

University of Huddersfield Repository

Gkotzampougiouki, Maria

A Compositional Response to Information Anxiety

Original Citation

Gkotzampougiouki, Maria (2014) A Compositional Response to Information Anxiety. Masters thesis, University of Huddersfield.

This version is available at http://eprints.hud.ac.uk/id/eprint/27158/

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@hud.ac.uk.

http://eprints.hud.ac.uk/

A COMPOSITIONAL RESPONSE TO INFORMATION ANXIETY

GKOTZAMPOUGIOUKI MARIA

A thesis submitted to the University of Huddersfield in partial fulfilment of the requirements for the degree of Masters by Research

September 2014

ABSTRACT

The composition portfolio presented here consists of four fixed media pieces that form a response to information overload, an everyday reality that is familiar to most people of the modern world. Drawing stylistic influences from electronic dance music and ambient music while transferring to a musical context characteristics of meditative practices, the core elements that were combined for the construction of the composition portfolio were repetitive rhythmic patterns, textural material and long reverberations coming from empty, large indoor spaces. My manipulation of these elements, their meditative qualities and the ways they have been combined, as well as how they contribute to the creation of autonomous, static sonic environments are examined in Section A. In Section B, my compositional process, which is a variation of the typical acousmatic composer's process is presented analytically, starting the discussion with preconceived ideas and my method behind the selection of sound sources, and ending with the compositional importance of the mixing stage which is the final stage. A key point to the formation of my compositional approach was the decision to incorporate an idea relating directly to the situation of information anxiety, which was the relinquishing of compositional control over the musicians' performances to a great degree during recordings. The implications of this decision both on the process and the result are also discussed here, with the most important macroscopic consequence being the rise of a gradual, bottom-up structural development of each piece.

TABLE OF CONTENTS

LIST OF WORKS	5
LIST OF AUDIO EXAMPLES	6
ACKNOWLEDGEMENTS	8
COPYRIGHT STATEMENT	
INTRODUCTION	10
A. MEDITATIVE QUALITIES OF THE MUSIC	11
1. Loops and Electronic Dance Music	12
2. Atmosphere	15
2.1. Textures and Ambient Music	15
2.2. Reverberation	16
2.2.1. Reverberation As Texture	16
2.2.2. Significations of Reverberation	16
3. Stasis and Vertical Time	18
B. COMPOSITIONAL PROCESS	20
4. Each Composition as a Different World	21
5. Musical Architecture and Acousmatic Influences	22
5.1 Selection of Sound Sources	23
5.2. Recording	24
5.3. Listening and Editing	25
5.3.1. General Approaches of the Recorded Material	25
5.3.2. Listening and Segmentation	26
5.4. Processing	26
5.5. Construction	27
5.5.1. Construction of Different Layers and Layer Interaction	28

5.5.2. Harmonic Considerations	30
5.6. Mixing	34
CONCLUSIONS	36
REFERENCES	37
BIBLIOGRAPHY	37
DISCOGRAPHY	38

Word Count = 10.059

LIST OF WORKS

1)	Platform <i>i</i>	10.07
2)	Icelandic	09.06

- 3) Homage to Cubism 08.15
- 4) Flaminius Rufus 11.04

LIST OF AUDIO EXAMPLES

Audio Example 1 (Platform *i* - 01.32 - 01.48) Audio Example 2 (Homage to Cubism - 02.25 - 03.11) Audio Example 3 (Platform *i* - 02.23 - 04.10) Audio Example 4 (Homage to Cubism - 00.26 - 02.38) Audio Example 5 (Platform *i* - 04.35 - 06.32) Audio Example 6 (Platform *i* - 05.56 - 06.26) **Audio Example 7** (Icelandic - 06.56 - 07.22) Audio Example 8 (Platform *i* - 02.02 - 02.08) Audio Example 9 (Flaminius Rufus - 01.26 - 01.35) Audio Example 10 (Platform *i* - 00.40 - 00.48) Audio Example 11 (Flaminius Rufus - 00.00 - 00.07) Audio Example 12 (Homage to Cubism - 01.26 - 02.18) Audio Example 13 (Homage to Cubism - 03.57 - 04.22) Audio Example 14 (Homage to Cubism - 00.26 - 00.56) Audio Example 15 (Platform *i* - 03.15 - 03.21) Audio Example 16 (Homage to Cubism - 04.20 - 04.24) Audio Example 17 (Homage to Cubism - 05.36 - 05.50) Audio Example 18 (Homage to Cubism - 06.16 - 06.49) Audio Example 19 (Platform *i* - 09.49 - 10.00) Audio Example 20 (Homage to Cubism - 00.55 - 01.40) Audio Example 21 (Homage to Cubism - 00.58 - 02.06) Audio Example 22 (Homage to Cubism - 05.18 - 05.42) Audio Example 23 (Icelandic - 02.10 - 03.29) Audio Example 24 (Flaminius Rufus - 07.10 - 07.55) Audio Example 25 (Homage to Cubism - 02.39 - 02.41) Audio Example 26 (Platform *i* - 04.38 - 05.40) Audio Example 27 (Platform *i* - 03.50 - 04.04) Audio Example 28 (Flaminius Rufus - 03.58 - 04.37) Audio Example 29 (Platform *i* - 02.28 - 02.43) Audio Example 30 (Homage to Cubism - 02.45 - 03.55) Audio Example 31 (Platform *i* - 06.51 - 07.40)

- Audio Example 32 (Flaminius Rufus 05.55 06.30)
- Audio Example 33 (Homage to Cubism 04.23 04.45)
- Audio Example 34 (Flaminius Rufus 01.05 02.32)
- Audio Example 35 (Platform *i* 06.51 07.33)
- Audio Example 36 (Homage to Cubism 01.26 02.18)
- Audio Example 37 (Platform *i* 02.23)
- Audio Example 38 (Homage to Cubism 07.18 07.40)
- Audio Example 39 (Homage to Cubism 02.30 02.38)
- Audio Example 40 (Flaminius Rufus 06.46 08.08)

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to my supervisor Dr. Alexander Harker for his continuous guidance, patience and useful feedback through the creation of this composition portfolio.

I would also like to thank the improvisers who enthusiastically accepted to perform and provided me with the invaluable musical material that my compositional work was based on: Christine Avis, Samuel Hodgson and Ben Wallbanks.

COPYRIGHT STATEMENT

- i. The author of this thesis (including any appendices and/or schedules to this thesis) owns any copyright in it (the "Copyright") and s/he has given The University of Huddersfield the right to use such Copyright for any administrative, promotional, educational and/or teaching purposes.
- Copies of this thesis, either in full or in extracts, may be made only in accordance with the regulations of the University Library. Details of these regulations may be obtained from the Librarian. This page must form part of any such copies made.
- iii. The ownership of any patents, designs, trade marks and any and all other intellectual property rights except for the Copyright (the "Intellectual Property Rights") and any reproductions of copyright works, for example graphs and tables ("Reproductions"), which may be described in this thesis, may not be owned by the author and may be owned by third parties. Such Intellectual Property Rights and Reproductions cannot and must not be made available for use without the prior written permission of the owner(s) of the relevant Intellectual Property Rights and/or Reproductions.

INTRODUCTION

Arthur Schopenhauer (1969, p.390) has argued that one of the functions of art is to provide an escape from reality. The artist, inspired by the stimuli she receives from her environment forms ideas that channels in her work in order to create alternative realities and imaginary worlds.

