

Contrasting noises and expanding sounds: the composition process of *Caminantes I to IV*¹

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Abstract: This article explores some of the compositional techniques of a cycle of four pieces called *Caminantes*. Firstly, it comments on the importance of timbre and texture, the starting point for my own creation of material and its articulation. In this part, the contributions of different composers of the 20th Century are discussed, in order to contextualise the ideas and techniques used in the composition of the *Caminantes* cycle. Then there is an analysis of the compositions from the point of view of form, extended techniques, harmony, microtonality and indeterminacy. The analysis is aided by digital audio analysis, i.e. spectrograms as well as by sections of the score.

Key-words: Music Composition, Analysis, Timbre, Texture, Extended-techniques

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This article discusses four compositions that form a series called *Caminantes*. It is divided in two parts: a short historical introduction on timbre and texture relevant to my compositional approach, and an analytical commentary of the compositional process used in the making of the pieces.

In the first part I explore the many influences, over the course of the 20th Century, in our understanding and appreciation of timbre and texture, pointing primarily to the concepts I use in my series *Caminantes*: noise and extended techniques. I attempt, through a historical criticism to give an overview, however incomplete and personal it can be, so that the *Caminantes* series can be put into context.

In the second part, I explain the techniques applied and materials used in each piece, analysing the use of noise, extended techniques, microtonality, improvisation and indeterminacy that were vital to the compositional process.

By means of diverse methods and the use of many techniques I have searched for a confluence of distinct musical materials in this cycle. This first came to me in 2010 while a composer/student at Foundation Royaumont and I was challenged to compose a duo for Violin and Horn (*Caminantes I*). From the point of view of timbre, it was clear that variety and newness, could only be obtained by using extended techniques. These techniques, from my perspective, grant the use of sounds with accented noise component so that the duality noise-pitch can be explored. In addition, when the two instruments are interacting the remarkable characteristic is the complementarity of two timbres in the sense that a noise of one can be superposed to the pitch of the other.

Related to this is the concept of the convergence of sounds for the *Caminantes* series. This implies the use extended techniques in order to transform the sounds from the two instruments making them aurally similar hence, ideally, the listener can't distinguish the source. My purpose with timbre was to fully explore noisy pitched sounds getting new sound material for composition. So, the idea of integrating these different techniques and materials into a piece is, I believe, one of the main contributions of this cycle for this paper.

1. TIMBRE AND TEXTURE

1.1. TIMBRE

Throughout the 20th century there has been an increasing concern with practices that focus on timbre organization and textural composition. Many composers have explored new sonorities and materials and, in this way, informed and expanded our understanding of these matters.

Arnold Schoenberg famously coined the term *Klangfarbenmelodie* (sound-colour-melody) in 1911 in

his *Harmonielehre* (SCHOENBERG, 1911). His idea still inspires composers to create horizontal combinations of timbres that could be heard/interpreted as a melody. Schoenberg's idea of *Klangfarbenmelodie* can be exemplified by the third movement of his *Fünf Orchesterstücke*, Op. 16 entitled *Farben*, as well as by Webern's orchestration of J. S. Bach's *Ricercare* of the Musical Offering.

The music of Edgard Varèse also occupies a prominent place in the appreciation of timbre due to his unusual combinations of sound-colours ahead of his time and in line with his search for the 'liberation of sound' (VARÉSE; WEN-CHUNG, 1966). His ideas on primitiveness and exoticism (MATIIS, 2014), in works like *Amériques*, *Ecuatorial* and *Nocturnal*, were also influential in creating new sonorities, though some of these ideas were already evident in Stravinsky, in works such as *Le Sacre du Printemps* and *Les Noces* - for example structuring a work through blocks, creating a collage of musical materials, repetitions of small melodic materials and ostinato (CROSS, 2005).

Fifty years after Schoenberg's *Klangfarbenmelodie*, in 1961, Giacinto Scelsi composed his *Quattro Pezzi su una nota sola* for orchestra, in which all instruments play a single pitch class per movement, distributed through various octaves and with microtonal variations, and focused on timbre in a way probably never encountered before in Western music. Shortly, he relegated to a minimal approach other parameters such as pitch, focusing only in one pitch class per movement. Scelsi's music was influential in the late 20th century's aesthetic attitude to sound, radically altering many pre-conceptions, as summarises Tristan Murail in his article "Scelsi De-composer": "For Scelsi, the principal object of composition then becomes what he calls the 'depth' of the sound. It is primarily a question of working with timbre, taken in the broadest sense: the global timbre of the orchestra as a whole" (MURAIL, 2005: 175-176).

The "depth of sound", as Murail mentions, turned to be an important concept in musical thinking throughout the 20th century.

