Composing Myself

One composer’s autoethnographic study into the inspirations and processes of composing

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Supplementary materials

The blog pages can be viewed using Evernote Web, Desktop or App.

Go to:

https://evernote.com

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The blog is referenced here in case of wider interest, but is not essential in its entirety for the wider understanding of this research commentary.

Username: daniel.davis@stu.gsmd.ac.uk **Password:** Dmus-2020

The scores and recordings of *Sonata for violin and piano* and *Colours (in circles)* are provided separately in the Appendix.

The Appendix is a digital folder that can be found here: Appendix Link

Footnotes and references

This commentary also references other artists' work. This is referenced in the footnotes.

Acknowledgements

Sincere thanks go to all who contributed for this research project, to my supervisors Julian Philips and Richard Baker, and to my mother and sister who were always supportive in the good and bad moments. Especially, thanks to the following for their assistance, friendship and support:

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Abstract

Before starting this research project, I was composing with a very intuitive approach, my way of making music was not especially rigorous and I was not using a pre-compositional schema. This portfolio consists of six compositions, scores and recordings, and a commentary. The commentary provides some context for how processes that generate harmony and how thinking about harmony and rhythm have shaped my music both technically and aesthetically and it will lead the reader through a work in progress of how I developed from a very intuitive way of composing to a more sketched and rigorous practice. It is a journey in a learning-active process of composing, sketching, thinking and writing about it. By using autoethnography I am able to construct my own bibliography, analysing my own self-reflective data that was built during the process of composing by blogging and documenting compositional approaches, and external experiences in other art forms.

The commentary also attempts to rationalise my view in the ongoing debate around composition research, which I became aware of when I arrived to the UK in 2016. It seeks to create a narrative that serves as an accompaniment to the scores and recordings of the portfolio. It aims to find a way of writing about music in a research context. It has an ambition of writing about the pre-compositional stage, the process of composing, and the final result, all during the process of composing and not in a post-hoc way. It seeks to find a balanced manner of writing in a research context about music, the process of composition, difficulties, obstacles and solutions. This is mainly explored through reflections on individual compositions, explained chronologically in terms of their completion. Composing music is not a tidy process, consequently this commentary does not strive for a neat ordering: the focus will shift across differing musical parameters, from orchestration and timbre to rhythm and structure.

Composing Myself – One composer's autoethnographic study into the inspirations and processes of composing

Introduction

This research project documents the development of my creative practice as it evolved from an essentially intuitive way of working, to one that embraces processes that generate, construct and transform harmony and rhythm in more rigorous ways through an engagement with four creative research questions (see page 30). Alongside this is an investigation of how acquiring a discipline of sketching — something that had also been largely absent from my practice —has affected my music.

In order to provide some context for the project, it will be necessary to briefly outline my educational background, and also acknowledge the particular circumstances that surrounded the discipline of composition research in the UK at the moment that I arrived to begin my studies at the Guildhall School of Music & Drama.

Biographical Sketch

I was born in Porto, Portugal in 1990. Very soon, my family moved to Venezuela where I grew up. When I was ten years old, I moved back to Portugal, this time to Madeira Island. Here, when I was twelve years old, I learned music for the first time. At school, I learned how to play the recorder, and one year later I was invited to be part of a philharmonic wind band in my local area. In *Banda Municipal de Santa Cruz,* I learned how to read music, learned percussion and later the saxophone. Saxophone was an instrument that I particularly enjoyed, and very quickly I decided to continue in a more professional way. In 2005, I was admitted in the saxophone class of Duarte Basílio at Conservatório – Escola das Artes da Madeira, Engº Luís Peter Clode, and later in 2008 I entered in the Professional Music Course in the same institution. My composition experiences began in 2009 when I started exploring new ideas for the saxophone quartet I played in. In 2010, as a member of the young soloists of the conservatory, I composed and conducted an

orchestral piece called *Wonderland.* In 2011, before graduating from the conservatory and before going to the university, my mother lost her job and with it the opportunity of buying a saxophone for me to continue a musical career as a performer, but I was determined to continue as a composer or even as a conductor. In Lisbon, I applied for both composing and conducting undergraduate courses, and fortunately I was accepted on both. However, a teacher told me that composing could be better for me at that time, and that a musician could become a conductor later in their career. I followed their advice and began the undergraduate course in composition at the Lisbon Music College where I studied for five years, completing the Undergraduate and Masters degrees in composition with Portuguese composers Sérgio Azevedo, António Pinho Vargas and Luís Tinoco. Finally, in 2016, I moved to London to work at the Guildhall School of Music & Drama on the research project which this commentary documents.

Composition is (not) Research

> *'The king said: "I'll chop off your head unless it sounds like this." The pope said: I'll rip out your fingernails unless it sounds like this." The duke or somebody else might have said it another way – and it's the same today: "Your song won't get played on the radio unless it sounds like this." '*[1]

When I began this doctoral project in September 2016, apart from discovering that my compositional technique was very intuitive, my way of making music was not especially rigorous and that I was not using a pre-compositional schemata of the kind that often is used from the basis of 'composition research', I also discovered that the whole discipline of composition in UK Higher Education was engaged in a vigorous debate about what constituted 'composition research'. My first encounter with this debate came through reading *Composition is not Research* by John Croft in which he describes the construction of compositional systems as research, research narratives, and his assertion that 'the very idea that musical composition is a form of research is a category error: music is a domain of thought whose cognitive dimension lies in embodiment, revelation or presentation, but not in investigation and description.'[2] This led me to the responses it provoked from Camden Reeves, in which he asserts that 'in its own misguided and more general attempt to answer the question, "What is 'research' … really?", the Academy has looked to science. Croft merely follows suit, using the term "research" in the narrow sense of "scientific research" '[3]; and Piers Hellawell, in *Treating Composers as Researchers is Bonkers,* who argues that 'the myriad decisions that put together a musical work do not map neatly onto what the world understands as research, however convenient an alignment would be for bureaucratic purposes'[4].

In *Composition and Performance can be, and often have been, Research* Ian Pace comments that "the need for student satisfaction and demonstrations of 'vocationality' (replete with employment statistics for marketing purposes) demanded by management can make unreflective and technically-focused courses the safest of options. But as

[1] (Zappa & Occhiogrosso, 1999)
[2] (Croft, 2015)
[3] (Reeves, 2016)
[4] (Hellawell, 2014)

composers and performers are integrated into the full academic structure of university departments, there is pressure on them to produce research;" and he is "not arguing that Croft is necessarily advocating this state of affairs, but it is one of the reasons his article has attracted such widespread discussion."[5] I have noticed, especially in myself, that composers often struggle to translate their musical process into words. In a research environment, composers often adopt a post-hoc analytical mode in discussing their own work, because there is a degree of stability in the analysis that has traditionally been favoured in a research context. Frequently in academia, composers will be encouraged to adopt this analytical mode of research by their supervisor, teachers, colleagues and the research environment, leading the composer to write about their music only at the end of the process, ending up with an analytical description of the compositional techniques, aesthetic and stylistic context, analysis of completed compositions, explanation of pre-compositional approaches, references to other composers' works and perhaps a reflection on creative success.[6] Ian Pace, responding to John Croft, refers to this tendency thus:

> *"Certainly Croft makes some important points, particularly the suggestion that the concept of composition-as-research privileges certain approaches, such as those using elaborate compositional systems and/or cutting-edge technology, regardless of the results. To these I would add intricate aesthetic formulations drawing liberally upon canonical 'theorists', or the self-conscious situating of one's practice relative to whichever other composers seem opportune for the career-minded. With respect to the issue of systems, however, Croft's claim that 'good and bad music can be made from any system' is glib, and suggests the systems' role is essentially arbitrary; on the contrary, some crude systems are unlikely to produce good music"*[7]

Yet the creative process inevitably involves various instabilities; and embracing such instabilities can be healthy for practice-based research. The journey from the start to the

[5] (Pace, 2016)
[6] (Leedham & Scheuregger, 2020)
[7] (Pace, 2016)

end of a piece often seems to me like walking on a bridge, backwards and forwards, going through one's ideas, sketches, and the composition itself over and over until one discovers the right material to use. Experiences of music are subjective; the process of creating it even more so. The desire to represent the process of composing as something completely stable is arguably a mistake, and a joyless one at that. Often, research environments ignore the basic truth that composers compose because they enjoy it. Whilst there is naturally a need to acknowledge how composers conceptualise the initial creative idea and the final result, too often, the details in between go unexplored. Embracing 'walking on the bridge' is the only way that composers can capture the initial creative idea, the whole process of making and the final result; and they should feel able to walk backwards as well as forwards if they need to.

From Biography to Autoethnography

Influenced by Martin Scheuregger and Christopher Leedham's ongoing research into composition research methodologies[8] I will outline my research questions from an autoethnographic standpoint, opening up both the process of composition and the works that result. By making an autoethnographic study[9], I hope to document the development of my creative personality as it assimilated many different elements from the cultural context that shaped me in the past, and from the cultural context in which I am working now.

In what follows, I intend to share the sources of inspiration for my research, to discuss the compositions I have made, the composers whose work has inspired me, the non-musical artworks I had the opportunity to engage with, the many personal conversations I have experienced, the various instabilities, how I embraced such instabilities, and how embracing these instabilities helped me with my research and sharing my own creative practice.

What this commentary is *not* is a tidy summary of finished work. This is because the experience of composing is not a tidy one. Rather, it is more like setting out on a journey where the destination is not always known in advance. For me, 'walking across the bridge' may be the way that composers construct their own creative self-reflections, about their processes of sketching and composing.

This research aims to contribute to creative knowledge for other researching composers, so that by telling my story, and telling stories about the inspirations, influences, documented compositional processes and sketches in a very open and honest way, it may prove useful for overcoming barriers in the journey of making a piece of music, and presenting it to colleagues in a research context.

[8] (Scheuregger, n.d.)
[9] See below page 28

SOURCES OF INSPIRATIONS

Rationalising the making

This doctoral research project attempts to chart my creative engagement by framing this practice with methodologies drawn from autoethnography, which "is an approach to research and writing that seeks to describe and systematically analyse (graphy) personal experience (auto) in order to understand cultural experience (ethno)."[10] "A researcher uses tenets of autobiography and ethnography to do and write autoethnography. Thus, as a method, autoethnography is both process and product."[11]

> *When writing an autoethnography, an author retroactively and selectively writes about past experiences. Usually, the author does not live through these experiences solely to make them part of a published document; rather, these experiences are assembled using hindsight. In writing, the author also may interview others as well as consult with texts like photographs, journals, and recordings to help with recall.*[12]

During the first stage of my research, I documented several experiences—for example, personal discussions with others or places I visited. This data helps to answer my creative questions:

- Blogging selectively about experiences – such as concerts, art installations, art exhibitions plays or personal talks – permits me to review past experience with alternative perspectives. Thinking retroactively, reminds me where am I now, where have I come from and what my cultural context has been up to now.
- Blogging about my compositional process, not only allows me to document what I am doing in a specific moment, but also, helps me to think deeply about what I am doing and, sometimes, after reading, to make changes to what I have done. In a way, writing about my compositional processes might provide me with new ideas and solutions for different problems. Having a composition blog requires constant thought about what has been the legacy of my training up to this point.

[10] (Ellis et al., 2010)
[11] (Ellis et al., 2010)
[12] (Ellis et al., 2010)

"I am never free of the past, I believe in continuity"[13]

As part of documenting experiences, I started to look closely at my daily working routine as a composer, which is very connected in a contemporary context with the world of the Internet and social media. Surfing online, I found a video[14] in which Jacob Collier, a young English jazz musician, discusses jazz harmony, and specifically something he called the 'super-ultra-hyper-mega-meta Lydian', which is an infinite Lydian modal scale, where the characteristic Lydian raised-fourth note is also the seventh of the next scale. So, G is the fifth of C major but also the fundamental of G Lydian scale [G-A-B-C#-D-E-F#] (Image 1).

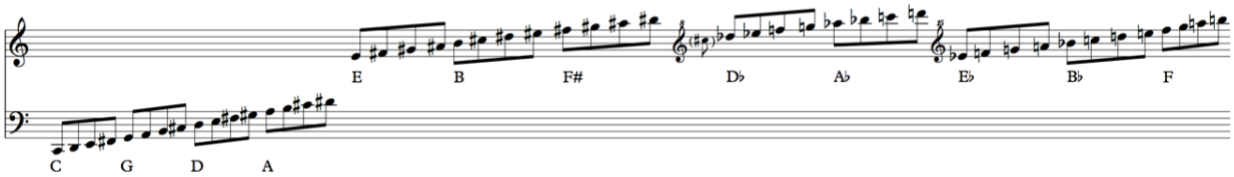

Image 1 - example of an infinite scale, using Collier's 'super-ultra-hyper-mega-meta Lydian'

In addition to Collier, in *The Lydian Chromatic Concept of Tonal Organisation*, George Russell discusses the Lydian mode not only as offering possibilities of transposition, where it is possible to go anywhere, but also as a 'musical landscape where tones, scales, chords, and modes resonate within the Principle of Tonal Gravity'[15]

In Collier's video, there is a similarity between both techniques, although they work in a different way. Both work as an infinite scale, melody or series. In the same video—because, on the one hand the transposition of the Lydian scale is made by fifths, and on the other hand, because it is made by reorganising a sequence of fifths (Image 2)—Collier deploys the circle of fifths not only as a way of transposing chords, but also as a way of generating the opposite pole of a chord.

[13] (Krasner, 2019)

[14] (Lee, 2017)

[15] (Russell, 2001)

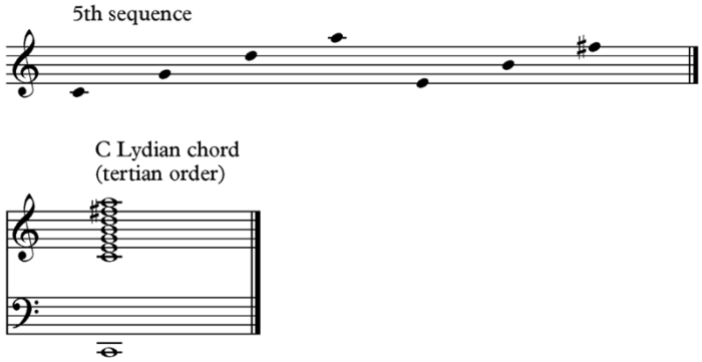

Image 2 - organisation of fifths into a C Lydian chord

In *A Theory of Harmony*, Ernst Levy suggested a similar approach to harmony and voice leading coming from a standpoint of using perfect fifths, major thirds and their inversions (perfect fourths and minor sixths). It is not only Collier who responds to Levy's theory, but also saxophonist Steve Coleman who talked about it as a *Symmetrical Movement Concept*[16] which is a way of varying a simple theme and achieving a musical balance, using Levy's idea about the polarity of each chord and its relation[17].

[16] (Coleman, 2015)

[17] Of course, both Collier's and Russell's ideas closely relate to Per Nørgard's *Infinity Series* (1959) with which he explored a similar technique. For example: if setting two notes – G and A-flat – as the kernel of the structure, it will end up with an ascending semitone (+1), which will be projected twice: inverted in the 'upper' layer (G to F-sharp) and non-inverted in the 'lower' layer (A-flat to A). The next interval formed is A-flat – F-sharp, which is two semitones descending (-2) projected twice: inverted in the 'upper' layer (F-sharp to A-flat) and non-inverted in the 'lower' layer (A to G). The next interval is F-sharp – A, which is three semitones ascending (+3) projected at the same way: inverted in the 'upper' layer (A-flat to F) and non-inverted in the 'lower' layer (G to B-flat). The next intervals are made using the same process. Nørgard, used this technique for the first time in his *Symphony No 2* (1970) and in *Voyage into the Golden Screen* (1969) – for more about the *Infinity Series* see (Beyer, 1996).

Seeing is making

In a contemporary context, YouTube can be a valuable source of inspiration. Watching YouTube programmes, as for example *Tate Shots*[18], has offered me a broader vision onto the work of different types of visual artists, as for example Maggi Hambling, Sarah Sze, Anne Hardy, Agnes Martin and Daido Moniyama, that I would never have discovered without this channel. Now, when I said that these artists were crucial source of inspiration I do not mean only for writing notes on the paper, but also listening to them talk, taking notes on how they talk about their art, about their processes of making, about their influences, their own sources of inspirations and also about the work of their friends – the artists that surround and inspire them. Programmes like *Composing Myself*[19] and *This is the moment*[20] allowed me, on the one hand, to find a list of new pieces I had never listened to before, finding myself rooted in some of the ideas and pieces I tuned into, and enjoying music that I had not had the opportunity to attend live; on the other hand, I did have the opportunity to listen to every composer streamed in the channel, talking about their processes of composing, discovering the idea or the concept, struggling and finding solutions, sharing their experiences and collaborative projects.

Windows of order

Of course, my daily routine does not include only sitting in front of a computer watching videos all day. Other cultural activities can be a rich source of stimulus.

> *You absorb from finding something that is new or surprising and not everything you find become[s] materials for work, but there is a moment when an idea and a material come[s] together*[21]

When I first encountered visual artist Sheela Gowda's observation, quoted above, one word stood out in importance – 'absorb'. As an artist, I feel that I am always absorbing different ideas from my colleagues, friends, other composers or artists, and those ideas

[18] (Modern, n.d.)
[19] (Classical, n.d.)
[20] (& Hawkes, n.d.)
[21] (Gowda, 2016)

can interact with my own in a rich and stimulating manner. In a way, by absorbing, I am able to 'interpret, construe and construct, sometimes in concentrated knowing ways, sometimes intermittently, tangentially to other personal agendas.'[22] Living in such a cosmopolitan environment permits me to absorb different cultures when talking with people – who may or may not be composers, musicians, writers or artists – who come from different cultural contexts.

> *I just collect lots of things at the beginning…it's about how things come together that becomes something interesting*[23]

Sheela Gowda's installation *Behold* (2009) explores the connection of two different materials – human hair and car bumpers. The relation between these two materials made me think about the possibility of having different ideas (from different composers or artists), putting them together and creating a new object, not as if I was at the supermarket collecting products from my shopping list, but as a way of creating a toolbox where I can have different devices ready to use in my compositions. It is not about having all these devices and tools, it is about touching everything for myself. It is very much about the process, and the process is not something which I can delegate to someone else, because the majority of the decisions are very intuitive. It is about acquiring these devices and tools and exploring them. Louis Andriessen outlines a similar experience, in the period between 1962-63, in an article where he describes his visit to the Darmstadt festival in August 1963[24], where he 'glowingly praised Berio's works that demonstrated his interest in phonetics (*Circles* (1990) *Passagio* (1961-62)), Henri Pousseur's rational system for harmonic analysis, Karlheinz Stockhausen's self-analysis of *Gruppen* for three orchestras (1955-57), and Pierre Boulez's striking forum that defended the significance of Debussy for modern music.'[25]

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[22] (Swanwick, 1994)
[23] (Hardy, n.d.)
[24] (Andriessen & Zegers, 2002)
[25] (Everett, 2006)

I like to think that all these YouTube videos, exhibitions, books, scores, programmes, belong on the shelves of a library that involve different creative areas capable of informing or communicating with its visitors. Berio himself describes this phenomenon thus:

> *What we do have at our disposal, instead, is an immense library of musical knowledge,* which attracts or intimidates us, inviting us to suspend or to confound our chronologies. For over a century, composers have been taking trips to the library, to take stock of its endless shelves (…) a library that is unable to offer coherence, but can receive it from the right visitors. Today that library has become boundless. Rather like Borges 'Library of Babel', it spreads out in all directions; it has no before or after, no place for storing memories. It is always open, totally present, but awaiting interpretations.[26]

The infinite shelves of 'the library of musical knowledge' acted as a source where I could find musical inspirations that were written in the twentieth and twenty-first century. Since I began as a composer, I have been searching for other composers' work, not only to enrich my knowledge, which is what composers have always done, but also to interpret in a personal way what I might find there. In the quotation above, Berio is voicing what composers always do, and I would strongly endorse Berio's view. I want, for each piece I am working on, to go inside 'the library of musical knowledge' and take what I want from the shelves, speculate and process the ideas that I find; especially having today a large and rich 'Library of Babel' where it is possible to find so many different types of music, languages and techniques.

I do not think that the corridors of 'the library of musical knowledge' that we visit should stay only as musical corridors. I agree that the main subject of our search is in those musical corridors and on those musical shelves. However, today we are immersed in an enormous world of diverse information: social media, installations, technology, film, TV-series, art galleries, operas, concerts, museums, and so forth; and we cannot avoid connecting to them, in some way, at some point, in the time we live. For that reason, we

[26] (Berio, 2006)

can expose ourselves to these other corridors, not being afraid of feeling connected with subjects other than just music.

From teenager to composer

To some extent, the artists I have engaged with in the past four years have been influenced by the cultural scene in the United Kingdom, but I have not always lived in London. In 2011, I moved to Lisbon, where I developed, in an intuitive way, some techniques for creating, controlling and orchestrating harmony. For example, in 2013, when I started composing my work *…from the last breath,* harmony was drafted spontaneously with a pencil: in some places, the pencil was a little bit wider and in others, thinner (Image 3).

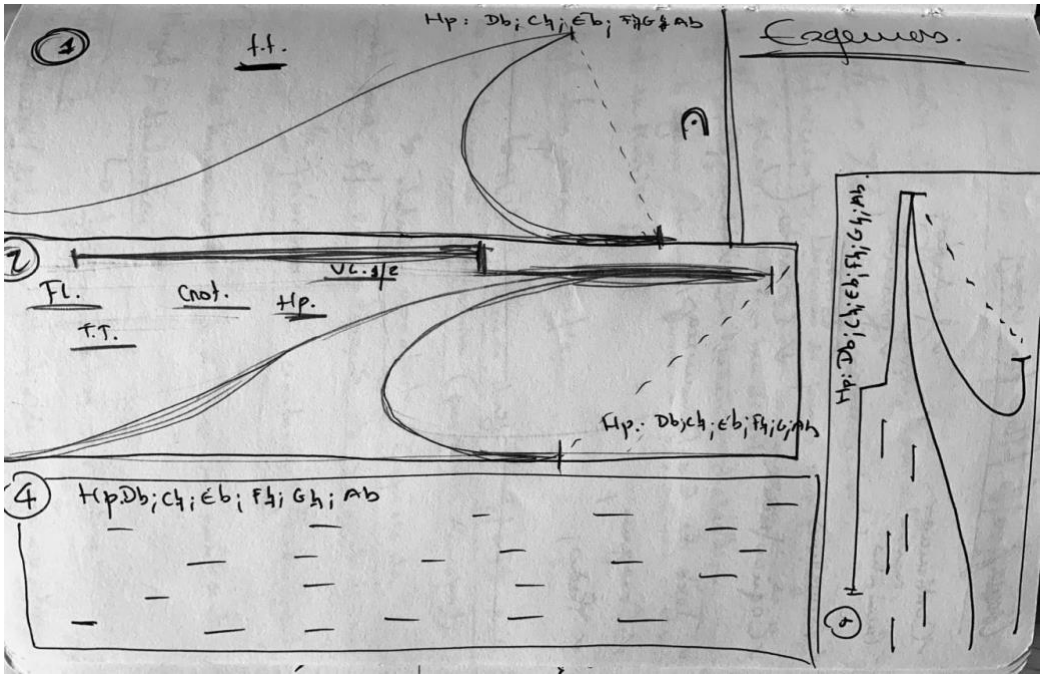

Image 3 – …from the last breath – sketches: notebook drawings

This draft made me think about lines in the orchestra score as a process of transformation of different materials in a specific period of time (starting deep in the low register of the orchestra, sustaining the lowest notes and adding other instruments in the medium register to get the line, widening as in the draft) – (Image 4).

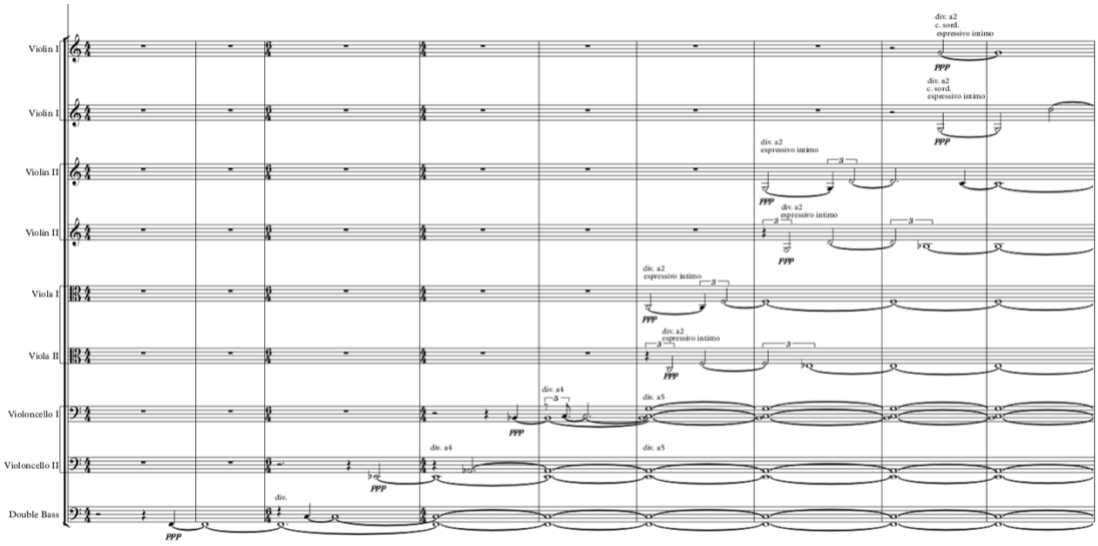

Image 4 - score ...from the last breath, representation of my notebook sketch

In that moment, I thought about Kaija Saariaho's *Verblendungen* (1984), and although Saariaho's idea is to have opposite directions between the orchestra and tape, the way she shaped *Venblendungen* and orchestrated it is almost as if she were painting (Image 5).

Image 5 - Verblenbungen shape (Saariaho, 1987)

Still, my draft made me think about Takesada Matsutani's *Fly-70* (1970), and although this work by Matsutani is not absolutely related with the visual of the orchestration, nevertheless it made me think about the wider line (wider gesture), and the thinner line (thinner gesture) (Image 6).

Image 6 - Fly-70 (Matsutani, 1970)

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An alternative example, still in Lisbon, before composing *Redefinition…*, in 2015, I was playing a brake drum in the percussion room of Lisbon Music College, and found the sound particularly fascinating – so, I recorded it. When I returned to my computer, I imported the sound file into the spectrum reading software SPEAR and started to analyse the sound (Image 7).

> *For some years, electronics have allowed us to listen to the interior details (microphonique) of sound. The same interior of sound, which was hidden and clouded by several centuries of essentially microphonic musical practice, is finally delivered to our wonderment. On the other hand, the computer allows us to approach timbres unheard of until this day and to analyse their composition very finely.*[27]

The diversity of notes was particularly striking, and I picked out some and played them on the piano as both chords and melodies. Suddenly, I found myself in the act of composing a new piece, and the very beginning was a combination of the sound of the real percussion instrument and the fundamental of the harmonic series resulting from the sound recorded. Each of the partials of the harmonic series had a different intensity, so I could play with timbre, intensity and sound effect at the orchestration stage.

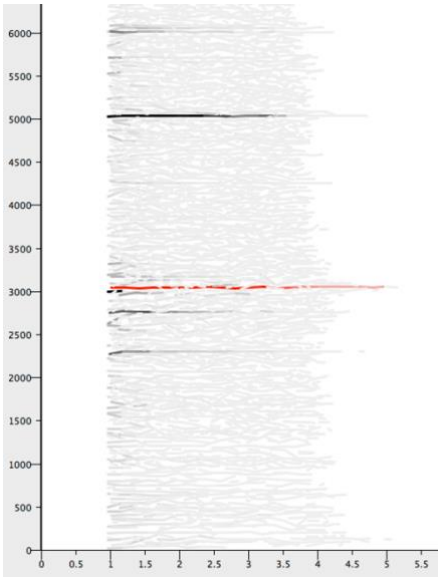

Image 7 - Redefinition, frequency and tempo of the recording of the brake drum

[27] (Besharse, 2009)

Spear became a tool for me to explore my harmony and although I have always been a composer with a strong concern for questions of harmony and rhythm, I was never capable or confident enough to explore my harmonic and rhythmic ideas deeply. On the one hand, harmony may not be a matter of interest for some composers, as for example Xenakis, who, in Andriessen's estimation, "…was not interested in harmony at all, he thought in terms of sound masses, movements and directions.'[28] On the other hand, throughout my creative development, rhythm has always been a particularly intuitive element in my compositional approach. However, reflecting on my work so far, my approach to rhythm has often been through the use of rhythmic ostinatos. This may happen as a result of a connection with Latin, Portuguese and especially Jazz music. When I was a teenager, before even thinking of composition as something I could explore, Jazz was as important to me as classical music. As a teenager, I hated going to classical music concerts, Beethoven and Mozart were boring to me. Now, I have a different opinion about classical music, while my interest in other genres, especially Jazz has remained at the same level. In this way, I have absorbed influences in a similar way to other composers I admire: "[f]or instance, music by Philip Glass, Terry Riley, Steve Reich and John Adams, has distinct different colours and styles, brought about by, for example, Reich from his studies in Ghana or by Glass from his studies in India."[29] Yet I also would agree with Everett's observation of Andriessen's influences:

> *The most powerful influences are frequently those that remain unspoken, influences that lie dormant within the depth of one's unconscious. As the Darmstadt core began to disintegrate and split off into many different compositional orientations, Andriessen identified most with theatrical composers like Luciano Berio and Hans Werner Henze who promoted music as a form of social and political engagement. Improvisation became a key element in guiding his compositional orientation to transgress stylistic boundaries between atonality and free jazz.*[30]

[28] (Andriessen & Trochimczyk, 2002)
[29] (Johnson, 1972)
[30] (Everett, 2006)

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Continuing the past – Research Questions

We can refuse history, but we cannot forget about it[31]

Looking back, and considering not only my experience in Portugal, but also my experience in London, I recognise that my training in Lisbon and the experiences I had when I first arrived in the United Kingdom, left me with a number of creative research questions:

1. What is the relationship between the harmonic series and my harmony?
2. How might that relate to the circle of fifths?
3. How does this harmony relate to the rhythm of my music?
4. What is the rhythm of my harmony?

These four questions, in different configurations, informed all of the creative work in this project.

Alongside these questions was a conscious attempt to develop a discipline of sketching, something that–as noted above–had been absent from my practice before. Sketching involves using intuition as a form of knowledge, for example selecting which idea might be the more functional or appealing idea to use. Sketching also implies being able to imagine in one thought what is going to happen in the entire piece, even though the precise nature of the thought might not be clear until the end.

Dialogues with the past, and 'the library of musical knowledge'

When composing it is necessary to consider the autonomy of the materials, and also the reciprocal interactions between them, connecting all of the meaningful layers. I want to embrace the possibility of having different materials, engaging with them, and using them in my own practice while developing my own voice as a composer. Additionally, as Harold Bloom observed, "you are or you become what you read" and "that which you are, that

[31] (Berio, 2006)

only can you read."[32] Taking ideas of other composers from the shelves of 'the library of musical knowledge' is part of the process of becoming 'more me'. In other words, engaging, reflecting and speculating about other composers and artists' works has allowed me to discover my own compositional voice.