The issue that has been for me the triggering force behind this project is a situation familiar to the vast majority of people of the developed world; information anxiety, an anxiety "produced by the ever-widening gap between what we understand and what we think we should understand. It is the black hole between data and knowledge, and what happens when information doesn't tell us what we want or need to know" (Wurman, 1989, p.34). Although the term was coined 25 years ago, it is now more relevant than ever. This condition, caused by a constant information bombardment, is further aggravated by the fragmented way we actively parse or passively receive information. McCullough (2013, p. 49) states that "the human mind naturally tends to wander, [but] never before has it had such abundant means for doing so. This is an age of unprecedented distraction".

In an effort to find a creative response to this reality, I imposed on myself an information overload situation while working on this project: four music pieces that would result from recording sessions over which I had little control, leading me to the collection of material I did not necessarily need, or know in advance how to use. This material was afterwards segmented or fragmented in various ways and to various degrees, the challenge being the detection of potentially useful segments or fragments and then their recombination in a meaningful, coherent way. At the same time, I was interested in manipulating and combining the selected material in ways inspired by meditative situations which are meant to be an antidote to anxiety, and create spaces for reflection.

My two main music influences at an aesthetic level, which both bear meditative qualities, have been the repetitive rhythmic patterns encountered in electronic dance music as well as the static or slowly evolving textures mostly found in ambient music, while my compositional process has largely been influenced by the acousmatic composers' working process.

A. MEDITATIVE QUALITIES OF THE MUSIC

Walsh (1983, p.18) defines meditation as the "family of practices that train attention in order to heighten awareness and bring mental processes under greater voluntary control". It is closely associated with mental activities such as contemplation, introspection or concentration that require the individual to achieve an inward focus and to varying degrees, a disconnection from the surrounding environment.

Repetitive rhythmic patterns and atmosphere were my two main points of focus whilst composing and they both display characteristics that strongly relate to elements of practices that promote states of inner involvement. The specific rhythmic patterns, the enveloping atmosphere and their combination were inspired both directly by meditation practices and also by other music genres demonstrating meditative qualities.

1. Loops and Electronic Dance Music

Loops, which function as the building blocks of my rhythmic language, play a key role both in several meditation practices¹ and in EDM music. There are a number of traditional meditation rituals that use repetition of some kind as the focus of attention, such as the famous sufi whirling, which involves constant revolution around oneself, or the japa discipline where a mantra is repeatedly recited; the focus of attention on a repetitive action aims at achieving a state of trance. On the other hand, "the loop is the fundamental unit of musical structure in electronic dance music: most tracks are composed primarily (if not entirely) of loops … Non-looping patterns do occur in EDM, particularly in tracks incorporating live vocals, but loop-based structure is much more common" (Butler, 2006, p. 102-103).

All the sounds I have used in my pieces, including the ones that make part of the various rhythmic loops, have been sampled from my own recorded material. Sampling can become a particularly challenging task when it comes to the search of a segment with the right (for the occasion) characteristics to be looped and work as the fundamental unit for the creation of a new piece. In my case, the search was mostly focused on finding a segment with the appropriate rhythmic qualities. For example, when I was going through the raw material for 'Platform i', I was looking for a segment that could be stylised as a minimal techno beat (a process that is transparent in **Audio Example 1** (Platform i - 01.32 - 01.48), while in 'Flaminius Rufus', where more or less all percussive material was rhythmically appropriate, I was specifically searching for a phrase that would be of relaxed dynamics, relatively slow tempo and also flow when looped, in the sense that it

¹ In a meditation context, as Wier (2009, p.245) explains, a loop is "a repeating sequence of cognitive objects" where the term cognitive object refers to "any thought, feeling or inner sensation."

would feel like a continuous performance. This search process is practically a way of dealing with a situation of information overload (even though voluntary); the composer needs to have her filtering abilities developed as most of the time she has to go through a lot of material in order to recognise the one small phrase that suits her artistic aims. I applied this rather traditional method in the two previous examples ('Platform i' and 'Flaminius Rufus'), however, fragmentation of material has been an important part of my compositional process, and I was interested in exploring it more deeply. Regarding the formation of rhythmic patterns, I took this idea a step further by looking in the recordings not for a segment that could be used directly as a loop, but for interesting sounds that could be parts of a loop or for phrases that could potentially provide an interesting pattern after further fragmentation and rearrangement of the fragments. For example, in 'Platform i' I manually isolated sounds from the train recording that I considered timbrally appropriate to the minimal techno tradition, for stylising the selected 'train loop'. In 'Homage to Cubism' several parts of a cello recording of durations between fifteen seconds and two minutes were fragmented in pieces of about 400 ms. These pieces were then rearranged in various ways (all with the aid of a software granulator) and the result was a number of long streams of micro sounds. My self-imposed task was again a search process in order to find and isolate a relatively short sequence of grains that would make a rhythmically interesting loop. Inspired by a surrounding environment comprised of fragmented information, I had created a situation in which I had to deal with a sea of sounds out of which I needed to isolate a very small portion that would allow me to create something focused, functional, and coherent.

Apart from the loop-based structure of my rhythms, another characteristic I have incorporated from EDM is the constant tempo and sense of regular pulse, which along with the repetition of the material make the rhythmic loops work as a focal point in an otherwise fluid or unpredictable sonic environment. However, there is an important difference with EDM regarding my manipulation of rhythmic material on a macroscopic level. EDM composers tend to prioritise the rhythmic layers in the mix by placing them in the foreground. While this is a common occurrence in my music too, it is not constantly the case. There are moments where the loops disappear completely, move from the foreground to the background either in the mix through volume, equalisation and/or reverb manipulation, or by removing layers from them and therefore making them more discreet. The latter case, or even the complete disappearance of a rhythm, does occur in EDM pieces quite often but it lasts for short intervals; the purpose of a section like this is to work as a 'break'², that is a short interruption or suspension of the flow of music, in order to

² A 'break', also referred to as a 'breakdown' in an EDM context is defined by Eigenfeldt and Pasquier (2013, p.321) as "a contrasting section to the verse in which the beat may drop out, or a filter may remove all mid – and high– frequencies. It will tend to build tension, and lead back to the verse".

create interest and intensity after the reintroduction of all the cut elements. In my music however, there are occasions where these silent or rhythmically discreet sections tend to be quite $long^3$, while the gradual displacement from foreground to background or the opposite is not at all a common practice. This characteristic actually relates more directly to the family of meditation practices mentioned in the beginning of the chapter than EDM; during this type of meditation, the individual is supposed to focus on a repetitive action, be it the recitation of a mantra, the process of breathing, etc. Yet, it is very common that attention shifts away from it and the mind ends up wandering around other thoughts, while it either completely forgets about the loop or it transfers it to the background. This process which is not dissimilar to my treatment of the loops in some occasions (e.g. **Audio Example 4** (Homage to Cubism - 00.26 - 02.38) or the opposite occurring in **Audio Example 5** (Platform *i* - 04.35 - 06.32)), makes the music more of a sonic illustration of what happens in an individual's mind while meditating rather than a meditative tool;

Another characteristic that further reinforces the metaphoric view of parts of the music as a mind in meditation, is the common case of very limited interaction, or non-interaction, between loops and the other layers in the pieces. This aesthetic approach has been primarily inspired by works released on the avant-garde minimal techno German-based Raster - Noton label⁴, such as Alva Noto's (2011) *Univrs* or Kangding Ray's (2014) pieces "Serendipity March" and "Evento" where the composers tend to employ layers that are quite distinct from the rhythmic layer. *Univrs* is an album full of static or very slowly evolving textures, commonly encountered in ambient music, placed in the background and simply coexisting with the foreground rhythmic layer. Kangding Ray on the other hand, commonly employs sounds that occur periodically and their rhythm is 'in sync' with the dominant rhythmic layer, but are usually quite distinct from it because they are heavily reverberated. Reverb sets them apart in space and gives them a more ambient character.

