines, until they take up the main phrase in inversion (first violin, upbeat to b. 36) and its counterpoint.

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[22] The first part of Pythagoras' speech is not used in this work. I start with the second part, v. 143-175. The subdivisions of the text are taken from *Ovid's Metamorphoses*, tr. Anthony S. Kline (online).

The double bass line presents the second twelve-note row ß, with the tetrachords permuted (pitches 1-4, 9-12, 5-8) to agree harmonically with the transposition used by the other voices.

The piano offers rapid high-pitched figurations, made of tetrachord $\partial$. This anticipates the atmosphere of section 3.

It will be useful to jump ahead for a moment and discuss the counterpoint and harmonies in sections 7, 9 and 11, all of which derive from the materials of section 2. They are all freely octatonic and are harmonically deeply related. From a combination of the main phrase with its variations and counterpoints I created a small fragment of three five-bar phrases to be used in sections 7 and 11 in a four-part polyphonic texture. The individual lines are basically the same, but the sections vary in the vertical arrangement, the rhythms and the transposition of the octatonic scale. A series of harmonies derived from this combination of phrases and these harmonies are used in section 9 homophonically, as chords.

Figure 6.5 shows three fragments using the same material.The first stave shows the leading phrase in its original form as it appears in b. 22-24; the next stave shows the counterpoint in the same bars. Stave three shows the same main phrase in inversion, with the counterpoint it has originally in b. 28-32. The same arrangement in exactly the same transposition appears in section 7, b. 165-170, with varied rhythm and register, as shown in the next system. The last system shows the same lines, in the same transposition but a minor third lower and in a new arrangement.

The measures which follow in the original fragment that I created are not shown in the figure but can be seen in b. 171-175 in section 7 and its equivalent in section 11, b. 244-249.

## Sections 3 (letter B; b. 40-61) and 8 (letter H; b. 183-193)

The prevalent thirds, used harmonically, and the mellow, placid, character from section 1 reappear in section 3 and 8, which are closely related and will be discussed together.

In section 3 the solo countertenor continues with the text: 'it is pleasing to go through the stars on high' (v. 147-148). In section 8 the countertenor sings 'And since I am borne on a great sea and have given full sail to the winds…' (v. 176-177). The text in both sections denotes movement. Thus, the character, the handling of the orchestration, and the resulting textural quality is light and bright. In section 3 group I and III are involved; in section 8 the whole orchestra except for the piano takes part. Both sections are led by the line of the solo countertenor, accompanied by a countermelody as in section 1: horn and trumpet in section 3; bassoon and trombone in section 8.

A light orchestral accompaniment in soft dynamics colours the speech, using octatonic materials with prevailing major thirds, as discussed in section 1. Wind and string figurations in the high register are based in a melodic pattern corresponding to tetrachord $\partial$; these occur in various arrangements and were anticipated by the figurations on the piano in section 2. In section 3 the two violins, *spiccato,* and flute and clarinet, staccato, play these figurations in semiquaver quintuplets. In section 8, analogously, flute, oboe, clarinet, sax, muted trumpet and the four violins

Figure 6.5. Phrases from section 2 arranged as a four-part polyphonic texture for sections 7 and 11.

play the figurations in *legato pianissimo* ascending from the middle to the high register and then descending. These figurations are more similar to those in section 2 because of their length and direction.

Meanwhile, in section 3 viola, violoncello, and double bass move continuously in ascending and descending pizzicato triplets in the low register, indicating continuity and serving as a basis for the rest of the accompaniment. Similarly, in section 8, glissandi in violoncello and double bass imitate the movement of the figurations on the higher instruments, ascending and descending as before, while viola harmonics impart more brightness to the picture.

Lastly, in both sections, the metallic percussion instruments add a gleaming colour to the desired atmosphere. An exception occurs at bar 46 in section 3, when the bass drum colours the word 'terris'. All these elements are intended to represent the movement, the brightness and lightness of the narrator's ride, across the sky and across the sea.