As a composer, dialoguing with the past makes sense because music is not a painting that one hangs on the wall. "Music is performed, is constantly in motion, forever 'in progress' (…)"[33], especially since it is impossible to keep the connection, as one hears music, between a composer's ideas and structures, and a performer's skills. For the audience, conservation of the past may have a negative impact, becoming a way of forgetting music, providing "listeners with an illusion of continuity; it gives them the illusion of being free to select what appears to upset it. This is why musical performance often seems to have autonomous life: it becomes a merchandise, indifferent to the music it is supposed to be serving."[34]

Documenting these dialogues helped to revise my thoughts with a different perspective and my encounter with Sheela Gowda's installation *Behold* (2009) is a perfect example of how I reported facts and actively constructed interpretations of my experiences. In my blog, I reflected on my first visit to Tate Modern: "I decided to focus in one exhibition - *Living Cities*."[35] Suddenly, I found myself walking in the corridor and one installation caught my attention – *Behold (2009)* by Sheela Gowda. The combination of two different, common, materials made me think about different tools I can have in my toolbox, ready to use when I am composing. I am not considering that other composers' ways of composing are common techniques, nevertheless using basic techniques of composition, as for example the circle of fifths, combined with other more complex structures, as for example Radulescu's *Cardinal Points of the Sound Compass*, can give me the combination of materials I need to have stronger structures in my sketches and therefore in my compositions.

[32] (Bloom, 1997)
[33] (Berio, 2006)
[34] (Berio, 2006)
[35] (Davis, 2017f)

Image 8 - Behold (2009) by Sheela Gowda - Living Cities, Tate Modern 10th October 2016

Selecting what is important and what is not important for research is a process that sometimes is not clear at the first instance. Going backwards and forwards is a process I used in order to decide what was more 'research-worthy', in Camden Reeves' formulation:

> *It may be claimed that some things are more research-worthy on the grounds that they are advancing the discipline. Progress and innovation are part of the course for science, to be sure, but such concepts are not as straightforward in Art. Paradoxically with Art, moving forwards is not always moving forwards, at least from a technical point of view. Progress in art can be aesthetic, rather than technical, and sometimes a deliberate technical regression can stimulate aesthetic change. Doing something new is not the same as doing something worthwhile, and endless innovations in technique (timbre, technology, harmony, rhythm, pitch, instrumental technique, etc.) may seem positively regressive at certain times. Why? Because Art innovates aesthetically as well as, and sometimes instead of, technically.*[36]

[36] (Reeves, 2016)

Berio, in *Remembering the future*[37], relates music with literature, in a way of construction, form, narrative and performative process of the text itself. For that reason, my journey through Tate's corridors made me think about how I can relate music, not only to other visual arts and literature, but also to common processes of composition and other composers' work.

Intuition

Even though everything external to my composition process and outputs is important, as for example other visual arts, this research seeks to create a reasonable observation about writing in an intuitive way. Intuition is the "immediate apprehension of an object by the mind without the intervention of any recognition process."[38] In *Musical Knowledge: Intuition, analysis and music education* (1994), Keith Swanwick wrote that "intuitive, personal or acquaintance knowledge lies at the heart of musical experience."[39]

In an extra-musical context, "intuitions are: this river, this lake, this book, this rain, this glass of water; the concept is: water … water in general."[40] In music, intuitive knowledge "is essentially the exercise of *imagination*, the creative forming Images."[41] However, it is not possible to create intuitively without experience, or "the basic matter of sensory impressions, the interface between the human organism and the world outside."[42] In a way, everything I cannot rationally explain in any selections I make is an intuitive choice. Writing music and thinking about it may differ the way intuition works. The perception of 'being in' and 'thinking about' the process of composing is different; recognising them, and learning with them, is also intuition.

"The statement repeated so often, that art is not knowledge, that it does not tell the truth, that it does not belong to the world of theory, but to the world of feeling, and so forth, arises from the failure to realise exactly the theoretic character of simple intuition. This simple intuition is quite distinct from intellectual knowledge, as it is distinct from perception

[37] (Berio, 2006)
[38] (Onions, 1987)
[39] (Swanwick, 1994)
[40] (Croce, 2017)
[41] (Swanwick, 1994)
[42] (Croce, 2017)

of the real."[43] I am not trying to compose to express a beautiful concept like a set or data – that is not what music is. Music is incredibly unstable. Whatever one might say about music, and what comes out in the musical notes, is different, and there is a gap between them. The gap between the verbal attempts to describe music and what music does is a mysterious and spontaneous phenomenon. Whatever I write about any of my pieces can evaporate in the moment of listening. Pieces of music that try to eliminate this gap between score and sound serialise everything, undermining the musical spontaneity.

My *Sonata for violin and piano* (2017), is an alternative previous example of how I reported facts and actively constructed interpretations of my experiences. I noted in my blog entry:

> I do not feel that the violin and piano *Sonata* had enough time to engage with the materials I wrote, and it does not relate with the knowledge I am interested in my research project. In a way, I started to consider that, all the material I have already for the piece needed to be thought about before writing a single note on Sibelius software.[44]

After thinking deeply about all the materials I used in my *Sonata*, I realised that they have a strong connection with ostinato and the harmonic series. However, all these materials were created in a very intuitive way, and thereafter it was very difficult for me to talk about them. On the other hand, writing about this piece provided me with new ideas and solutions for different problems, such as the lack of sketching and preparation in my compositional process, and consequently my need to engage more with the creation and transformation of my harmony and rhythm.

Recognising and accepting my mistakes and errors is a way of knowing myself as an artist and as a composer. Creation is an act of instabilities, an act of searching for something I do not know. It is certainty and uncertainty, what I see and what I cannot see. It is living in a state of doubt. It is working on something for one, two, three or more months, and—whatever the work is—it can come alive and die many times. That work,

[43] (Croce, 2017)
[44] (Davis, 2017c)

that idea can arise in a day or in a week, or in a morning, but it could not happen without being present, following and understanding its progression. Watching and documenting its progression is where the magic is, so as a composer working within the academy (a research environment) I must have the ethical obligation to create honest and open discourse around the compositional practice. Not only the final result matters, but also all the process which precedes it. There is nothing wrong with showing difficulties, if one can learn from them.

Autoethnography (again)

> *I have learned throughout my life as a composer chiefly through my mistakes and pursuits of false assumptions, not by my exposure to founts of wisdom and knowledge.*[45]

My goal, with autoethnography, is to adopt an attitude in defence of the position that a composer must be honest with his work and be honest with the listener. For that, it is necessary to demonstrate the other part of composing: difficulties, fragilities, mistakes, errors, solutions, tools and inspirations. At the same time, it is necessary to demonstrate that using autoethnographical methods such as collecting data—by, for example, blogging—allows a composer to think deeply about his/her own material, engage more with it and overcome barriers that may appear in the process of sketching and composing.

Autoethnography "is about what your connections are to others in contexts, and only you can decide what experiences are to be engaged through this method. To begin, focus on an experience – or a series of experiences – that changed your life in some way, or that was somehow transformative in terms of how you think, act, or see the world."[46] The reason I elected to use an autoethnographic methodology is to demonstrate to my peers that composition is not only about the final result, and is not a perfect process. There are difficulties, working-around-obstacles; there are mistakes and false assumptions that are, in my opinion, where creativity grows. I intend to demonstrate that even when writing intuitively, it is possible to sketch and reflect about the materials.

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[45] (Ackoff & Greenberg, 2008)
[46] (Spry, 2016)

As a composer engaging in research, I want to make evocative texts using "showing"[47], techniques which will be designed to bring the reader into thoughts, emotions and actions in order to "experience an experience."[48] However, telling my story provides some distance from the events described.

Using a narrative autoethnographic approach allows me to document the experiences I consider important, not only to my life as an artist, but also to my compositional career. Still, using an autoethnographic approach allows me to review those life experiences and compositional experiences from a different perspective, creating a critical commentary about what I have lived and what I have composed.

"The 'crisis of confidence' inspired by postmodernism in the 1980's introduced new and abundant opportunities to reform social science and reconceive the objectives and forms of social science inquiry."[49] Subsequently, autoethnography had been codified when *"*scholars began illustrating how the 'facts' and 'truths' scientists 'found' were inextricably tied to the vocabularies and paradigms the scientists used to represent them.*"*[50] In the United Kingdom (also in Portugal) there is a conventional way of describing composers' activities and research. Composing might rely on research, as for example: "how do I make an orchestra sound like a bell? How do I electronically sustain a note from an instrument so that it doesn't sound mechanical? What is the best way to notate microtones or complex rhythms so that they can be accurately played?"[51] However, these are techniques, these could be ways of engaging with another composers work or a way of creating mechanisms in the process of composing. None of these is the composition of music itself. John Croft in his article *Composition is Not Research*, draws a parallel between composition as research and composition as non-research activity: "research *describes* the world; composition *adds* something *to* the world. Research, at least of the scientific kind to which musical composition is generally assimilated, aims to produce *generalisable* results; the significance of a piece of music lies, on the contrary, in its particularity."[52] Although Croft insists composition is not research, composition is also not

[47] (Ellis et al., 2010)
[48] (Ellis et al., 2010)
[49] (Ellis et al., 2010)
[50] (Ellis et al., 2010)
[51] (Croft, 2015)
[52] (Croft, 2015)

a perfect science. Composition can be research if one identifies the gap between the process of composing and the composition that is the result of that process. This gap can of course be considered as a non-research-driven composition process, because inspirations, intuition and visits to ‘the library of musical knowledge’ are inescapable. It is simply not possible to compose without these elements as composing always involves collaborative engagement with others.

Having outlined a narrative autoethnographic approach as a means of creating my methodology, I will now connect what was documented in my blog with my subsequent analytical commentaries, reviewing the compositional process at a larger stage.

Composing myself I

Before I introduce the compositions that make up this portfolio, it is important to mention that there was a period at the start of the project before I landed on exactly what I wanted to develop technically during this journey. This only came after composing two different pieces: *Sonata for violin and piano* (2017)[53] and *Colours (in circles)*[54]. Each represents an extreme approach, one in a fully intuitive direction, the other in a fully sketched direction. Both helped me to narrow this research in the way that subsequent pieces were then conceived and composed.

Sonata for violin and piano, was an attempt to demonstrate that everything can be thematic and that any individual musical object is made up of, for that one piece, the reaction of different organic elements that are all responding, changing and melding; they are specific to that piece. These organic elements, their reaction, changes and their instabilities go back to intuition again. Individual intuition, quite mysteriously, finds the energy of all these elements and that is where the consistency of a movement comes from. It was through the process of composing this work that I realised that there was "a lack of sketching and a need for a deeper understanding around the potential and quality of my musical material."[55]

Even though I was satisfied with the result of the *Sonata,* I became fully aware that the second movement was overwritten and there was no connection between all the different parts of this section. Although I found it a struggle — because I was doing something unfamilliar — I tried to sketch all my materials at first, transposing them and understanding how they could work, taking advantage of them as much as I could. I was selecting what was really important and what was, for me in that moment, good material.

In contrast, *Colours (in circles),* was an extreme attempt to sketch as much as I could before even drawing a treble clef on the stave. Although I do not consider that it could be a work for live performance (except perhaps in a future revision), this work is a flag not only in my development as a composer, but also in my research. This specific case can

[53] Check Appendix page 1 to 9
[54] Check Appendix page 9 to 26
[55] (Davis, 2017c)

be seen as an example of how blogging can become an integral part of the composition process. After watching the video discussed above,[56] I was very interested in what Collier, Levy, Russell and Coleman were suggesting, so I made notes from it. Months later, in my attempt to sketch, I realised the importance of the circle of fifths in my work. At the same time that I was blogging, I was experimenting with new ways of transposing my chords. Thus, this engagement with blogging, sketching and composing became an important part of my methodology, not only as a way of documenting my composition process, but also as a discrete facet of my creative approach. Both *Sonata for violin and piano* and *Colours (in circles)* narrowed the direction for the following compositions.

This research seeks not only to focus on the process of sketching, but also to consider the final result. On the one hand, I consider *Colours (in circles)* a piece in which I accomplished some of the aims of this research project, in for example sketching, blogging, thinking more about my materials and engaging more with them. On the other hand, I have also looked through different windows, which allowed me to absorb different types of art, such as installations or paintings. Engaging with the different devices I collected in my toolbox permitted me to work around the difficulties I encountered during the process. I realised that working around these difficulties and finding solutions for them was where I felt more inspired and inside the composition environment.

What I was not expecting, though, was that at the end of it, I would have to make a revision of the piece. Through my attempts at sketching up to this point, I had not yet learned that not everything composers sketch must find their way into the finished piece. Composers cannot keep everything – it leads to too much chaos. *Colours (in circles)* is an extremely difficult piece because of the excess of information written in it. For this reason, I do not consider that this marimba and string quintet work should be included in my portfolio as one of the submitted projects; however, I consider it an important staging point that should be mentioned.[57]

[56] See page 20.
[57] See Appendix

Colours (in circles) brought a variety of skills and knowledge to my research project in terms of developing material, engaging with ideas, or establishing a compositional context.

Colours (here in) **(2018)** was commissioned by the ACJC Choir. This commission happened after a hosting experience in one of their tours to London. For three days I was their host in the city, helping them with rehearsals, travelling, food and other experiences. The purpose of this commission was to celebrate a new friendship between myself and the choir, and to celebrate their annual anniversary. It was an online collaborative project that ended with its premiere in Esplanade Concert Hall, Singapore. This work not only started with the idea of exploring and experimenting with new techniques and different approaches to the methods I had been engaging with, but also was an attempt to respond to my first and second research questions.

> In *A Theory of Harmony* by Ernst Levy, I read that all harmony can exist in any chord and any chord has an opposite pole. So, in a hypothetical way, if the harmonic series work as a chord, it must have an opposite pole[58]

Every piece is different and its function or process of being constructed differs from others. Before knowing the text I would be using, I decided to start with the harmony. Inverting the harmonic series was a new approach to start creating and controlling my own harmony. With the help of Open Music, I created a patch (Image 9) that allowed me, in an effective way, to construct the harmonic series, starting from any fundamental (Image 10).

[58] (Davis, 2017b)

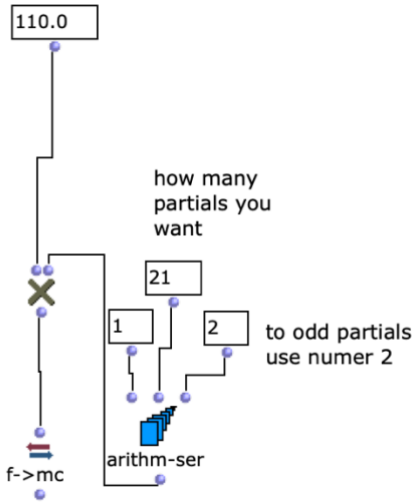


Image 9 - Open Music patch - harmonic series original

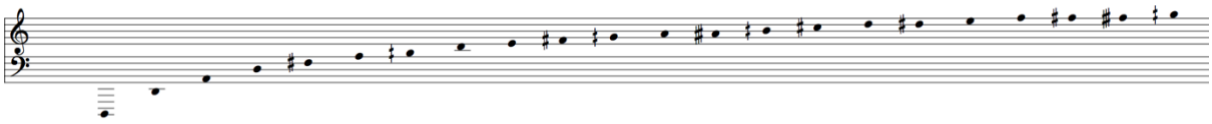


Image 10 - Open Music - Original harmonic series in D
(the example is presented with the automatic pitch spelling by Open Music)

To create an exact model of the harmonic series, I used a simple converter, also in Open Music, which allowed me to convert the pitch of one note into Hertz (Image 11). The opposite pole is made by intervals but also mathematical calculation.

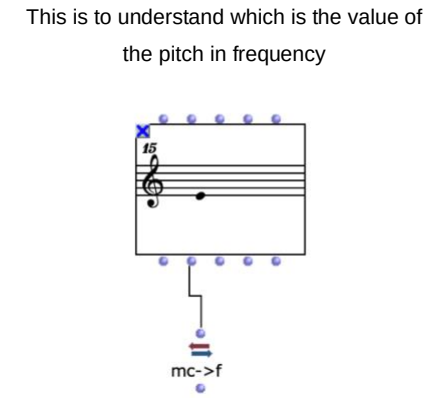


Image 11 - Open Music patch - pitch to Hertz

My blog post from the time states:

> Therefore, for the harmonic series positive pole, the formula – to know perfectly each partial – is **Y x Hz,** so: 1st partial = 1 x 36.71Hz (D^0=36.71Hz); 2nd partial = 2 x 36.71Hz); 3rd partial = 3 x 36.71Hz; etc. For the harmonic series negative pole (opposite pole), the formula is **Hz ÷ Y** [Image 12], so: 1st partial = 881.04Hz (A^5=881.04)[59]; 2nd partial = 881.04 ÷ 2; 3rd partial = 881.04Hz ÷ 3; etc. [Image 13][60]

[59] At this time, to calculate the negative pole (opposite pole) of the harmonic series, I was using the 5th of the original fundamental, transposed in a high register, as the starting point.
[60] (Davis, 2017a)

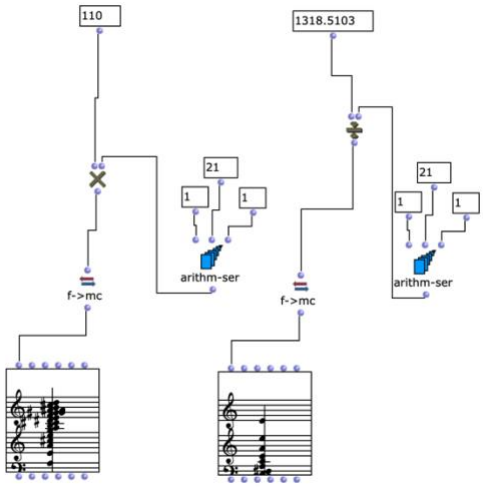


Image 12 - Open Music patch - harmonic series original plus harmonic series opposite

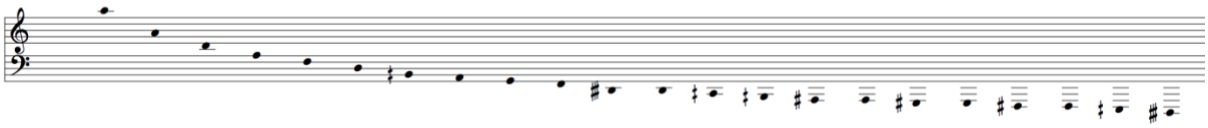


Image 13 - Open Music - Opposite harmonic series of D (starting on the 5th, in a high register) – the example is presented with the automatic pitch spelling by Open Music

To build the harmonic ecosystem of *Colours (here in)*, I had to use the process of creating harmony demonstrated in Image 9, 11 and 12. However, this process can only be done after having chords and/or their own fundamentals. To do this, I had to improvise at the piano. After hours playing random notes, chords, melodies and/or other composers' pieces I arrived at three chords that I thought were suitable for what I was looking for (Image 14).

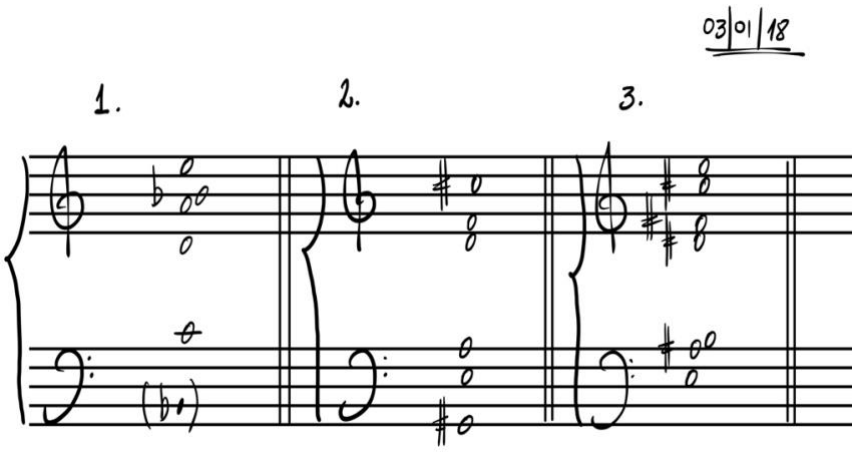


Image 14 - Colours (here in) - piano improvisation and sketches

After identifying the chords, the process of construction began.

Chord 1 and chord 2 were taken from the harmonic series in B-flat. The partials for chord 1 are: 9th partial (transposed octave down); 10th partial (transposed octave down); 15th partial (transposed octave down); 16th partial (transposed octave down) and 22nd partial (transposed octave down) [Image 15 and 16][61]

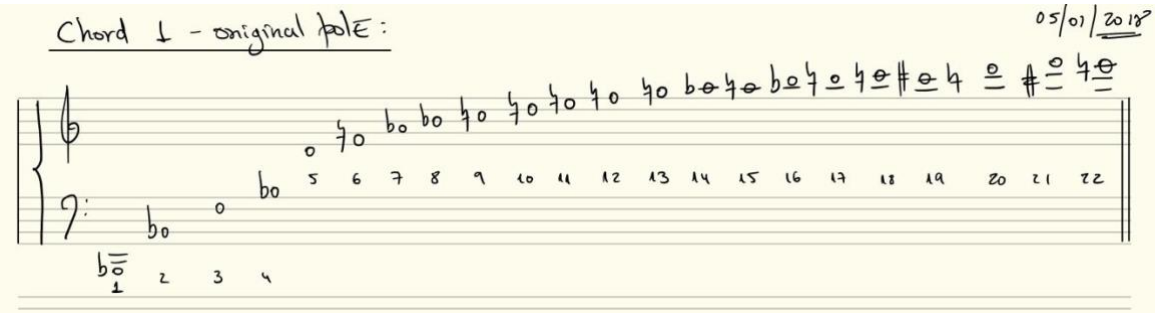


Image 15 - Colours (here in) - Harmonic Series in B-flat, base for chord 1 and chord 2

61 (Davis, 2018f)

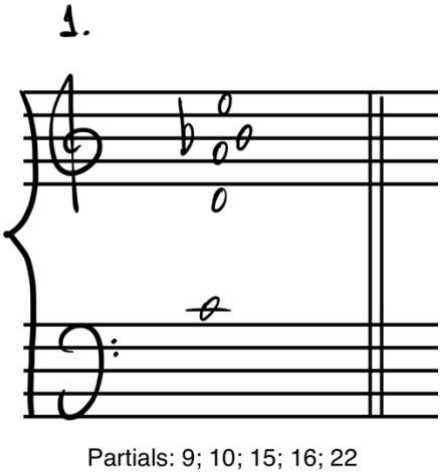


Image 16 - Colours (here in) - partials of chord 1
(All partials are transposed an octave down.)

The partials for chord 2 are: 7th partial (transposed octave down); 22nd partial (transposed octave down); 15th partial (transposed octave down); 5th partial; 6th partial; and 19th partial (transposed octave down) [Image 17][62]

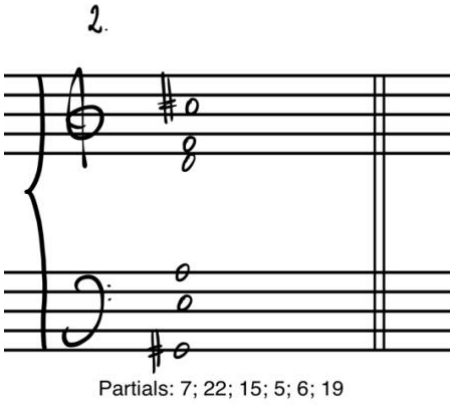


Image 17 - Colours (here in) - partials of chord 2
(All partials are transposed an octave down.)

62 (Davis, 2018f)

For chord 3, the harmonic series is in B-natural and its partials are: 21st partial (transposed three octaves down); 15th partial (transposed two octaves down); 4th partial; 5th partial; 6th partial; 9th partial and 21st partial (transposed octave down) [Images 18 and 19][63]

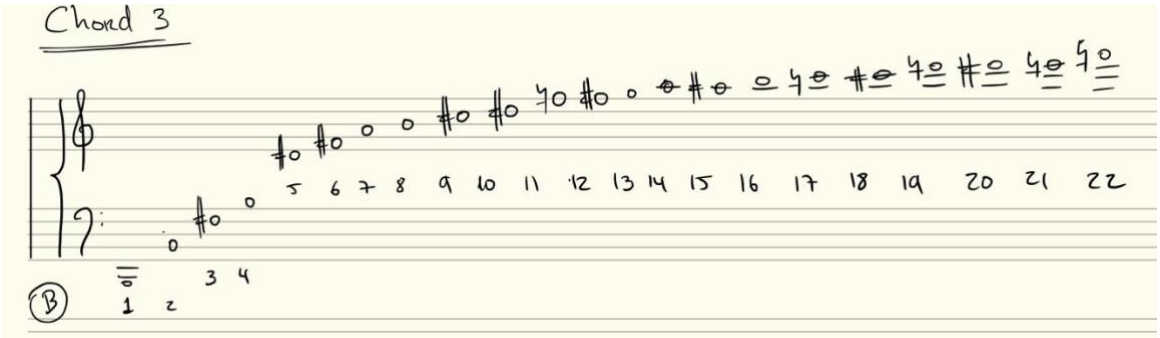


Image 18 - Colours (here in) - chord 3 harmonic series in B-nat

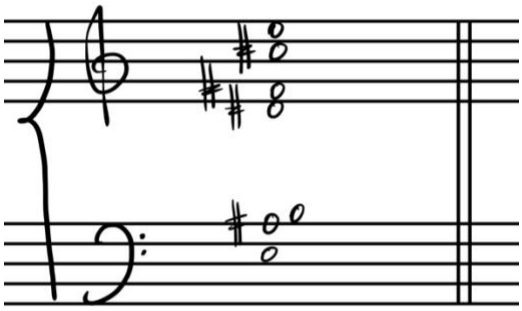


Image 19 - Colours (here in) - chord 3 partials (partial 21 appears transposed both one octave and three octaves down, and partial 15 appears transposed two octaves down)

At the time, I was trying to combine the mathematical part of creating harmony with the intuitive part of it (improvising, wrong notes when improvising and hearing critically). After identifying the harmonic series of my chords, I spent a few days trying to understand the sonic capacities of them by playing inversions and changing their partials' octaves at the

63 (Davis, 2018f)

piano. Through this, I ended up with different inversions of chords 1 and 2 (Image 20 and 21)[64]

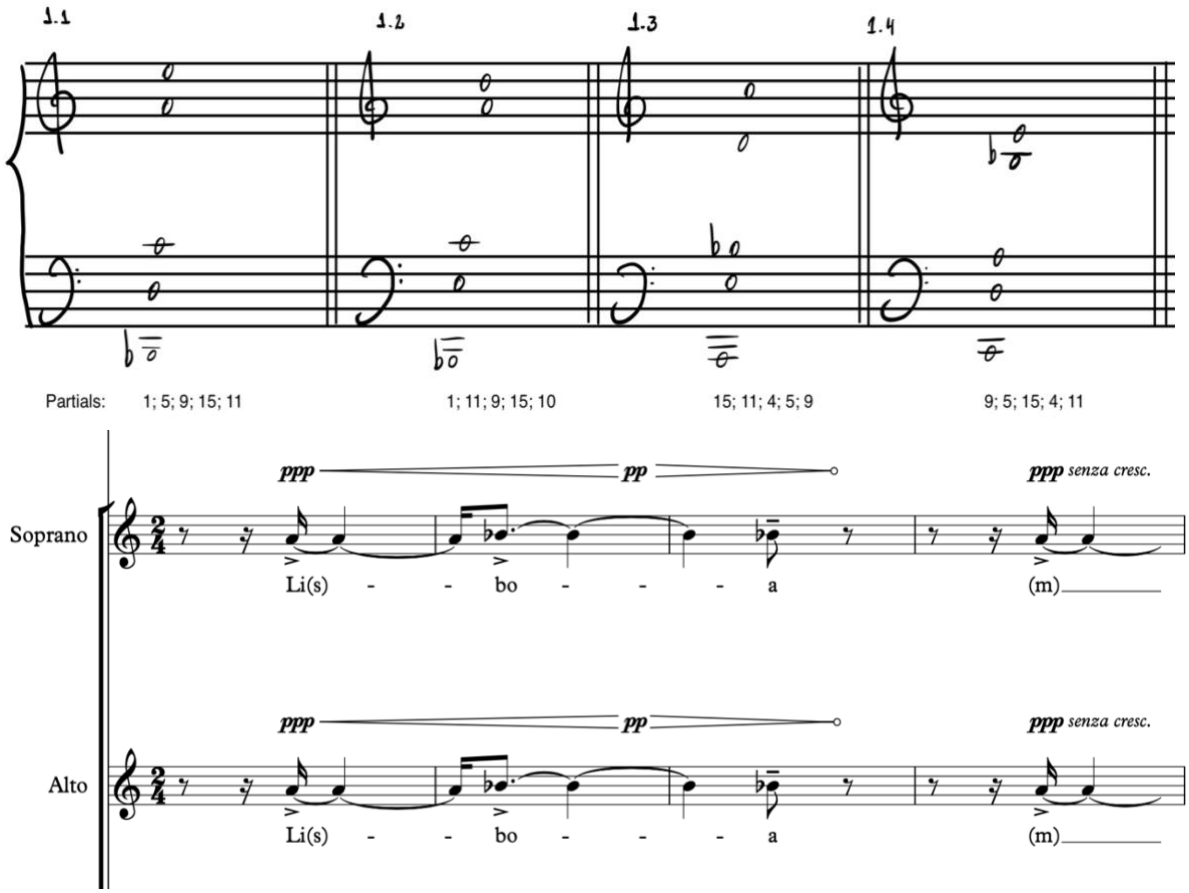


Image 20 - Colours (here in) – possible inversions for chord 1 using partials from the harmonic series. The chord progression is maintained, however the chord progression appears as melody and not as a vertical chord - p. 1, bar 1 (in chord 1.1. partials 5, 9 and 15 appear transposed one octave down; in chord 1.2 partials 9 and 15 appear transposed one octave down and partial 11 two octaves down; in chord 1.3 partial 11 appears transposed two octaves down and partial 15 three octaves down; in chord 1.4 partial 5 appears transposed one octave down, partials 11 and 15 appear transposed two octaves down and partial 9 appears transposed three octaves down).