This aesthetic of separation of layers in space that has been incorporated in my music, is taken to its extreme in some cases by further separating sounds through rhythmic discontinuity (e.g. **Audio Example 6** (Platform i - 05.56 - 06.26) or **Audio Example 7** (Icelandic - 06.56 - 07.22). In sections like these, periodic elements other than those that are part of the loop rarely occur and the sounds that do not relate to the rhythmic pattern spatially or rhythmically, resemble persistent or wandering thoughts of a mind in meditation; they simply coexist with the loop or antagonise it for attention.

³ It is difficult to accurately say how long, since there are slow shifts between rhythmic and non-rhythmic parts, or a rhythmic layer may briefly emerge in an ambient section. Nevertheless, two good examples are **Audio Example 2** (Homage to Cubism - 02.25 - 03.11) lasting 46 seconds, and **Audio Example 3** (Platform *i* - 02.23 - 04.10) lasting 1minute 47 seconds.

⁴ Elissa Stolman (2014) has said about the label that "If there's ever a history of avant-garde minimal techno in Germany, Raster-Noton will appear front and center".

2. Atmosphere

Along with rhythmic repetition, atmosphere is one of the two most important aspects of my music. By 'atmosphere' I refer to all the elements that create a particular mood or set up a virtual space for the listener, in an analogous way to how theatrical scenery and lighting aim at immersing the audience in the world of a given theatrical play.

2.1. Textures and Ambient Music

Static or slowly evolving textures⁵ have a primary role in setting up a particular atmosphere for each piece, since their constant character (especially when they remain unaffected or uninterrupted by other elements) is very effective in giving a colour to the musical space and subsequently creating mood. The idea of using textures was inspired by ambient music, a genre whose central element is precisely "[the] development of the texture of sound itself as a focus for compositional attention, and the ability to create with electronics virtual acoustic spaces (acoustic spaces that don't exist in nature)" (Brian Eno, 1996, p. 95).

In the liner notes to *Music for Airports*, Brian Eno (1978) refers to ambient music as a music "intended to induce a calm and a space to think", while in an interview to David Toop, David Sylvian (1995, p.278), discussing about his ambient work *In Praise of Shamans*, thinks that his atmospheric music "[enables] the listeners to reflect upon themselves"; the inherent meditative qualities of ambient textures was the main reason why I have employed them extensively.

The slow rate (or complete absence) of activity in the textural material on a macroscopic level, can trigger a zooming in of attention on the nature of the sound, its characteristics and the microscopic activity that exists within it. As Smalley argues (1997, p.113) "the slower the directed, gestural impetus, the more the ear seeks to concentrate on inner details (insofar as they exist)." This was a case of particular interest to me since I could use the texture dominated sections of the music to draw the listener's attention on the details of the sounds and therefore automatically immerse her in the virtual space of the music; a space with its own character that either contains rhythmic loops, blends with them or simply exists on its own with the purpose of surrounding the listener, taking her away from an information saturated environment and creating room for reflection and concentration.

⁵ With 'texture' I refer to the type of sound that Denis Smalley (1997, p.113) describes: "If gestures are weak, if they become too stretched out in time, or if they become too slowly evolving, we lose the human physicality. We seem to cross a blurred border between events on a human scale and events on a more worldly, environmental scale".

2.2. Reverberation

Another element that plays a vital role in creating atmosphere in my music is the heavy use of long tail reverbs, both for musical and metaphorical reasons. It is both the way the application of reverb transforms a sound, as well as the connotations it carries that render it very effective in creating immersive, tranquil spaces.

2.2.1. Reverberation As Texture

In all four pieces in the portfolio, I have used two different convolution reverbs; one coming from the Vigeland mausoleum in Oslo and the other from the Saint Ouen cathedral in Rouen. Both are long tail reverbs and have been extensively used, one of the reasons being my interest in the effect they have on the spectromorphology⁶ of the sounds. Through the reflections that occur in a real or a virtual space, reverbs tend to lengthen the duration of a sound whilst they also smooth out or mask its ending or any following articulations; they add a sustain factor. Therefore, the longer the reverb and the more intense, the longer the sound and the more the smoothing out or masking that occurs, since different parts of the same sound, or sounds that are close in time tend to get mixed together. Consequently, the longer and the heavier the reverb applied, the closer we get to a texture sound. Considering also that different spaces favour the reflection of waves of specific frequency bands, leading the input frequencies to die out at different times, we have a slowly fading-out sound that can be considered as a slowly evolving texture. This type of texture that is formed out of the use of reverb, occurs quite often in the portfolio (e.g. the 'sparkly' sound in **Audio Example 8** (Platform *i* - 02.02 - 02.08) or the emerging voice in **Audio Example 9** (Flaminius Rufus - 01.26 - 01.35)).

2.2.2. Significations of Reverberation

Another reason for the intense presence of reverb is the connotations it carries both as a natural phenomenon and at a cultural level, and which contribute to the meditative character of the music.

Historically, there is a strong link between meditation practices and reverberant spaces through religious practice. Shapiro (2002, p.632) informs us that "Meditation has been an essential element in nearly all contemplative religious and spiritual traditions", while Doyle (2005, p.43) remarks that "there is an integral and enduring connection between what might be called 'reverberancy' and the sacred". From caves, to churches and mausoleums, to galleries or concert

⁶ "The two parts of the term refer to the interaction between sound spectra (*spectro*-) and the ways they change and are shaped through time (*-morphology*)" (Smalley, 1997, p.107).

halls, reverberant spaces tend to "'naturally' produce in us a hushed awe" (Doyle, 2005, p. 43). I was particularly interested in utilising this widespread association between spirituality and reverberation in order to evoke the feeling of "hushed awe" in my music. The presence of strong reverb would help me create a sonically imposing space which could in turn trigger an inward tendency in the listener. It is not a coincidence that there is often heavy reverb applied to music that is specifically composed for meditative purposes (e.g. Steven Halpern's (2001) *Chakra Suite: Music for Meditation, Healing and Inner Peace* album).

Of course in order to more effectively achieve this, it was important to occasionally give space in the mix to heavily reverberated sounds and allow their impact to be clearly heard (e.g. in Audio Example 10 (Platform i - 00.40 - 00.48) or in Audio Example 11 (Flaminius Rufus - 00.00 -00.07)), so as both the listener obtains a good sense of the virtual space she is in and also to emphasise the emptiness or loneliness that reverb can imply: "a hint of reverberation added to isolated sounds (for example footsteps in a street) can reinforce the feeling of emptiness and silence" (Michel Chion, 1994, p.58). A long heavy reverb means that there is little absorption and a lot of sound reflections taking place; therefore it indicates a big empty space, which in turn can imply solitude. On the other hand contemplative, introspective, meditative states are solitary by default. Murcof's music, which has been a big influence on me, is particularly effective in creating this impression of emptiness, even when a piece is gesturally very active. If we take, for example, the piece "Memoria" (Murcof, 2002), this is exactly what the sparse and heavily reverberated piano or cello notes achieve when placed against a perceivably dry beat. I have also incorporated Murcof's approach at similar moments of presence of a rhythmic pattern, especially in 'Homage to Cubism' (e.g. Audio Example 12 (Homage to Cubism - 01.26 - 02.18) or Audio Example 13 (Homage to Cubism - 03.57 - 04.22)), where the sparsity or low rate of macroscopic activity of the reverberated sounds heard along a dry but energetic loop still allows them to communicate a feeling of emptiness and tranquility.