Both Scelsi's and Varèse's work were influential for the composers of so called "Spectral Music" or "Spectralism", one of the most important musical movements of the second half of the 20th century. Since Spectralism attempts to grasp complex harmonic structures and use them to obtain formal and procedural coherence (FINEBERG, 2000), it has, naturally, influenced the approach several composers have to sound and timbre. Tristan Murail, Gerard Grisey and Hughes Dufourt, the founders of Spectralism, composed substantially with the methods and techniques that originated this movement. The movement is already in its second generation with composers such as Joshua Fineberg, Edmond Campion, among others (NONKEN, 2014). All these composers were influential in the sense that they shared a keen interest in expanding our listening experience to include the perception and aesthetics of timbre as a central compositional focus.

In my *Caminantes* series, I have been dealing with harmonic sounds such as those of pitched orchestral instruments, and suitable noises superimposed. Thus, the sound of an instrument can be

“stained” by noise, and reciprocally, a noise can be filtered in order to get closer to certain “harmonic” timbres. So, with respect to timbre, my main interest with this cycle is to experiment with sonorities of musical instruments in non-conventional way, through the use of extended techniques, discovering new connections and contrasts between them taking into account the harmonic and noise counterparts.

1.2. TEXTURE

Another significant aspect of my music is “texture”. According to the Grove Music Online, texture is:

A term used when referring to the sound aspects of a musical structure. This may apply either to the vertical aspects of a work or passage, for example the way in which individual parts or voices are put together, or to attributes such as tone colour or rhythm, or to characteristics of performance such as articulation and dynamic level (TEXTURE, 2017).

This definition is, initially, rather general. It mentions, “sound aspects of a musical structure”, which is an open and wide-ranging concept. It then exemplifies the possibilities of this concept of texture from “individual parts or voices” to “colour or rhythm”. The Grove Music discussion includes traditional textures, such as homophony and heterophony, whilst also describes recent developments such as micro-polyphony, spectral or noise based sonorities, and even polyrhythmic structures. These, in fact, are examples of texture, but do not make its definition any clearer.

Nevertheless, “texture” as such a diverse and heterogeneous concept, is a 20th century consideration. Jonathan Dunsby argues in his paper “Considerations of texture” that “texture probably arose as a feature of the critical vocabulary spawned by post-tonal music starting in the early years of this century” (DUNSBY, 1989: 47). In certain sense is better to accept the term as a “fuzzy concept” than to attempt a formal definition as suggested by Dunsby.

In my own work, I see texture in a creative, or even, operational sense, that is, as a broad compositional area. I consider texture as interconnected and interdependent evolving layers of sonorities, in which I deal with different techniques and sound materials. These textures can be controlled or organised in different ways, depending on the parameters involved.

Regarding the use of texture and the organization of pitch material in the series *Caminantes*, another significant influence in my work has been that of the music of Witold Lutosławski. From the point of view of pitch material, his use of pitch-fields and interval-class chords is something that interests me due to the simple rules of formation of his vertical structures and their related timbre characteristics. In an interview from 1984, Lutosławski gives the following remark about his pitch organisation:

I'm especially interested in the somewhat elementary chords of which the adjacent notes form a limited number of types of intervals. (...) Twelve-note chords, which are made up of one, two, or three types of intervals have for me a distinct, easily recognisable character. In contrast to these, twelve-note chords which include all types of intervals are devoid of colour and present no distinctive features. (KACZYNSKI, 1984: 38-40)

Therefore, according to Lutosławski, by focusing on certain intervals a sound object (or chord) is created, that is likely to be construed as having a “recognisable character”. Hence, I have used in my compositions intervallic structuring of harmony and melody, although not as strictly as Lutosławski. The main difference is about the length of chord sequences based on the same pattern of intervals. My chord sequences are shorter in time, leading to a greater flexibility of the sound material.

This organisation of pitch material has appeared in sections of the *Caminantes* series as cluster harmony, chords based on fifths and fourths, and also melodies that are structured around certain intervals which are selected based in their intrinsic sonorous qualities. For instance, in *Caminantes I*, for violin and horn, there is an abundant use of fifths. This has been both for the sonorous quality of both the perfect and diminished fifth as well as the instrumental techniques. The violin being tuned in fifths has a particular timbre when using stops with fifths. As this interval is also the second to appear in the harmonic series it also facilitates the horn in the technical challenges that are made in the piece.

Besides this, in some of his works, Lutosławski achieves a coherent structure by controlling texture through a so-called “texture-space” (BERRY, 1987). In his article about Lutosławski’s music, Klein defines texture-space as “a coupling of texture and register into a single musical structure” (KLEIN, 1999: 37). Clearly, instead of a simple linear confinement, it’s a bi-dimensional space which, of course, is plenty of room for new timbre explorations. I have adopted this definition, and its implicated compositional freedom, as a way to analyse my own compositions.

Moreover, I consider my music to be embedded in *modern classicism*, as defined by musicologist Arnold Whittall: “Post-tonal music that aspires to emulate a degree of unity and connectedness characteristic of the classical aesthetic, but without losing all association with the more fragmented structures proper to modernism.” (WHITTALL, 2008: 275)

As pointed in the title of this work, for the construction of textures I had in mind two opposite processes of layer superposition. The first one is the already mentioned “approximation”, or convergence of two sounds. In this regard, an interesting effect is showed below for *Caminantes I*, in which adding noise to two different pitched sounds we can approximate them one to another. Acoustically, this is not new, since, in the limit, white noise or similar can blur all pitch signal. Nevertheless, the artistic use of this fact is important since there are many extended techniques and it is necessary to search which best fit the composer intentions.