[64] (Davis, 2018f)

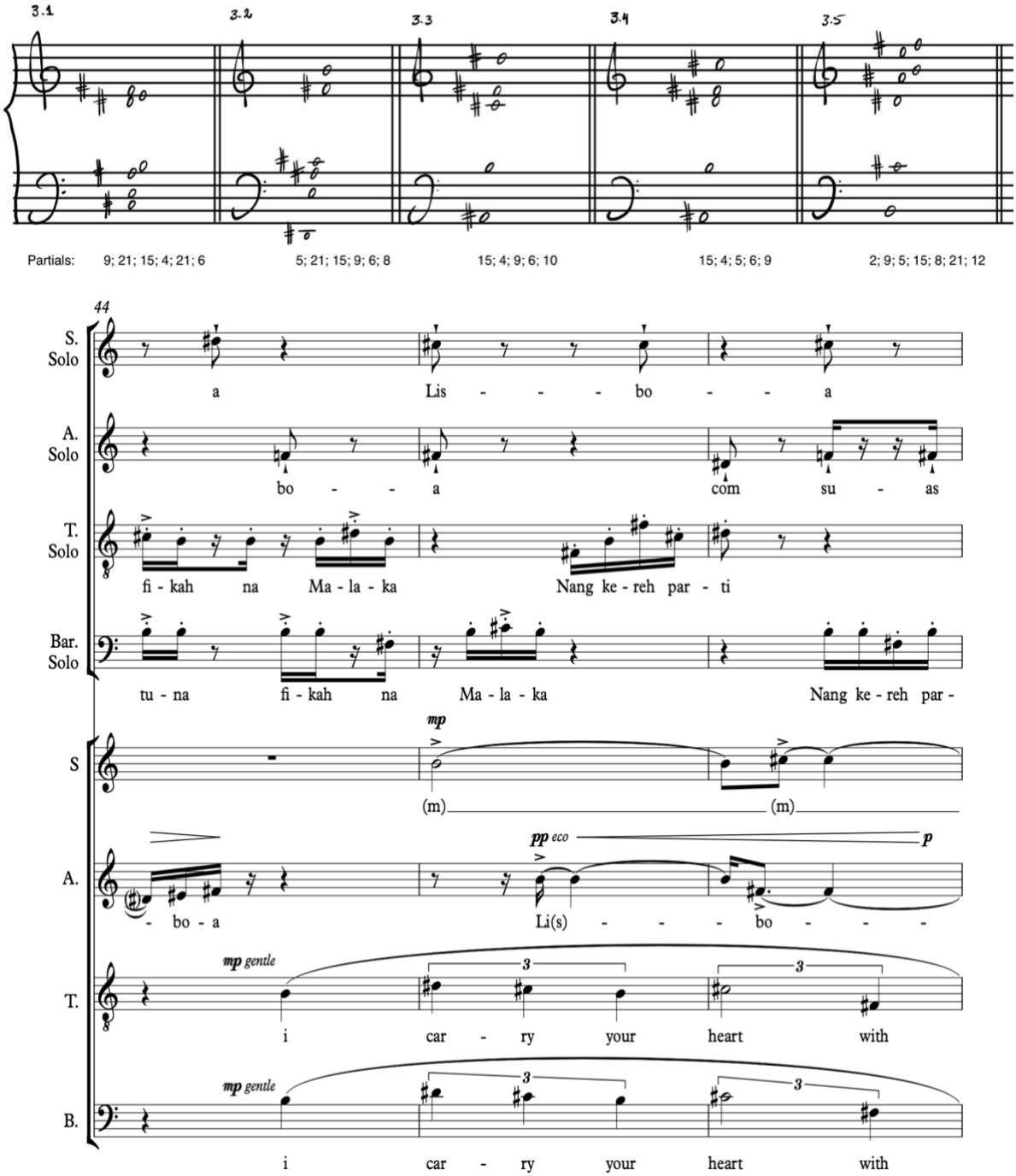


Image 21 - Colours (here in) – The chords shown on the top section of this image are possible inversions for chord 2, using partials from the harmonic series. Because these sequences of chords are inversions from the same chord, there is no variation in the notes but in the pitches. In the score, p. 12, bar 44, I decided to use the chords, and its inversions, as melodies rather than using them as vertical chords. This because I was composing in a melodic way rather than in a choral way for this section. However, in bar 44, in the score section of the image, the note F-nat in the Alto Solo, scapes the rule of the harmony, and this is just because I decided to attribute a chromatic short melodic gesture in this section. So the F-nat works as an appoggiatura to the F-sharp that is part of the harmonic schemata. (In chord 3.1 partial 9 and 15 appear transposed two octaves down, and partial 21 appears transposed both two octaves down and one octave down; in chord 3.2 partial 9 appears transposed one octave down, partial 5 and 15 appear transposed two octaves down, and partial 21 appears transposed three octaves down; in chord 3.3. partial 15 appears transposed three octaves down and partial 9 appears transposed one octave down; in chord 3.4 partial 15 appears transposed three octaves down; in chord 3.5 partials 21, 15 and 9 appear transposed one octave down).

After these inversions, the process of transposing using the circle of fifths began, with a similar process used to *Colours (in circles)*. The idea was to create a harmonic journey between chords 1 and 2, going through the chords in between them, and their transpositions and inversions (Image 22).

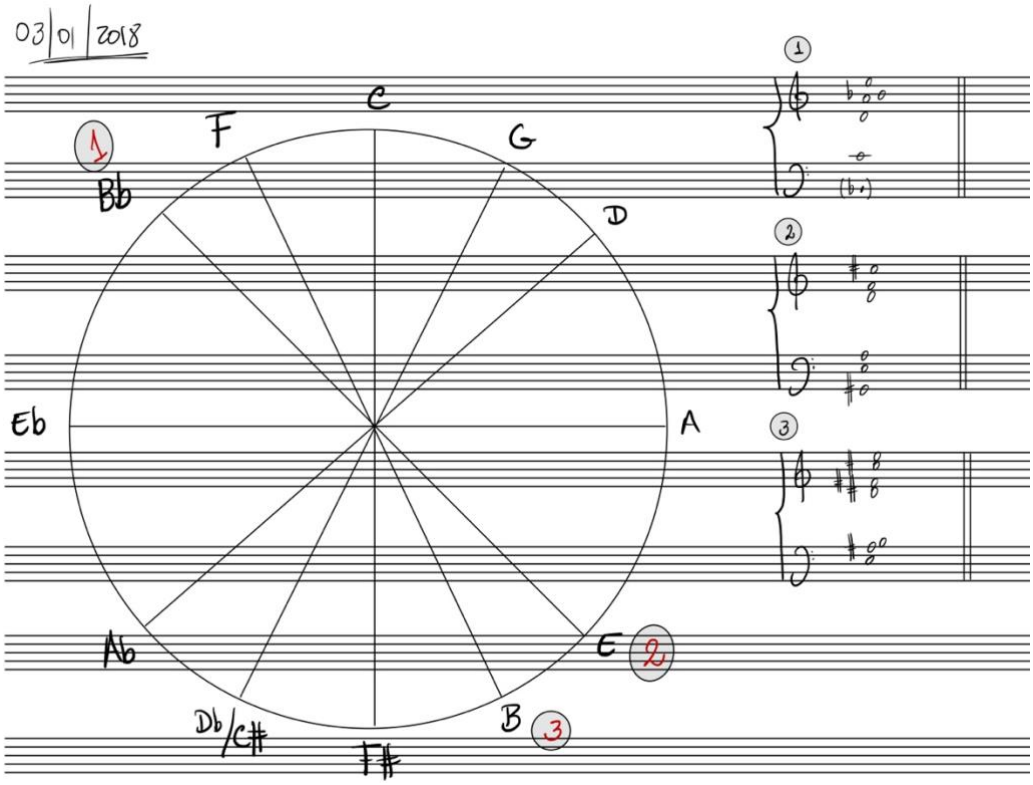


Image 22 - Colours (here in) - chords 1, 2 and 3 in the circle of fifths

The circle of fifths appears as a tool to transpose the chords using the nearest tonalities in the circle of fifths, as for example, A, G, C, or E. Although my source chords were not conceived as belonging explicitly to a diatonic key, nonetheless viewing them through a more explicitly tonal filter, allowed me to explore whether ‘major’ or ‘minor’ transformations might yield interesting results. Establishing a place in the circle of fifths helped me to transpose the chords in a more effective way.

Subsequently, although I had a considerable number of chords to use, I still wanted to engage more with the idea of rotating the polarity of the harmonic series. For that, I created an opposite pole for every chord. The goal was to create as many chords as possible, so I could trace a harmonic journey through them, selecting the ones that suited the best.

This process of constructing harmony can be very confusing. I found myself going forward and backward all the time. In one instance, I was transposing every chord using the circle of fifths, inversions and their opposite poles. Then, after having a vast array of chords, transpositions and inversions, I thought that perhaps I could use the human part of the instruments I was composing for.

> Because a choir is created by human voices, every voice is different and they have different ranges, I thought that maybe I could create a sonic variety linking all the partials of the different harmonic series that may result from different fundamentals. I took the lower note of each section (sopranos, altos, tenors and basses) and constructed a harmonic series with each lower note as a fundamental. For basses and tenors, the fundamental was E-natural; and for altos and sopranos, the fundamental was G-natural [Image 23 and 24][65]

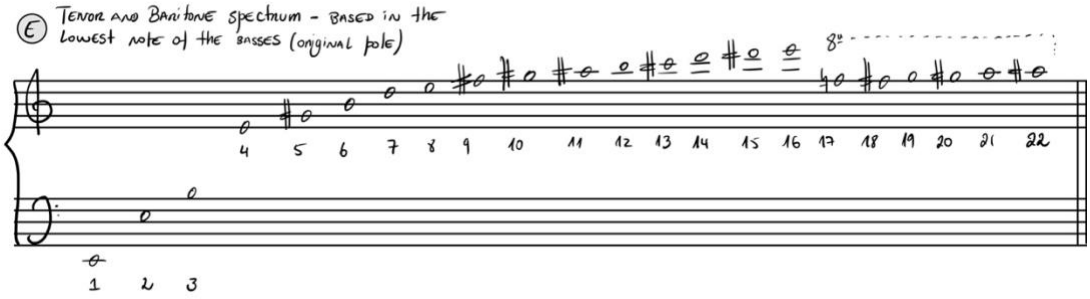


Image 23 - Colours (here in) - harmonic series based in the lower note of basses and tenors

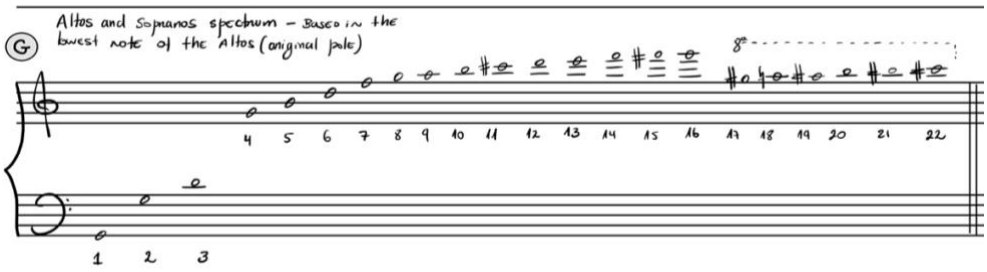


Image 24 - Colours (here in) - harmonic series based in the lower note of altos and sopranos

[65] (Davis, 2018f)

This process of constructing the harmony of this piece, had some intuition in it, because all chords were originally created by playing and improvising at the piano. Nonetheless, constructing these chords, their transpositions and inversions is a mathematical process.

After finishing, and having more than fifty chords, I decided to start to look for texts and poems. I considered using *How happy is the little stone* by Emily Dickinson, but then I started thinking about the connection between myself and that poem; or what was the connection between that poem and the relationship I had built with the choir?

[Kristang Popular anonymous author- original]	[English translation]
"Keng teng fortuna filha na Malaka, Nang keren partih bai otru tera. Para ki tudu jenti teng amizadi, Kontu partih logu fikah saudai. Oh Malaka, tera di San Francisku. Oh Malaka undi teng sempri fresku,	"Who is lucky stays in Malacca, Doesn't want to go to another land. In here everyone has friendship, When one leaves soon has saudade. Oh Malacca, land of Saint Francis. Oh Malacca, where there's always freshness,
[Alvaro de Campos – Lisboa com suas casas de várias cores]	[Alvaro de Campos – Lisbon with its houses of various colours – English translation]
"Lisboa com suas casas De várias cores. Lisboa com suas casas De várias cores Lisboa com suas casas De várias cores…	"Lisbon with its houses Of various colours. Lisbon with its houses Of various colours. Lisbon with its houses

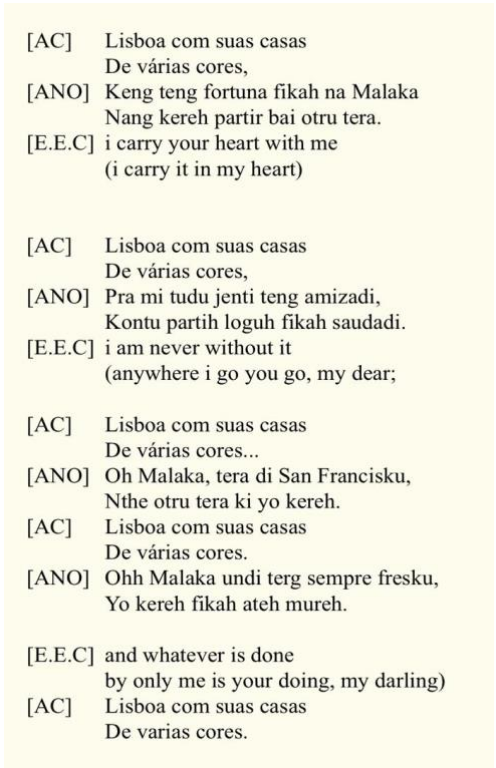
Image 25 - Colours (here in) text

After some research, I found a Portuguese dialect in Malacca called Kristang. Malacca is a small region in the south west coast of Malaysia. When I started to look at the history of Singapore, I also realised that Singapore was previously part of Malaysia, and although there is a rivalry between Malaysia and Singapore, the choir has good connections with Malacca. Having found this valuable information, it made me think that the purpose of the text for this annual anniversary concert could be the connection between myself, a

Portuguese composer, and a choir that keeps a connection with one Portuguese colony in Asia. But which poem to choose?

> As soon as I discovered this [Kristang dialect], I had another idea for my choral piece. I remembered Alvaro de Campos' poem *Lisbon with its houses of various colours.* So, I decided to link a poem in Portuguese about Lisbon with a poem in Kristang from Malacca [Image 25].[66]

But then, the narrative of the poem seemed strange, and I started thinking again that maybe I needed a connection between these two poems. In a way, I was also looking for a relation between myself, a Portuguese composer, with the English language. After only a few days of looking and reading English writers, I found E.E. Cummings's *I carry your heart with me* (1952), and thought: "I found it."[67] I could not use the whole poem, but I used a small part of it to build the bridge between the two continents. Then, I created a structure blending the three poems in one single narrative (Image 26).



[AC] Lisboa com suas casas
De várias cores,
[ANO] Keng teng fortuna fikah na Malaka
Nang kereh partir bai otru tera.
[E.E.C] i carry your heart with me
(i carry it in my heart)

[AC] Lisboa com suas casas
De várias cores,
[ANO] Pra mi tudu jenti teng amizadi,
Kontu partih loguh fikah saudadi.
[E.E.C] i am never without it
(anywhere i go you go, my dear;

[AC] Lisboa com suas casas
De várias cores...
[ANO] Oh Malaka, tera di San Francisku,
Nthe otru tera ki yo kereh.
[AC] Lisboa com suas casas
De várias cores.
[ANO] Ohh Malaka undi terg sempre fresku,
Yo kereh fikah ateh mureh.

[E.E.C] and whatever is done
by only me is your doing, my darling)
[AC] Lisboa com suas casas
De varias cores.

Image 26 - Colours (here in) - Campos, Cummings and Anonymous all together

[66] (Davis, 2018h)
[67] (Davis, 2018h)

So far, I had not written a single note, line, melody, counterpoint or accompaniment. I have been just trying to figure out my harmony, harmonic journey, the text and the form of it. But before writing notes, there was another process to be completed:

> After reading the text over and over, I started thinking of the curve of my musical material. What could the shape of it be? I ended up with a map that would guide me through the composition process [Image 27]

Image 27 - Colours (here in) - form of the piece

In the process of composing, I found myself going in different directions from the one I had decided in my sketches. Sometimes, taking these different directions may be a good solution. However, it was not the case:

> After a while, I decided that maybe I should follow my own rules. I deleted some sections that were overwritten, especially those sections that did not correspond to my previous plan. For example: importance of the words, setting Kristang dialect in the choir at the same time that the soprano and

> alto solo were singing in Portuguese. Also, I decided in my sketches that the choir will not sing Kristang, and I was not respecting that rule.[68]

I strongly believe that a composer never finishes a composition. S/he is always composing, learning, listening, self-criticising him/herself and his/her own work. All alterations that are made at the rehearsals, after the premiere and even after future concerts are still part of the creative process.

> *Colours (here in)* was not different. On the first rehearsal, the choir made the piece from the beginning until the end without stopping. It was good and they were doing exactly what was in the score. However, there were some issues that I wanted to amend.[69]

When I started to think about *Colours (here in)*, I wanted to engage not only with the act of writing for voices, but also with the personal and impersonal setting characteristics. Sometimes we feel connected with some poems and sometimes, even though we recognise their value, we do not feel a visceral connection with them, and that is perfectly fine. For this piece I felt strongly connected with Alvaro de Campos' poem, and although I recognise the value and the importance of E.E. Cummings and the anonymous Kristang poem, especially in this piece, I thought that they would come across as impersonal because I felt that the tone of the text would be harder to convey with a choir. Therefore, I asked myself 'how do I set something that is personal for choir?' I ended up realising that is very complicated, and perhaps, at least for me, impossible. For that reason, I decided to use the structure of the choir differently, using a quartet of soloists to sing the Campos' poem and using the choir to sing Cummings and the anonymous poet from Malacca. These alterations made the difference between personal and impersonal more evident, but also it never changed the message or the shape of the music itself.

[68] (Davis, 2018h)
[69] (Davis, 2018b)

Colours (closing in) **(2018)** was commissioned to be part of a documentary about guitarist and composer António Lauro. The idea was to involve the guitar, not as a soloist, but as part of a chamber music group, in which the musical material would be inspired by Antonio Lauro's work. It is the third *Colours* I composed on the journey of my research and it tries to celebrate not only António Lauro's work, but also the collaboration with the performers. This piece marks a very important new way of composing for me as it was in *Colours (closing in)* that I started to acknowledge the third research question (see page 30). Before, I would think that collaboration was to ask: can you play this? Can you play that? But after *Colours (closing in)* I knew it was more than that. It is more about absorbing the sensibility of the performer, trying to understand why they might want this piece to be written; and to understand the purpose of this new work for them. Obviously, once the piece is written and other people have played it, they will inhabit the music in a different way.

As *Colours (closing in)* is the final trilogy of *Colours,* its harmonic construction worked the same way as it worked in previous *Colours:* improvising at the piano, finding some chords, identifying those chords in the harmonic series, transposing them, inverting them and changing their poles. However, within this process, I wanted to explore other techniques in order to differentiate distinct polarities. Analysing a harmonic series in SPEAR, acoustically the lowest partials are always more present than the highest partials. So, I wanted to respect, in both polarities of the harmonic series, their differences in dynamics, as for example, *"fff"* in the lowest partials (Image 28) and *"ppp"* in the highest partials (Image 29). On the other hand, I wanted to use a specific tempo every time I had chords that belonged to the original harmonic series, namely crotchet = 72, quaver = 144, and dotted-crotchet = 48 (Image 30); and use a different tempo every time I had a chord that belonged to the opposite harmonic series, namely crotchet = 60, quaver = 120, and dotted-crotchet = 40 (Image 31).

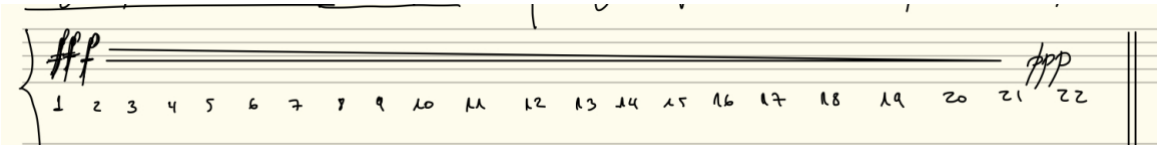


Image 28 - Colours (closing in) - sketches: dynamics, "fff" for low partials and "ppp" for high partials

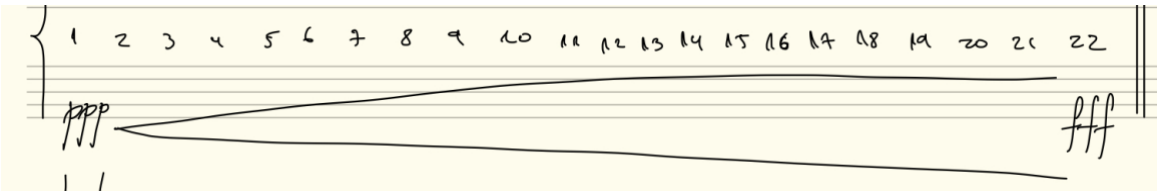


Image 29 - Colours (closing in) - sketches: dynamics, "fff" for low partials and "ppp" for high partials

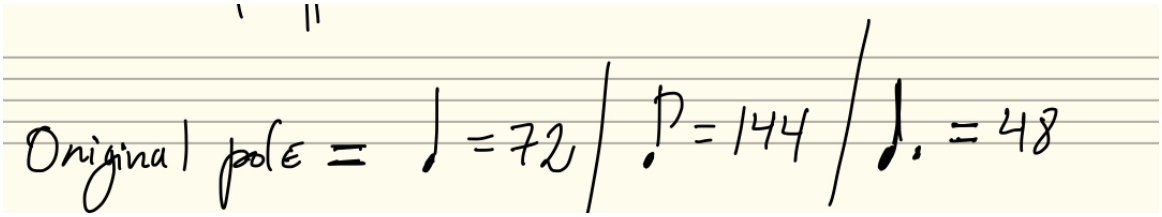


Image 30 - Colours (closing in) - sketches: tempo for chord in the original pole

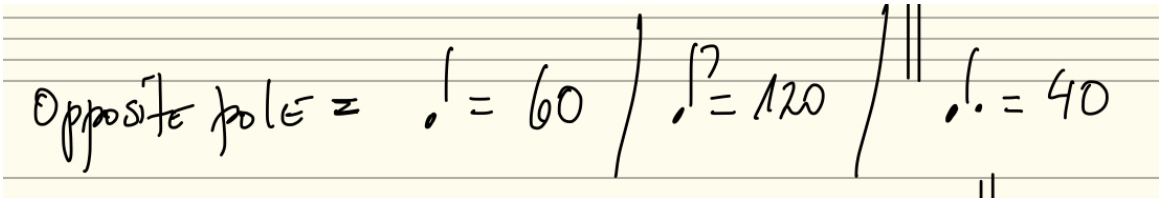


Image 31 - Colours (closing in) - sketches: tempo for chord in the opposite pole

As the concept behind this piece was something to do with tempo and dynamics, I spent an afternoon with the guitarist exploring the duration of a sound on an open string,

fingered string, in different dynamics and with different articulations. I ended up with different durations, in different dynamics and on different notes, as expected (Image 32).

Options	Position on the Guitar	Note	Dynamic	Time total (attack + resonance + decay)
A	fretted	B2	**fff**	00:12'00''
B	fretted	C#3	**fff**	00:04'82''
C	Open string	G2	**ppp**	00:05'92''
D	Open string	G2	**fff**	00:09'00''
E	fretted	A#3	**mf**	00:05'53''
F	fretted	D#4	**f**	00:04'55''
G	fretted	E	**mf**	00:05'15''

Image 32 - Colours (closing in) - sketches: experimentations dynamics and tempo

> All these were made to try to control the sound that a specific chord can have when orchestrated for the string quartet. All these can guide me to nothing, but it's good to have all these materials in case I need them.[70]

Rhythm, was also explored in the shadow of the improvisation, creating rhythm modifications in semiquavers, triplets and quavers. I wanted to create patterns in groups of 4 semiquavers, in which the 4th of them would be accented; patterns in groups of 3 + 4 + 4 semiquavers, in which the 3rd and the 4th semiquavers would be accented; and in a group of six semiquavers, in which the 6th of them would be accented. The same process was applied with triplets, quavers and dotted quavers (Image 33).

[70] (Davis, 2018d)

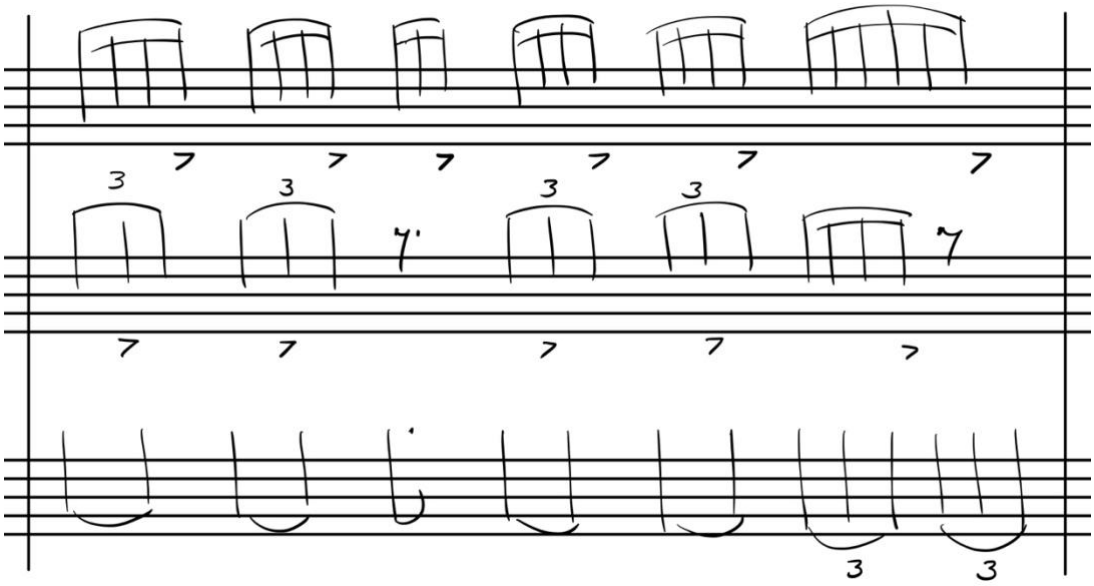


Image 33 - Colours (closing in) - sketches: rhythm modifications

The following weeks served as a way of linking my harmonic material with these rhythmic patterns and using GarageBand to create a melodic gesture (Image 34)

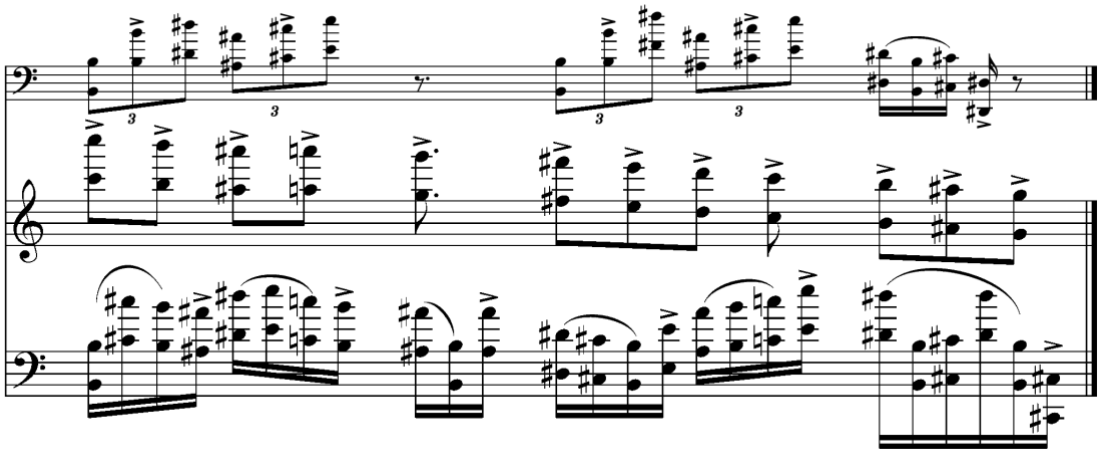


Image 34 - Colours (here in) - sketches: harmony and rhythm - experiences

As mentioned before, when composing, the composer lives in a state of doubt. Composers can be working on something for one, two, three, more months and, whatever the work is, it can come alive and die many times. Progress can happen in a day, or in a week, or in a morning; but not without the time spent waiting, and processing in the background.[71]

> I stopped sketching my guitar and string quartet piece because I had rehearsals, premieres and an important document to finish. So, only after having finished all these, I was able to start working on this piece again.
>
> Reading the previous pages of this blog, I realised that some of the material is weird, and I am not confident about it. For example, from "Decisions", I feel that I have no explanation for using a specific dynamic for each partial of the harmonic series. Also, I have no justification for using a specific metronome mark for each harmonic pole (original and opposite). On the one hand, when I thought about the specific metronome mark, I was just using an idea that I enjoyed from another composer. However, his music is related with video and electronics. So, for this composer, it makes sense using different metronome marks, because the composer needed to relate, combine video, electronics and music. On the other hand, maybe the dynamics make sense because it is acoustically correct. However, I could apply this idea only when using the harmonic series in its crude stage. Does not make any sense applying this in chords that are a mix of different partials played at the same time.[72]

This disagreement with myself and my old thoughts made me question what was the core of my material? How would I be transforming my material? Or even, how would I transpose it? So, I started the sketching process again, selecting, from the material I

[71] "A composer produces work which cannot be felt as a statue, or seen as a picture, or tested for strain and stress as a bridge; it appeals through the ear alone, and is, therefore, more difficult to test for value and soundness; but the canons for art, whether ocular or auricular, are the same in all respects, and cannot be infringed without sooner or later involving disaster to the work and its inventor." (Stanford, 1911)

[72] (Davis, 2018c)

already had, the ideas that were still alive; and the ideas that had died, I recognised them as part of the process, but I knew they would not be included.

The first step was to create a melodic line, combining notes from the original and opposite pole chords. The only rule for this was that the last note of the first fragment was the first of the following one (Image 35).

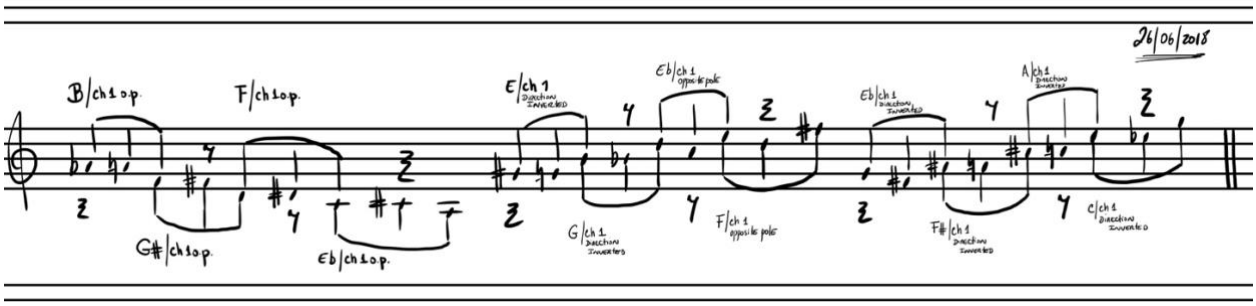


Image 35 - Colours (closing in) - sketches: melodic contour

Then, I started to use the Lydian mode and Collier's ideas to write scales that could be infinite (Image 36).