In chapter 1 it was also discussed how my manipulation of the rhythmic loops (their displacement in the mix or their reappearance after a relatively long absence) works as a musical illustration of a mind in meditation. Inspired also by the metaphorical use of reverberation in films, another reason I have used it so extensively is because it reinforces this aspect of the music. Among different genres and also throughout the history of cinema, when reverb is employed metaphorically, its symbolism is quite consistent. Van Leeuwen (1999, p.167) observes that reverb "can be used … to make sounds appear subjective and 'interior', almost as though heard from inside the body". Similarly Holman (2010, p.31) remarks that "when we see a cut to a contemplative character and hear his voice reverberated without his lips moving, we know what to think—these are the character's inner thoughts". I was interested in manipulating the mysterious,

otherworldly impression of reverberated sounds emanating from an allegorical 'inside' in order to suggest that the music itself is a blend of someone's inner thoughts and her subjective perception of surrounding sounds while she is experiencing a state of inner involvement. The reverb can give the impression we are listening to the pieces, or (in cinematic terms) our point of audition⁷ is, from inside somebody's head.

3. Stasis and Vertical Time

Although repetitive rhythmic patterns and atmosphere have been separately examined, there is an essential common element between them in which lies the essence of their meditative qualities; stasis. An overall harmonic, timbral and rhythmic stasis aims at establishing a situation, a state of being rather than creating music that tells a story, evolves or transforms through time. While this may not be true for individual sections within the pieces, and local directionalities do exist, each piece as a totality is a space in which the listener wanders aimlessly, explores and discovers new things or falls upon places that has already visited.

Of course, a direct effect of stasis is the warping of our sense of time. A static composition exists within its own 'vertical time'⁸. It establishes its own temporal laws enhancing this way the impression of its existence outside the real world and the sense of immersion to the listener. Kramer (1993, p.57) says that "When we do not perceive a work's directionality, its time-world seems vertical." He also defines vertical music as the music "in which nonlinearity predominates over linearity", whose "temporality is more vertical than linear." Ultimately he concludes that "The context of vertical music allows a listener to make contact with his or her own subjective temporality. It is music of subjectivity and individuality", an observation that connects directly with the beginning of the discussion and brings us back to the meditative qualities of the repetitive rhythmic patterns and the sense of atmosphere.

Returning to the notion of vertical time, Joanna Demers (2011, p.96) in her description of drone music points out that "[its] absence of pulse ... obscures the passage of time". While my music does share common elements with drone music (mostly the static textures), it also employs rhythmic material. Nevertheless, this does not ruin its verticality. When Demers (2011, p.97) talks about the four-on-the-floor genre of dub techno, she observes that "With its reverberance, [it]

⁷ Rick Altman (1992, p.60) describes point-of-audition as 'a clumsy term whose only merit is to recall unfailingly the "point of view shot"...Point of audition sound [represents] sound as it would be heard from a point within the diegesis, normally by a specific character..." and it "...always carries signs of its own fictional audition".

⁸ Vertical time as defined by Kramer (1993, p.454), is a "temporal continuum of the unchanging, in which there are no separate events and in which everything seems part of an eternal present".

approaches the endlessness of drone music". Apart from the fact that in the portfolio there is an intense presence of reverb, the rhythmic patterns work to reinforce the feeling of timelessness, rather than hinder it, through, first of all, their repetitive, static quality. But also, even though they provide a sense of pulse, they hardly work as a measure of real time; In 'Platform *i*' and 'Flaminius Rufus', the first appearance of the beat is preceded by a long textural section (of 43 seconds and 2 minutes and 32 seconds respectively) that establishes a sense of atmosphere, and by the time the rhythmic elements enter, the listener has already been immersed in the vertical time of the piece. Therefore when the loops come in they create their own temporalities within the pre-established temporal world of the music. In 'Icelandic' the first beat (four-on-the-floor at 30 bpm) is too slow to disturb the textural atmosphere; it becomes hypnotic and has a similar role to the opening textural sections of the previous two pieces, while in 'Homage to Cubism' where the rhythmic pattern appears first, it works as the vehicle that gradually immerses the listener in the musical space of the piece, as it disappears in reverb and textural material.

B. COMPOSITIONAL PROCESS

4. Each Composition as a Different World

The feeling of stasis, its effect on the perception of time, and the resulting establishment of a state of being discussed in chapter 3, played a crucial role in allowing me to fulfil my intention for each piece to be a unique sonic world, but I also needed to work on other levels in order to achieve this. When Francois Bayle (2000, p.26) was asked how he approaches the problem of having to choose sounds for each new work, he replied with a cinematic metaphor: "Pour moi chaque oeuvre est use saison nouvelle, un univers nouveau, une expérience avec des formes que je ne connais pas encore et que je dois apprendre. Paysages et personages vivants d'un film d'amour ou d'aventure."⁹

My general approach to the creation of each piece has been similar to Bayle's. First and foremost, during the recording sessions I was interested in the musicians performing as freely as possible, so that the raw material would be an imprint of their personal style and character and would contain as little of my personality as possible. Dealing with this material would push me to new directions, challenge my imagination and inevitably lead to the broadening of my stylistic horizons. As a result, it would help me create a diverse set of pieces, each one with its own character.

On the other hand, the compositions were not a mere addition of textural material, rhythmic patterns and reverberated spaces. In order to create a virtual world with a specific character and not just a motley collage of sounds, sonic coherence within each piece was equally important. For this reason, a tactic of significantly limiting either the sound sources or the number of sound objects¹⁰ used to make a piece was followed. For 'Platform *i*' and 'Homage to Cubism' only two sources were used; a primary one which gave the majority of sounds (train / cello) leading to timbral connectedness, and a secondary one (voice / bell) for adding interest. In case of 'Flaminius Rufus', where more sources were employed (voice and several percussive instruments) it is primarily the vocal manipulations that are the connecting timbral tissue of the piece, while the percussive material (excluding the drums which is not a primary source) is actually comprised of a very limited number of percussive samples. In 'Icelandic', on the other hand, which was essentially made out of heavily processed samples of drums, voice and cello sounds, coherence is achieved through the use of a limited number of sound objects which are recycled throughout the piece, with drums providing the majority of them.

⁹ "For me every work is a new beginning, a new universe, an experience with forms I do not know yet and I have to learn. Landscapes and living characters of a love or an adventure film." (Translation: M. Gkotzampougiouki)

¹⁰ With the term 'sound object' I refer to audio segments of any content, spectromorphology or length that have been used as structural units in the building of a composition.

5. Musical Architecture and Acousmatic Influences

Even though aesthetically there is a considerable distance between the music I compose and the diverse body of works classified as acousmatic, my compositional process has been influenced by a typical acousmatic composer's working process. To give the general idea of what that is, I will cite a relevant passage by Francis Dhomont (1995) on the principal characteristics of musique concrète (the precursor of acousmatic music):

Indeed, in musique concrète, materials are selected from our sound environment, without prejudice.