In b. 53 the colour begins to change: the dynamic level increases, the instruments descend in register and the darker colours of the instruments from group II are added progressively, while those of group I disappear in the same way. By b. 56 only group II remains in a transition to a new character. The narrator refers to the 'men lacking reason' whom he is observing. The metallic percussion gives way to snare drum and bass drum, the pizzicati disappear and the strings play long notes, because the movement is ending and the narrator is descending to the terrestrial realm. When he sings 'gaze down from afar' ('despectare procul') the character is wholly transformed, and section 4 begins without break.

## Section 4 (letter C; b. 62-76)

While travelling on a cloud, Pythagoras '… gaze[s] down from afar on men … timidly fearing death' (v. 151) and prepares to exhort them to greater courage.

This section involves only group II and has a darker character than the previous ones: the register is lower and the marimba's colour replaces the vibraphone of sections 2 and 3. The tempo is slower, and the individual lines emerge alternately with crescendos and decrescendos set against the line of the countertenor, with subtle changes of harmonies, gradually moving from one to another of the tetrachords of twelve-note row ß, first appeared on double bass in section 2.

In section 4 the row appears at its original pitch level, $P^0$. It is used with free repetitions of pitch within each tetrachord, these moving gradually from one to the next, resulting in three different chords. The first predominates in b. 62-66; the second in b. 67-72; and the last in b. 73-78. Melodically the first hexachord of the row is heard in b. 68-70 in bassoon and violoncello, and the double bass completes the row in b. 73-78.

In b. 74 the choir sings for the first time, in staggered entries, supporting the text 'sic exhortari' (to exhort them thus).

## Section 5 (letter D; b.79-111)

The exhortation in b. 79 starts rather like a reprimand to humankind: 'O race stupefied by the dread of cold death' (v. 153). The atmosphere is sombre and dramatic. The solo countertenor in *sprechgesang* is accompanied by group II with sparse colouring by group III. The register is lower and the lines no longer offer a promising crescendo but rather decrescendos which end with quarter-tone inflections that depict the humans fearing death.

This section is constructed with row $\partial$ ($P^6$). From bar 79 to bar 94 the row is used in dyads with free repetitions, but preserving the order.[23] These paired pitches produce minor seconds and tritones as vertical intervals, contributing to the sombre atmosphere.

When Pythagoras proclaims in b. 95 that 'souls are free from death' (v. 158), the colour starts to change. This sentence is harmonised first with perfect fifths and tritones and finally with an open octave. The strings play harmonics, raising the overall register and imparting luminosity. These harmonies are made with pitches 7-10 — that is, the so-called tetrachord $\partial$.

In b. 98 the choir enters again. First enter the alto and bass (which stand at the same side of the stage as group II); soprano and tenor follow, with flute and clarinet, from the other side of the stage. They then sing antiphonally 'when they [the souls] have left their earlier abode, they always live in new homes and dwell where they have been received' (v. 158-159). The harmonies become limpid, emphasising open fourths, fifths, octaves and tritones (sonorities which will recur in sections 6, 11, 13 and 15) and leaving behind complex dissonances.

Figure 6.6 on next page shows row $\partial$ in orthodox use with doublings: the choir starts with pitch 11 in an open octave, then countertenor moves to pitch 12 to form a tritone; the same row starts again there and continues until the end of section 5.

## Section 6 (letter E and F; b. 112-164)

Now Pythagoras declares: 'all things change, nothing dies' (v. 165). The sombre character of sections 4 and 5 is left behind; the harmonies are complex, in four-part counterpoint. This section is much longer than the previous ones and can be separated into smaller segments all of which use row $\partial$.