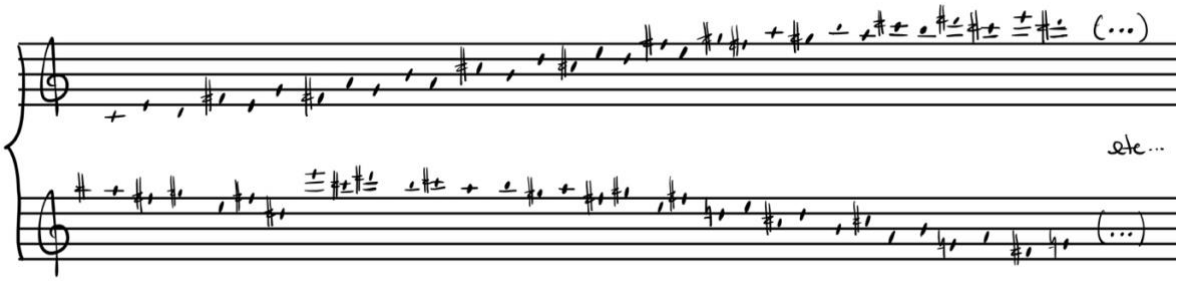


Image 36 - Colours (closing in) - sketches: Lydian, Collier and infinite scales

Within this process, I thought that I could construct an original scale for this piece. In chord 1, for example, after making a scale with the notes of the chord (Image 37) and changing the 4th note (E-natural) to an augmented 4th (E-sharp) I would have not only the possibility of creating a new scale but also the infinity of the Lydian scale I was looking for (Image 38).

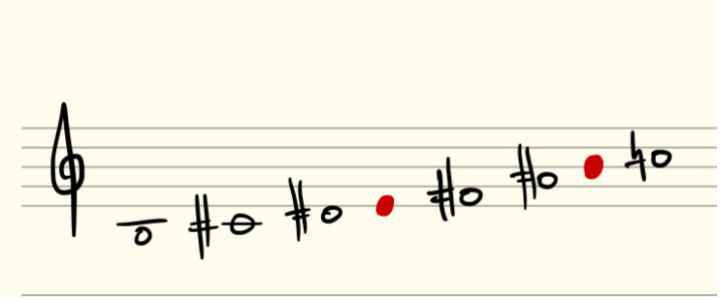
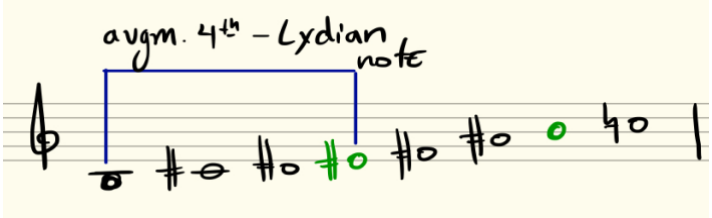


Image 37 - Colours (closing in) - sketches: scale



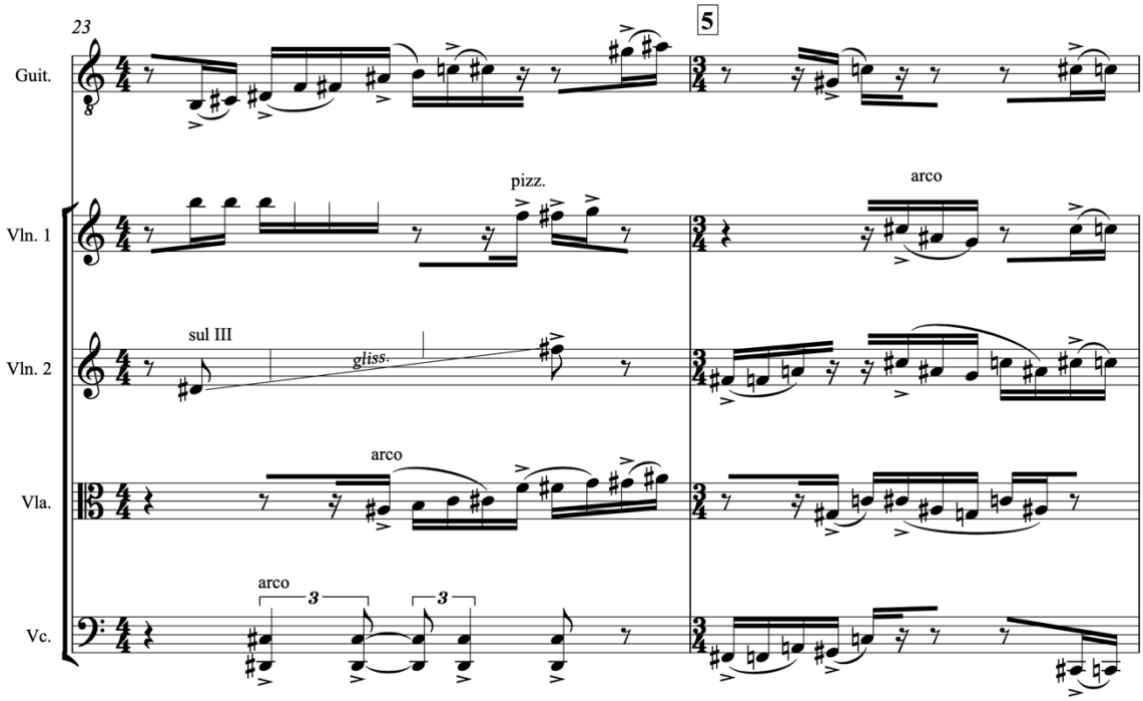
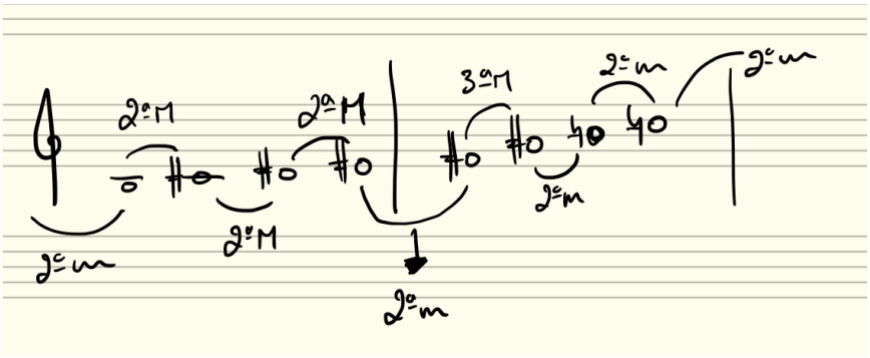


Image 38 - Colours (closing in) - sketches: infinite scale. In the score, page 10, bar 23 it is possible to see part of the scale in the guitar

After creating this scale, I could then create more scales using the same intervals. However, the intervals of the first group of notes were different from the second group. So, to solve this problem I inverted the scales (Image 39, 40 and 41).



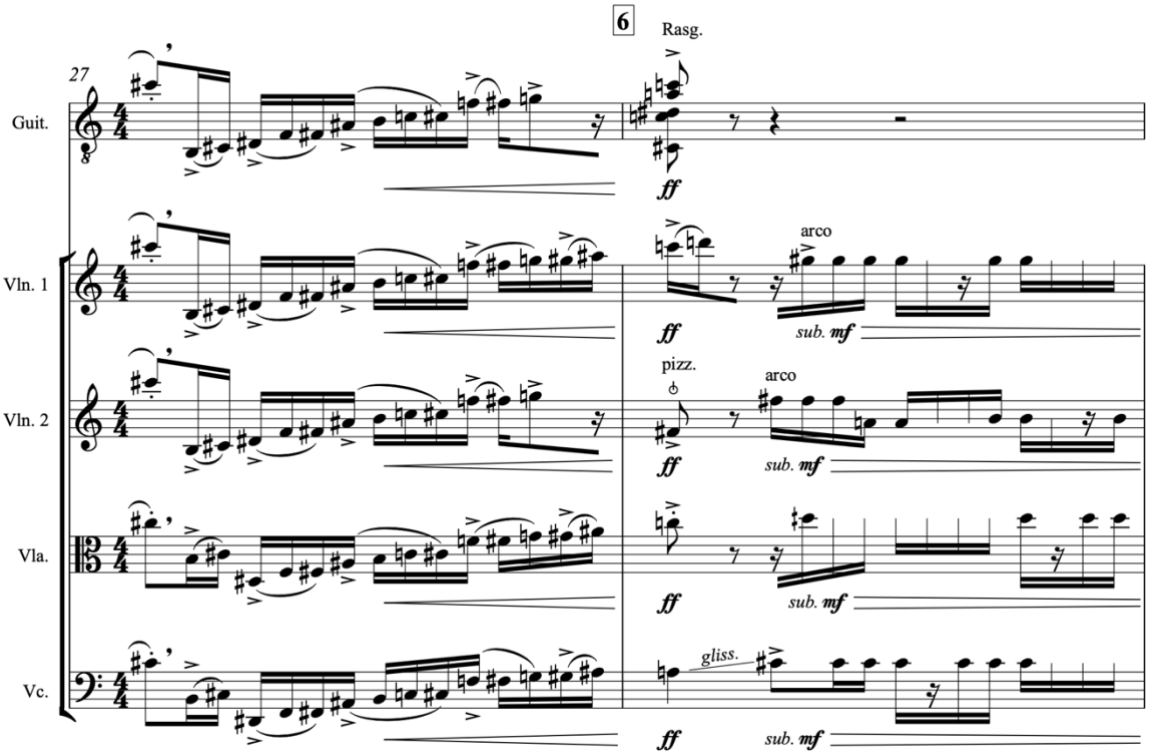


Image 39 - Colours (closing in) - sketches: construction by interval of the scale. In the score, page 11, bar 27 it is possible to see part of the scale in the violoncello.

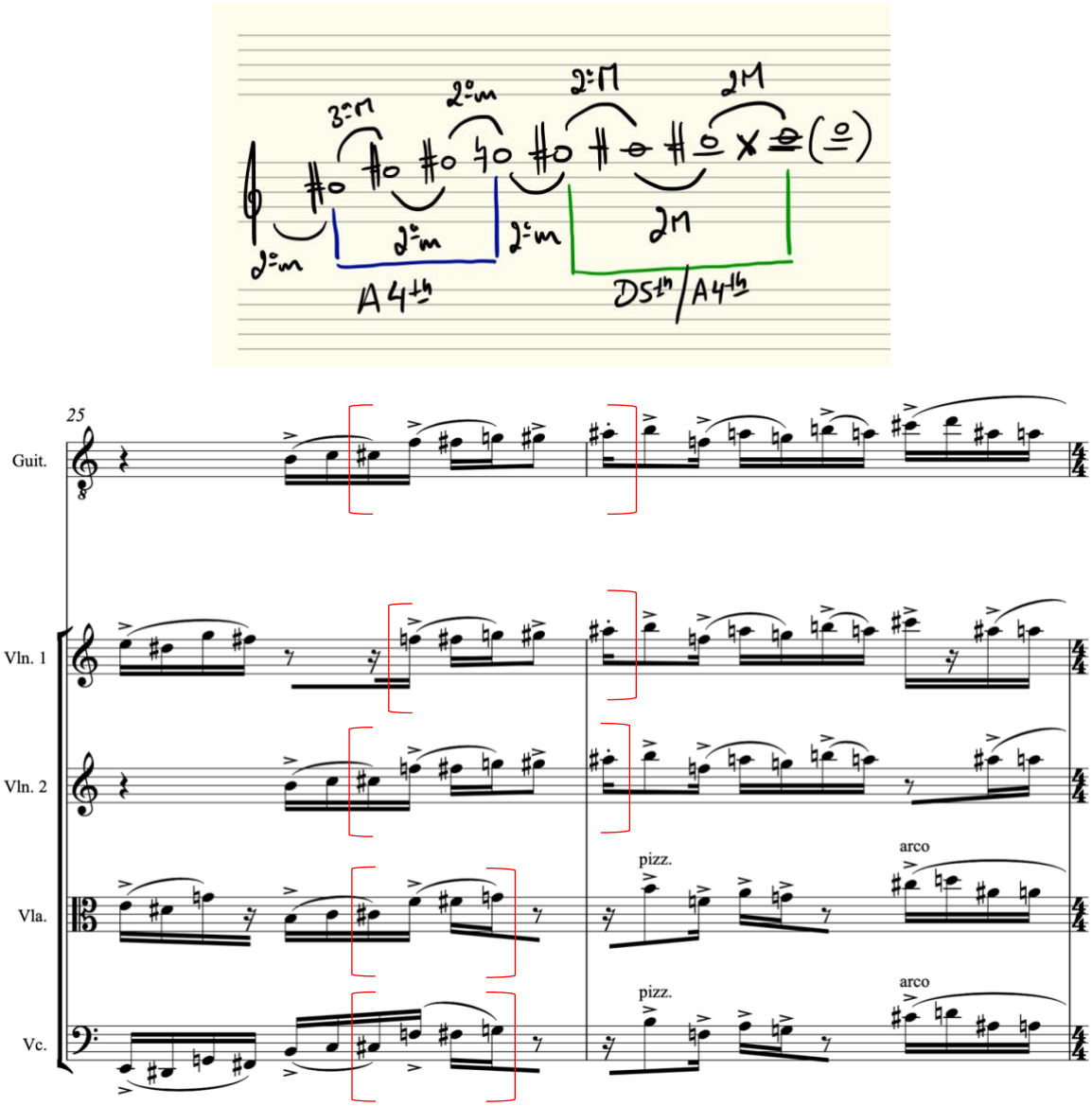


Image 40 - Colours (closing in) - sketches: inverted sequence of the scale. In the score – marked in red brackets – page 11, bar 25 it is possible to see part of the scale. The notes used in this image are a mixture of both original and inverted scales.

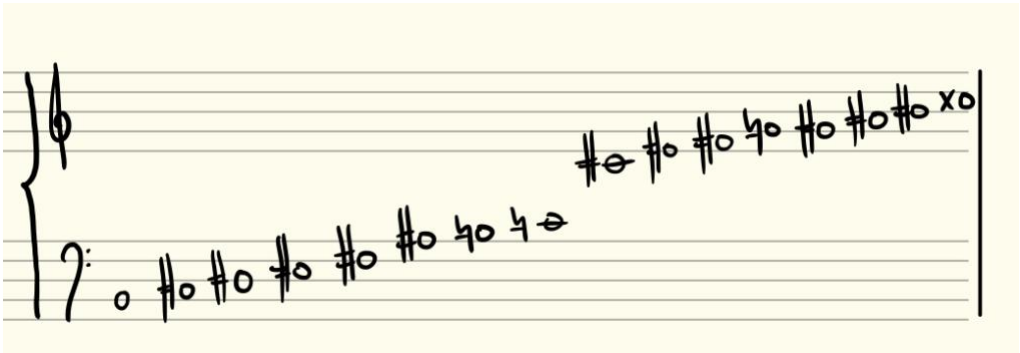


Image 41 - Colours (closing in) - sketches: infinite Lydian scale from chord 1 in B

Another idea that incorporated into this piece, was to use António Lauro's own work as a source of inspiration. His *Venezuelan Waltz no. 2* and *no. 3* were a fount of inspiration. Both waltzes, have three lines working simultaneously: bass, accompaniment and melody (Image 42). Lauro had the distinctive idea of mixing, in a very distinct and accurate way, these three lines as if they were only one, lending the music a Latin rhythmic groove, harmonic transformation and fluency. In parallel, Lauro plays with minor and major chords setting up a parallelism which made me think about the combination of original/opposite pole chords.

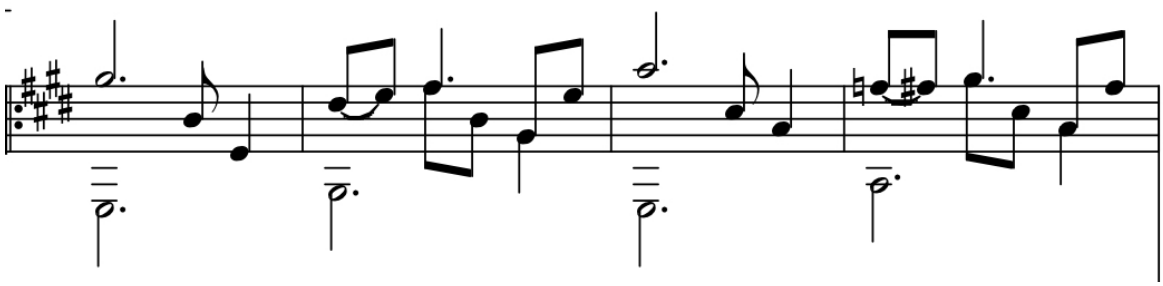


Image 42 - Colours (closing in) – sketches: Antonio Lauro's influence – Walts Venezolano No 3 (1938-1940) Free sheet music library

> Today, I started to create some guitar melodies and accompaniments, using all the material I have sketched so far. I tried to create some musical gestures with my original and opposite pole chords; and also constructing a self-efficient guitar line with melody, accompaniment and bass [Image 43 and 44]. Another idea I had was to create a melody that can be used as a scale to create, transform and change the direction of the harmony [Image 45][73]

[73] (Davis, 2018e)

*What is in Images 43 and 44 are sketches of ideas, inspired in António Lauro's scores. However, it is not possible find the exact ideas in the score. The intention can be found in page 14, bar 38 in the guitar part; or from page 18, bar 56 until bar 58.

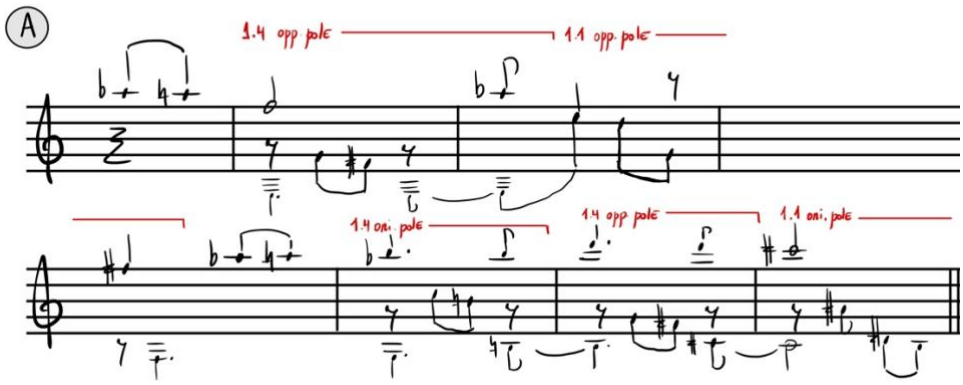


*Image 43 - Colours (closing in) - sketches: self-sufficient guitar line**

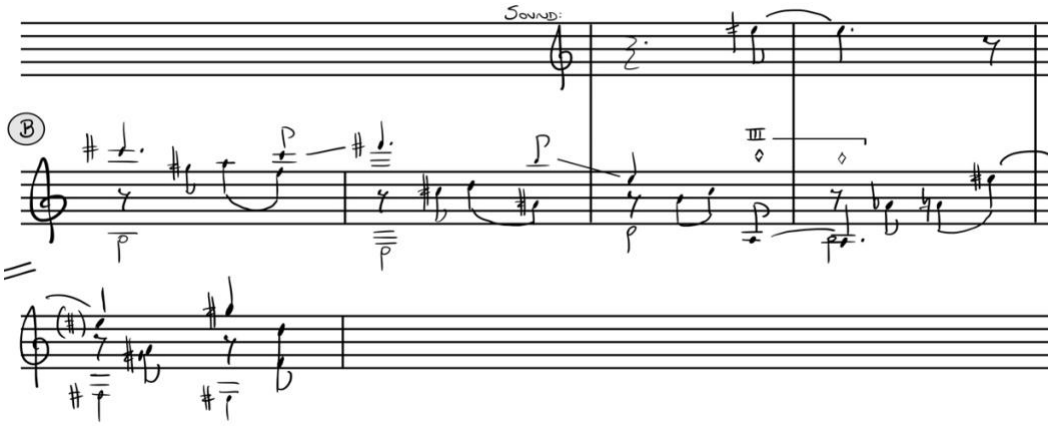


*Image 44 - Colours (closing in) - sketches: self-sufficient guitar line**

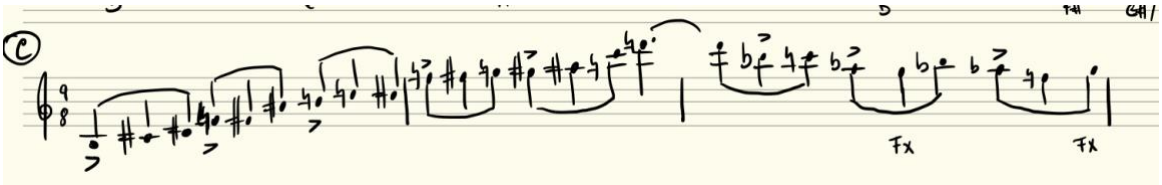


Image 45 - Colours (closing in) - sketches: melodic gesture in form of a scale

In the corridors and shelves of ‘the library of musical knowledge’ the composer might find what s/he thinks is necessary to build whatever s/he is trying to build. However, other shelves might have a different influence and, although the composer may think that it is extra to what s/he is looking for, that extra might become the main subject of the search. *Let me tell you* by Hans Abrahamsen has nothing to do with guitar and string quartet and, aesthetically, it is very far from Lauro’s work. But after having looked at the score, I started to think about how I could transform my harmony from chord to chord in a very organic way without being monotonous. From bar 112, in *Let me tell you,* Abrahamsen uses a descending scale where he explores the notes of one chord in an organic and sustained way without using long notes (Image 46) which makes this section sustained and very lively at the same time.

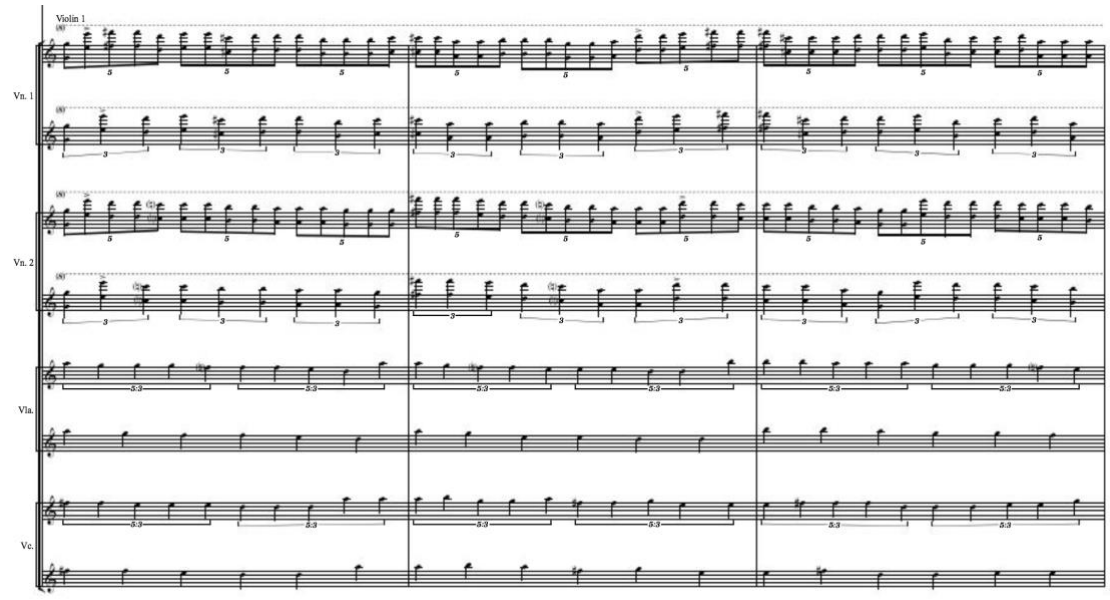


Image 46 - Colours (closing in) - influences: bars 112-114 from Let me tell you (2013) by Hans Abrahamsen – Wilhelm Hansen Editions

Then, *Tempo giusto, quasi meccanico* of *Ends Meet* for marimba and string quartet (2002) by Luís Tinoco, made me think in how I could transform my harmony from chord to chord in a very organic and rhythmic way. In the image below (Image 47), Tinoco repeats the same chord on the marimba and string quartet, alternating crescendos and diminuendos, including sporadic accents on the marimba line, influencing retrospectively the material in the string quartet.

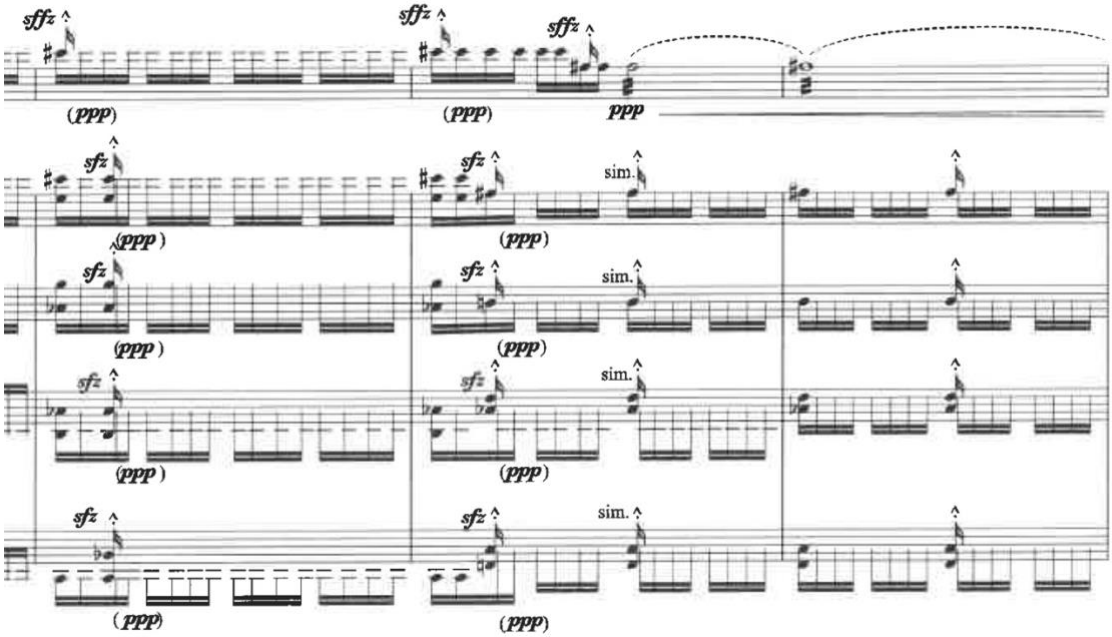


Image 47 - Colours (closing in) - influences: Ends Meet (2002) by Luis Tinoco – UYMP Editions

This section is made by three different materials: 1st – the repeated notes allowing the harmonic transformation to be more organic [Image 48]; 2nd – the *sul pont.* gesture in the strings, creating a melodic gesture and a contrasted material [Image 49]; and 3rd – long notes gesture at the same time where the marimba repeats the same note (which can be a suggestion for next section) [Image 50][74]

[74] (Davis, 2018g)

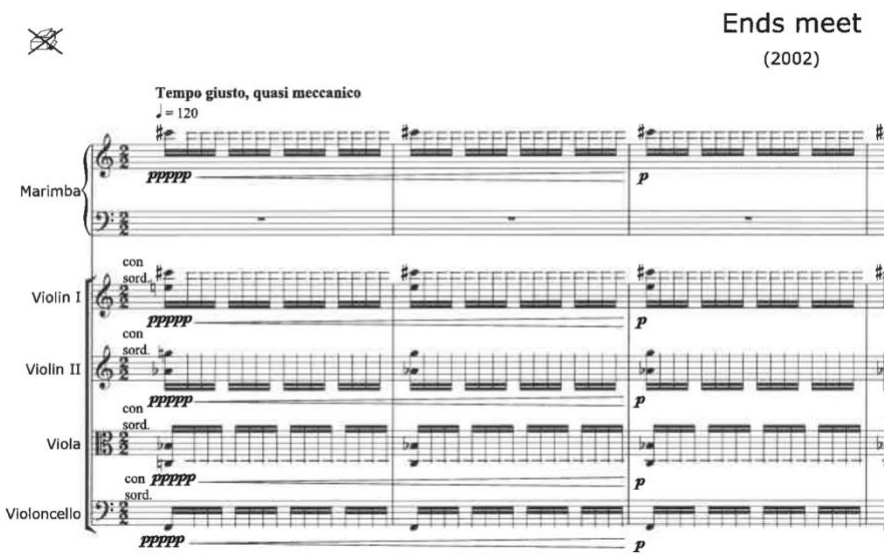


Image 48 - influences: Ends Meet (2002) by Luis Tinoco – UYMP Editions, repetition of the same chord

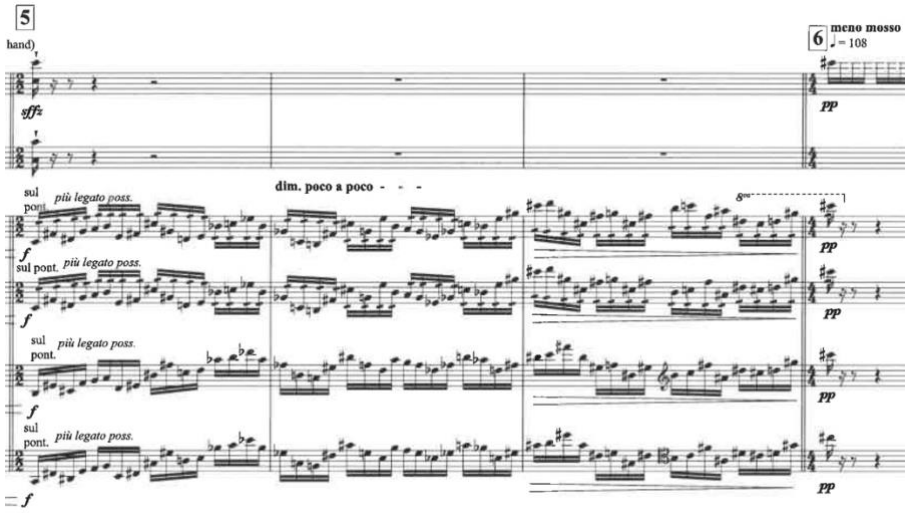


Image 49 - influences: Ends Meet (2002) by Luis Tinoco – UYMP Editions, sul pont. section on the strings

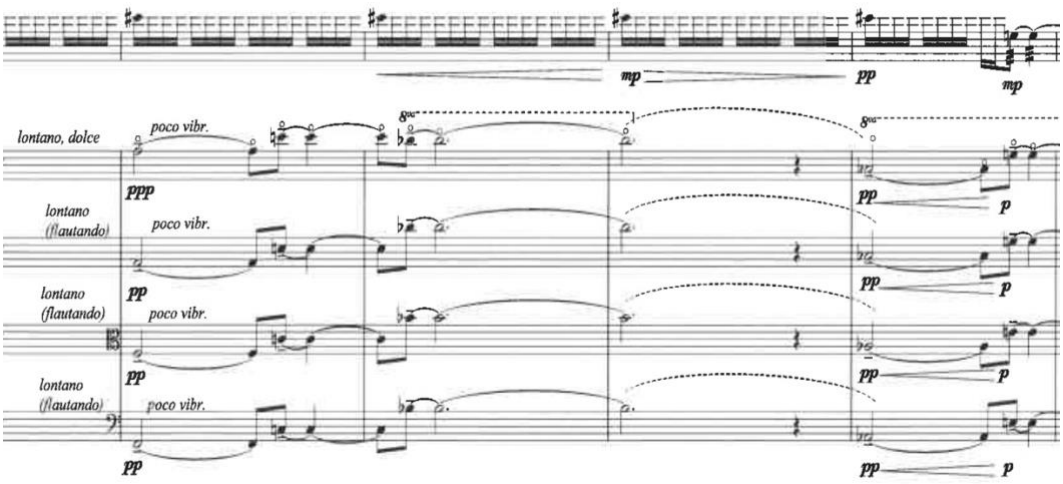


Image 50 - influences: Ends Meet (2002) by Luis Tinoco – UYMP Editions, long notes section

After exploring both pieces and Lauro's influence, I found myself in the act of making first drafts of *Colours (closing in)*: melodic gestures, all in unison (Image 51); different layers in which I could repeat notes and use the melodic gestures; and using the guitar's resonance and technique; and its unique characteristics learned in Lauro's music (Image 52).