The other process is the contrasting of two sounds such as noise against pitch, or pitch 1 against pitch 2, or yet noise 1 against noise 2, all of them with very dissimilar sonorities. These are expanded

sounds, belonging to a texture-space far larger than that one devised by Lutosławski. We are tempted to compare them with the harmonic expansion from triads to chords to clusters, but now, no harmony is involved, only texture and its time development, within a personal aesthetics as a selective filter. In my compositions, the texture-space is the set of all possible sounds generated by extended techniques I've chosen. Clearly, they are different for each piece.

This does not mean, however, that my works are all schematic in their construction. When I compose, I do not pre-establish all aspects of the piece I am working on. Instead, I tend to work with the material I have, in an improvisatory way, aiming at creating connections and contrasts between these materials and develop them accordingly. In other words, I used improvisation and experimentation, largely based on intuition, for generating and developing the material.

After this preliminary work, I may then create a plan for the composition, which include a texture-space and/or other structural ideas. The sections below detail these practices through outlining the techniques used, the aesthetics and inspiration behind each of the *Caminantes's* pieces, and their structural outline.

Finally, I must stress that my aesthetic is not a negation of the past, but a personal continuation of what was done previously. While it is crucial to explore and experiment with sound, I believe it is also beneficial to retain a practice that links your work with tradition; this is the reason for my own leanings towards modern classicism.

2. THE CAMINANTES CYCLE

Caminantes Cycle is a series of duets I began composing in 2010. They were inspired by a quote, from the book *Campos de Castilla* by Antonio Machado): “*Caminantes no hay camino, se hace camino al andar*” (“Walker there is no path, paths are made by walking”) (MACHADO, 1986). This famous quote inspired many artists, among them Luigi Nono, who also named three of his last pieces based on a variation from this quote. However, my series has no direct link or connection to Nono's compositions.

The pieces in the *Caminantes* cycle involve a combination of one wind and one string instrument. This restriction requires from the composer, which has interest in timbre as well in textural structures, to search for new sound combinations including, of course, extended techniques. This cycle was started at the *Fondation Royaumont* where *Caminantes I* (MAIA, 2010) was composed for violin and horn. *Caminantes II* (MAIA, 2011), for oboe and viola, was commissioned for and performed in the Takefu International Music Festival in 2011. *Caminantes III* (MAIA, 2012) was written for trombone and contrabass for members of the Camerata Aberta and premiered at the SONiC Festival, New York in 2013. Finally, *Caminantes IV* (MAIA, 2015), for clarinet and guitar, was written for the Qitayes duo, and

premiered in Gran Canaria, Spain in 2015.

The inspiration for the series came during the work in the first piece of the series, when I encountered Machado’s poem. The idea of this series became clear; it was to seek a path, one between noise and tone, exploring the timbral resources of the two instruments involved in each piece. An interesting point is that in *Caminantes* cycle, several techniques were implemented in order to “approximate” the timbre of the instruments. This is achieved through the control of several parameters such as register, pitch/noise contrast, durations relative one to another, articulations and so on.

I proceed my analysis below discussing the four pieces of the cycle, the parameters and techniques that were important for their composition. They are: form, extended techniques, harmony and microtonality, and indeterminacy.

2.1. FORM

All works of the *Caminantes* cycle have started with the same basic structure, which is pre-composed and is shown in the Figure 1 below:

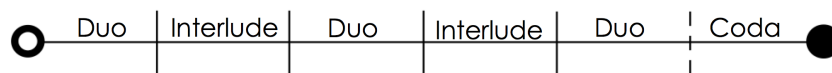


Figure 1: basic structure of the *Caminantes* cycle

The form above can be varied, having just one Interlude as is the case of *Caminantes II* and *III*. The example above, in Figure 1, is that of *Caminantes I* and *IV*. It is clear that, in both cases, besides the coda, the overall structure is symmetric. Nevertheless, the contents are independent. There were some reasons for having a pre-conceived basic structure in the cycle. First of all, as I was interested in the exploration of the duality *noise and tone* and creating a path between them, it was more important for me to minimise the disruptions from other parameters. Therefore, having a simple structural skeleton that would work for all pieces was preferred, giving more concentration, as a composer and listener, to the sonorities and interactions created.

The form of all the *Caminantes* pieces are showed in the figure below. They are arranged by sections, with the numbers indicating the bars where each section starts and ends. Different sections are ordered by the materials and given capital letters, i.e. *Duo A* indicates the first duo of the piece. Sections with the same material, but coming later in the piece still use the same letter but with an apostrophe, for instance *Duo A'* means a return to the material A with variations.