In the first segment (b. 112-130) the voices appear in pairs: alto and bass enter in b. 112 and soprano and tenor enter in b. 114. Each pair of voices is accompanied by its respective group — soprano and tenor by Group I and alto and bass by Group II — as mentioned at the beginning of this chapter. The pace is tranquil, with sustained semivowels.

The section begins with the original transposition of row $\partial$ ($P^0$) used as pitch-sets: from b. 112 pitches 1-4 ; from b. 119 pitches 3-6; from b. 125 pitches 7-10; and in b. 129-130, pitches 7-12. Figure 6.7 on next page shows a fragment of the choir part. The orchestration is light, groups I and II mainly doubling the choir in unison. Initially at $\boldsymbol{p}$, it gradually intensifies and grows in volume leading to an increase of speed.

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[23] In b. 79-82 we see pitches 1-2; b. 83-85, pitches 3-4; b. 86-90, pitches 5-6; b. 91-92, pitches 6-7; b. 93-94, pitches 7-8.

Figure 6.6. Limpid, open harmonies with row ∂ (P$^6$) in orthodox use with doublings, b. 99-109.



Figure 6.7. Row ∂ (P$^0$) as pitch-sets. Choir b. 118-127.

In the second segment, *più mosso* (letter F; b. 131-143), the orchestra doubles the choir in unisons and octaves; flute changes to piccolo to widen the register and increase intensity. The choir sings 'the spirit wanders and comes from there to here, from here to there' (v. 165-166). Starting $f$ the text is sung antiphonally by the two pairs (A+B and T+S); and in b. 135 all four voices sing the same text, shifted, in four-part counterpoint, with different dynamics that stress the word 'errat' :

> S: errat et illinc huc venit hinc illuc
> A: hinc illuc errat et illinc huc venit
> T: huc venit hinc illuc errat et illinc
> B: et illinc huc venit hinc illuc errat

With this technique I represent the souls coming and going from one body to another. This procedure was inspired by the way Nono uses the choir, notably in *Il canto sospeso*. Figure 6.8 below shows the whole sentence, underlined, divided into the four voices (b. 135-138)

In this second segment there is orthodox use of row $\partial$, as shown in the same figure:

$P^8$ in soprano (pitches 1-8) and bass (pitches 1-4).

$P^2$ in alto and tenor (pitches 1-4) and then in bass, b. 135 (pitches 5-9).

$P^6$ and $P^0$ in alto and tenor respectively, b. 135 starting with pitch 11.



Figure 6.8. Row $\partial$ in orthodox use and the text shifted, b. 131-137, Letter F.

This section ends $f$, and a short break of a crochet (b. 143) gives impulse to the next segment, which begins $ff$.

In the third segment (b.144-149) the counterpoint and the orchestration are less dense, the distance between the voices widens and the tempo slows down. The choir sings 'and occupies whatever body it likes' (v.166-167) with the text distributed across the four voices:

> S: et quoslibet occupat
> A: artus spiritus
> T: spiritus artus
> B: occupat

The strings disappear, and the section ends with only winds accompanying the choir, to introduce a new character.

The final segment begins in b. 150, where the texture changes: the choir sings homophonically, in the usual antiphonal pairs: 'and from wild beasts transfers into human bodies, and into wild beasts when in ours' (v. 167-168). As in the end of section 5 (see figure 6.6 above) they sing in open fourths, fifths, octaves and tritones, reaffirming the optimistic and positive message, accompanied brightly by winds only, doubling in a relatively high register.

The section ends with the solo countertenor, who had previously been quiet (b. 158). Row ß is used here in its fifth transposition. The strings play the three tetrachords described before (see figure 6.4 above); these appear in open voicings, widening the register and ascending. This culminates in a long chord (b. 164), coloured by winds, that conveys a placid atmosphere to suit the words 'and [the soul] does not perish at any time' (v. 168). This marks the end of the first large unit of the piece (sections 1-6). The mood, the orchestration and the final chords create a link to the next part.