Image 51 - Colours (closing in) - sketches: first draft

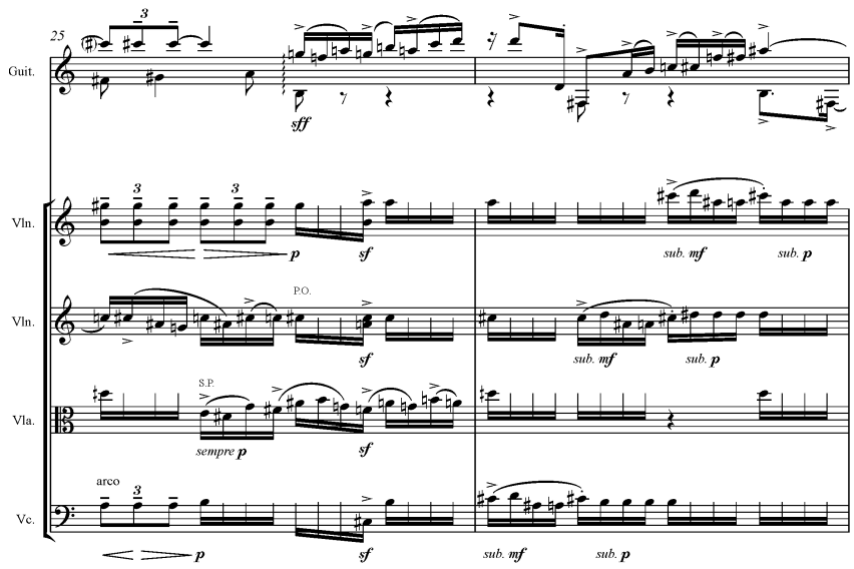


Image 52 - Colours (closing in) - sketches: first draft

Suddenly, I realised I was in the composition process, and when I stopped, I had composed four minutes of music. So, I took a few days off, in order to give the ideas time to cement.

> In the process of giving the ideas time to breathe, Julian Anderson's 3rd String Quartet was a very useful piece to consider, as in Luís Tinoco's *Ends Meet,* a contrasting section using harmonics [Image 53][75]

[75] (Davis, 2018a)

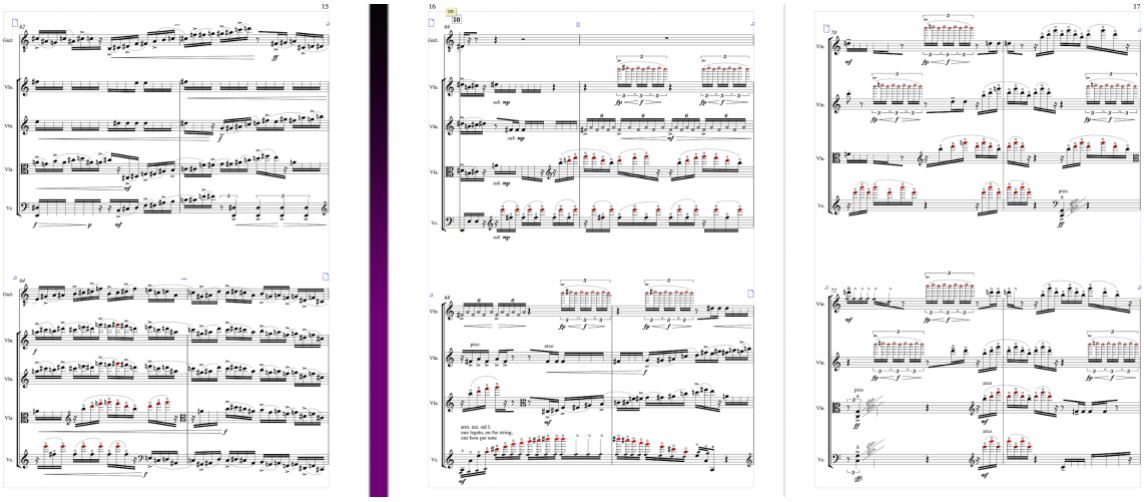


Image 53 - Colours (closing in) - composition process: contrasting section in harmonics (for large image see Large Image section)

Although I was writing the piece and I was content with the result of it, I had not been very thoughtful about the narrative and the form of the piece, and that was something with which I struggled, and still do, every time I am writing a new work. Sometimes, a composer has in his/her head an image for the shape of the piece, sometimes s/he just discovers that image when s/he reaches the double bar at the end of it – which may not even be the real double bar. For *Colours (closing in),* that image, as soon as I started sketching, did not exist; and writing music without direction can be very difficult and confusing. But sometimes a composer cannot just wait for the image to appear, especially when there are deadlines to fulfil.

Although I was content with the result, I felt that there was a lack of understanding around where the piece actually starts, where the piece travels and where the piece ends. Only after a month of thinking about this and not writing any more notes, I discovered, within what I had written already and within my material, that this was a two-movement work in which I could create different perspectives within and without a musical argument.

After writing the second *Perspective* it was time to get physical and start workshopping, rehearsing and recording the piece.

How important is to be physical in your work?[76]

Rehearsing and recording *Colours (closing in)* was an opportunity to engage with the musicians and to enjoy a more active role as composer – conducting, rehearsing, organising and working in studio.

> On first rehearsal, we worked on specific sections, as for example sections where more than one instrument played the same material. We slowed the tempo and started to practice the rhythm patterns, tuning the pitches and making sections in blocks.[77]

During this process, I never stopped composing. Composers may end up overwriting the score. When I say 'overwritten', I mean not only in the number of notes the composer may put on the score, but also the amount of information s/he may give to musicians, such as dynamics, for example.

> Dynamics can be a tricky part when composing. When I write dynamics, sometimes is because I want that section louder than the other or want a specific instrument to be more relevant. However, sometimes dynamics are just an attitude, a direction. But how do you write that attitude in score?[78]

My solution was to engage in direct exchanges with the performers, and that is why rehearsals, sharing ideas, knowledge, different approaches and perspectives are so important. Of course, composers may not be always present, but it is important to establish at least one contact so the composer can define his/her ideas and, if possible, learn how to make them present in the score for future performances.

Composing, rehearsing and recording *Colours (closing in)* made me realise that composing is not just a matter of writing the right rhythms, notes, dynamics, accents, *accelerando* and *ritardando*; it is a matter of playing together, pulling the cart in the same direction. What is written and what the composer hears should have the same function.

---

[76] (Lijn, 2018)
[77] (Davis, 2019b)
[78] (Davis, 2019b)

The imaginative way a composer writes the score should be analogous to the sound s/he will hear. But this is impossible to recreate in the composer's brain, and every time a composer hears his/her work for the first time, the composer recognises that what s/he had in his/her head and what s/he is listening to is just completely different. It is kind of a puzzle, but the last pieces are hidden by the musicians. So, the composer knows what the final image is, but there are bits of that image that the composer cannot see, and for that s/he needs performers to help the composer construct the final result. Performers do not always have these hidden images. However, they play a musical instrument and they know it better than the composer does.

> *'Musical instruments are tools useful to man, but they are tools that lack of objectivity: they produce sounds that are anything but neutral, which acquire meaning by testing meaning itself with the reality of facts. They are the concrete depositories of historical continuity and, like all working tools and buildings, they have memory. They carry with them traces of the musician and social changes and of the conceptual framework within which they were developed and transformed. They talk music and – not without conflicts – they let themselves be talked by it. The sounds produced by keys, strings, wood and metal are in turn all tools of knowledge, and contribute to the making of the idea itself'.*[79]

Instruments are demanding tools and even though composers have to have some knowledge about them, it is impossible to learn them as an instrumentalist would. Composers are dependent on performers because they spend an extensive period of time with their instruments, so they know them better than composers do. Experiences, on the other hand, are part of the composer's mental library and s/he will learn with them; and, in the next work the composer does, s/he will have them present. However, every time composers work, they are trying to figure out an image that it is not clear, and every time is different, and it seems that the cues for that image are in the experimentation, in the changing, in deleting, discussing different approaches, knowledge and ways of playing.

[79] (Berio, 2006)

Image 54 - Colours (closing in) - rehearsals and recording session - string quartet warming up (presented as a documentation of the recording sessions for this project).

Composing Myself II

Remembering the future **(2019)** started out as a collaborative project as part of *Voice Works 2019* at the Guildhall School and part of my research.

Remembering the future, in its first stage, was intended for high soprano and countertenor. For the accompaniment, I wanted to compose for a small ensemble, maximum three performers, in order to have more timbre variety, but not too much information, so the voices could still be present. Also, I was thinking that the ensemble could be taken to perform this piece everywhere, even if in one specific venue there was no piano. I ended up with high soprano, countertenor, clarinet in B-flat (doubling bass clarinet in B-flat), viola and double bass. I was not expecting a very strong blend, but the final result was surprisingly satisfying.

The following step was to meet with the writer and discuss our shared creative objectives. In our meeting, we talked about literary sources, music, theatre and performance more generally. We talked about special moments and personal life experiences; and without noticing, we were building a relationship, something I've found essential for the process of making music.

After few weeks, I received the first draft of the text

We're remembering the future.

Or, how to write a city

like an epitaph

like epithelial tissue, the outer layer of a skin

Can you write it with wrinkles, its history bleeding into peeling paint, black acrylic a finger in the film of old milk, stripping it bare before the evening

An exhibition, in between the artworks, the corners sharp and winding Like a cataract, a world behind the eyelid or

Red in a pale blue sky

We're remembering a divorce

A swimming pool split in half

The sides of the road holding rivers in their gutters, hold cigarette, hold plastic, the cracking of palms, holding eachother

Can you write it like a mirror

How we are turning it upwards to the air like fresh scars

we sing the names of our dead

like heavy bibles in our mouths

That we are all holy

gnashing teeth and revenge on our lips,

because we have to keep surviving, somehow through others

Somehow through cities

Across time

fear, like a drop of wine on our tongues

we love like coming home from war

kiss our loved like

We're remembering the future

like we have oceans inside us

like we only wish to be called into arms and not to.

we dance like silk and messy mesh black in the wind

How some skylines materialised when we say our names

How we've been here as summer slipped us underneath her tongue

When the city gave in to the warmth

When the city is wet, is mouth, is teeth and baring and exposing

We're remembering the future a little more like us.

After the first draft, we questioned the size of the text and the length of the song we needed to write. By the end of our discussion, we arrived at the conclusion that we could shorten the text:

We're remembering the future.

Or, how to write a city

like epithelial tissue, the outer layer of a skin

We’re remembering a divorce

A swimming pool split in half

The sides of the road holding rivers in their gutters, hold cigarette, hold plastic, the cracking of palms, holding each other

Can you write it like a mirror

because we have to keep surviving, somehow through others

Somehow through cities across time

fear, like a drop of wine on our tongues

We’re remembering the future

like we have oceans inside us

like we only wish to be called into arms and not to.

We’re remembering the future a little more like us.

Knowing who was playing and singing and having the text before starting sketching was very helpful. Nearly everything one writes—solo piece, chamber music or a piece for orchestra—is being written for particular people, but thinking exactly of the people one is writing for makes the process more stimulating, especially because one tries to incorporate into the writing something about them. Obviously, other interpretations will personify the music in a different way, and that is exciting.

Now with an agreed text, I began my sketching process. At the very beginning I split the text into sections (Image 55).

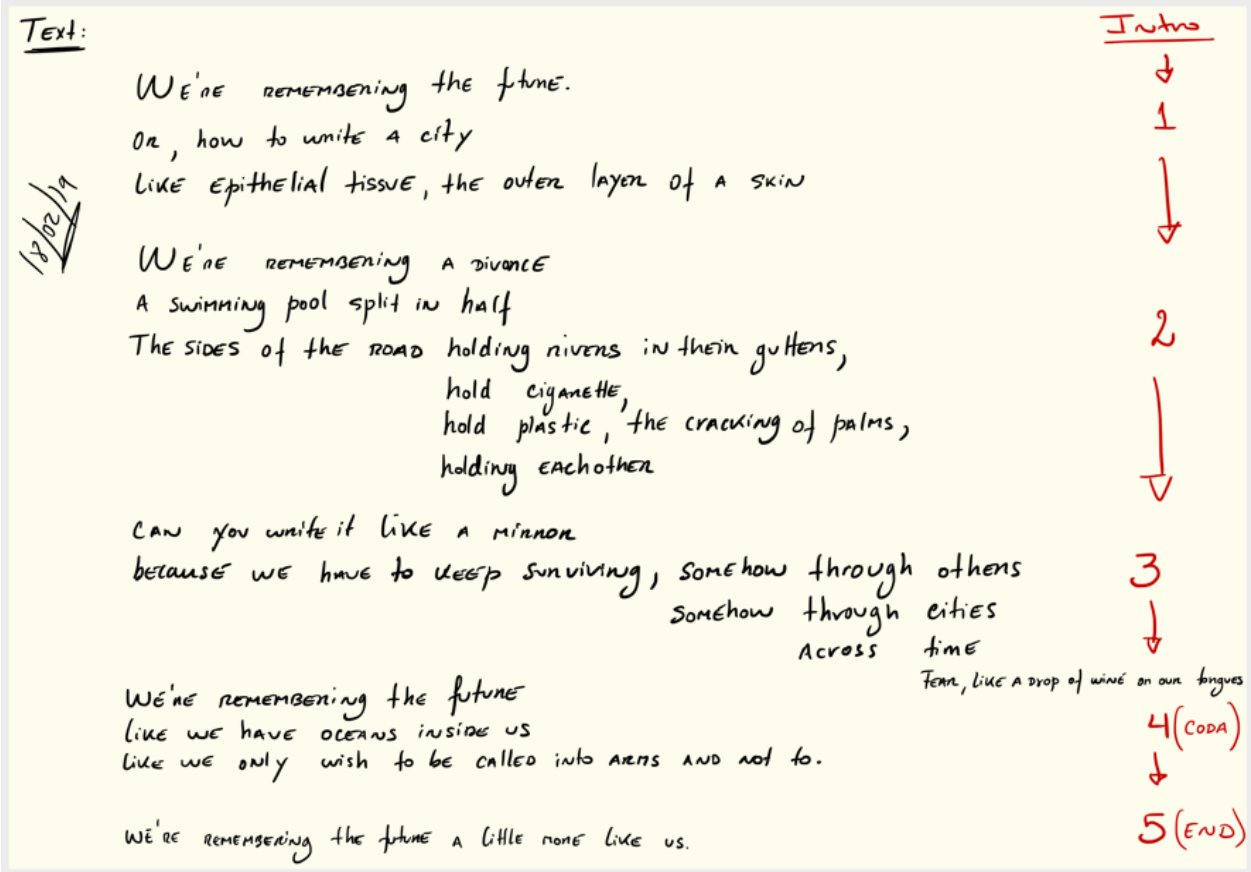


Image 55 - Remembering the future, sketching text

In order to construct harmony for this work and to be able to preview a form for it, I used the ranges of the performers to build the chords I would potentially use. For the soprano, whose range was from B2 to E5, I used the odd partials from the harmonic series in B-natural, and its opposite pole in F-sharp (Image 56).

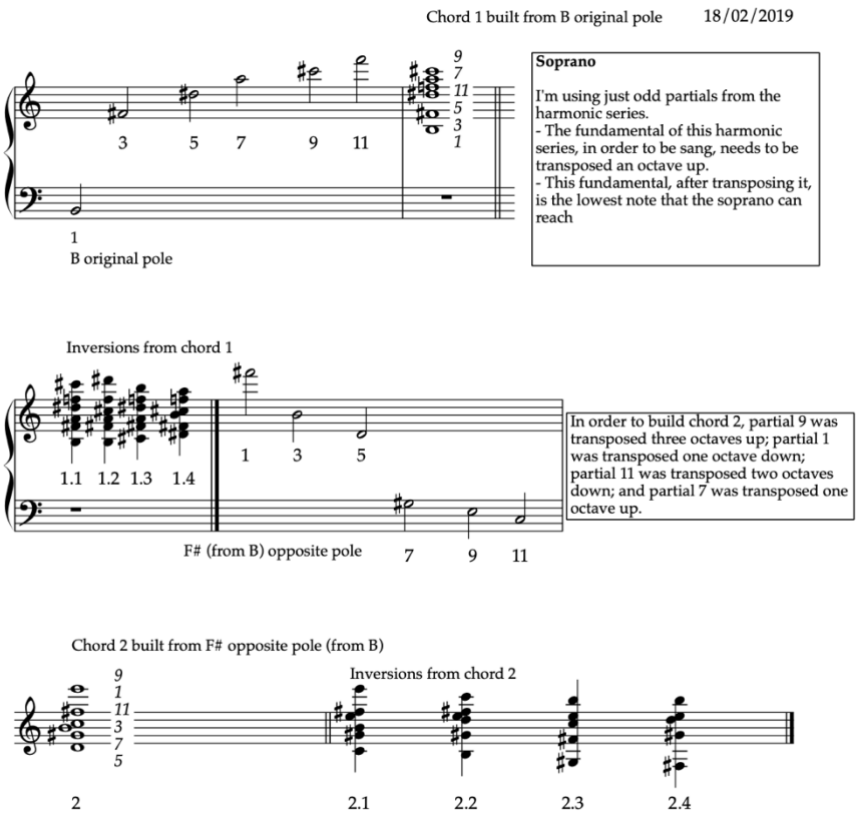


Image 56 - Remembering the future, sketching harmony and form

(transcribed into Sibelius from the original manuscript sketches)

For the countertenor, whose range was from A2 to F4, I used odd partials from the harmonic series in A-natural, and its opposite pole on E-natural (Image 57).

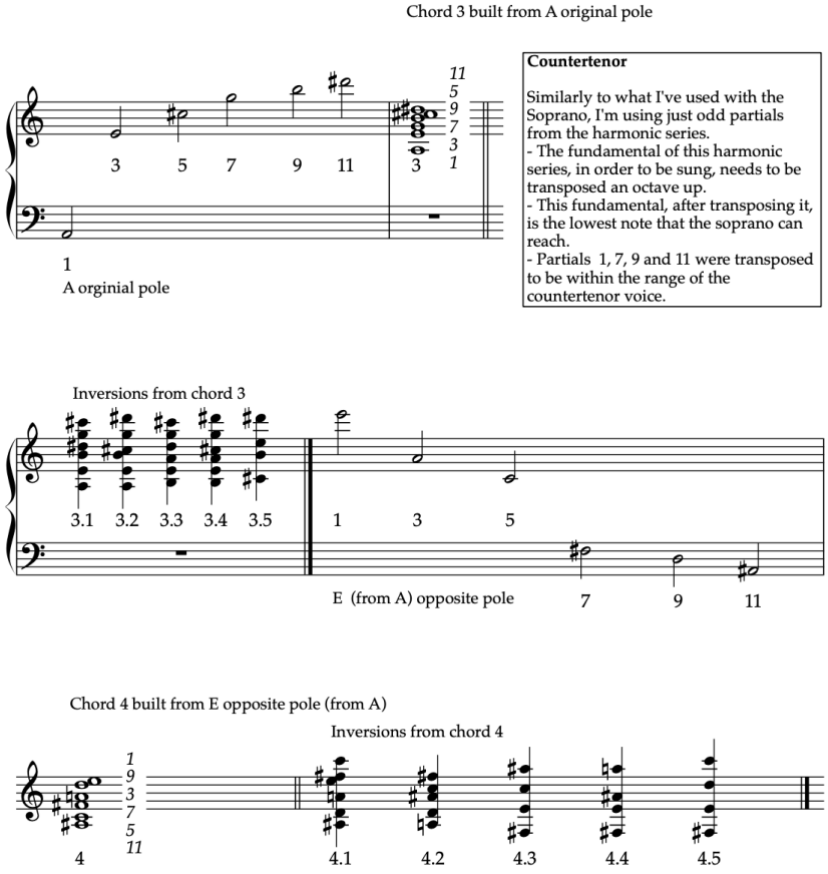


Image 57 - Remembering the future, sketching harmony and form

(transcribed into Sibelius from the original manuscript sketches)

The same process was carried out for each instrument of the ensemble. For the clarinet, the lowest note of which is D, I used the odd partials of the harmonic series in D-natural, and its opposite pole in A-natural (Image 58). For the double bass, the lowest note of which, in this case, is F-sharp[80], I used the odd partials of the harmonic series in F-sharp, and its opposite pole in C-sharp (Image 59). For the viola, which lowest note is a C, I used the odd partials of the harmonic series in C-natural, and its opposite pole in G-natural (Image 60).

[80] When the double bass is tuned in the Italian soloistic way, the lowest string can be in F-nat or F-sharp (Freitas dos Santos, 2018)

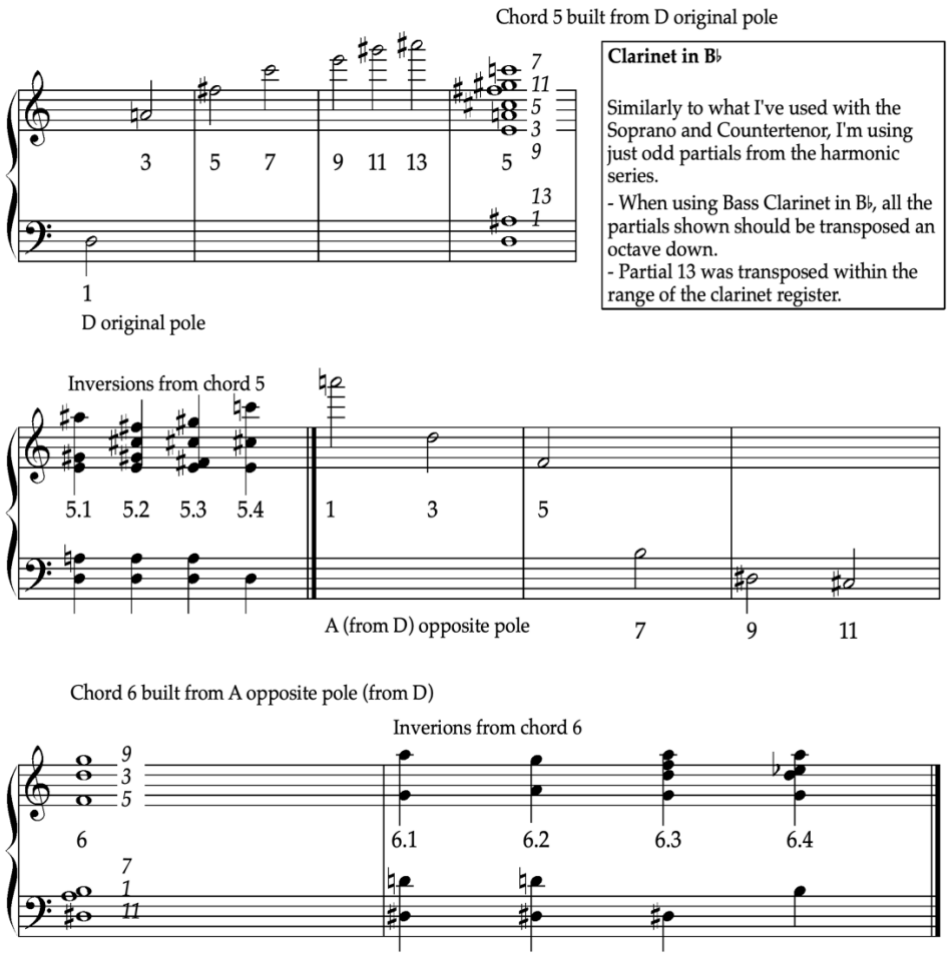


Image 58 - Remembering the future, sketching harmony and form

(transcribed into Sibelius from the original manuscript sketches)

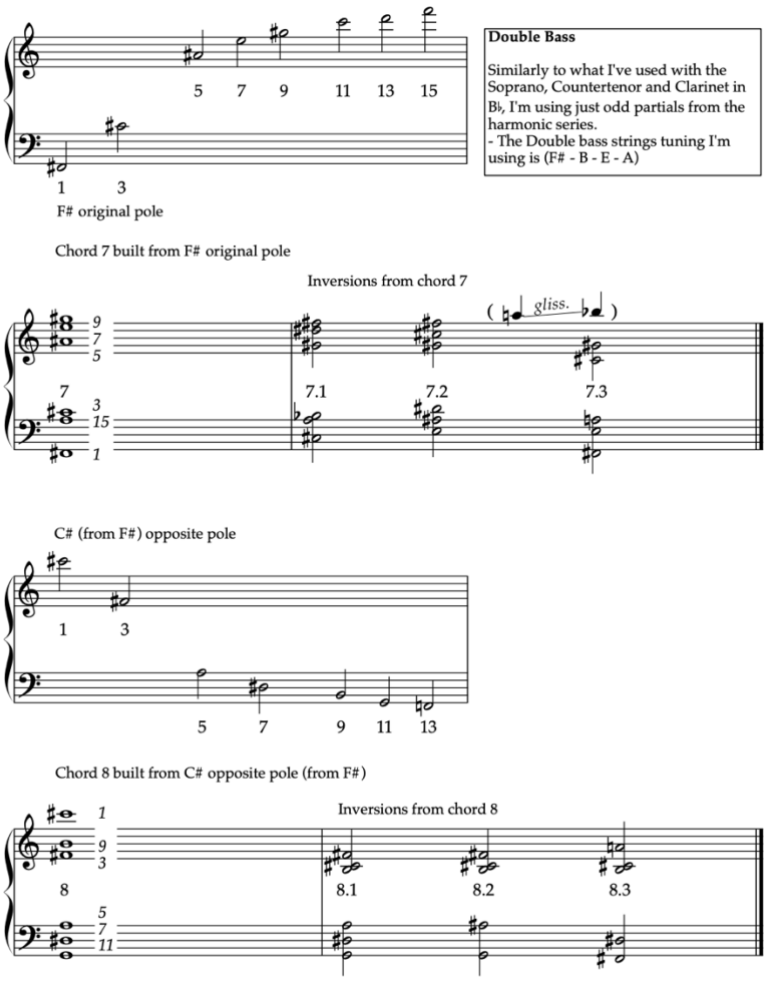


Image 59 - Remembering the future, sketching harmony and form

(transcribed into Sibelius from the original manuscript sketches)

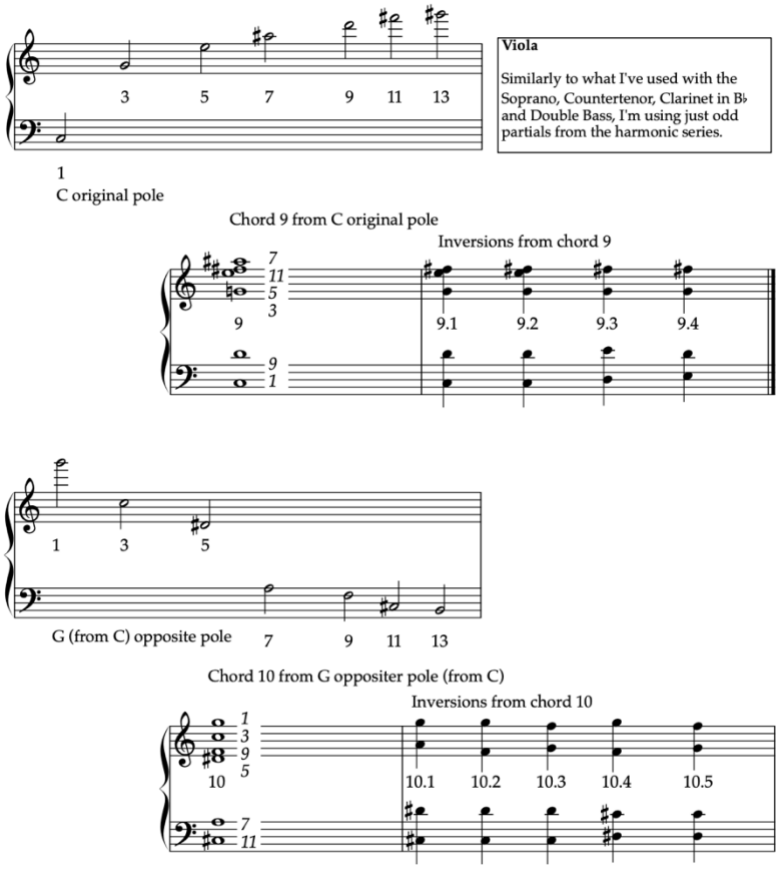


Image 60 - Remembering the future, sketching harmony and form

(transcribed into Sibelius from the original manuscript sketches)

The idea of having all these chords before deciding the form of the piece was to have a diverse number of possibilities, play them at the piano, and try to figure out an optimal ordering. Following experimentation at the piano, I ended up with ideas, melodic lines and chords that would be organised into the different sections of the text (Image 61).

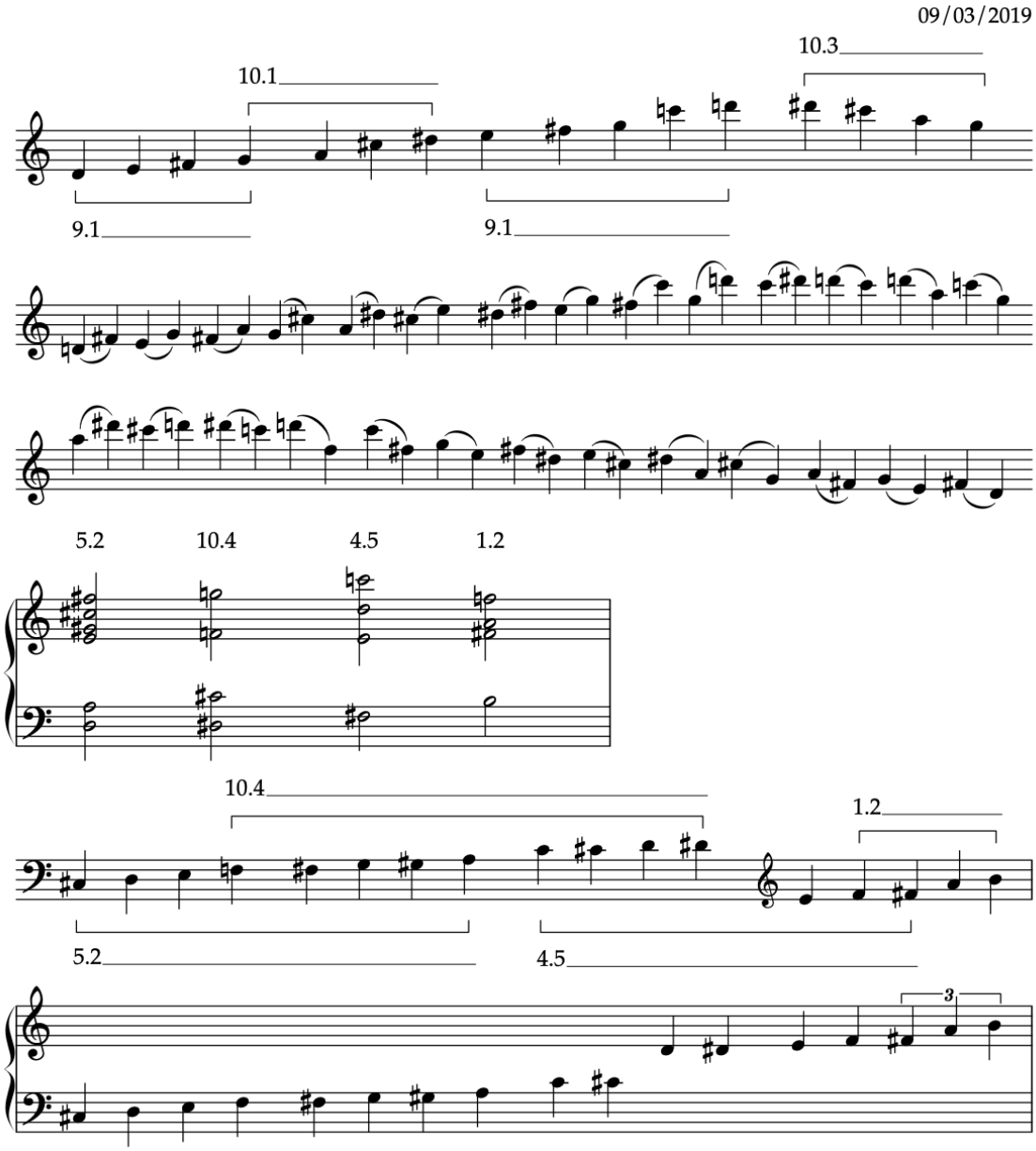


Image 61 - Remembering the future, sketching

(transcribed into Sibelius from the original manuscript sketches)

It is possible to observe the way that the sequence of chords 9.1; 10.1; 9.1; and 10.3, shown in Image 61, are presented in the score, as for example from page 1, bar 10, it is possible to hear chord 9.1 that goes until page 15, bar 27. From here, it possible to notice chord 10.1, with the D# in the soprano and C# in the viola. However, these three chords

also form a scale, and because of that D natural is still present in the double bass. This sequence continues until page 5, bar 57 where the new sequence of chords 5.2; 10.4; 4.5; and 1.2, shown in Image 61 appear, changing the sonic space of the music.