Caminantes I	Caminantes II	Caminantes III	Caminantes IV
Duo A: 1-36	Duo A: 1-21	Duo A: 1-14	Duo A: 1-24
Hn. interlude: 37-38	Duo B: 22 to 50	Duo B: 15 to 22	Cl. interlude: 26-28
Duo B: bars 39-62	Duo C: 51-62	Duo C: 23 to 40	Duo B: 29-90
Duo C: 63-80	Vla. interlude: 63-68	Tbn. interlude: 41-52	Duo A': 91-98
Vln interlude: 81-85	Duo D: 69-85	Duo C': 53-58	Gtr. interlude: 99-109
Duo C': 86-104	Duo C': 86 to 93	Duo A': 59 to 68	Duo A'': 110-121
-----	Duo E: 94 to 125	Coda: 69 to 77	Coda: 122-124
-----	Coda: 126 to 132	-----	-----

Figure 2: Structure of all *Caminantes* pieces, relating to the general

Observe that different duos, using other musical material, can appear in sequence. However, they are considered as part of the same larger “Duo” within the common overall structure of the cycle.

2.2. EXTENDED TECHNIQUES

My ideas of timbre combination and extended techniques are not far from that which was developed by Helmut Lachenmann in what he denominates *Musique Concrète Instrumentales*. However, in Lachenmann’s thinking “sounds [are] to be broken up so that their innermost nucleus and vibration can be set free in space and time” (RYAN, 1999: 22), as he said in an interview.

On this same interview, he comments further on the idea of *musique concrète instrumentale*, exposing the ideas of refreshing old sounds by means of new sounds:

The idea of ‘instrumental musique concrète’ (...) signifies an extensive defamiliarization of instrumental technique: the musical sound may be bowed, pressed, beaten, torn, maybe choked, rubbed, perforated and so on. At the same time the new sound must satisfy the requirements of the old familiar concert-hall sound which, in this context, loses any familiarity and becomes (once again) freshly illuminated, even ‘unkown’ (RYAN, 1999: 20-21).

There are other possibilities for the aesthetical use of extended techniques such as the articulation of gestures, creating a multiple instrument similar to a multiple percussion (PADOVANI; FERRAZ, 2011) or its use as a means of varying the sound production in musical instruments, as used by Penderecki in compositions of the 1960’s (MIRKA 2001)

For the composition of each piece in the series I organised a set of extended techniques. All the different techniques used in all the pieces can be seen in the figure below, where they are listed according to those used in each piece.

Techniques	Compositions	Cominantes I	Cominantes II	Cominantes III	Cominantes IV
		Cominantes I	Cominantes II	Cominantes III	Cominantes IV
Microtonality		X	X	X	X
Tapping		X	X	X	X
Harmonic Trill		X	X	X	
Harmonic Gliss.		X		X	
Circular Bowing		X	X	X	
Écrasé		X	X	X	
Play at the bridge			X	X	
Col legno battuto		X	X	X	
Soffio			X		X
Multiphonics			X		X
Slap - Tongue			X		X
Key-noise			X		X
Sing while playing		X		X	X

Figure 3: Set of techniques used in the *Caminantes* pieces.

This set would then feed my imagination into combining different sonorities to create contrasts and oppositions, or blending the instruments. Since the series always deals with one string and one wind instrument, the first oppositions come already from the tone production of the instruments. For example, if one takes a clarinet and a guitar as in *Caminantes IV*, the clarinet in its usual mode of playing can only produce one sound but that sound can be sustained almost indefinitely, if the technique of circular breathing is used. The guitar, on the other hand, can produce multiple sounds but has a natural decay that makes the sound vanish and reduces the possibility of long connected lines.

However, these limitations can be overcome by extended techniques. For example, the clarinet can play multiphonics or sing and play at the same time. This generates a complex sound, with more than one pitch being heard at the same time. The guitar can try to prolong its sound by articulating the notes quickly in tremolos or using an e-bow. I have used some of these techniques in the *Caminantes* cycle, for example, singing and playing at the beginning of *Caminantes IV*.

Another technique I used is to integrate the playing techniques of the clarinet and the guitar and creating new aggregates in which I have as a goal to explore the ambiguity of the source through the approximation of timbre played by each of the instruments. In other words, we have a kind of partial fusion of two instruments when played with appropriated extended techniques. This, in certain sense, is also a technique used by spectral composers where the idea of continuity or progressive transition of spectra is explored (SINGLETON, 2015).

Another example of timbre approximation is from the very end of *Caminantes IV*, where the

guitar plays with low pressure on the left hand, creating a muffling effect on its sound that is supposed to be imitated by the *velato* effect at the clarinet (bars 122 and 123) shown in the figure 4 below.