## Middle Part

Sections 7, 8 and 9 form the central part, which functions as an intermezzo. Two instrumental sections enclose an appearance by countertenor solo and orchestra, where the third part of Pythagoras' teachings, 'the eternal flux,' is introduced (v. 176-177). This part is octatonic: the melodic lines of section 7 and the chords of section 9 are based on the pitch materials of section 2, and the pitch materials of section 8 are related to section 3, as explained above.

### Section 7 (letter G; b.165-182)
Section 7 is for solo strings, and its character is reminiscent of section 2. There is a change of texture, with lighter counterpoint and instrumentation than in the previous section, preparing for the atmosphere of section 8. Section 7 is interrupted momentarily by a general pause in b. 176, which gives some relief to the continuos flow and to the dark colours and complexities of sections 4-6. Apart from this general pause, the flow is unbroken from the beginning to the end of the piece. (There are two more instances of a rest in all the voices, but they are shorter and function more as an impulse for the following section; see section 6, b. 143 and section 11, b. 260.)

### Section 8 (letter H and I; b. 183-197)
The text and character of this section was already discussed together with section 3. At the end of it (letter I; b.194) the countertenor comes emphatically to the fore, as he did in the transition from section 6 to section 7 (b. 158-164). This time he is accompanied only with a pedal-tone in marimba and double-bass. He uses row $ß^{10}$ to sing 'there is nothing in the whole word which persists' (v. 177). This connects with the text which will follow in the final part, in which Pythagoras convey his thoughts about the perpetual movement and transformation of things.

## Section 9 (b. 197-204)

Gradually piano, percussion, and brass are incorporated and section 9 begins without a break. In a slow tempo, and over a row of chords in the piano, supported by *arco* double bass, the other instruments play short lines. A pronounced crescendo peaks with snap pizzicati in the double bass I, the whole imitating the changing volume of the sound of the waves.

This brief instrumental fragment prepares the atmosphere for the new entrance of the choir, which starts the third large unit of the work (sections 10-15).

## Final part

The last part of the work deals firstly with the eternal flux. Both sections 10 and 11 involve the choir; the former accompanied by group III and the latter by all three groups. The instrumentation is lighter again in sections 12 and 13, when the choir is divided respectively into male and female voices. The text moves to the fourth part of Pythagoras' teachings: 'the four ages of man'. Regarding character and instrumentation, in particular section 12 reminds us of the first section, thereby indicating the approaching end. The music adopt darker tones when the subject is the consumption of everyone and everything by Time in section 13. These are the last verses taken from Ovid's text. After a short instrumental epilogue where the whole orchestra joins gradually, the piece concludes with all the forces involved and the pleasant message of Goethe's verses.

## Section 10 (b. 205-214)

In b. 204 the volume is reduced to $pp$ to allow the choir to appear in measure 205 with delicate phrases singing 'all things flow'. These continue the gestures from the previous section by a *crescendo al f* followed in this section by *subito p*. The four voices enter alternately, accompanied by unpitched percussion instruments. The brass instruments from the previous section disappear momentarily, and the piano plays a soft melody derived from the pitches sung by the choir. The pitch material follows an orthodox use of row $\partial$. The resulting texture is related to that in sections 4 and 5, because of the lines emerging and retreating. However, the colour is very different, due to the distinctive set of instruments.

At b. 213 there is a *crescendo al f* while singing 'every image formed is transient' (v. 178). Thereafter (letter J) the texture changes slightly. The gesture formed by fluctuating dynamics continues, but the volume is higher and the tempo faster. The voices sing now in pairs, female and male, in two-part counterpoint. The piano makes a radical shift to a lower register, playing chords derived from the choral material. From b. 220 the choir is again divided into four-part counterpoint, singing 'time glides'.