As soon as I had an evolving idea of what the form of the text and the harmonic shape would look like, I could start thinking about when the soprano would sing alone, when the countertenor would sing alone, when the ensemble would play alone and when everyone would play and sing together (Image 62).

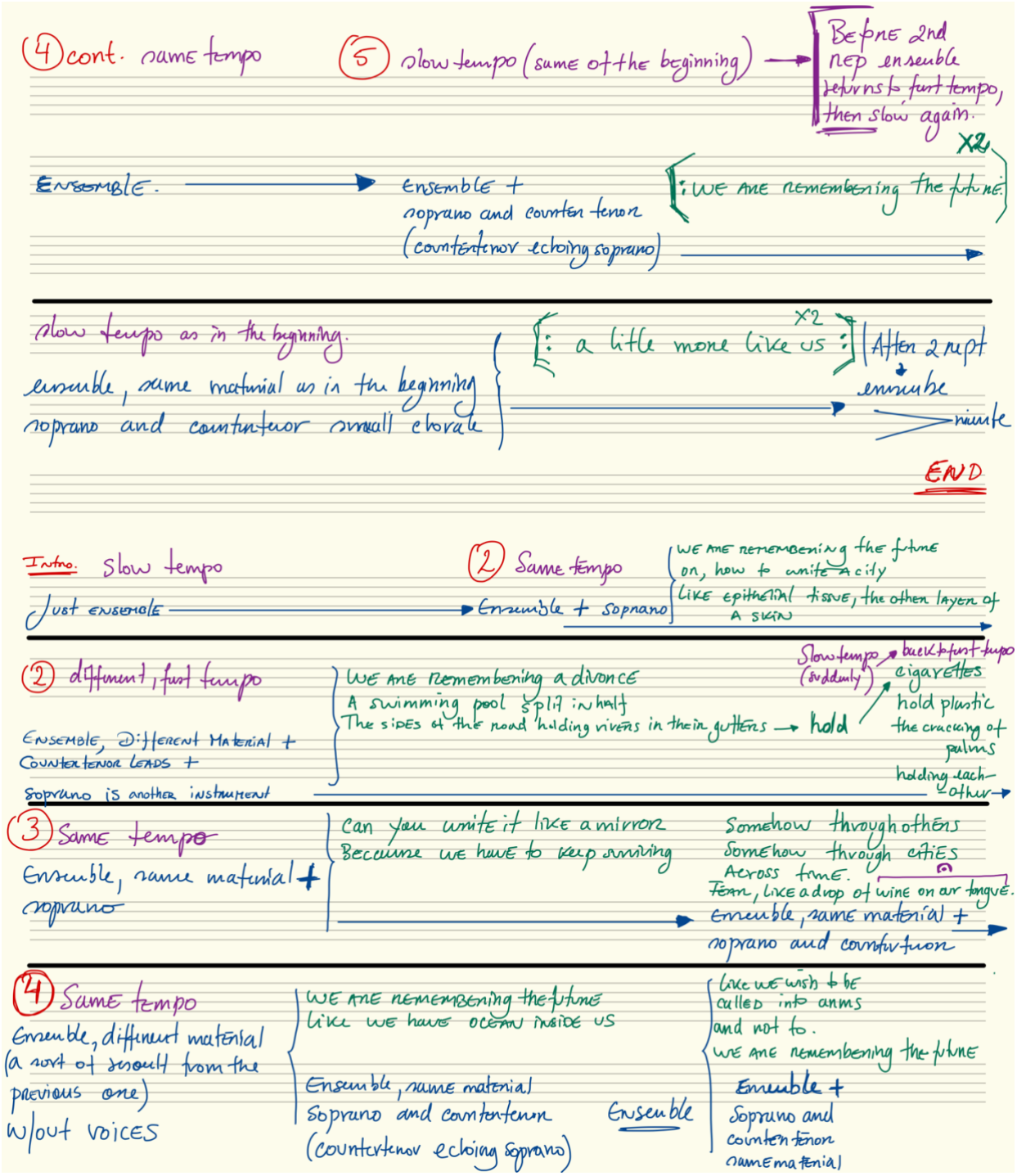


Image 62 - Remembering the future, account in words of the form

It was at this point that I started to set the text to music, playing the chords at the piano and singing at the same time different contours for the same phrase (Image 63).

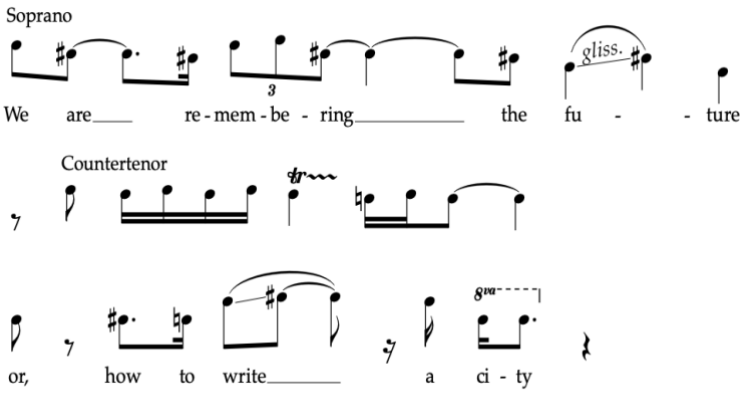


Image 63 - Remembering the future: sketching, text and music. There is no stave here in order to just idealise the contour of the melodic line.

The process of singing and writing different versions of the same phrase continued for weeks, during these I would record myself singing, and reading the phrases with a specific rhythm to send to the writer. I wanted to confirm, with a native English speaker, the phonetics, rhythm, direction and meaning of the text. During this process of finding the right rhythm for a phrase, I struggled with some of the words and their pronunciation. In order to be precise, and to respect the text as much as I could, I asked: “can you read the text for me, record an audio message and send it to me?” As soon as I received his audio message, I listened to it and realised how rich, versatile and irregular the rhythm of the text was. Then, I put the audio into Logic Pro and split the phrases in order to adapt the irregular rhythm of the phrases into down beats, normally used in pop music as quantisation. But this proved to be a mistake (Image 64).

Image 64 - Remembering the future: sketching, quantised the text

It was a mistake because the versatility, richness, organicism and the irregularity of the spoken text were taken away; it sounded like a robot and not like a person. On the other hand, even though it was a mistake, and even though its character changed through the journey of the text, this exercise helped me to understand the arch of the phrases, the form of the multiple paragraphs, the way some words were pronounced, and the way the text worked from the beginning until the end in its organic and consistent way.

After this process, the text started to have a melodic contour. The singers and I worked together on each line and phrase, so they could not only learn the score during the process of composing, but also indicate if something was out of their range, possibility or skill. I wanted to create something that was new and unique for me, but also something that felt comfortable for the singers and instrumentalists involved.

> Today is the day before the premiere, one week ago I did not think this could be possible, especially after the countertenor had cancelled his participation in the project.
>
> Remaking the score in one night for just one voice, adapting the range of the countertenor into a high soprano, making changes in the ensemble so they could help the soprano with some references, printing the new score and new parts; rehearsing with the soprano for two or four hours per day in order to learn the new version, rehearsing extra hours with the ensemble so we could glue everything in time for the performance, although exciting, it was a nightmare.
>
> Tomorrow morning, premiere day, and we will have our first go through and then performance. Hopefully everything will be fine.[81]

Composers often face extra issues that can make the process of composing or rehearsing even more extreme and frustrating. It was not just a matter of adapting the score for a single voice, or having extra hours of learning and rehearsing, it was more about the reconceiving of the piece for two voices. Even though the results were musically

[81] (Davis, 2019c)

satisfying, this was nevertheless a new version that changed the sound world and the way the text was projected. Perhaps inevitably, this meant that we used the time that was intended for rehearsing musical ideas, gestures, or phrases for learning the new version.

So whilst at the end, it felt good to be part of the team, it felt as if we had done a very good job, everyone was happy and satisfied, it also felt as if we could have presented a better musical idea if we had the time. I felt that missing the original forces from the main idea was extremely hard to cope with, and although ‘the show must go on’ it was difficult to digest and to adapt what I had written for just one voice—and such a different voice. However, I have not changed the first version and the plan is, at some point, to perform the first version, and maybe two good versions of the same music will emerge.

Image 65 - Remembering the future's team - Wigmore Hall after premiere 23rd May 2019 (presented as a documentation of the premiere performance for this project).

Tell me again the music of that Tale (2019)

Although *Tell me again the music of that Tale* was meant to be composed and performed after *Remembering the future,* I began the sketching process before even having received the opportunity to compose the vocal work. Everything started when I was trying to find a musical idea that could include not only everything I had been developing in terms of musical craft, but also a musical idea that could refer in some way to my research, and this autoethnographic study.

We are always in transformation. Everything that surrounds us and everything we do has an impact on us. Tami Spry writes that 'performative autoethnography is about what your connections are to others in contexts, and only you can decide what experiences are already to be engaged through this method.'[82] When I started this research I was looking for something that I did not know that existed. *Tell me again the music of that Tale* emerged from placing myself within the music I was willing to write and with my own practice over the last eight years. I wanted to link different parameters of various stages of my life as a composer and to create a musical idea that could demonstrate the impact of those different stages. In order to do that, I needed to find a text capable of identifying where I came from, where I am, and where I am going. My first thought was to combine texts from a number of different authors. However, for some reason Fernando Pessoa crossed my mind. One of my artistic motivations is to observe myself in different cultural situations. Pessoa offered a model of how connect the relationship between his 'heteronyms' (his numerous different poetic alter-egos) and the way they are presented, in terms of aesthetics, poetic style and personality, with the narrative of the song cycle I wanted to achieve. Pessoa's 'heteronyms' write about the same timeline from different perspectives. By using extracts from different 'heteronyms', I set out to create a narrative that echoed the different strands in my own autoethnographic study, with its different perspectives.

The narrative for the song cycle is a mixture of different fragments and sections of poems and texts by Fernando Pessoa, Álvaro de Campos, Bernardo Soares and Alexander

[82] (Spry, 2016)

Search. I wanted to make a bilingual song to demarcate the two distinct cultural contexts I have inhabited: Portugal and the United Kingdom.

> Languages are an instrument of common and practical verbal communication, but can also be literature, prose and poetry. To transcribe a text into music implies a vast and complex network of interactions. We can read, translate and discuss Pessoa and its 'heteronyms' in depth, but we can only theorise or barely imagine how it will be transcribing them into music; and each composer will have their own way of doing it, their own interpretation and their own way of setting text in music.[83]

After having looked at different poems and texts by Pessoa and his 'heteronyms', I ended up with nine fragments of poems and texts (Image 66).

[83] (Davis, 2019a)

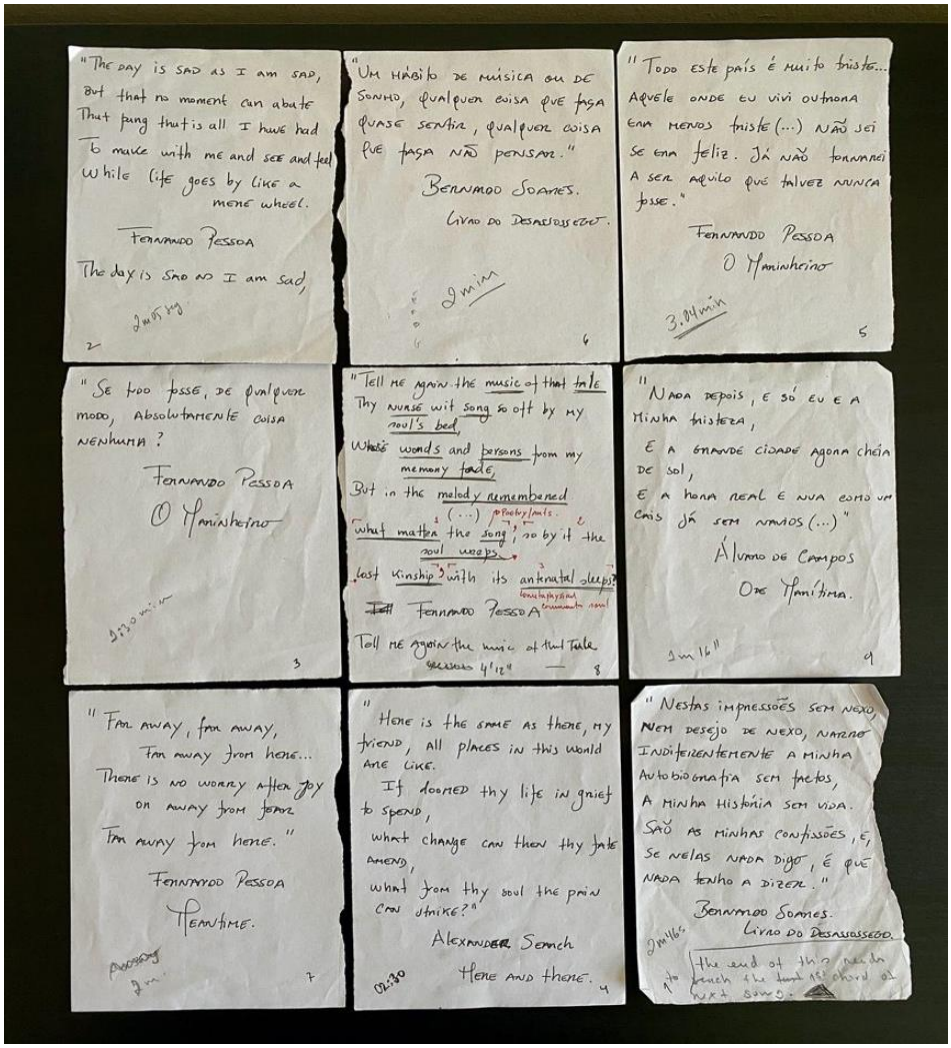


Image 66 - Tell me again the music of that Tale: text

But they were not organised, and the direction of the narrative was a little confusing. Only by reading them a few times, in different orders, was I able to reach what seemed, to me, their natural structure (Image 67).

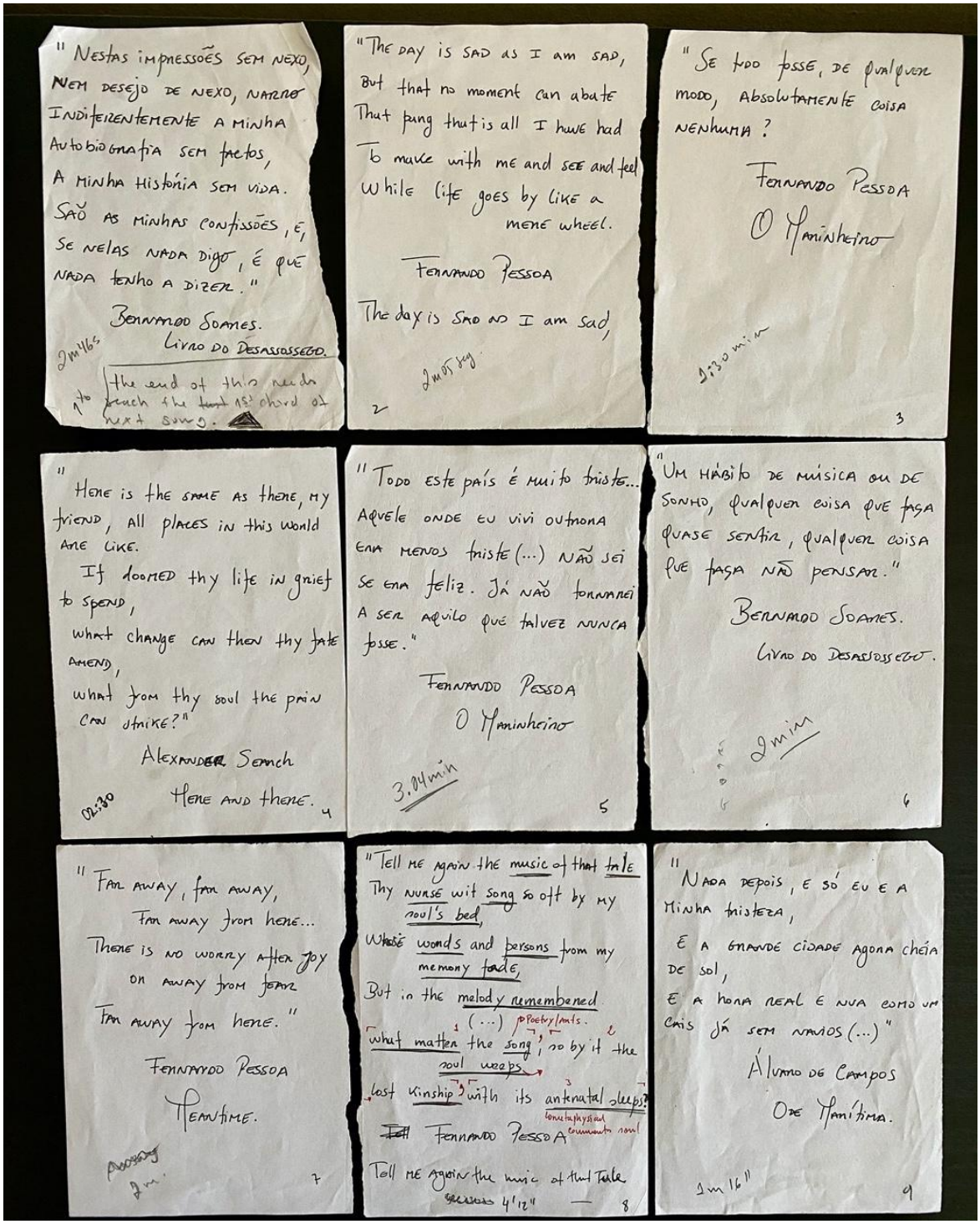


Image 67 - Tell me again the music of that Tale: text as it finally appears in the score (Prelim pages).

Every time I begin a new piece, I tend to compose fast material, overwrite, compose strong motifs, dynamics between ***mf*** and ***ff***, rapid gestures, and create chaos and mess. It was no different with this song cycle. In order to allow this process to happen naturally, I began *Far away* first (song seven). I thought it was better to unleash all that material

first; then I could compose the more fragile parts of *Tell me again the music of that Tale* later.

Harmony was built using similar processes to those outlined earlier in this commentary: through improvising at the piano, creating specific chords, locating them within the harmonic series, transposing them using the circle of fifths and rotating their poles. The way this harmony was developed, in order to fulfil the necessities of the text, was different from the processes described in previous pieces. I would find myself in different places in London, singing and recording parts of the text into my phone. Then, I would take those recordings and draw the melodic contour that I was singing (Image 68), and only after would I adapt or transpose the notes of my singing to the notes that I had chosen for the harmony (Image 69).

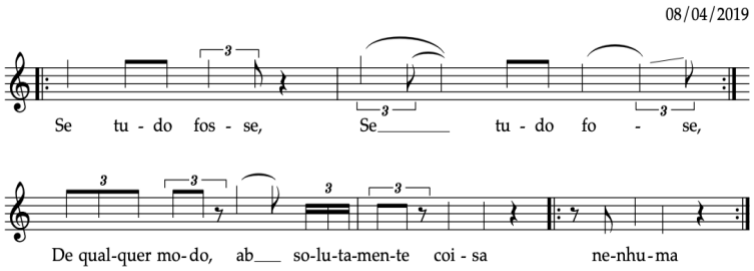


Image 68 - Tell me again the music of that Tale: setting the text

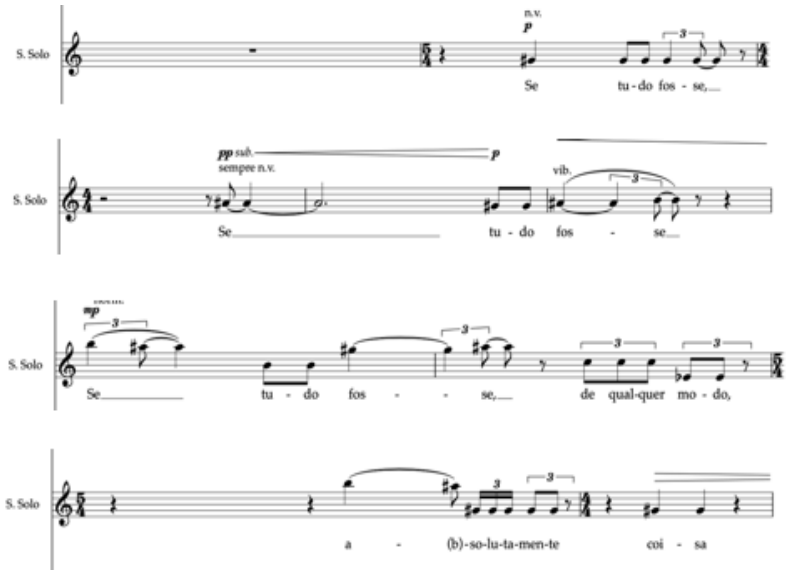


Image 69 - Tell me again the music of that Tale: setting the text

The adaptation of the melodic contours of the recordings, to the actual harmony, was not that difficult, because before starting singing, I had in my mind a sonic space already. So, the notes I was singing were relatively close to the notes of the harmony I had already imagined. Of course, in the process of composing, different decisions were made in order to give the sentences a place to breathe, or to give time for a word to be recognised before or after high notes. Additionally, the process of composing expanded to involve learning the piece with the soprano, and different decisions were made using her collaboration and knowledge. For example, in *The day is sad*, I wrote the soprano line without any interruption, and in bar 43, during the learning process, I noticed that, although she was singing the line as it was written, it was not precise or relaxed, and it felt a bit robotic (Image 70). The solution was to substitute a note and a *glissando* for a pause, so she could breathe and mentally separate those two moments (Image 71).

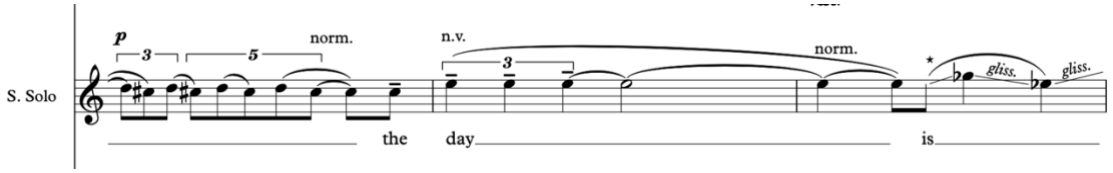


Image 70 - Tell me again the music of that Tale: composing in collaboration

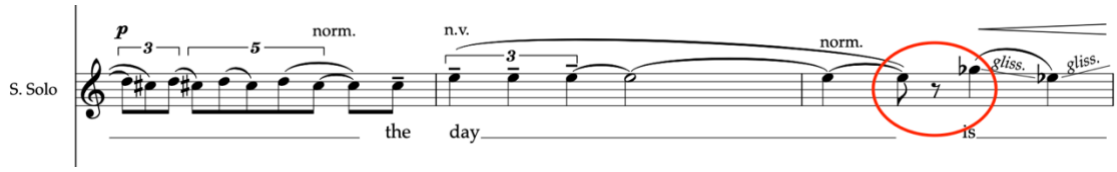


Image 71 - Tell me again the music of that Tale: composing in collaboration

The day is sad, is a song in which I wanted to exploit the high register, starting in the middle register and growing and growing until the soprano reaches one of the highest notes in the song cycle. To do this I needed to face two problems: the first was the text. By using the high register, I would completely compromise the text. The second was tension: when building up so much over such a long span, the tension can lose its potential to surprise; it becomes the object, and not the way to reach the object. For the text, I decided to repeat it again, in a lower register, a few bars after reaching the highest

note (Image 72). To vary the tension, I decided to transpose some of the notes an octave down, change the rhythm and add some dynamics (Image 73).

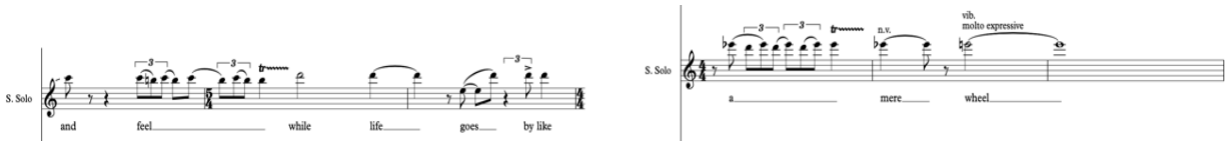


Image 72 - Tell me again the music of that Tale: composing in collaboration

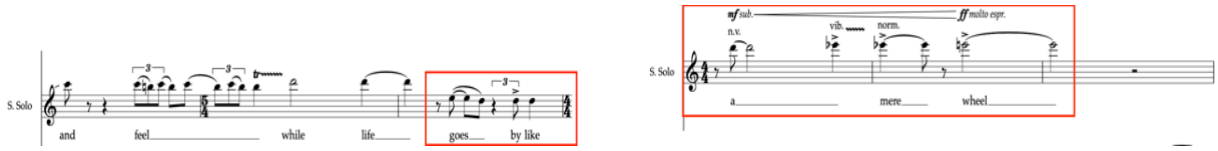


Image 73 - Tell me again the music of that Tale: composing in collaboration

Having had the opportunity to be not only the composer of this project, but also the conductor, gave me the possibility to work in depth with the singer and the ensemble. Some of the issues mentioned above were worked on in the process of learning and rehearsing the piece with the soprano, but other decisions were made during the learning process and rehearsals with the ensemble. In *Far away*, dynamics were recomposed, as for example in moments where I wrote ***mf*** – *cresc.* – ***f***, or the opposite ***f*** – *dim.* – ***mf.*** In these moments, I wanted a clear difference between one dynamic and another, sometimes in a very fast gesture, sometimes a bit slower. When composing, I was not so conscious of the distance between ***mf*** and ***f***. It was only after rehearsals, that I realised the difference is not as noticeable as I imagined. For that reason, they were changed during rehearsal to a range between ***p*** and ***f*** or ***p*** and ***ff***. They only could have been changed during rehearsals, because although a composer may have an image of what he or she hopes to achieve, until actually heard, the composer will struggle to make these decisions, because dynamics are more qualitative than quantitative; they are not absolute scientific quantities, they are much more psychological, shaped by the personality of a performer or the nature of the acoustic space (Image 74).

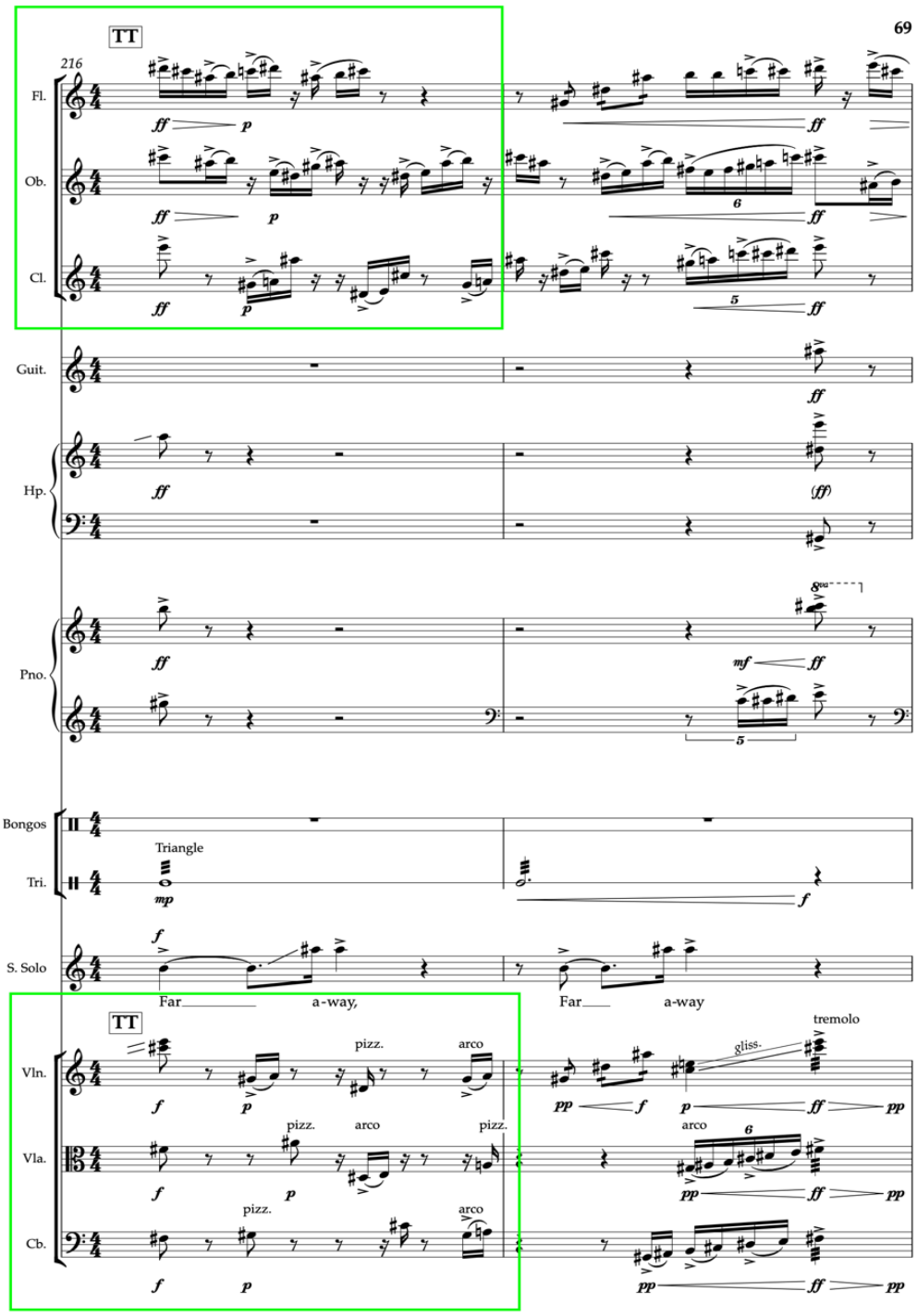


Image 74 - Tell me again the music of that Tale: composing in collaboration

Tell me again the music of that Tale is a dialogue not only between two languages, English and Portuguese, but also a dialogue between cultures, life experiences and a dialogue between Pessoa, its 'heteronyms' and myself. A dialogue between a pre-existing text and a composer can be

> developed through multiple forms and interactions, from the most unanimous to the most conflictual and estranged ones. The dialogue between Pessoa, its 'heteronyms' and my own perception was like a visit to a library: wander through the corridors, grabbing some of the books on the shelves, selecting the ones I enjoyed and putting them on the trolley. After, in a more selective way, I made my final decisions.[84]

Vocal music can deal with the totality of its configurations, including the phonetic one and including the ever-present vocal gestures. It can be useful for composers to remember that the sound of a voice is always a quotation, always a gesture. This implies that composers have the possibility of transforming and even abusing the text's integrity so as to perform an act of constructive demolition of it. Also, there is a possibility of exploring and absorbing musically the full face of the language.