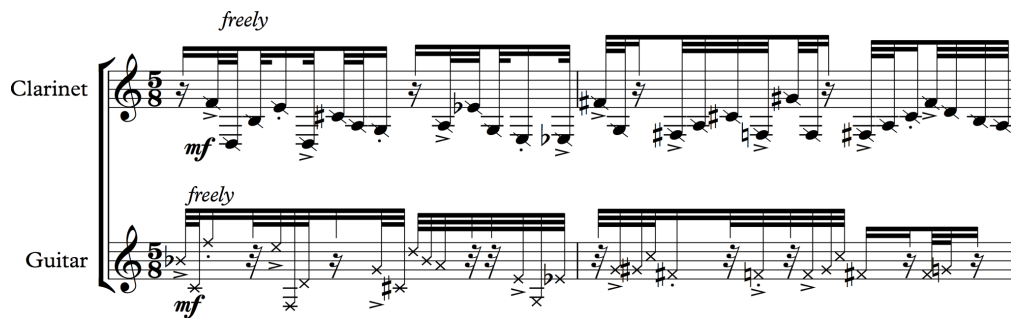


Figure 4: Timbre approximation by using extended techniques in *Caminantes IV*.

By creating connected sonorities from two different instruments, the limits of their tone production are explored within a duality of noise/pitch. We can, intuitively, think that connected sonorities have some part of their spectra close one to another and, relatively, one to another, their spectra work as an “additional noise”. In an analogy with Information Theory we blur the characteristic distinctiveness of signal and noise as a twilight zone, that is, while in Information Theory the goal is to separate the signal from the noise, for me their synthesis is the goal, since their spectral approximation bring them to the same level.

In the *Caminantes* cycle, extended techniques can be categorised in two main functions: development of new sonorities and creation of structural points in the piece. For instance, as mentioned above, and regarding the creation of new sonorities, one idea can be to encourage the listener to associate the different timbres of the instruments, not only with one or the other, but also as a new, blended sonority. Well utilized, blended sonorities have a good impact on the psychoacoustic awareness of a listener. For example, they work as not expected transitions increasing the curiosity and surprise of the listener.

In relation to the articulation of structures in the piece, extended techniques promote different types of awareness, not only of sonority, as already mentioned, but also of gesture and noise. For example, in certain parts of *Caminantes II*, the amount of noise created by extended techniques is what articulates the sections of the piece. This means that noise works as a structural function, via extended techniques, instead of the more common and historical harmonic function.

However, there are also moments of continuous transition, from salient noise to a gradually enriched pitch section (including quarter-tones). In these sections, the player’s tone production is challenged, due to the virtuosity of their parts and the exploration of the extreme registers of the instruments. Hence, extended techniques and virtuosity are also used to test the limits of each instrument's tone production.

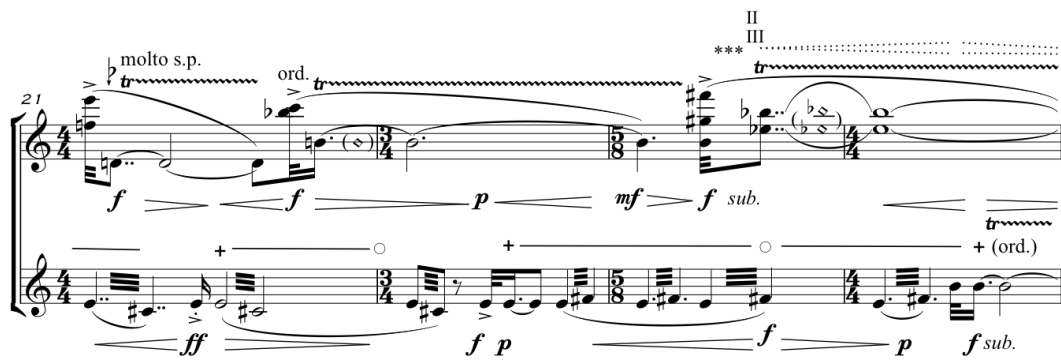


Figure 5: Timbre approximation by use of noise in *Caminantes I*

Figure 5 shows multiple extended techniques working together to create different aggregates. The new sounds come from the approximation of the violin and horn by means of technique (the tremolos and trills) as well as noise content (*écrasé* and *ponticello* in the violin and hand-muting in the horn). The sound is in constant mutation by means of the conjunctions of techniques, which cause a lot of instability in the section.

The spectrogram below (figure 6) shows the FDP (Frequency, Density, Power) analysis of the same section of *Caminantes I* (bars 21 to 24). We can observe the high density of frequencies around 5-15 KHz and their high energy as well. This means that the section has a large component of noise, although quite varied in its density and duration. The noise is well distributed over the section, with certain peaks at almost 20KHz that are generated by the violin and horn attacks (the accents at *forte* and *fortissimo*).

