

Commentary
Portfolio of Compositions
for the PhD degree in Music Composition

by
Matteo Malavasi

A thesis submitted to the
University of Birmingham
for the degree of
DOCTOR OF MUSIC COMPOSITION

College of Arts and Law Graduate School

Music Department

University of Birmingham

September 2012

UNIVERSITY OF
BIRMINGHAM

University of Birmingham Research Archive

e-theses repository

This unpublished thesis/dissertation is copyright of the author and/or third parties. The intellectual property rights of the author or third parties in respect of this work are as defined by The Copyright Designs and Patents Act 1988 or as modified by any successor legislation.

Any use made of information contained in this thesis/dissertation must be in accordance with that legislation and must be properly acknowledged. Further distribution or reproduction in any format is prohibited without the permission of the copyright holder.

Abstract.

This text contains a short general description of my experience at the University of Birmingham. This is an attempt to communicate how my perception in composing music has changed and evolved. The focus is to introduce briefly my experience before I arrived at the University of Birmingham, then go through all the compositions I have worked on during my PhD programme. This attempt is to explain the main processes I have used for composing, giving a wider view of the issues that I was interested in developing. Furthermore, I will consider some technical aspects with reference to facilities that the University of Birmingham offers to students. This appears to be the right opportunity for them to explore technology almost without any restrictions. I also give some information about other non-musical issues, which I was interested in developing in order to look into personal aesthetic directions.

My main reason for being at the University of Birmingham was to explore compositional processes different from my previous experiences, in order to enlarge my abilities and perspectives in music composition.

Index

List of enclosed material	
1. Introduction	p. 1
2. Compositional technique	p. 3
3. Thinking acoustic / acousmatic	p. 16
4. Thinking audiovisual	p. 21
5. Conclusions	p. 27
Bibliography	p. 29
Musical Works Consulted	p. 31

Enclosed material:

1. Germination score (B4 format)

(Recording stored in the DVD data 1 - folder 2 (see below))

2. The Time of Disillusionment score (A4 format)

(Video file stored in the following DVD video, soundtrack stored in the DVD data 1 - folder 1)

3. DVD video: The Time of Disillusionment (single monitor presentation)

(Soundtrack also stored in the DVD data 1 - folder 1)

4. DVD video: exit

(collection of videos with some of those which are included in my portfolio. All videos are a single monitor format reduction with a stereo soundtrack in order to give a general impression of the work)

Videos to be considered part of the portfolio are:

- Vivid Roughness
(Video version of Urban Density: soundtrack also stored in the DVD data 1 - folder 3)
- Disgregation* of the Body
(Soundtrack also stored in the DVD data 1 - folder 4)
- Filtering Emotions
(Soundtrack also stored in the DVD data 1 - folder 6)

* Etymology: disgregation was defined in 1862 by Rudolf Clausius as the magnitude of the degree in which the molecules of a body are separated from each other - from Wikipedia

5a. DVD data 1:

- folder 1: The time of Disillusionment (22'20")
 - original stereo audio file
(score indicated at point 2 of this list, video presentation indicated at point 3)

- folder 2: Germination (10'01")
 - stereo recording
(score indicated at point 1)

- folder 3: Urban Density (14'38")
 - original stereo audio file
(video version called Vivid Roughness included in the DVD video: Exit, indicated at point 4)

- folder 4: Disgregation of the Body (11'20")
 - stereo audio file (stereo reduction)
 - original 5-channel audio file
(video version included in the DVD video: Exit, indicated at point 4)

- folder 5: The Edge of Illusion (14'59")
 - stereo audio file (stereo reduction)
 - original 11-channel audio file

- folder 6: Filtering Emotions (8'24")
 - stereo audio file (stereo reduction)
 - original 11-channel audio file
(video version included in the DVD video: Exit, indicated at point 4)

- folder 7: Little Journey (13'23")
 - stereo audio file (stereo reduction)
 - original 8-channel audio file

5b. DVD data 2:

- folder 8a: Nocturne (16'00")
 - stereo audio file (stereo reduction)
 - 8-channel audio file (8-channel reduction)
 - original 40-channel audio file

5c. DVD data 3:

- folder 8b: Nocturne
 - five audio files (8 channels each)

1. Introduction

When I arrived at the University of Birmingham my compositional research was focused on the acoustic exploration of music. My interest in using electronic sounds was focused on the creation of homogeneous mixtures of sounds, between acoustic and electronic sounds, the latter being mainly synthetic. The first composition in my portfolio, *The Time of Disillusionment*, is an example of this research. During my time at the University of Birmingham, I was able to listen to acousmatic music with more attention. It was diffused in different contexts, performed with professional equipment and these were the right conditions to start my exploration into the area of concrete music. This moved my research towards something different. This experience also enhanced my interest in multimedia composition. Working with acousmatic music and the exploration of concrete sounds gave me a wider view of the creative potential of recorded material linked with visual material. I discovered a fascinating corresponding point in the idea of working with concrete sounds and images as though they were a unique concrete material (images are inevitably 'concrete visual material'). This represents the starting point of my reasoning about the possibility of researching a 'concrete' aesthetic in audiovisual composition.