Image 75 - Tell me again the music of that Tale - Milton Court Concert Hall 17th February 2020 (presented as a documentation of the premiere performance for this project).

[84] (Davis, 2019a)

***Mirroring the voice of time* (2019)**

As with *Tell me again the music of that Tale*, *Mirroring the voice of time* was performed at Milton Court Concert Hall as part of a project that I developed as a culmination of my research at the Guildhall School. Although held up in the timeline of my research project, this piece pursues the third research question further and begins to respond to the fourth question (see page 30). My initial idea was to find an ensemble that already existed, as a way of understanding what other composers explore, and what might result sonically; in addition, from a programming perspective, by using an ensemble line-up that already existed, this could maximise the possibilities of my music getting played more often, programming not only my music but also music from other already established composers. In *Mirroring the voice of time*, this idea of programming and playability was crucial before even starting composing, and copying the ensemble used by Unsuk Chin's *Gougalon* (using guitar instead of mandolin and two pianos rather than piano duet), gave me the chance to explore what Chin composed, and also to be able in the future to programme Chin's *Gougalon* alongside my own *Mirroring the voice of time*.

> Concerts as we see them today are based on the idea of a nineteenth century concerto, as for example concerto for violin, concerto for piano, concerto for flute, etc., concerts that involves one soloist. But in the Baroque era, a concerto was not this idea at all, they were instead a group of soloists. One example of a concerto would be Bach's Brandenburg Concertos. This idea, in which a group of different instrumentalists are all soloists, interests me very much and for that reason writing Mirroring the voice of time for an ensemble built by soloists was something that I really wanted to do.[85]

The structure of the selection of the ensemble comes before even starting composing, and it was decisive for *Mirroring the voice of time*. It gave me a certainty of what the sonic sound could be before starting, moulding the ensemble to the musical image.

[85] (Davis, 2020b)

So, everything began when I started to think about my journey as a composer and how influenced I have been by new technologies, in good and bad ways. For this work, I wanted to explore new technologies as a tool to enhance or even to give a distinctive quality of timbre to the final result; but also, because I wanted to explore autoethnographic concerns within the main focus of this concert, I wanted to include quotations from compositions completed earlier in this doctoral research project, mixing them up with new material, so I could establish a relationship with the past, that might influence both present and future.

> I sketched harmony and rhythm, I played chords taken from the odd partials of the harmonic series at the piano, transposed them using the circle of fifths, rotated them using the poles inversion (this time using two types of inversions – inversion by octave and inversion by fifth), created an harmonic bass and an harmonic journey.
>
> I started recording the sounds I wanted to use. Exported them into Logic Pro and initiated the tape. In parallel, I chopped extracts from previous pieces and granulated them in MaxMSP, recorded them as new audios and added them into my tape in Logic.
>
> After all these, I found myself composing directly in Sibelius. I uploaded the tape into Sibelius and started composing, using the tape as a guide for my composition – and here you have the first mistake. The electronic is made by strong and affirmative short attacks, and those are supposed to create some activity both in the ensemble and in the tape itself. At the beginning, the first song we hear is the click from the tape, and that is the starting point of a choral-melodic-gesture in brass instruments. At the end of that first choral, the click silences the trumpet and the trombone, triggering some activity in the winds.
>
> These all sound very exciting, but the reality was not that exciting. It turned up that I was feeling lost and not controlling what I was doing. I was been

> controlled by the electronics and the idea of having new technologies as a new tool disappeared. So, I stopped. Closed Sibelius file and had a break.[86]

The idea of having the electronic sound mixed with the brass came from Michel van der Aa's trilogy *Here* (2001-03), but for some reason, although I really enjoy the way he does it, I did not enjoy the lack of organicism and the strong presence of a strict system when I was doing it and that created a barrier between my main idea and the composing process. Also, I was, again, going back to that stage, explored earlier in this research, in which I was confronting a lack of sketching, composing directly without the process of selection, or knowing what I was doing. The fact that I had a restricted amount of time to compose this work, was also something that helped the frustration of pursuing an idea directly through the composition process, skipping the preplanning and the thinking about the piece.

For some reason, I forgot the electronics for a moment and returned to my harmonic plan. Quickly my thoughts led me to the conclusion that since I had started sketching prior to the composing process itself, I could develop a system of creating, shaping, constructing, inverting and transposing harmony. It was a long process, but it demonstrated how I can be more in control of the harmony I use, how I can chain different chords, different harmonies, different poles, different transpositions all together. Though a composition process of this nature might not reveal itself with complete clarity in the early stages, none the less, with the heat of creativity, these uncertainties fall away.

> In my previous compositions, I have noticed a lack of rhythm preparation. A gap between sketching the rhythm and sketching harmony. What has been happening is, that there is a strong sense of where harmony comes from and where it goes, but rhythm is always an improvisation, something I take from my intuition and not a single planning of it, which sometimes it can take me to a good places but also it can take me to moments where I feel that I did not know what I was doing at the moment, and in real performances might seem that I reached to a place where is amazing, but could not control

[86] (Davis, 2020c)

> it, and because of that, that specific moment can be misunderstood, especially for musicians, performers, the audience and myself.[87]

So, even though I was in at an advanced point of my research, I introduced a sketching process for rhythmic material. I started to investigate rhythm, and how it could be sketched for this piece, thereby creating an initial structural outline analogous to my harmonic planning. Initially, I started to look at other the works of other composers whose music evidences a strong sense of rhythm: not only John Adams, Steve Reich or Judith Weir, for example, but also Jazz composers such as Mark Turner, Jeff Ballard and Larry Grenadier. At first, this investigation took me to a place of creative uncertainty:

> I mean, you can copy a rhythm and make indeed something with it, but how can you make it interesting for certain length of time? I needed more than stealing composers' ideas, I needed something that could make me create a core where I could use as a base of my structure.[88]

I thought about the Fibonacci sequence and remembered that I had used it before in *Colours (closing in)* when trying to assign chordal durations. The Fibonacci sequence seemed to offer the right solution, so I started exploring it, and for this piece I created a table using the series as follows (Image 76).

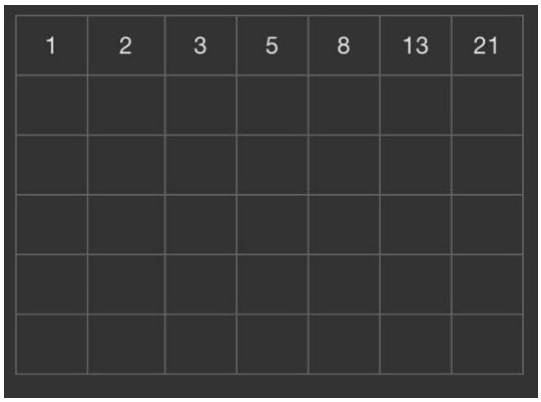


Image 76 - Mirroring the voice of time: sketching rhythm

[87] (Davis, 2020c)
[88] (Davis, 2020c)

Then, I needed to figure it out which number could be after 1 in the first column at the left. If I run the same process I used in the first row, I would end up with the same sequence of numbers, so in order to not to have the same sequence, I added the third number of the original sequence (3) with the first number (1): 3 + 1 = 4 (Image 77).

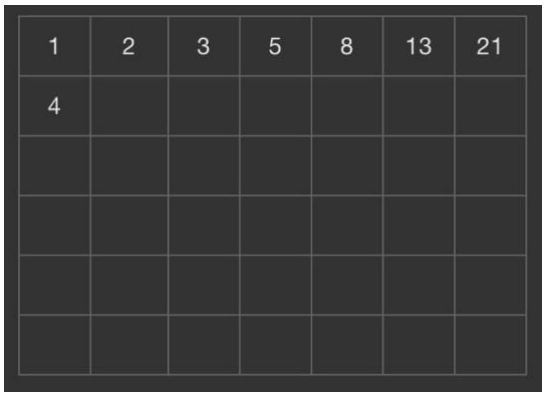


Image 77 - Mirroring the voice of time: sketching rhythm

Having produced the second number of the left column, I then started to add the second number in the row plus the second number in the column: 2 + 4 = 6; then the third number in the row plus the third number in the column: 3 + 6 = 9; and the same process until the last number of the left column (Image 78).

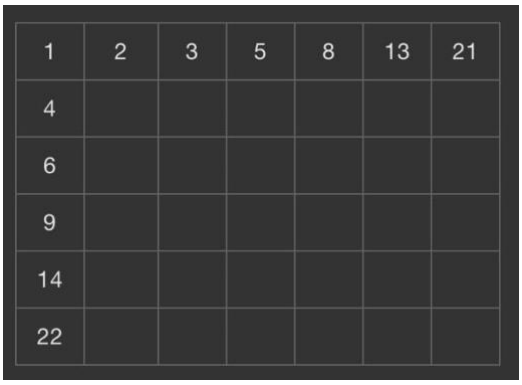


Image 78 - Mirroring the voice of time: sketching rhythm

After this, I followed the same Fibonacci process: 4 + 4 = 8; 4 + 8 = 12; 8 + 12 = 20 and so forth, repeating it until all the numbers in the table were completed (Image 79).

1	2	3	5	8	13	21
4	8	12	20	32	53	85
6	12	18	30	48	78	126
9	18	27	45	72	117	189
14	28	42	70	112	182	294
22	44	66	110	176	286	462

Image 79 - Mirroring the voice of time: sketching rhythm

The problem with the version in Image 79 was that the numbers were too high for transcription from rhythms to music. Instead, I used the third number of the Fibonacci series and the second number in the column at the left: 3 + 4 = 7. Then, I applied the Fibonacci rule: 7 + 4 = 11; 4 + 11 = 18 and so forth. I then repeated the process until I had completed the table (Image 80).

1	2	3	5	8	13	21
4	7	11	18	29	47	76
6	10	16	26	42	68	110
9	15	24	39	63	102	165
14	23	37	60	97	157	254
22	36	58	94	152	246	398

Image 80 - Mirroring the voice of time: sketching rhythm

Although the difference between the table in Image 81 and the table in Image 80 is not significant, I thought I could control my rhythm more effectively. However, I was still confronting large numerical values, and for that reason I divided the table, selecting only those sections I wanted to use (Image 81).

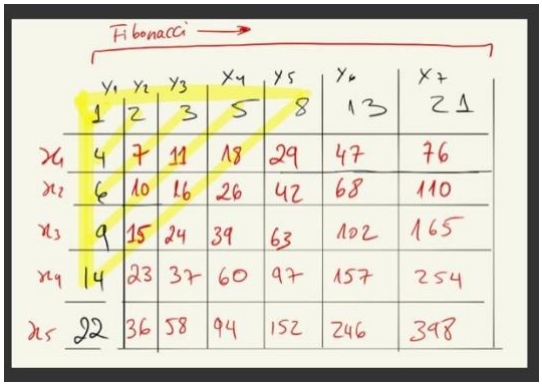


Image 81 - Mirroring the voice of time: sketching rhythm

Once I had all these numbers, I started to convert them into rhythmic figures built from equal quaver units (Image 82).

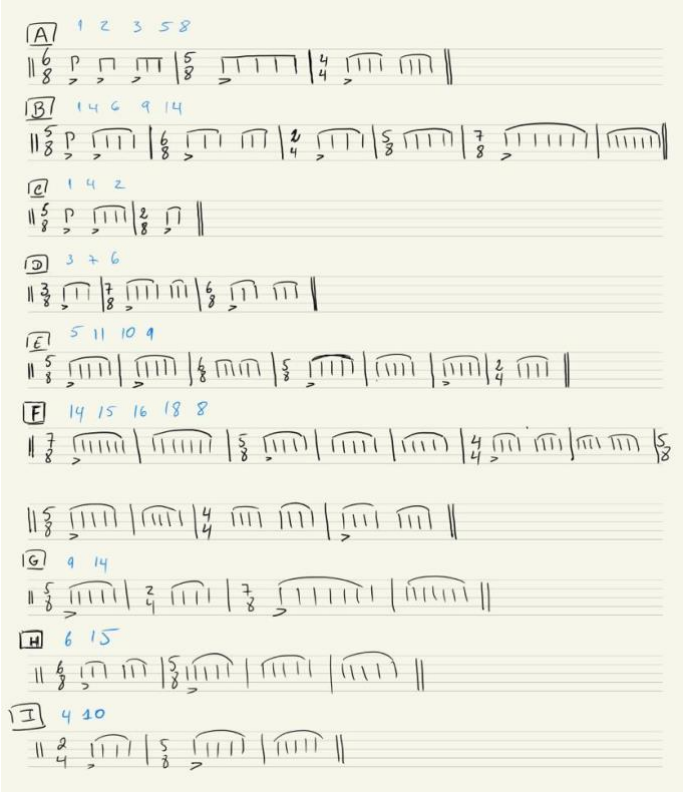


Image 82 - Mirroring the voice of time: sketching rhythm

From here, I realised that all these sketches could lead me to something I could use in *Mirroring the voice of time*, so I started to use variations of these quavers grouping them

together, creating long notes and using accents every time the durations changed (Image 83).

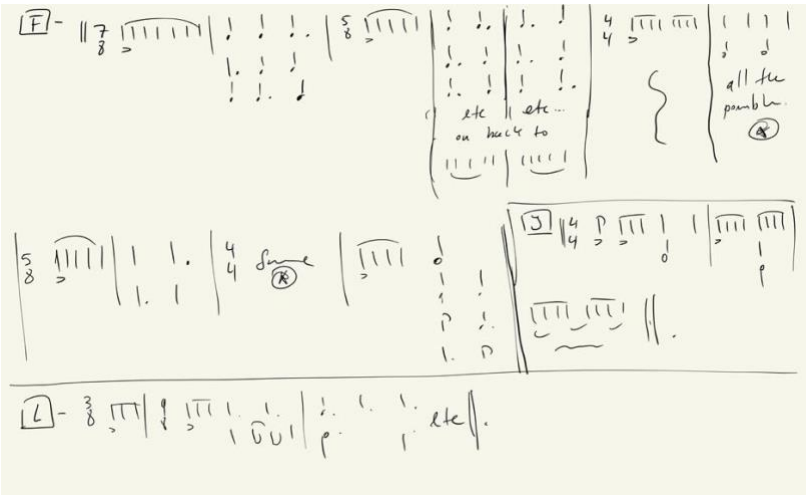


Image 83 - Mirroring the voice of time: sketching rhythm

Later on, I linked the rhythm and harmony using different patterns with different notes from different chords. Suddenly, I found myself drafting ideas (Image 84).

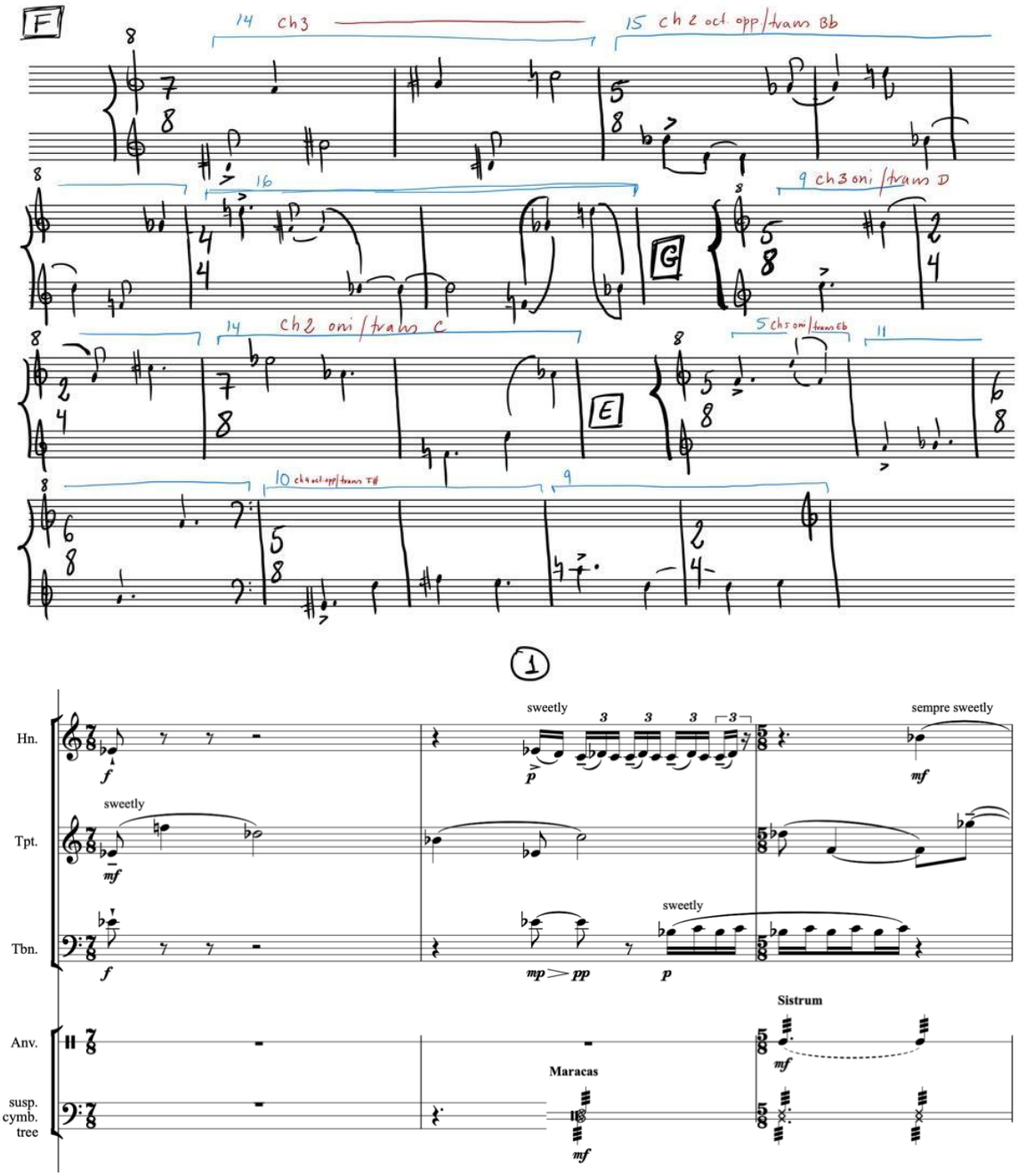


Image 84 - Mirroring the voice of time: draft of first material. In the scores, it is possible to see reflected the idea of the sketch from page 60, bar 261, in the trumpet part. The numbers in blue at the top of the image correspond to the number of quavers that line has. For example, from the starting point, the melody of chord 3 has 14 quavers; the melody of chord 2 (opposite pole / transposed to B flat) has 15 quavers, etc.

> Of course, in the moment of composing, sketches are not everything. There are still many and many decisions to make that are impossible to predict when sketching or preparing a piece. That is why intuitive moments and the warmth of composing exist, they combine knowledge and experience we have gained and acquired with the feelings, thoughts, and inspirations. Sketches are to guide you during your process, to avoid losing your track on the journey, and there is no need to be afraid of taking other paths, you still have the map (vague and blurred image of it) to find the way until the end of the compositional adventure.[89]

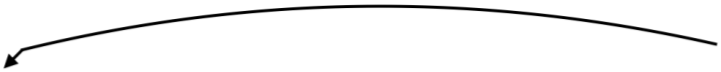
Although I spent some time sketching and engaging more with my materials, the electronics remained an unresolved issue. For some reason, I wanted to include the electronics as an instrument that could be present throughout. However, I realised that in Mahler's *Das Lied Von der Erde* (1908/09), there is a mandolin as part of the instrumentation. Yet even though the piece has six movements, nearly sixty minutes of duration, Mahler only uses the mandolin in last movement, and not even for the entirety of it. In Carlos Caires' *Instante* (2011) for pre-recorded electronics and orchestra, he just uses the electronics at the beginning of the piece, triggering an energy that is then transmitted to the orchestra, making the rest of the composition entirely orchestral. In the instrumentation of *Tell me again the music of that Tale* (2019), the guitar is part of my instrumentation, however there are sections and entire sections where the guitar does not intervene; also in my piece *Redefinition…* (2016) for percussion duo, brass ensemble and tape, the electronics are used as a prelude, just in one single moment of the work.

After thinking about these issues, I realised that having new technologies in my work does not necessarily mean that I need to be constantly using it. I was not setting out to create an acousmatic work, rather a work that seeks to gain from the timbral effect of having acoustic and electronic sounds combined.

[89] (Davis, 2020b)

The harmony, rhythm and electronics of *Mirroring the voice of time* were thus partially defined, but I was still confused and not knowing how or where to begin. So far, I had ideas, created and manipulated a large amount of music material, but I did not know how to make sense of them.

Listening to music, especially non-classical music, often triggers a reaction in my thought processes. By way of example, I found myself listening to *Henya* by Ambrose Akinmusire, and I remembered that on his album *When the Heart Emerges Glistening*, the track *Henya* reappears later on the album as *Ayneh* with its melody in retrograde: a kind of palindrome. Only after this, I was able to draw the shape for the piece I had been trying to visualise (Image 85).



SLOW	TRANSFORMATION	FAST
SECTION YELLOW	SECTION BLUE	SECTION GREEN
AYNEH from bar 53 to bar 64	BRIDGE from bar 65 to bar 69	HENYA from bar 261 to bar 272
WITHOUT ELECTRONICS	ELECTRONICS (SAMPLES OF PREVIOUS PIECES AND FROM SECTION YELLOW)	WITHOUT ELECTRONICS
SAME MELODY -FROM BOTTOM TO TOP- (this will create a palindrome)	NEW MATERIAL	SAME MELODY -FROM TOP TO BOTTOM- (this will create a palindrome)

Image 85 - Mirroring the voice of time: form and shape, with sections modelled on two tracks from Akinmusire's album When the Heart Emerges Glistening

Afterwards, I had in my head an image of how I could start moulding my material in order to make the musical material work: how many sections I could have, where the tempo might be slow, and when fast; when I could use the different harmonic sections, when I could combine the sound of the instruments and electronics and when I could use just the sound of the instruments.

I considered using both *Henya* and *Ayneh* as a way of generating melodic contours, they could be the same at the beginning and at the end, but the beginning section would be an inverted version of the final section. However, finally I decided merely to use this a structural model for my own original material. Also, I decided that the middle section would be a bridge between the first and last parts of the piece (image 86), and the material would be new, in a slow tempo transitioning to a fast one.

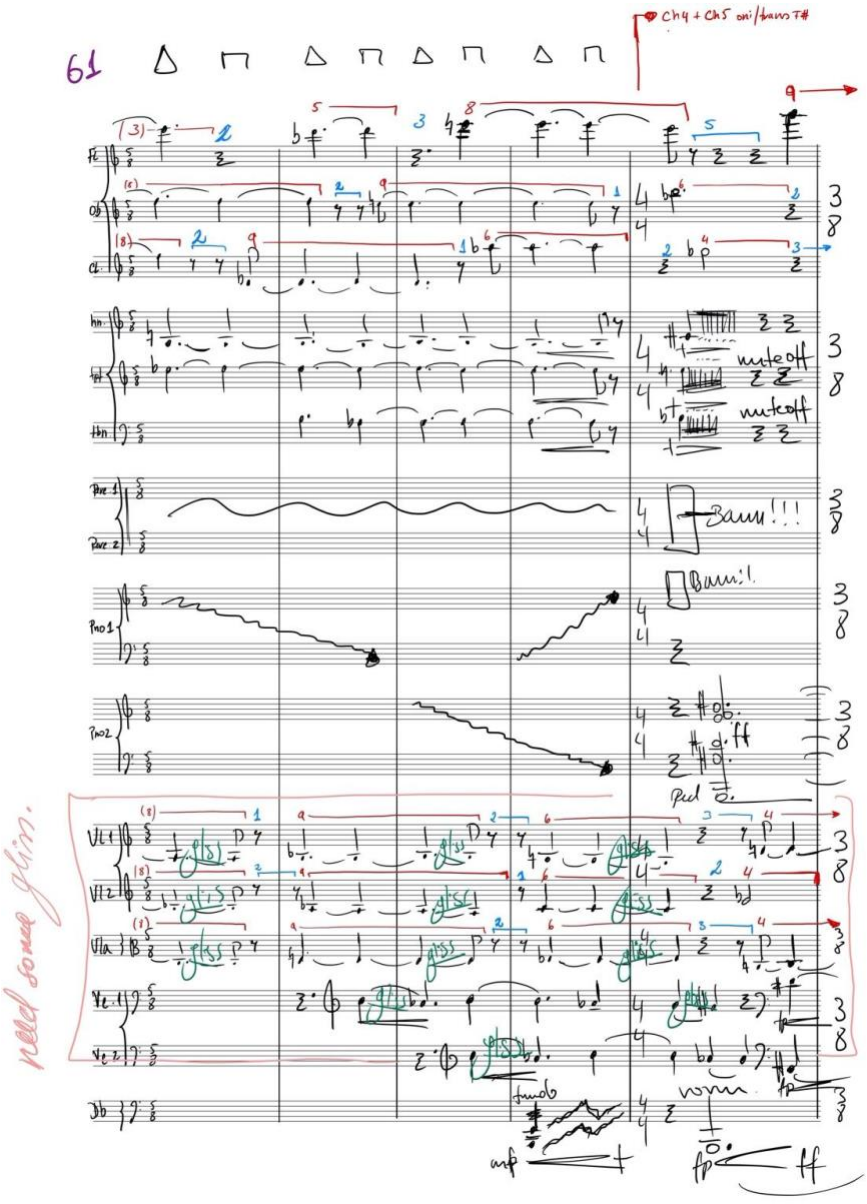


Image 86 - Mirroring the voice of time: Ayneh sketching and composing process, showing the bridge section between Henya and *Ayneh* (corresponding to bars 61 to 65 in finished score).

As I have mentioned before, a composer finishes the process of composition only after the premiere – and even then, composing is still not a perfect science. The electronics,

at the beginning of the process of composing, started to be a single instrument, something that would appear as a soloist with an accompaniment that would travel around all the instruments of the ensemble. The idea was to use the electronics as a single instrument to fulfil the need to include fragments of previous compositions. The place of it would be at some point in the middle section with simple material as an accompaniment, having then a mixture of old and new.

> The electronics, on the one hand, gave the opportunity to take complexity out of my mind. In the process of composing this section I thought that if I already have something complex in the electronics, why would I complicate even more in the ensemble? Also, if the ensemble had been playing difficult material in the first section, and it would play more in the third section, why would I not give them a rest? For all these reasons, I decided to create this moment where the ambience of it is plain, calm and very simple material. A chorale that the only function is to make a harmonic journey.[90]

In the middle section, I created the electronic material, which I was very confident would work with the music I had written for the instrumental ensemble. However, during the process of learning and rehearsing the piece, I started to think that maybe the electronics would not work in this section for a single reason: this section has a slow, plain and calm string chorale, which is followed by solos on the flute, clarinet, oboe, percussion and brass; and the final result of having rehearsed these sequences in a more expressive tempo was so satisfying that I started to fear that keeping the fixed tempo would be a problem. Nevertheless, I could not take the decision without experimenting with it. For that reason, on the first day of rehearsal, we tested the electronics and my misgivings were completely right. The music worked by itself without the electronics, and it could not have been played in a strict and metric way (Image 87).

[90] (Davis, 2020b)

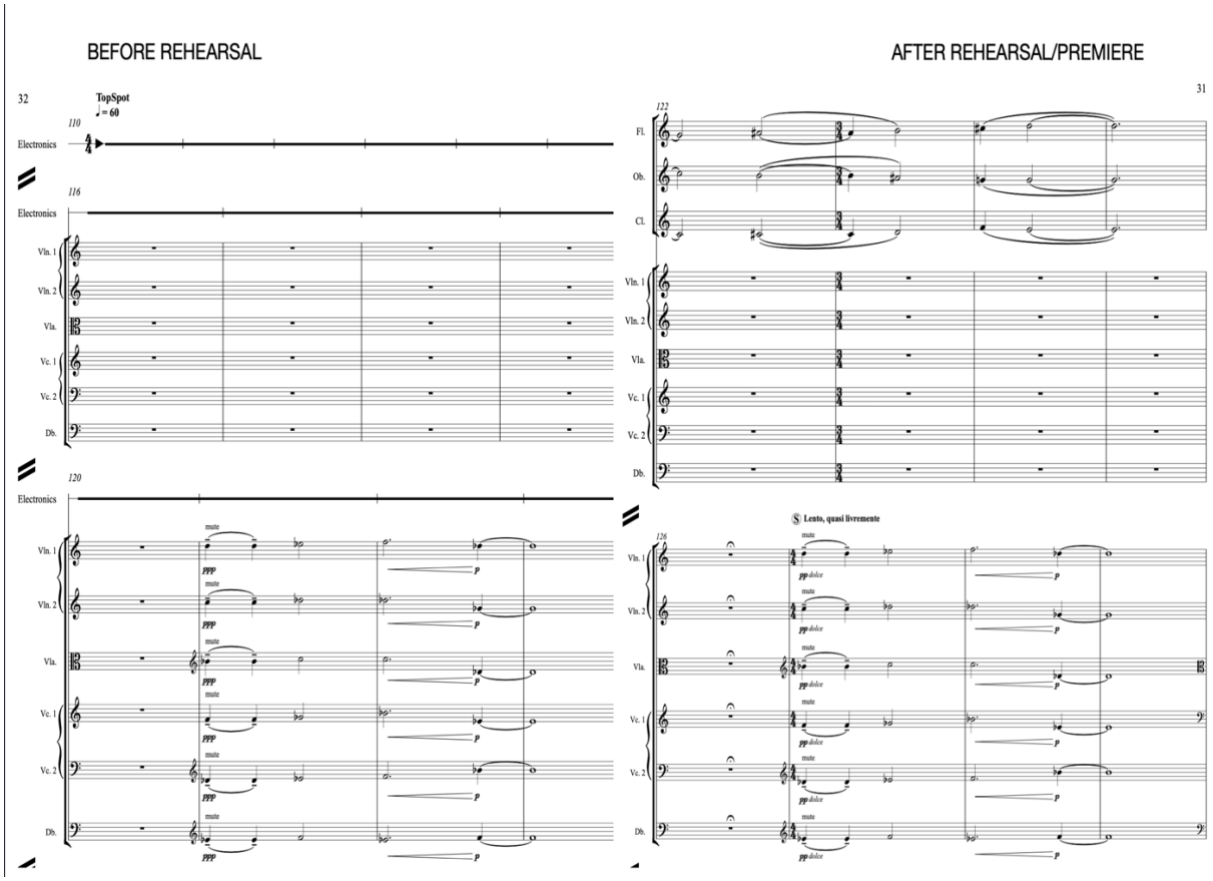


Image 87 - Mirroring the voice of time: adaptation in the score - no electronics

In the moment of composition, I often have a sense that there is something missing. That the music I am writing is not good enough, that it has too many gaps, silences, spaces that are not played by anyone. I want to create a sonic space that goes from one thing to the other. However, in this instance, when composing this section with electronics, because I was aware of the electronics, I decided to have these gaps, these silences, spaces that are not played by anyone, or even spaces that are just played by one instrument. When I just realised that the music just worked perfectly well with these gaps, the silences, the spaces that are not played by anyone, it was a surprising revelation. It was the music breathing by itself. Breathing from the first section and getting ready for the next.