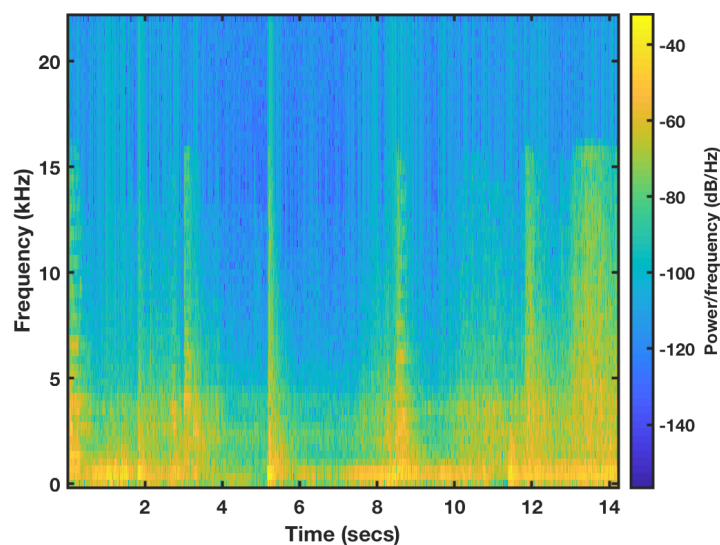


Figure 6: Spectrogram of section of *Caminantes I* (bars 21-24).

The material of this section, i.e. tremolos, écrasé, harmonic trills, among others, is widely used in the piece. However, the actual pitch content and the harmonic implications seen in the sheet music are not the only way to structure and interpret the piece. One is much more aware of the variance of textures and noise, and their impact on the aural sensibility of the listener, which can be “seen” in the spectrogram as well.

In the work *Caminantes II* there are further amalgamates which are created by the use of multiphonics in the oboe and multiple extended techniques in the viola, such as écrasé, harmonic trills and bow positions along the strings (*sul ponticello* and *sul tasto*). As a means to show this, below, in figure 7, is the extract from the score of a section where this amalgamate is created together with a spectral analysis of the recording of the section in figure 8. It is clear the inharmonicity created by the chords as well as the rich spectral content. As in the case for *Caminantes I*, we can also see how the structure of the section is based on the textures created by filtering and additive processes of the noise content.

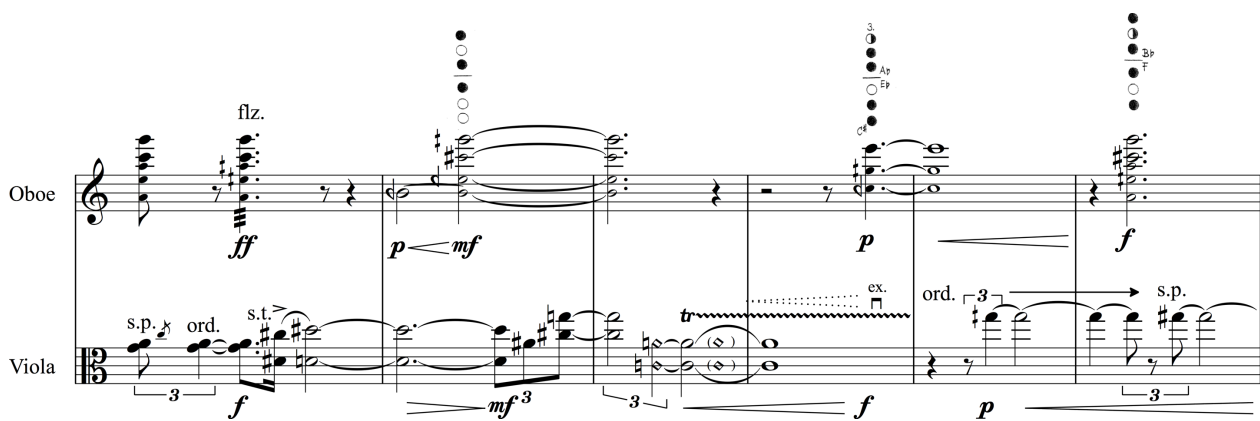


Figure 7: sonorities with noise in *Caminantes II*.

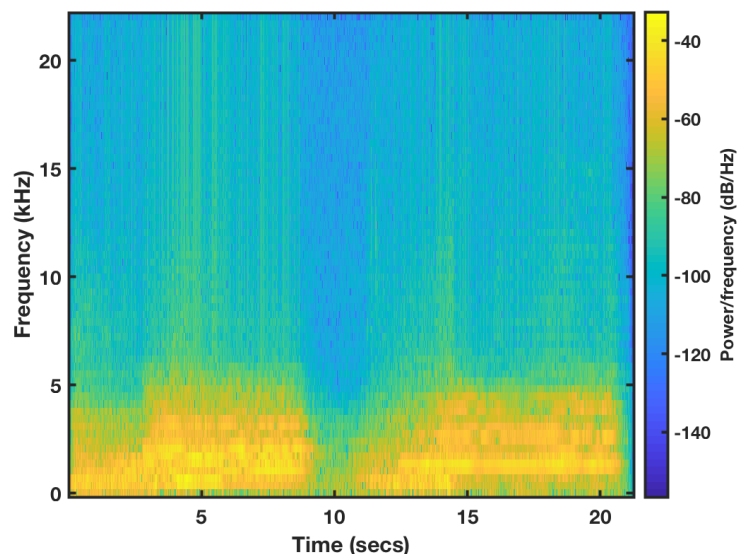


Figure 8: Spectrogram of section of *Caminantes II*.