All sounds, regardless of their origin, are of equal value and can be musically organized. These elements, sound objects, originally of an acoustic or electronic nature, are recorded, then processed, edited, mixed (note the analogy to techniques used in cinema) and 'orchestrated' in the studio, through the use of an ever-evolving technology...

This original compositional method begins with the concrete (pure sound matter) and proceeds towards the abstract (musical structures) -hence the name musique concrète - in reverse of what takes place in instrumental writing, where one starts with concepts (abstract) and ends with a performance (concrete).

The important points in Dhomont's quote above, and which apply directly to my work, are the potential musical value of all sounds, the fact that I obtain my raw material through recording and that all the compositional work is done in the studio using technology. The general process he describes in the last paragraph has essentially been followed in my case. There is however a musical structure (rhythmic loops) that was decided in advance to have a strong presence, even if not further defined at this stage. Apart from my selection of sound sources, what happens during the recording sessions is to a great degree out of my control. When the actual compositional process begins in the studio, I find myself with material I am not familiar with, and I either do not immediately know how to use, or if I have an idea regarding my general approach, I do not know which parts will be used or how. Usually there is a period of several days that I listen to the recordings again and again, isolate potentially interesting segments (of various lengths) and experiment with them.

More analytically, the stages of my work, which will be now outlined and discussed in the following chapters are:

- a. Selection of sound sources
- b. Recording

- c. Listening and Editing
- d. Processing
- e. Construction
- f. Mixing

5.1 Selection of Sound Sources

My adherence to the acousmatic idea that the composer's sound palette is infinite, required me to have a mechanism for the selection of sound sources. This mechanism was directly related to and largely influenced by one of the fundamental and predetermined characteristics of the music; the loop-based rhythmic patterns. Based on this idea, I was interested in selecting sound sources that were suggestive at various degrees of how I could work with them rhythmically.

More specifically, in 'Platform i' the train was selected as the primary sound source¹¹ due to its interesting inherent rhythmic patterns which could be easily 'translated' into an electronic beat, while in 'Flaminius Rufus' where a more traditional setting was decided, percussive instruments were recorded in order to have a percussive function in the piece while the enveloping vocal sounds are mostly charged with the role of creating atmosphere.

On the other hand, the cello in 'Homage to Cubism' was selected for the exact opposite reason; it was a very challenging task to find a way to build electronic rhythmic patterns with a percussive character out of a traditionally melodic instrument, while I was also interested in preserving its timbral qualities and not artificially reducing it to an unrecognisable electronic instrument. Finally, the idea for 'Icelandic' was to use an actual drum performance recording¹², but the challenge would lie in treating it purely as a sound source without indulging in any of the rhythms produced by the drummer.

In fact, the initial idea was to use instruments as fundamental sources for two of the pieces and field recordings for the other two, but in the course of my work this balance was overturned since manipulating cello sounds or the idea of totally decomposing a drum recording and re-

¹¹ While in all the pieces I have used more than one sound sources, as primary I consider the ones that have provided me with most of the material in each piece and are also the ones that the pieces were conceived to be built from. So for 'Platform i', a train recording is the fundamental source, for 'Homage to Cubism', a cello recording, for 'Flaminius Rufus', a percussion and a voice recording (two primary sources, drums not included) and for 'Icelandic' a drum recording.

¹² It was actually used the drum recording from 'Flaminius Rufus'.

approaching it seemed a lot more challenging tasks, pushing me to new directions in regards to the creation of rhythmic patterns.

5.2. Recording

One of my general self-imposed rules throughout the project was that I would derive all the material of the primary source(s) for each piece from a single recording session. While the train recording was the only field recording utilised, a similar level of control was the case regarding the musicians' performances for the other pieces; One cannot control the exact events that occur during a field recording and can only have a rough idea about what one might capture. In the same way, the sessions with the performers were based on improvisations with a great degree of freedom, during which I mostly had the roles of observer and recording engineer, rather than that of the composer. As discussed before, inspired by situations of information anxiety, I was interested in collecting material I had not specifically asked for and very roughly imagined through my choice of the particular musicians, so as to see what I could do if I took the time to familiarise myself with it, and where these unplanned events could take me compositionally.

More specifically, for 'Flaminius Rufus' a folk musician was asked to improvise on singing and on about six percussion instruments of his choice (three of which made it to the finished piece: a tambourine, a crash cymbal and a goblet drum), one at a time without any further guidelines or restrictions. For 'Homage to Cubism', a cellist with a classical and experimental music background was asked to produce a series of short improvisations (between 5-10 minutes), which would be either only tonal, only employ extended techniques, or consist of a mix of the two. Since I wanted to work with conventional, pitched cello material, my request for tonal improvisation was aimed at pre-establishing a harmonic field for the reason that I intended to focus on other aspects of the material during composition (mostly timbre, possible gestures and the creation of rhythmic patterns). The direction to employ extended techniques was meant to maximise sonic variety since this piece, apart from the small contribution of some bell sounds, was made entirely out of cello sounds. Other than that, no further restrictions or guidelines were given to the cellist.

The exception to the approach followed regarding the recording of material was the session with a rock music drummer who provided the drum performance for 'Flaminius Rufus' (which was afterwards also used as the primary source for 'Icelandic'). While he was not given any guidelines by me whatsoever, he was asked to improvise a number of times on a composed draft of 'Flaminius Rufus' which at the time included voice and the main percussive loop heard throughout the piece. This of course was an important limitation itself on his improvisation compared to the other musicians, undoubtedly on the rhythm and tempo of his performance and most probably on its character too.

5.3. Listening and Editing

5.3.1. General Approaches of the Recorded Material

The particular performance or field recording was not simply a sound source; it also largely defined the character of each piece. This is because the challenge was not placed on the performers to interpret exact compositional ideas (and clearly this could never be the case with the train field recording), but rather on me as a composer to find a way to work with recorded improvisations which inevitably convey each musician's personal style.

On top of the restrictions introduced by the style of each recording, my self-imposed limitation to work with EDM-inspired rhythmic loops led me to approach the recorded material for each piece in two possible and opposite ways; working either with it or against it. I consider for example 'Platform i' a case of concurrence with the material. The machine-like quality and repetitive patterns of the train immediately suggested to me the creation of a piece embracing the glitch / minimal techno aesthetic. The same happened with Flaminius Rufus, where the folk aesthetic of the raw material remained intact in the composed piece through the use of relatively long percussive and vocal samples. On the contrary, the classical and contemporary classical type of performance on the cello was very far from the general aesthetic I was aiming for in this project. It was impossible to directly extract a desired rhythmic pattern from the recording and also find enough material that could work both harmonically and rhythmically around such a segment. After weeks of failed attempts and experiments to approach the cello material, I realised I had to isolate samples for very drastic fragmentation - I had to perform something analogous to a chemical reaction, where the recording had to be broken into small units which would be bonded differently to ultimately create a new "musical substance". The puzzle-like pieces that were created from the fragmentation as well as the aesthetic result reminded me of the Cubism art movement, hence the name of the piece. The process is actually demonstrated in the opening of the composition, where a rather conventional cello passage is presented, followed by a rhythmic pattern. Although this pattern was created out of the same first passage (through granulation and rearrangement of the grains), it is of totally different character and completely contrasts the established sense of atmosphere. The same is true for 'Icelandic' where I decided to use as my main source the drum recording for

'Flaminius Rufus', but I did not want this to be recognisable. Therefore I had to disintegrate it and reconstruct sounds and rhythms out of the resulting particles.