Being able to be part of the ensemble, working directly with the musicians, and learning the music with them was a very important experience for my development as a composer and as an artist; and it was crucial for this research. How can a composer make a work that feels almost like an ecosystem? This can be in the composition itself, or it can be in the choice of materials, a choice of materials that really feel alive. However, part of that ecosystem is created during the learning and rehearsing process, and the composer can be part of it, then s/he not only becomes part of the ecosystem itself, but also the missing piece of the puzzle of solving the final stages of the creative process.

Image 88 - Mirroring the voice of time: building the ecosystem (presented as a documentation of the rehearsals for the premiere performance of this project).

***Broken Mirror* (2020)** was initially intended to be part of the LSO Orchestral Project 2019-20 at the Guildhall School, but during the composition process I realised that the work was intimately related to the concerns of this doctoral research project, especially in its attempt to respond to the final research question. In contrast to *Mirroring the voice of time*, the title and the idea of the piece came before everything else—even before harmony.

Broken Mirror's form was designed as three 'events', each one of them exploring a different idea. In Event 1, the piece starts calmly, plain and almost static, focusing just on harmony, harmonic changes, timbre and harmonic transformations; then, Event 1 reaches a crescendo of activity, in which the harmonic material would be used in an extreme way, creating an explosion that initiates Event 2, which evolves to a fast, agitated and chaotic moment, in which harmony and rhythm would be explored in an extreme version. Event 3 is the clarification of the rhythm, and it is the opposite of Event 1; its focus would be on rhythm, groove and a repetitive material that would lead the piece to its conclusion (Image 89).

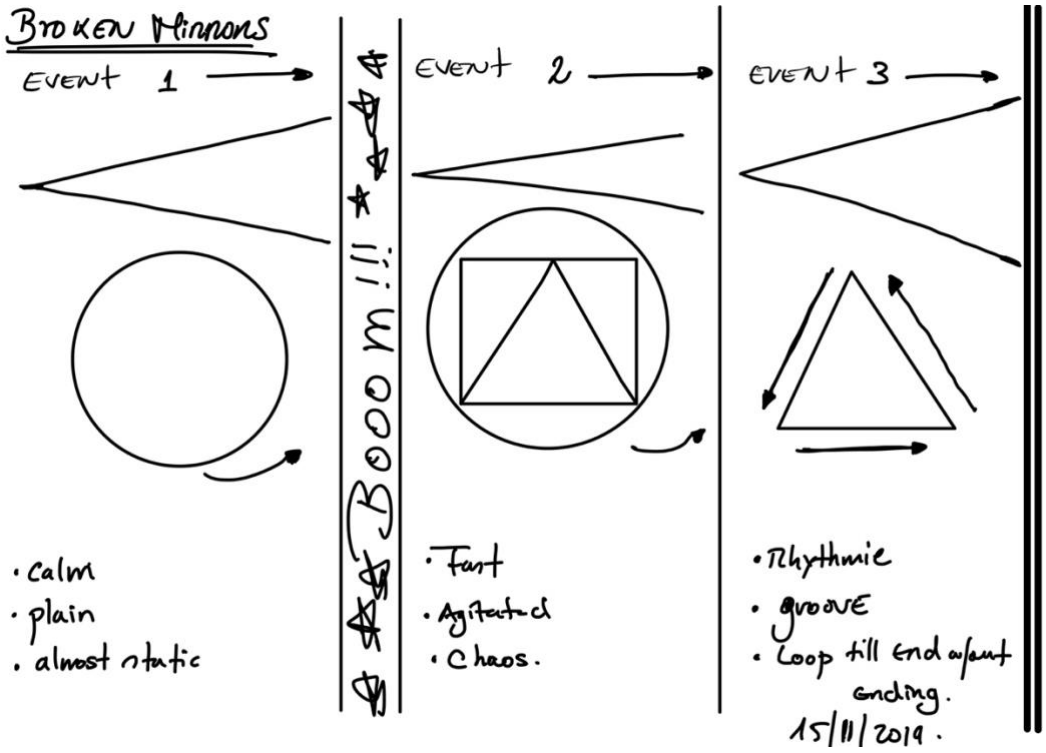


Image 89 - Broken Mirror: plan and form

Geometric forms were important in the sketching of the piece: the circle found in Event 1, is a representation of the circle of fifths, used to transform, transpose and manipulate harmony; the square found in Event 2 is a representation of a rhythm planned in regular patterns and tetrahedral patterns; the triangle found in Events 2 and 3 is the representation of a rhythm planned in triangular patterns (Image 89).

Once I had established these ideas, I started the sketching process for the harmony and rhythm. Harmony followed the process I had been developing over the past three years: improvising at the piano, creating chords, locating them in the harmonic series, transposing them using the circle of fifths, changing the register of the notes, changing the polarity of the chords, selecting the chords and putting them together in order to create a harmonic journey (Image 90).

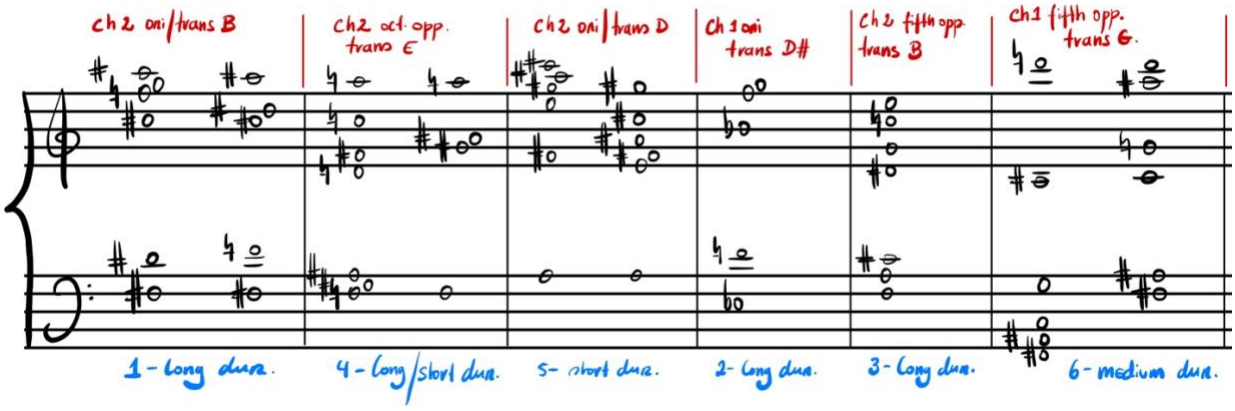


Image 90 - Broken Mirror: sketching harmony.

In Image 90, below each chord I wrote the order and the approximate duration that they would have in the music, as for example long, medium or short duration. In the score, the sequence of chords in Image 90 can be found as follows: first chord (long duration) and second chord, from bar 145, page 27 until bar 156, page 29. Fifth (long duration) and sixth chord (medium duration), from bar 156, page 29 until the end of the piece. This process was repeated with other chords of the image in previous moments of the piece.

Rhythm, on the other hand, was created using three different numeric patterns, that I call triangular patterns[91], regular patterns and tetrahedral patterns[92] (Image 91), and right after, by selecting in a geometric way the numbers I would be using to create the rhythmic alternations (Image 92).

triangular patterns		1	3	6	10	15	21
Regular patterns	1	2	3	4	5	6	7
tetrahedral patterns			1	4	10	21	35

Image 91 - Broken Mirror: rhythm - numeric patterns

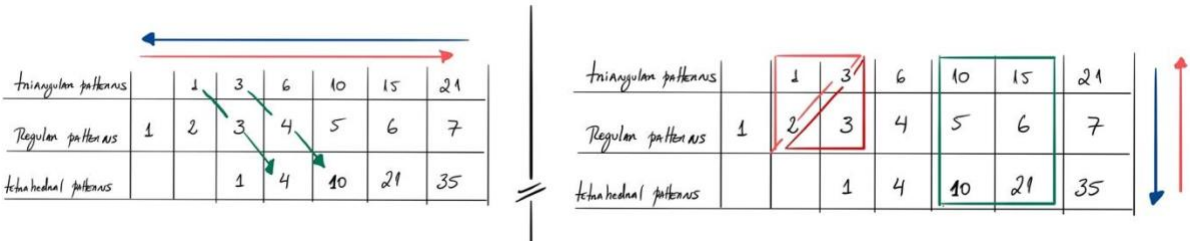


Image 92 - Broken Mirror: rhythm alternations

These allowed me to transpose numbers into figures (Image 93) and from there to combine the figures with the chords (Image 94).

[91] Wikipedia contributors (22, March 19)

[92] Wikipedia contributors (22, March 16)

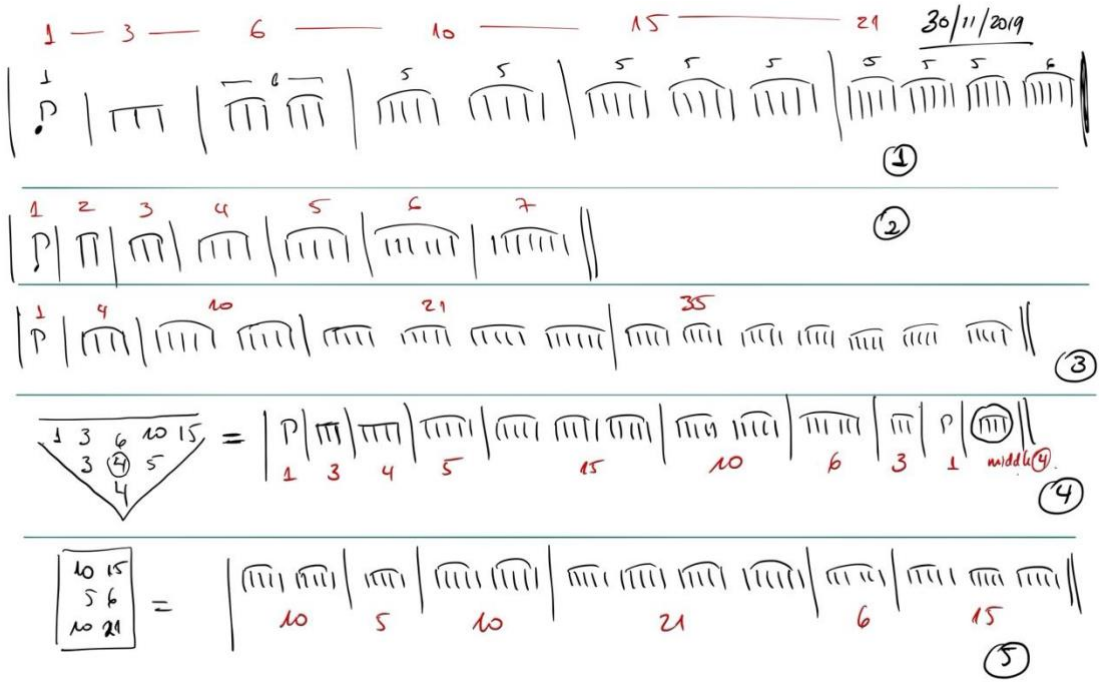


Image 93 - Broken Mirror: rhythm - numbers into rhythm patterns. These rhythmic patterns will transform into the rhythms in Image 94.

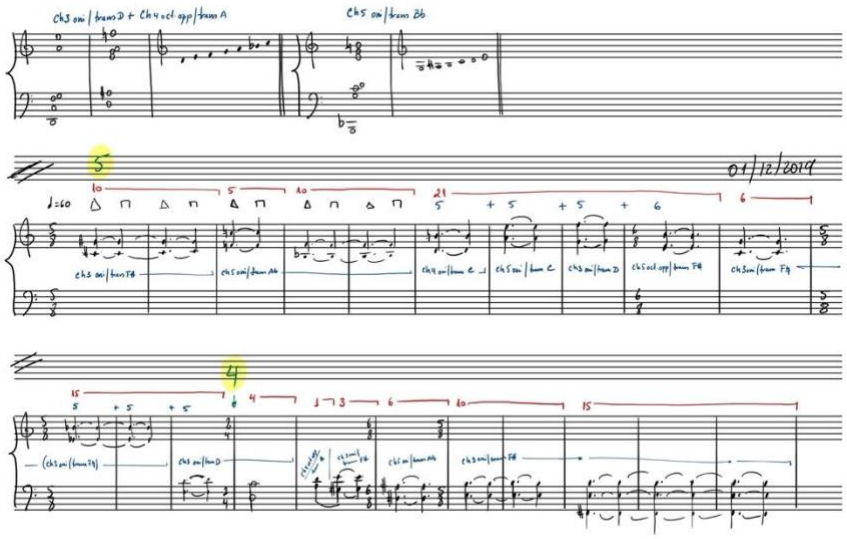


Image 94 - Broken Mirror: rhythm and harmony. These raw groups of rhythms and chords will be transformed into what I used as a melodic line in the beginning of the piece, in the woodwinds from bar 6, page 1.

After this, I started to think that I needed something that could glue harmony with rhythm in an organic way. By selecting pitches from my chords, I created melodic gestures that would allow me to give direction to the music, whilst also creating a continuous line, connecting harmony and rhythmic patterns through melody (image 95).

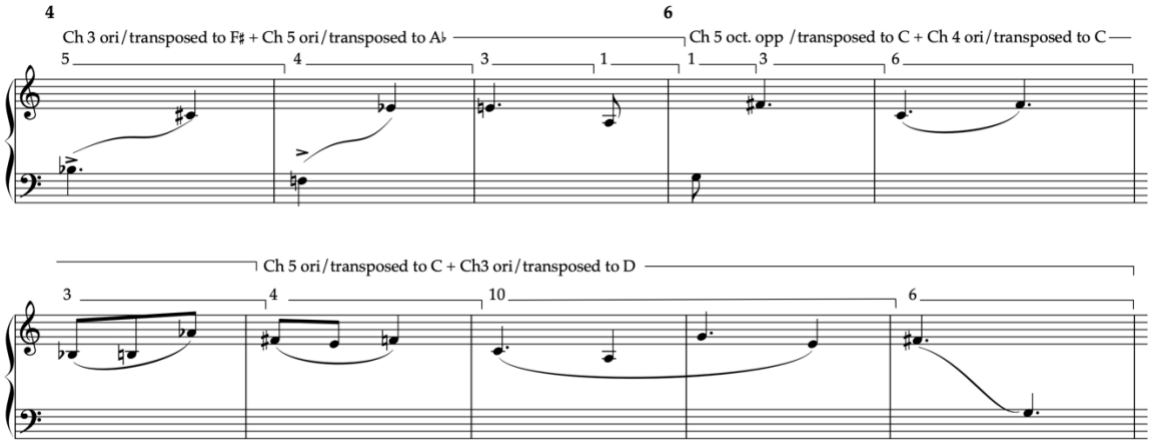


Image 95 - Broken Mirror: connection between the harmony, rhythm and melodic gesture (corresponding to bar 7 to bar 17 in the completed score)

One of the crucial moments when composing *Broken Mirror* was when I started to filter notes out of my harmony as I orchestrated. It may seem strange that when writing for such a large instrumentation, the decision was to take out notes rather than adding more notes, as for example in the first two pages of the score. But, in reflecting on standard tonal practice, what defines a major or a minor chord is the third. When considering a C-natural and an E-natural it is easily assumed that the sound of them together is a major chord, without even having the fifth. Conversely, the sounding together of an A-natural and C-natural implies a minor chord, without even having an E-natural. In Event 1, I wanted this clarity, filtering the notes I had in my chords to the minimum—so one could hear the plain, calm and almost static environment, and yet still feel the progression of each chord. This made me realise that I did not need to use the whole structure of the chords I had made. In other words, even though the image of the moment was calm and static, the composition of it could still be boiling in the background.

Having all these musical materials did not mean that the piece is composed. Notes still had to be written on paper, and it is at this point in the process that further difficulties emerge, especially pieces composed, back to back. In *Broken Mirror,* this was the case.

> Although I have all the materials I need, I am struggling a lot to write the notes on the paper. I suppose that is due to the fact that I have not had

> enough time to mentally recover from this extremely productive year, in which I wrote, one after the other, *Remembering the future*, *Tell me again the music of that Tale*, *Mirroring the voice of time* and now *Broken Mirror*.[93]

What can happen in this situation, is that a composer uses aspects of material already explored in previous pieces. In my case, for example, if one looks closely at *Remembering the future* and *Tell me again the music of that Tale* one finds similarities; and the same thing happened between *Mirroring the voice of time* and *Broken Mirror*. Of course, there is nothing wrong in using and re-using material from previous pieces. Self-borrowing is something composers have always done, in many different ways, with their own or other composers' music. Spending time in 'the library of musical knowledge' can be useful to establish what other composers have done, or even to rediscover and borrow from the composer's own music. However, each piece has, or should have, a unique character, so perhaps that feeling of disorientation is understandable when the composer needs to write notes afresh on paper, but his/her thinking is still entangled in previous work.

There is not a perfect solution for this dilemma. What helped me to get through these issues and start composing was to keep trying to understand that the message I wanted to communicate with *Broken Mirror* was different from the message of *Mirroring the voice of time.* Think about how many C-major chords exist in music, and how different can they be. The technique, musical ideas, rhythmic patterns, do not define a composer's musical image; they are just a code that helps him/her to draw that image on the score. The composer just has to remember that a piece of art can live and die many times before it is completed, and the same can happen even just before composition begins.

[93] (Davis, 2020a)

Image 96 - Broken Mirror: the final workshop (LSO and Guildhall Orchestra Players; Jack Sheen conducting (presented as a documentation of the workshop for this project).

Reflections in Conclusion

I would now like to draw together some reflections, with reference to my research questions. The first research question was ‘What is the relationship between the harmonic series and my harmony?’. Today there is a strong association between the harmonic series and spectral music, however the harmonic series is a fundamental dimension of sound itself.

Grisey wrote in the programme notes of *Les Espaces Acoustiques* that ‘Spectralism is not a system. It is not a system like serial music or even tonal music. It is an attitude. It considers sounds, not as dead objects that you can easily and arbitrarily permutate in all directions, but as being like living objects with a birth, lifetime and death.’[94]

My relationship with the harmonic series is not spectral at all. It is, nonetheless, a rich source of harmonic material, in which I have been able to identify, transpose, invert and adapt my harmony.

The second research question was ‘How might that [the relationship between the harmonic series and my harmony] relate to the circle of fifths?’. The relationship between the harmonic construction of my music, in this period of research, with the circle of fifths, began after reading Ernst Levy’s *A Theory of Harmony* and George Russell’s *Lydian Chromatic Concept of Tonal Organization*. There is this sense of polarity in the circle of fifths, in which if the music travels clockwise from one chord to the other, it is possible to have a bright cadential feeling. The cadential feeling becomes warmer when the music travels from one chord to the other in the opposite direction. Linking these qualities to the Lydian mode, which is organised by fifths, gave the me idea of using both chords in different poles and the Lydian mode as an infinite scale as tools for developing harmonic and melodic material.

The third research question was ‘How does this harmony relate to the rhythm of my music. What is the rhythm of my harmony?’. This was a question that took me a few pieces before I could start thinking about it. But I was able to understand the connection between

[94] (Grisey, 2010)

harmony and rhythm when I started sketching and composing *Mirroring the voice of time.* In this work, I started to create harmonic pillars on which different sections of the piece could be based. These harmonic subjects could create micro-tonalities in which each section could develop. So, the rhythm of my harmony, for this period, is based on the idea of having a floor on which I can build, on top of it, various walls.

The fourth and last research question was 'What is the natural rhythm of my own music?'. I like to think of pieces as being individual ecosystems. Each is different from the previous one, and they will be different from the following one. The natural rhythm of the music I compose will vary inevitably from one piece to the other. However, the rhythm of my own music is both plain and calm, but with boiling micro-rhythmical material. In a way, this question relates to the previous one, with the natural rhythm of my own music as a single chord that will have its micro-tonalities, variations, transpositions and inversions. But one of the main issues at the starting point of this research project – prior to my research proposal – was to adapt my genuine concerns as a composer into research questions.

This project was structured along two different paths: on the one path, it was about how I engaged with other composers' work, how I grew compositionally during this research process, how I developed as a composer – learning and improving my sketching and planning techniques. It was about how created and developed my harmony and rhythm, it was about the process of learning how to sketch, about how important it is to organise ideas in advance, it was about the Lydian mode, the circle of fifths, the harmonic series and infinite scales.

On the other path, this research project was not all about explaining a formula; it was not just about explaining how the twenty-two partials from the harmonic series worked, or the motivation for choosing particular rhythmic pattern and how that pattern might work; it was not just about how a scale was built and how it might be categorised. Writing this practice-based research commentary was also about experiences. As a researching composer, it was about the journey of the compositions, the journey of each piece, where I struggled, and what I did to find the solutions to the problems. This commentary was also about my relationship with the present, my connection to social media, YouTube, theatres, installations and concerts. It was about reflecting on the idea that composing is not just about the final result, and that composing can also be about the process of

composition. Right from the beginning, when a composer starts thinking about one piece, about one single idea, until the end of the process, there is a journey that is perhaps all too rarely described and shared – at least in research terms.

But this research was also a reflection on the processes I used to create, modify and transform harmony. The harmonic series, the Lydian mode, the circle of fifths and the inversion of the harmonic series in Open Music were all very helpful to develop my technique in this area. I learned that it is possible to compose a large number of pieces that share one technique. Of course, looking back now, I notice that *Colours (in circles)* was a raw, very new and rudimentary way of using this process. Most of the time, also in other initial pieces of this project, I felt that it was only about the technique and not about the music, and that made me question the quality of the music I was producing. *Is it really working? Am I really happy with the final result of these pieces?* It is clear that pieces like *Sonata for violin and piano* and *Colours (in circles)* shared these feelings. That is why I struggled to find a connection between myself and those pieces. But by the end, in *Tell me again the music of that Tale*, for example, the way that the technique blended with the musical result was very satisfying, and this is because, as I have mentioned before, at the beginning of this document, composers often struggle to translate their musical process into language and they forget, especially in a research environment, that the process of composing is also about instabilities and not only about technique or the complicated design of a new piece.

It is also important to mention that before arriving in the United Kingdom, I was composing in a very intuitive way. The lack of sketching and thinking about my musical intentions, before writing them on the paper, were forcing me to compose in a way that every idea was just the idea. So, as a result, a composition could have enough material to compose five different pieces. As soon as I started the learning process of sketching and thinking very deeply about my musical ideas, before composing, I started to understand that the composer is very likely to lose track of what s/he is engaged with creatively. However, the probability of getting stuck in sketches, and being swallowed by them is very dangerous—this is when the instabilities started to appear.

As I previously outlined, I accepted walking on the bridge, and this gave me the confidence in the process of organising, discussing, speculating, not only about my ideas,

but also about other composers' music. This commentary was important because it attempts to create a parallel between the process of composition, myself, the sketching process and the final result, and it has enabled a conversation with myself, and allowed me to look at the same time to the creative idea, to the whole process and to the final result, and still it gave me the possibility to walk backwards and forwards across the bridge if I needed to. As soon as I got them right, sketches helped me to find my way when I was blocked, lost and without knowing what to do. On the other hand, sketching allowed me, not only, to discover the harmonic system I developed in this research, but also to organise my musical thoughts in a very consistent way, shaping the arch of my music, the journey I wanted to explore and the harmonic path I wanted to use. I learned that sketches are important tools for the creative idea, but they are not the composition itself.

When I started this research project, I was only planning to focus on harmony. By the end of this research journey, I started to question myself in terms of the rhythm of my music, the rhythm of my harmony and the rhythm I was using. What happened was that the harmony was going through all these systems, sketching, inversions and polarities, and the rhythm was being composed in a very intuitive way—it was like a previous version of myself without sketching or thinking in my materials. Initially I thought that this was not a problem, because I wanted to keep the spontaneous part of composing too. However, a composer works very actively, it makes sense to have something by way of support, otherwise s/he gets lost or starts to repeat himself/herself. *Mirroring the voice of time* was the triggering point for the sketching of rhythm. In 'the library of musical knowledge', I started to look for examples and rhythmic techniques that I did not know before. I started to search for mathematical patterns, as for example Fibonacci Series, and use them as starting point to create my rhythmic patterns. I started to have a sketching process that includes, not only, the harmony, but also the rhythm. But, in the process of composing, I allowed myself to break the rules.

It is very important though to acknowledge that technique has a very important function in the process of composing. The capacities of the harmonic systems that I developed in this research gave me a large number of possibilities in which I could create, transpose, invert, change and rotate chords, but they also have limitations. One of the conditions of using this process is that if the composer uses it in a set of pieces, and s/he is not careful, all the pieces may sound the same, because the process of creating chords is the same,

and often chords that the composer thinks suitable for one piece may relate with a harmonic series s/he has used before, thus the composer may be using the same inversions, rotations and chords in different pieces. One of the solutions I found, by the end of the developing process, was to add different notes to the harmonic structure I was using, so I could enable the harmonic system to work in a different way, avoiding a similarity between pieces. It is important to mention, that the technique composers use to create a piece cannot be the piece itself. There is a gap between the concept, technique and the music we create, and as composers we should embrace this gap, because music is subjective and creating it even more so. Making music stable is a non-enjoyable mistake.

Looking back now to these harmonic and rhythmic systems, I recognise that aspects of them are distinctive from what other composers might have done, but also I recognise that they are still very fragile and that there might be something that could trigger their capacity of being able to create in a more unique way harmony, chords, bass lines, rhythmic patterns and gestures. In the future I would like to keep developing the way I create, construct, transform, transpose and use harmony and rhythm, exploring other techniques different from the ones I have explored on this journey, giving more attention perhaps to the Infinity Series of Nørgard, exploring other ways of transposing harmony, exploring other ways to exploit the harmonic series, its transformations and polarities. I would like to continue the blog with each work I compose, because blogging became a useful tool in the process of mapping my ideas; it became a useful way of having critical conversations with myself and dialoguing with my own ideas. I would like to work with the possibility of having different versions of the material itself, in such a way that the material itself could decay differently, resonating with the uniqueness and unpredictability of organic matter.

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Large Images section

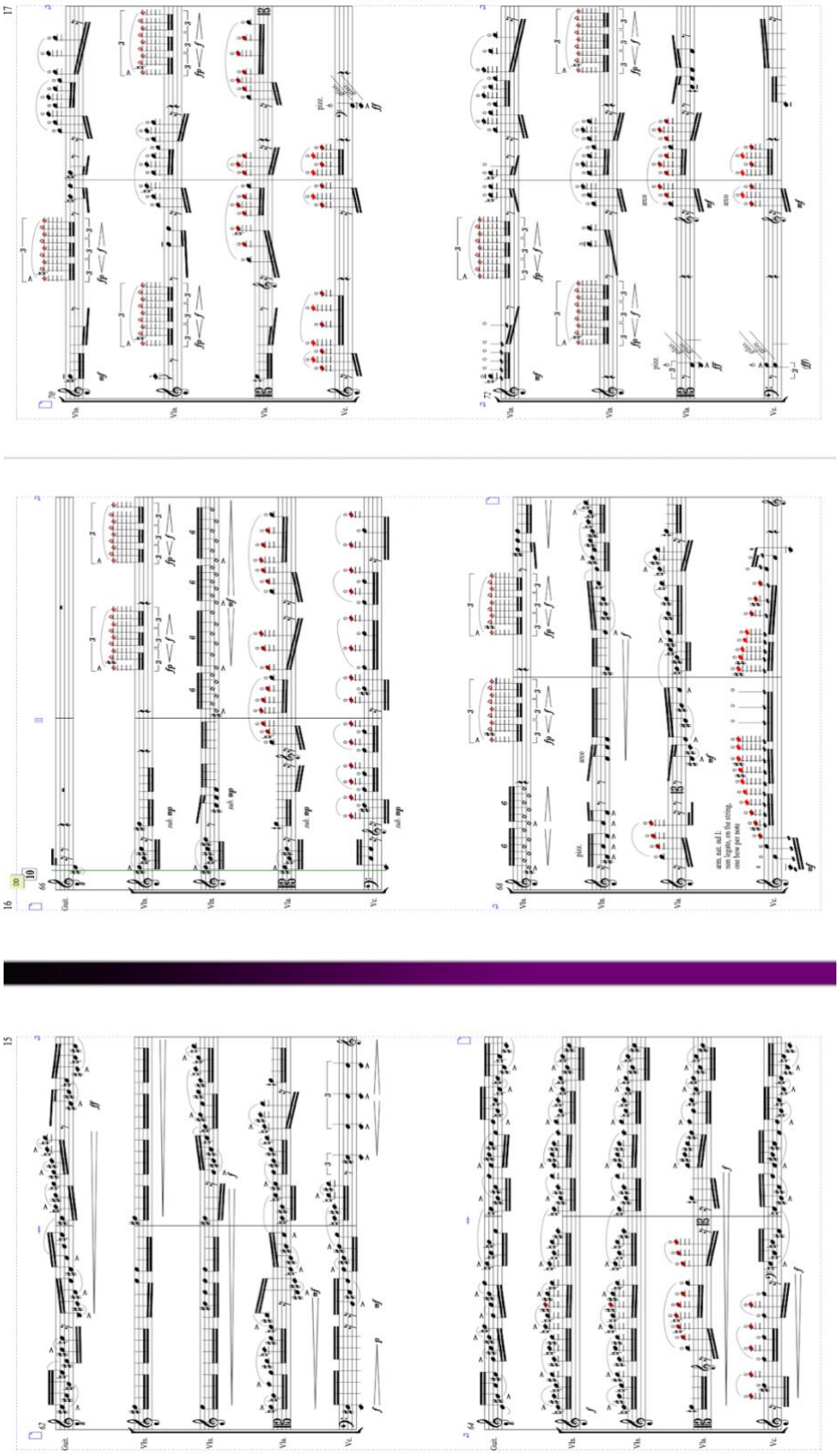

Image 53 – *Colours (closing in) – composing processes: contrasting section in harmonics.*