The voices stop abruptly; and after a quasi-pause in b. 223 (only maracas and cymbal, pianissimo, continue the flow) the texture from the beginning of section 10 (b. 205-214) returns, with softer dynamics and depicting the movement of water: 'not unlike a river'. (v.180). The piano gradually increases the speed of its lines and plays rapid figurations related to those that appeared

in section 2. The winds are gradually reincorporated from b. 231, preparing the beginning of the next section.

## Section 11 (letter K; b. 239-289)

Section 11 is similar to section 6 in its length and its use of orchestra and choir and can be divided into smaller segments as well. It differs in that percussion is included in section 11 and the general instrumentation is more complex, producing a thicker texture. The harmonic material is also different; as mentioned before, this section is based on the harmonies derived from section 2, as shown in figure 6.5.

This section is also deeply related to the previous 9 and 10. Indeed, it continues the same gestures of crescendo and decrescendo with increased forces. The text follows the same line of thought, 'the eternal flux', comparing the flows of water and time: 'as wave is driven on by wave … thus does time fly just so' (v. 181-182). However, more movement is implied in this section, because it describes the waves pushing one another.

Through bars 239-249 the instruments double as in section 6, always coupled with the choral voices of their respective groups, but adding more elaborate colours.

The texture becomes lighter in b. 250, marked *poco più mosso.* The text — 'and one before, pushed on by one coming behind, is pushing one before itself on' (v.182) — is illustrated with choral entrances in canon. The winds double at the unison, the strings play mainly pizzicato, and the percussion reinforces the crescendos. This lighter texture is contrasted with the word 'tempora', delivered $f$ and homophonically in b. 259.

A quaver rest gives impulse to the next segment, marked *ancora più mosso* (letter L). Soprano and tenor on one side, alto and bass on the other, sing homorhythmically the same text: 'thus does time fly just so, and just so does it follow'. The orchestra supports 'fugiunt' (fly) and 'sequntur' (follow) playing legato and with the same water-gesture as before. In contrast, "pariter pariterque" (equally, just so) is reinforced with accents in winds and pizzicati in strings. This technique is not an attempt to represent the word "equally"; it just takes advantage of the sound of the words. The density is thick, contrasting with the next segment.

At letter M, bars 274-289, there is a drastic change of colour and texture. The orchestration is much lighter and the dynamics are softer. The material changes too, and now row $\partial$ is used homophonically in mainly limpid, open harmonies (as discussed in section 5). The tempo slows, forming a conclusion to this section and preparing the next. The character is solemn as the choir sings 'for what was before has been left, and becomes what it had not been, and all moments are renewed' (v. 184-185).

## Section 12 (letter N; b. 290-309)

Section 12 is essentially four-part counterpoint involving tenor, bass, horn and trombone. In b. 296, bassoon, bass clarinet and countertenor are added to emphasise the words 'corpora vertuntur' (our bodies … are changing). Gradually the strings, and in b. 302 the female voices, join

to illustrate the words 'fuimusve sumusve' (what we were or are). From b. 301 the winds, in turn, play the now-familiar gesture of pianissimo with a pronounced crescendo. The register ascends by means of harmonics in strings and the incorporation, one by one, of the higher winds: trumpet and sax, culminating with flute and oboe in b. 309.

## Section 13 (b. 310-331)

Only the orchestra is left at the end of section 12 (b. 307-309). The high colours established there continue at the start of section 13; all the strings play harmonics, framing the entrance of the female voices and maintaining the previous tempo. Overlaid by a timbral trill in flute and oboe, soprano and alto sing the last and most dramatic selection from *Metamorphoses*, already quoted in the introduction to this chapter:

> Time, the devourer of things, and you, jealous old age,
> you destroy all things and, after blighting them with the teeth of age,
> little by little you consume all things in slow death. (v. 234-236)

The texture is generally homorhythmic, with very sparse orchestration, and the pitches come from row ∂ again in open harmonies (as described in the discussion of section 5). All the winds and the male voices are added to reinforce the words "invidiosa vetustas". The strings stop playing harmonics, and in b. 314-315 they join the polyphony in the middle register. Then the female voices are left alone, together with strings and the higher winds. The register starts to descend in b. 335 and only the violas and violoncellos accompany the female voices. Towards the end they sing, in *rallentando* and altos in their lowest register, 'paulatim lenta consumitis omnia morte!' (v. 236).