2.3. HARMONY AND MICROTONALITY

The piece *Caminantes IV* starts with a cluster, which is the basic material of section A. The cluster, as a construction made mainly of major and minor seconds, is an example of interval concentration in my harmonic thinking. In *Caminantes IV* there is a prominence of intervals of seconds and sevenths, similarly to the thinking presented earlier by

This section develops gradually through a harmonic progression of variants from this cluster chord, shown in figure 9 below, where we see a harmonic reduction of the first eight bars of *Caminantes IV*.



Figure 9: Harmonic reduction of the first 8 bars of *Caminantes IV*.

The clarinet has a very narrow range in this section, staying only in the lower register. The use of this register also contributes to the mysterious aura of the beginning of the work. The guitar is also in its low range, although in a more resonant one comparing to the clarinet. In the figure 10 below we can see the first bars of the piece and how the chords presented above (figure 9) were orchestrated using singing and playing in the clarinet and extended techniques in the guitar, such as *tambora* and light left-hand finger pressure.

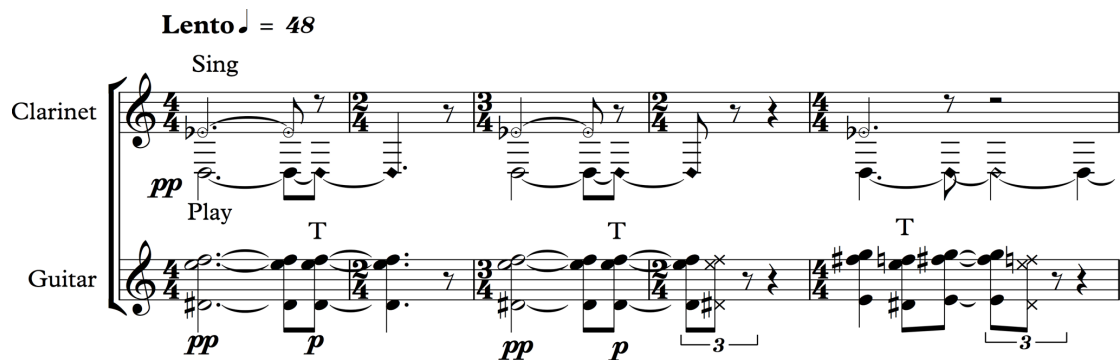


Figure 10: first 5 bars of *Caminantes IV*.

In *Caminantes III* the section towards the end of the piece uses microtonal deviations and extended techniques to create a murmuring effect, approximating the timbres of the double bass and the trombone. The section can be seen in figures 11 and 12 below, where figure 11 shows the score and

12 the spectrogram. In the score, it is very clear the E as a focal pitch with microtonal deviations floating around. In the spectrogram, one can see that despite an energy concentration in the low register (E with microtonal fluctuations) there is also, as expected, some high partials, coming from the extended techniques used.

Figure 11: Score from section of *Caminantes III* with microtonality and extended techniques.

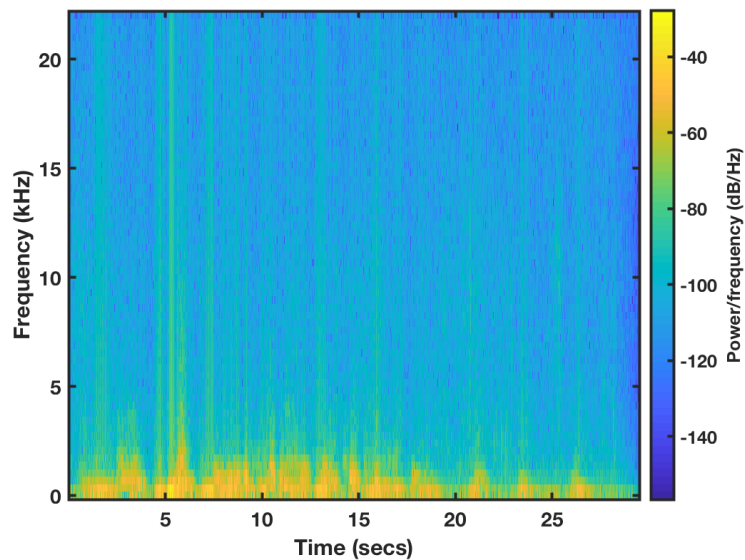


Figure 12: Spectrogram from section of *Caminantes III* with microtonality and extended techniques.

2.4. INDETERMINACY

The use of indeterminacy in Western music has a vast tradition ranging centuries and this has been the subject of multiple writings. For the sake of this work I am dealing with indeterminacy as that which is proposed in the music score, giving the performance a certain frame in which he/she can decide certain parameters in the piece.

Hence, in the *Caminantes* cycle I used sections with indeterminacy, ranging from improvisations based on graphs to written pitches with free durations. With indeterminacy, I wanted to allow certain

freedom to the players as well as to make the form and material of the *Caminantes* pieces unique to each performance. Nevertheless, it is a controlled indeterminacy and, as mentioned above, the form and much of the macrostructures are well defined by the composer.