5.3.2. Listening and Segmentation

Listening repeatedly, carefully and thoroughly was the only to way to deal with all the information collected; while doing this, I was also extracting and classifying interesting segments. For example, if I was looking for a phrase that could be used directly as a loop, as in the case of 'Platform *i*' or 'Flaminius Rufus' I was cutting a newly discovered segment out of the recording and I was assigning it to the 'loop' class so I knew what role I isolated this object for¹³. The length of a segment could vary drastically: from a few hundred milliseconds (e.g. when I was looking for sounds that could be part of a virtual percussion kit) to around a minute (if there was for example a section that could be part of the textural layer). There were also extracts that I simply found interesting without knowing immediately what their role could be, others that I felt could have several uses and others that I needed to process later (further fragmentation/ granulation, time-stretching etc) to find out if they suited my aims.

This was the most time-consuming stage of my process as I needed to learn my material by listening back to everything in various ways and levels of attentiveness and examine all the possibilities I could think of, in order to make sure that I had taken out all the useful sounds and classified them as well as possible. This way I reduced the amount of material I would continue working with, something that made the next stages advance more quickly than they would have if I had to deal with the whole recording. On the other hand, exhaustive listening also helped me start creating structural connections between the various segments.

5.4. Processing

Apart from the selected samples that were placed directly in a composition, I usually needed other types of sounds as well which I produced through processing of some of the selected raw material. The most important manipulations were:

<u>Time-stretching</u>: Achieved mostly through granular synthesis, the technique of multiple layering of relatively long grains (over 200 ms) has been used to create long, static or slowly evolving textures (usually between 20 to 60 seconds). These have been used in the formation of even longer or denser textures, playing an important role in the setting of atmosphere in each piece.

¹³ More specifically, this process takes place in a digital audio workstation, where I can choose the colour of each audio segment. Each class (e.g. loop, texture, further fragmentation, etc.) is assigned to a colour and by colouring appropriately the segments of interest, I know which class they belong to.

<u>Fragmentation and Concatenation</u>: The fragmentation of material and the sequential rearrangement of fragments, through the use of appropriate software tools¹⁴ has been an extremely important sound processing technique throughout the project. It has allowed me to disintegrate raw samples and obtain new material of completely different character, with the resulting objects having been extensively used, assuming various roles in the pieces. The most representative examples are the main loop in 'Homage to Cubism' (which can be clearly heard in **Audio Example 14** (Homage to Cubism - 00.26 - 00.56)) and the percussive anacruses in 'Icelandic'. Some other examples are most of the secondary rhythmic layers and several isolated or repeated gestures in 'Homage to Cubism' as well as the vocal layers in 'Platform i'.

Silence Insertion and Digital Decay: Another technique that was employed at this stage, was a special type of sound disintegration provided by a custom software tool. The reason I designed this was because I wanted to incorporate a glitch music aesthetic, mostly in 'Platform *i*' and to a lesser degree in 'Homage to Cubism'. Depending on the settings, this sound processing unit can simply insert silences at irregular intervals changing the morphology of the input sound while occasionally adding a soft glitchy quality (e.g. the gesture **Audio Example 15** (Platform *i* - 03.15 - 03.21) or the originally steady, long cello note in 'Homage to Cubism' mostly audible in **Audio Example 16** (Homage to Cubism - 04.20 - 04.24) and in **Audio Example 17** (Homage to Cubism - 05.36 - 05.50)), or to the other extreme completely destroy the sound, reducing it to a more or less dense assemblage of microsounds¹⁵ (e.g. **Audio Example 18** (Homage to Cubism - 06.16 - 06.49) or **Audio Example 19** (Platform *i* - 09.49 - 10.00) which is the ending of the piece and the destruction process is actually demonstrated). In 'Platform *i*' this type of extremely distorted result has provided me with glitch sounds that can be heard throughout the piece.

5.5. Construction

Just before this stage I had finalised my collection of potentially useful objects, either extracted directly from the raw recordings or resulted from sound processing techniques, and they were all labeled so as to indicate which role they could be potentially used for. Also, through my

¹⁴ These tools were a granular and a concatenative synthesis program. The first one (Cecilia), with the appropriate settings can produce a single stream of selected grains, while the second one (cataRT) is a type of granular synthesis that is designed to do specifically that with the extra feature of arranging the grains in a 2-D space according to user specified characteristics.

¹⁵ As defined by Joanna Demers (2011, p.171), a microsound is "literally, [a] sound of extremely short duration, typically lasting only a fraction of a second... Microsound techniques are popular among ... many electronica artists, especially those dealing in glitch, a genre that uses the sounds of digital decay as aesthetic materials".

familiarisation with the material in the previous stages, I had already developed some more specific ideas about how I would approach the current piece and what kind of structures I wanted to try. I would describe my compositional process as a bottom-up approach, since the structures I had in mind at this stage were possible local level arrangements (e.g. how a particular rhythmic pattern could be combined with a particular texture) and there was no overall structural plan imposed. As some of these local level arrangements evolved into short sections, then the question became how these could be combined into a bigger structure which would be the final piece.

5.5.1. Construction of Different Layers and Layer Interaction

There are three types of layers with quite distinct roles throughout the pieces:

- rhythmic
- textural
- gestural

<u>Rhythmic Layer</u>: This layer was constructed from percussive loops (or loops comprised of sounds lasting a few hundred milliseconds, which is the case with 'Homage to Cubism') which over the course of the piece remain largely unaltered, so as they do not lose their meditative quality which resides in the unchanged repetitions of the rhythmic material. In some cases there maybe some minor interferences or slight changes in order to keep a pattern interesting (e.g. **Audio Example 20** (Homage to Cubism - 00.55 - 01.40)) but extremely rarely do these interferences affect the rhythmic flow. All the rhythmic patterns appearing in the pieces, with the exception of the main loop in 'Flaminius Rufus' have a strong sense of pulse - a mesmerising quality as the pulse by definition contains the characteristic of regular repetition.

It is also very common that the rhythmic layer contains its own sublayers. For example, **Audio Example 21** (Homage to Cubism - 00.58 - 02.06) demonstrates a gradual additive process of rhythmic sublayers on top of the main one, while in **Audio Example 22** (Homage to Cubism - 05.18 - 05.42) there is an interesting play with addition and removal of sublayers creating brief alterations of relative tension and release. Other examples, where the sublayers comprising the rhythm are equivalent can be found in **Audio Example 23** (Icelandic - 02.10 - 03.29) and **Audio Example 24** (Flaminius Rufus - 07.10 - 07.55).

Due to their regular nature and grid-like structural discipline, the rhythmic patterns are the spine of the pieces, which seem to turn to freely floating liquid masses when the former are absent. At the same time, depending on their prominence in the mix, their role can vary from an occasional

emerging in a texture dominated part (e.g. Audio Example 25 (Homage to Cubism - 02.39 - 02.41)), to providing some kind of background structure (blending with the textural layer) that acts as a reference for the other elements, to grasping the listener's attention and leading the way in a journey through a virtual sonic space. It is also not uncommon for this layer to slowly shift between roles by moving from foreground to background, or the opposite, as discussed in Section A (e.g. Audio Example 26 (Platform *i* - 04.38 - 05.40)).