Focusing on my scores, I could say that my acoustic music comes from many different stimuli in terms of language and instrumentation. These come from many scores of important composers that I have carefully analyzed over the years, such as Gyorgy Ligeti, Karlheinz Stockhausen, Gérard Grisey, George Benjamin and Luciano Berio, as well as Claude Debussy, Maurice Ravel and many other composers of the 19th and 20th centuries. Understanding the balance between scores and their musical result was very important in order to start a personal exploration. This focused mainly on researching the broad possibilities surrounding timbre, working either with single instruments or the wonderful perspective of creating sonorities through instrumentation techniques with an ensemble.

To analyse a score means to understand, appreciate and discuss qualities, as well as being able to confront the composer's choices, in terms of aesthetic and technical issues. This keeps the real discussion on a proper analysis of the score in question, becoming more aware of personal reactions and as a consequence, personal choices. This process was very important for me in order to understand my needs, developing the style that it is possible to see in my instrumental music. I would however, define this result as one step on a long path of development.

In the history of music, composers started to realize the importance of timbre with the change into the romantic period. Of course, we could say that colours in music have been developed since the Romantic period. Then, composers had the opportunity of working with bigger orchestras with more sophisticated instruments and, consequently, with more sophisticated techniques. But the awareness of timbre's potential is mainly associated with

the late 19th century with the experience of French composers, starting with Eric Satie, Claude Debussy and Maurice Ravel.

As I will say in the commentary, I have always been fascinated by timbre, which was one of the most important issues in music throughout the 20th century and which, with the arrival of electronic music, has changed the concept of composing. Modern acousmatic music represents a more advanced step, showing what quality of sound it is possible to obtain with the use of modern technology. The result is so impressive that we can easily explain why concrete sounds have also been used extensively in other environments such as the film industry.

2. Compositional technique

There is a secret inside the sound which sometimes composers are able to grasp and sometimes not. This secret is hidden behind the appearance of what we usually define as sound, in the traditional concept of music, or audio material in a more modern approach of contemporary music. Actually, I am not referring to those properties of sound that modern composers are able to discover when using the well known variety of spectrum analysis techniques. Surely, these techniques are involved in modern composition processes in order to discover all possible information about sounds. But the secret I am referring to is something more abstract. It is a character which emerges from each individual sound or from a compositional gesture. There is a particular nature of these subjects which very often shows a proper 'behaviour' which takes a position against compositional processes and, sometimes, it also reacts, even to the compositional idea itself. Therefore, to dominate and to subjugate the sound to the compositional idea, the composer needs good technical skills and knowledge of compositional processes in order to control the material or to be flexible when dealing with the material's properties.

Sometimes, the audio material does not suit the composer's intention because it does not work as well as it should, or as the composer thought it should in the musical context. The consequence is a resistance of the audio material to connect with the compositional idea. The result is a sort of opposition on the part of the audio material to the manipulation that the composer would like to operate on it in the musical context. This sort of 'behaviour' shown by the audio material is consequently converted into a bigger effort made by the composer, in order to produce the artistic idea successfully.

To understand what this secret consists of is the beginning of a good understanding of the origin of the musical form. I probably should mention the origin of the modern musical form, which seems to involve a different musical approach than the more traditional one operating in classic music. But, I honestly think that it is wrong to make distinctions between classic and contemporary classic music. Certainly, there are huge differences in the linguistic aspects of music, which have evolved enormously over centuries. But the most important aspect, which creates the *fil rouge* in musical history, is the comprehension of the musical material in its own context, looking at all relationships inside the musical structure. This, in my opinion, is the key reason why some music is great, independent of genre, style or age. This awareness gives the composer the ability to understand details and to recognize the compositional value of music.

More precisely, I think that composers are often bound by a superficial influence of musical material instead of looking into wider possibilities. These are, of course, those properties that I have mentioned above, which are easily available with spectrum analysis. But the most important aspect in composition is time and the management of the audio material over it. Space in music can be important, but time is the key point of musical

language. Space can be motionless but time cannot be, and music lives in the temporal dimension; control of time defines the form. Very often, when composing, composers stop using musical material and musical gesture just to move towards other gestures, intending to introduce richness in the evolution of the musical structure. But I generally think that they make these changes too quickly, before having properly investigated the real potential and perspectives of those materials over time. Often, changing material simply generates fragmentation in the flow of time, making the form poorer than what it could really be. In consequence, the evolution of the audio material in the musical structure loses energy and the interest in the evolution of the musical material becomes smaller, simply because the compositional process becomes a casual juxtaposition of events.