There are mainly three types of indeterminate fragments: graphical, free pitch permutation and free tempo/rhythm (*Ad Libitum*). They are present in *Caminantes I*, *Caminantes III* and *Caminantes IV*. For instance, in the figure 13 below, is a section of *Caminantes I* that corresponds to the horn interlude (cadenza).

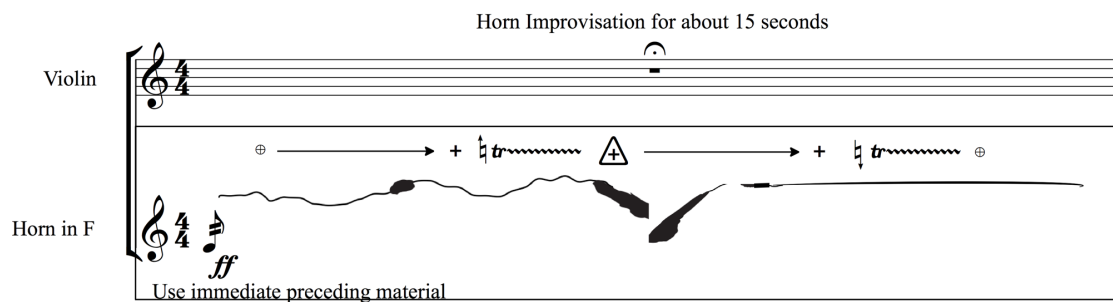


Figure 13: Graph notation for horn interlude (cadenza).

This horn interlude allows freedom to the performer to interpret the graph in the score. However, some indications of microtonal trills and hand-stopping are proposed, so the performer has to play these indications. This means there is a freedom of pitch selection and time (about 15 seconds) but not a total freedom of how he articulates his/her selection.

As stated previously, the interludes are transient sections in the structure of the *Caminantes* pieces. These interludes are moments of individuality for each player, similar to cadenzas. For example, in *Caminantes IV* the clarinet has its interlude being accompanied by two different figurations from the guitar, which are free in tempo and within the permutation of pitches. These figurations are made out of clusters, linking the material of the interlude with the previous section, keeping the same interval classes from the beginning (seconds and sevenths).

The clarinet in its solo is supposed to be very free. This means its time evolution is, in certain degree, uncorrelated to the guitar figurations, be as material or performance. In fact, the all section has attached to it a sense of indeterminacy. The rhythms given are for guidance and are not supposed to be performed in a standard way. The same applies to the multiphonic, it is not specified, the clarinetist should find a specific multiphonic of his/her choice.

Towards the end of *Caminantes IV* comes a last attempt at creating a unity between the instruments, something written about in the section on extended techniques. In the figure 14 below we can see this section.

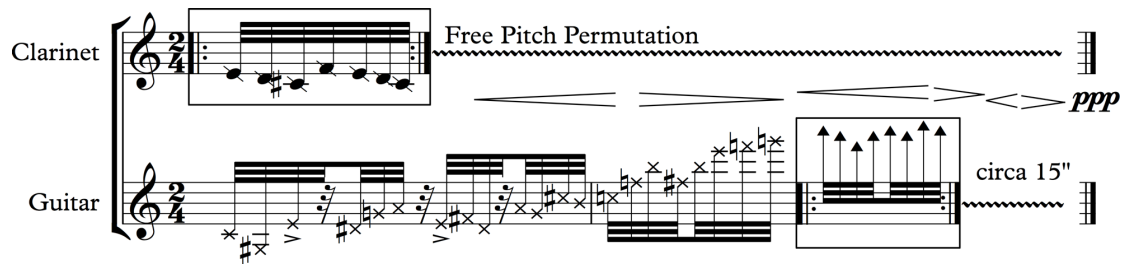


Figure 14: Indeterminacy and extended techniques in *Caminantes IV*

There is again certain indeterminacy in the writing; the players are free with regards to time, playing more or less *rubato* and there is a free pitch permutation of the indicated pitches in the boxed notes. Clarinet and guitar attempt the amalgamation of their sounds, as they gradually vanish, ending the piece.

FINAL CONSIDERATIONS

The sound explorations in textural and timbre composition through the *Caminantes* cycle show mainly how rich and large is the texture-space at disposal with just two instruments, mainly when extended techniques are used thoroughly.

The categorisation of techniques used in the cycle instigated my curiosity and sound imagination into creating different aggregates, structuring the pieces and individual sections by means of noise, sound quality, timbre and texture. Together with other elements such as indeterminacy, harmony and microtonality they have shaped the works into sound experiments of pair of winds and string instruments. The overall result has been expanded once, into larger contexts in the work *Guatá*, for 15 players, where sections of *Caminantes II* have been extrapolated into the larger instrumentation. In this case the texture-space is exponentially larger and a work is just a small set of possibilities.

The accomplishment of the *Caminantes* cycle implies several facets of contemporary musical composition as experiments into duality timbre-noise, instrumentation and extended techniques, texture-space possibilities, spectral approximation, among other, bringing a vast array of compositional possibilities into the context of a piece.

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