<u>Textural Layer</u>: Constructed with textural material, this layer primarily contributes to the atmosphere of each piece. There was no fixed method behind the combination of these units, other than making sure that no masking of their interesting qualities takes place when there are multiple textures at a time. Either created by artificially time-stretched objects or directly extracted from the raw material, such as the cello textures in 'Homage to Cubism', they can be divided in three sub-categories:

- Static (e.g. Audio Example 27 (Platform *i* 03.50 04.04))
- Slowly evolving (e.g. most of the vocal textural material that is present in Audio Example
 28 (Flaminius Rufus 03.58 04.37))
- Containing micro-gestures or gestures occasionally emerging to the foreground (e.g. Audio Example 29 (Platform *i* 02.28 02.43) or the gestures in Audio Example 30 (Homage to Cubism 02.45 03.55)).

Usually, the textural layer has a discreet presence by being less upfront in the mix, while because of the fact that it rarely interacts with other elements, we could liken it to a semi-transparent veil that guards the borders of each piece's meditative sonic world, masking noises from the outside. The only common occasion of interaction is when it gains more prominence in the mix along with a rhythmic pattern. In these cases, the technique of side-chaining is applied and the textural layer assumes a rhythmic role; this is the standard interaction between rhythmic and textural layer in the vast majority of EDM music. When I employ this type of interaction, it is usually because I aim at changing temporarily the character of the piece to a more focused one in order to achieve a more intense or directional section (e.g. in **Audio Example 31** (Platform *i* - 06.51 - 07.40), **Audio Example 32** (Flaminius Rufus - 05.55 - 06.30) and **Audio Example 33** (Homage to Cubism - 04.23 - 04.45)). Nevertheless, with the exception of 'Icelandic' (where there is a lot of texture-rhythm interaction), in the other pieces these are mostly local occurrences, while generally the use of textural material is designed to create a feeling of stasis.

<u>Gestural Layer</u>: The role of all the other elements that are neither part of the rhythmic layer nor of the textural and may occur only once but also a few times throughout the piece, is to 'give life' to the sonic space. Much in the same way that a staged room needs all these disordered, unexpected objects in order to look realistic and inhabited; an open book, an unmade bed, a pair of shoes that one stumbles upon.

This layer tends to be sparse compared to the other two layers and is generally comprised of isolated objects. These objects may travel anarchically in space (e.g. **Audio Example 34** (Flaminius Rufus - 01.05 - 02.32)), follow the rhythm (e.g. **Audio Example 35** (Platform i - 06.51 - 07.33)) or drift around it (e.g. the long cello notes in **Audio Example 36** (Homage to Cubism - 01.26 - 02.18)). Other times they may have a cause and effect relationship with other elements (e.g. in **Audio Example 37** (Platform i - 02.23) where the glitches feel like triggered by the voice grain), or even, if they are long enough, create their own localities within a piece (e.g. the intro in 'Homage to Cubism'). Their status can vary from almost purely decorative (like the short vocal objects in the ambient parts of 'Platform i') to structurally functional (e.g. in 'Flaminius Rufus' where the vocal blocks throughout the piece build the harmony, or **Audio Example 38** (Homage to Cubism - 07.18 - 07.40) where the raucous gestures interjected by another regularly repeated element aim at intensifying the atmosphere).

5.5.2. Harmonic Considerations

I would describe my music with a sentence by Trevor Wishart (1996, p.311): "timbrally articulated ... based on a relatively fixed harmonic field." Although I consider both the timbral and harmonic fields static, as it was discussed in chapter 3, there is a lot more timbral variety than harmonic. Timbre and morphology were the first characteristics of a sound to be considered during the construction of each layer (textural, rhythmic, gestural), whilst of course the rhythmic characteristics of a phrase were also prioritised when I was looking to extract a loop directly from the raw material. If a sound was pitched, it was generally a matter of secondary importance.

Nevertheless, there were cases that harmony did play an important role in the construction of the music and as a matter of fact the four pieces could be put in order according to the level of consideration of harmony that each one required, given the sound sources that were used, the particular recordings and also the approach that was decided for each one of them.

<u>Platform *i*</u>: For this piece there were practically no considerations regarding harmony. This was primarily because of the sound sources - train and speech - which do not produce pitched sounds in the traditionally musical sense. Some of the textures do have a clear pitch, but for the majority of the other sounds pitch is either unclear or a secondary element. Therefore harmony as a concern while building this piece was non-existent, and any resulting harmonies that may exist are purely incidental.

Homage to Cubism: With a cello, a traditional musical instrument as primary source and the cellist asked to use tonal material in her improvisations, considering harmony was necessary. Of course, working with timbre was again prioritised, but there were occasions where although an object would feel spectromorphologically appropriate to a particular temporal placement, it would also be harmonically disorientating (e.g. by creating dissonance or harmonic tension, mostly an undesirable occurrence throughout the piece) and was therefore discarded. Notes of pitch G are present most of the time (most commonly G2 but other octaves also appear); this is the tonal centre with any local harmonic movements that exist being incidental. There are only one or two exceptions in the piece where a segment has a structural role because of the harmony it creates (for example in **Audio Example 39** (Homage to Cubism - 02.30 - 02.38) the two long and successive Ab and G notes help bring this section to an end through a harmonic resolution).

<u>Icelandic</u>: While this piece is extremely static harmonically, there is one occasion where harmony was considered structurally: The three different textures repeated in cycles between 00.30 - 03.29 happen to have a clear pitch (they are the notes D, A and F# in order of appearance) and inevitably create a harmonic field (the chord D major). The textures used between 04.35 - 4.58 were actually selected for their harmonic implications (notes E and A#), leading to a creation of an unstable dyad (in relation to the D major chord, established as a tonal centre). This reinforces the impression of having passed to a new section in the piece along with the other changes, while the familiar feeling of resolution is created when the initial textures come back.

Elaminius Rufus: Harmonically, this is probably the most developed piece of the four. First of all, as in the case of recording a cello, the harmonies of some folk singing would be impossible to ignore, especially since no extended techniques were used and all the material was strictly modal. For this piece I had decided even before the recording takes place to not work against the material, and that the selected percussion segments would remain largely unprocessed and have percussive roles in the piece. In the same way I decided to concur with the existing harmonies of the singing and build the biggest part of the piece (from 03.10 onwards) around a particular melodic line (on the Eb natural minor scale) of one of the improvisations.¹⁶ Of course, as in the other pieces, I was still interested in other elements standing out, so the stages of the harmonic progression of the original performance were stretched out in time and singing phrases were repeated in order to create the desired feeling of stasis and attract the attention of the listener to the atmosphere of the piece. Nevertheless, the main melodic line of the improvisation (and its implied harmony) did provide a structure for the piece and there is even a section (**Audio Example 40** (Flaminius Rufus - 06.46 - 08.08)) where things become harmonically adventurous as some voice samples from a different

¹⁶ In the first part of Flaminius Rufus there were also harmonic considerations, but of the same level as in 'Homage to Cubism'. After 03.10 things became a lot more limiting in this respect.

performance were added, creating occasional semitonal collisions with the main melody, disturbing this way the sense of clear tonality.

In **Figure 1** we can see a transcription of the part of the original improvisation of the main melodic line that was used, and how it was segmented. Its overall duration, including the unused material was exactly 2 minutes, and excluding it 1 minute and 15 seconds. In **Figure 2** we can see how these segments were spread, repeated, and/or time-stretched in the composed piece over an overall duration of 7 minutes, in order to slow down the progression of harmony and achieve a feeling of stasis. (Note that in the original improvisation there were four layers of singing, and in the pictures is demonstrated only the material coming from the main melodic line. In the piece was also used material from the other layers, although to a lesser extent.)