## Section 14 (letter O; b. 332-345)

Violoncello II remains alone, with a long note that very softly links to an epilogue for Pythagoras' teachings. The full forces enter one by one with row ∂ presented in sequence (pitches 1-8, then 11), forming a huge chord that grows to *ff* and then diminishes to *ppp*, as if everything had finished. But another cycle is about to begin.

## Section 15 (letter P; b. 346-372)

In this section, the verses by Goethe are presented by the full forces. However, in contrast to sections 6 and 11, section 15 has a gentle character and sparse orchestration. The whole moves in placid homophony, the row ∂ again offering limpid, open harmonies (as in section 5), while the piano plays figurations similar to those in section 2.

The work ends with solo countertenor singing, 'the whole reflected in each separate part', with horn as accompaniment, bringing us full circle.

# Conclusion

I based the first piece of this portfolio on a sequence of chords, which the piano trio presented with various textures and characters. This procedure was a significant precursor for the rest of the portfolio: even though I started with the planning of the harmonic material, the purpose was to work with it in textural rather than motivic terms, as I used to do in the past.

The second piece represents the new approach. To write the chamber ensemble *Matlaktli* I started with a sequence of moods and textural qualities, and then I chose an appropriate ensemble and the pitch material. *Matlaktli* is nonetheless related to the trio in that the same material is used to create different textures.

This second process consisted, then, of conceiving the work as a whole, with a plan of events or musical fragments with contrasting and related textural qualities taken as a starting point, and only *a posteriori* construction of the appropriate material. This proved very satisfactory, and it was what prevailed for the rest of my research. This procedure allowed me to prioritise the timbral and textural elements of my works, while still organising the harmonic and rhythmic material to ensure unity, as I had done in the past.

The work for chamber orchestra and choir require a slightly different procedure, because the atmospheres were not conceived abstractly: they were suggested by Ovid's text. Due to its dimensions, the harmonic material had to be more complex.

The two duos are related in that they both use polymetre as a distinctive element. I constructed rhythmic patterns to support the desired aural image of the percussion duo and the attention to rhythm led me to focus more deeply on the tempo relations. For the piano duo I had to specify pitch material, but here this was less determinant in the conception of the piece than for the others. The pitch material is subordinated to rhythm, metre and tempo relations, and is equal in importance to silence.

In the near future I will aim to emphasise the use of silences as a fundamental parameter of my compositions.

# Resource List

## Books

Goethe, Wolfgang. *The Metamorphosis of Plants*, English translation taken from the British "Journal of Botany" (1863). USA: McNaughton and Gunn, [n.d].

Jones, Arthur Morris. *African Rhythm*. Reprinted from Africa, Volume XXIV, Number 1, January 1954. London: [n.p.], 1955.

Messiaen, Olivier. *Technique de mon langage musical*. Paris: A. Leduc, 1944.

Ovid. *Metamorphoses XIII-XV*, trans. D.E. Hill. Warminster: Aris and Phillips LTD, 2000.

*Oxford Dictionary of English,* 3rd edition. Oxford: Oxford University Press, Inc. 2010 (electronic resource).

Webern, Anton. *The path to the new music*, ed. Willi Reich, trans. Leo Black. London: Universal Edition, 1975.

## Online Resources

Beethoven, Ludwig van. Symphony No. 3 in E-flat major, Op. 55, Mvmt. 2 'Marcia funebre'. Stanford: Center for Computer Assisted Research in the Humanities (CCARH), 2008. <http://www.musedata.org/beethoven/sym-3> (accessed 21 June 2014).

Goethe, Wolfgang. *Die Metamorphose der Pflanzen.* <http://gutenberg.spiegel.de/buch/3670/203> (accessed 24 November 2013).

Goethe, Wolfgang. *The Metamorphosis of Plants* (poem). [No name of translator] <http://rekveld.home.xs4all.nl/growth/Goethe_MetamorphosisPlants2009.pdf> (accessed 25 November 2013).

Maderna, Bruno. *Viola* (1971). Ula Ulijona, viola. <https://www.youtube.com/watch?v=73u_62nKLyE> (accessed 3 February 2013).

Ovid. *Metamorphoses Book XV*, trans. Anthony S. Kline. <http://ovid.lib.virginia.edu/trans/Metamorph15.htm#488378547> (accessed 7 October 2012).

Ovid. Metamorphoseon Liber Qvintvs Decimvs. The Latin Library. <http://www.thelatinlibrary.com/ovid/ovid.met15.shtml.> (accessed on 27 August 2012).

Nordgren, Quentin R.  'A measure of Textural Patterns and Strengths' in *Journal of Music Theory*, Vol. 4, No. 1 (Apr., 1960), pp. 19-31. Published by Duke University Press on behalf of the Yale University Department of Music. <http://www.jstor.org/stable/843045> (accessed 9 November 2013).

Oxford English Dictionary <www.oed.com>

Thesis and Dissertations

Lunn, Robert Allan. *Extended Techniques for the Classical Guitar: A guide for Composers*. DMA Doctor of Musical Arts Document. The Ohio State University, 2010 <http://www.robertlunncomposer.com/Extended_Techniques_for_the_Guitar.pdf> (accessed 18 March 2012).

Scores

Berio, Luciano. *Coro per voci e strumenti.* Milano: Universal Edition, 1980.

_____. *O King,* for voice and five players. London: Universal Edition, 2002.

_____. *Sequenza XII per fagotto solo*. Wien: Universal Edition, 2002.

_____. *Sequenza XI per chitarra sola.* Wien: Universal Edition, 2007.

Beethoven, Ludwig van. Symphonie Nr. 3 Eroica, Op. 55. Leipzig: C. F. Peters, [n. d.].

Carter, Elliot. *Retracing,* for solo bassoon. New York: Boosey and Hawkes, 2007.

Ishii, Maki. *Tenor-recorder piece: East, Green, Spring,* Op. 94. Celle: Moek Verlag, 1992.

Ligeti, György. *Kammerkonzert für 13 instrumentalisten*. London: Schott, 1974.

_____. *Monument - Selbstportrait - Bewegung: drei Stücke für zwei Klaviere* (1976). Mainz: Schott, 2001.

Liszt, Franz. 'Marche funèbre' from *Années de pèlerinage, Troisieme annee*. München: Henle, 1980.

Messiaen, Olivier. *Quatuor pour la fin du temps*. Paris: Durand, 2006.

Nono, Luigi. *Il canto sospeso.* Mainz: Ars Viva Verlag, 1957.

Schnittke, Alfred. *Trio für Violine, Bratsche und Violoncello.* Wien: Universal Edition, 1995.

Simaku, Thomas. *Soliloquy V: flauto acerbo.* York : University Of York Music Press,  2009.

Sinohara, Makoto. *Fragmente*. London: Schott, 1974.

Strauss, Richard. *Metamorphosen. Studie für 23 solostreicher.* London: Boosey and Hawkes, [n. d].

Stravinsky, Igor. *Élégie pour alto seul ou violon seul.* Mainz: Schott, 1980.

Yun, Isang. *Monolog für fagott*. Berlin: Bote und Bock, 1985.

## Sound recordings

Ives, Charles. *Holidays symphony.* Chicago Symphony Orchestra, Michael Tilson Thomas, cond. Recorded 1986, Chicago. CD CBS Masterworks, 1988.