Figure 1 - Transcription of the main melodic line of the original improvisation for 'Flaminius Rufus'



Figure 2 - Placing of the various segments whose content is shown in Picture 1 between 03.00 - 10.30 in the composed piece 'Flaminius Rufus'

5.6. Mixing

Generally, in the creation of electronic music it is hard to separate the compositional stage from the mixing stage; mixing and compositional decisions tend to advance hand in hand. In my case for example, it was impossible to first put all the sounds together for the creation of a piece and then apply mixing stage sound processing techniques (mainly compression, equalisation and reverb), as these had a crucial sound design role while I was composing. Some of the raw segments were actually selected for their potential to be transformed, and if they did not respond in an interesting way to the techniques above they were discarded.

Nevertheless, there are always refinements at a mixing level that need to be done after the completion of a piece, and even more importantly, given my bottom-up approach, this final stage was essential for me to zoom out of the piece and finally consider the bigger picture. Some major macroscopic decisions of compositional importance that mostly involved the prominence and the positioning in the virtual space of layers and important elements were made at this stage and have drastically affected the piece. A representative example of such a decision is the slow disappearance

of the first rhythmic pattern in 'Homage to Cubism' in a texture dominated setting. Before the mixing stage, the loop was relentlessly continuing in the foreground until it stopped when there was a sudden change and a clear passage to the textural part; something that I decided to change as I found the slow disappearance of the rhythmic pattern to enhance the meditative qualities of the music by having a mesmerising effect and being more successful at immersing the listener in the sonic space of the piece.

CONCLUSIONS

Inspired by a situation of constant information bombardment that we experience everyday, my compositional process was a result of embracing this reality and finding a way to deal with it. I decided to release compositional control to a great degree during the recording sessions and face the information anxiety caused by the collection of new and foreign material through the development of a method that allowed me to not only overcome the anxiety but also gradually gain compositional control over the recorded material. At the same time I was interested in completely opposing the feeling of anxiety by manipulating and combining the sounds in ways that would produce music with meditative qualities and which could potentially work as a space for reflection for the listener and temporarily provide an escape from a busy environment.

While traditionally the composer is expected to first conceive an idea, then develop it and finally give specific guidelines for the production of the musical material, I consider my process a very relevant adaption of the acousmatic compositional process, to a world that is constantly and massively storing and sharing information. The specific compositional ideas were not abstract responses to random stimuli, but started developing after the exposure to some concrete recorded material (stored information) and were direct and tangible responses to it.

My decision to not work with a pre-imposed structural plan in addition to not specifying the contents of the recordings was an experiment I tried for the first time and allowed for some interesting things to happen: the creation of each piece felt a lot more liberated than before. I would describe it as a self-managed process, that was not just constantly adapting and developing around the material but it also gave prominence to the material's potential without trying to make it fit in any preexisting compositional moulds. Nevertheless, there were clear artistic aims relating to the creation, manipulation and combination of material with specific stylistic influences (repetitive rhythmic patterns inspired by EDM and textural material inspired by ambient music) that, without setting any overly restrictive limits, set a rough framework and helped me not to lose focus.

In the future I would be interested in further relinquishing traditional compositional control by introducing more decision making entities, apart from myself and the improvisers, such as a specially designed software tool that will arbitrarily select segments out of a recording for me to work with. It would be interesting to see how something like this would change my process, what kind of results would give and what are the limits of comfort and freedom.

REFERENCES

BIBLIOGRAPHY

- Altman, R. (1992). Sound theory, sound practice. 1st ed. New York: Routledge.
- Bayle, F. (2000). Principes d'Acousmatique. In: Musique du XXe siècle. Cologne: Institut Français de Cologne, pp.2 - 29.
- Butler, M. (2006). Unlocking the groove. 1st ed. Bloomington: Indiana University Press.
- Chion, M., Gorbman, C. and Murch, W. (1994). *Audio-vision*. 1st ed. New York: Columbia University Press.
- Demers, J. (2010). Listening through the noise. 1st ed. Oxford: Oxford University Press.
- Dhomont, F. (1995). Acousmatic Update. *Contact!*, [online] 8.2(Spring). Available at: http:// cec.sonus.ca/contact/contact82Dhom.html [Accessed 20 Jul. 2014].
- Doyle, P. (2005). Echo and reverb. 1st ed. Middletown, Conn.: Wesleyan University Press.
- Eigenfeldt, A. and Pasquier, P. (2013). Evolving Structures for Electronic Dance Music. In: *Genetic and Evolutionary Computation Conference*. Amsterdam, pp.319 326.
- Eno, B. (1978). [Liner notes]. In Music for Airports / Ambient 1 [CD]. US: PVC Recordings.
- Eno, B. (1994). Ambient music. In: C. Cox and D. Warner, ed., Audio Culture: Readings in Modern Music, 1st ed. New York: Continuum, pp.94 97.
- Holman, T. (2010). Sound for Film and Television. 3rd ed. Burlington: Focal Press.
- Kramer, J. (1993). *Time in contemporary musical thought*. 1st ed. Chur: Harwood Academic Publishers.
- McCullough, M. (2013). Ambient commons. 1st ed. Cambridge, Massachusetts: The MIT Press.
- Schopenhauer, A. and Payne, E. (1969). *The world as will and representation*. 1st ed. New York: Dover.
- Shapiro, S., Schwartz, G. and Santerre, C. (2002). Meditation and positive psychology. *Handbook* of positive psychology, 2, pp.632–645.
- Smalley, D. (1997). Spectromorphology: explaining sound-shapes. *Organised Sound*, [online] 2(2), pp.107-126. Available at: http://dx.doi.org/10.1017/s1355771897009059 [Accessed 24 Jul. 2014].
- Stolman, E. (2014). *Raster-Noton is an Avant-Garde Institution | Thump*. [online] Thump. Available at: http://thump.vice.com/words/raster-noton-imprints [Accessed 9 Jul. 2014].
- Toop, D. (1995). Ocean of sound. 1st ed. London: Serpent's Tail.

- Van Leeuwen, T. (1999). Speech, music, sound. 1st ed. Houndmills, Basingstoke, Hampshire: Macmillan Press.
- Walsh, R. (1983). Meditation practice and research. *Journal of Humanistic Psychology*, 23(1), pp. 18--50.
- Wier, D. (2009). The way of the trance. 1st ed. New York: Strategic Book.
- Wishart, T. and Emmerson, S. (1996). On sonic art. 1st ed. Amsterdam: Harwood Academic Publishers.
- Wurman, R. (1989). Information anxiety. 1st ed. New York: Doubleday.

DISCOGRAPHY

- Alva Noto, (2011). Univrs. [CD] Chemnitz :Raster Noton.
- Eno, B. (1978). Music for Airports. [CD] US: Polydor.
- Halpern, S. (2001). *Chakra Suite: Music for Meditation, Healing and Inner Peace*. [CD] San Anselmo: Inner Peace Music.
- Kangding Ray, (2014). Serendipity March. In: Solens Arc. [CD] Chemnitz :Raster Noton. Track 1.
- Kangding Ray, (2014). Evento. In: Solens Arc. [CD] Chemnitz :Raster Noton. Track 3.
- Murcof, (2002). Memoria. In: Martes. [CD] Leeds: Leaf Label. Track 1.
- Sylvian, D. (1988). In Praise of Shamans. [CD] Japan.