Of course, the twentieth century's musical history shows excellent examples of music which investigates a sort of denial of form. This is the case of the well known moment-form used notably by Karlheinz Stockhausen. Two of the best examples are represented by the compositions *Kontakte* and *Kontra-Punkte*. Considering the concept which generates the origin of this theory, I think this process appears to be extremely fascinating, but I just wonder if the practice strictly corresponds to the theory. This question arises simply because the structures of these compositions can be so 'musico-dramatically convincing in the trajectory of their unfolding' (Jonty Harrison - *Sound, space, sculpture*).

Furthermore, looking into classical music we discover that composers very often used only a few musical objects in order to develop the structure of a movement or of an entire composition (for example the process used in the technique of counterpoint or in making a fugue, where, for example, from a short section of a melody, an entire structure is developed). In these cases, composers were not in a hurry to use changes in musical material or musical context. They were aware that the musical material has significant amounts of energy and properties in itself and contained many possibilities of development, mainly over time. Therefore, once they had defined the material, they carefully investigated all facets and all combinations of it, structuring them in time.

But, just staying in the area of the twenty century classical music, I think that an extremely representative example is Ligeti's String Quartet No.2 (Schott Musik International ed.); particularly the third movement, where only a few very simple musical gestures are developed into a paroxysm of themselves, with the simple result of a perfect realization of the artistic idea. In other words, we could say that the process consists of the choice of few clear musical elements and their development over time. Making the analysis of this composition, we are able to understand the coherence, the essence of the compositional process and also its simplicity which appears to be disarming with respect to its artistic depth.

Actually, what I have just described is the basic approach I use to composing, for example when I use loop techniques, forcing the audio material in the time direction. I generally look for the edge where I am not able to extract energy from the material any more. As I explained above, this process requires a significant effort because of the general

impression that the limit at which the material extinguishes its own potential, is not actually the real one. When I feel this apparent limit, I just force myself to continue with the investigation of the material's possibilities because I am sure that I have not reached the real limit, and that the material can offer me many other unexpected perspectives which provide the opportunity to emphasize the compositional idea and the musical trajectory. Therefore, the key point is to choose a small selection of sounds (i.e. they can simply be a sinusoid, a noise, a recorded sound or simple combinations of these sounds) and to create coherence between them. The aim is to develop the material as much as possible, making indestructible bonds between these elements. Other additional very representative examples, taken from acoustic music, about how to investigate a precise musical issue deeply are Berio's *Sequenze* compositions for single instruments in which Berio is able to obtain a great musical result working with the most complex instrumental techniques. This complexity becomes transparent, giving space to the musical language and creating musicality, building a structure which becomes the form. This should also be the focus of acousmatic music, which unfortunately is very often focused too much on technology. Another extremely good example about how to investigate potential of an instrument is represented by Ravel's composition *Tzigane* which splendidly explores advanced violin techniques with great musical result. These examples represent the richness of instrumental techniques in the musical context.

In the composition *Urban Density* I decided to work on the contrast which exists between noisy sounds and sinusoidal sounds. The massive noisy colours of sounds I have used for this composition are obtained with 'concrete' sounds. These come from the recording the sounds of simple objects, managed in different ways. I have wiped, scratched or shaken objects one against the other. Some gestures were created with objects made of similar material in order to obtain a clearly identifiable sound, other gestures were created by just recording movements and combinations of different materials in order to produce a wider table of colours.

The opposing character that I have used is obtained with sinusoidal sounds; therefore, the main contrast exists in the simple contraposition between pure and noisy sound materials. Into this basic juxtaposition there is a further contrast which characterizes the compositional context. It is something more conceptual, but it brings in itself an important meaning. This consists of the contrast between the sources of sounds. As I said previously, the noisy sounds come from recordings of existing sounds, while sinusoidal sounds are generated synthetically with a computer. I was interested in using this simple contrast as a generator of the whole structure in this composition.

Bernard Parmegiani's music raises a similar question. Referring to the composition *Incidence-Résonance*, he explains, in terms of musical language, the reconciliation between the concepts of *concrete* and *electronic*. In philosophical terms, this means the meeting between natural and artificial. The artifice of the mixing process materializes the will of conciliation. I think this was a crucial subject for the plan of my projects. Parmegiani's thought represents, in my opinion, an important topic which is very useful in

order to approach the electroacoustic compositional process with a greater understanding. In *De Natura Sonorum*, this natural/artificial dualism becomes the basic dialectic idea of the work.

Similarly, I have also used this process in the compositions called *The Edge of Illusion*, *Nocturne* and *Little Journey* where the focus was on a static slow evolution of sounds over the whole length of the composition. The audio material consists of short sounds that I would like to consider as micro-compositions. These are made by a few mixed sounds. They are accurately edited in many different ways, superimposed or cut and pasted one after the other in order to produce a wide variety of micro entities to be freely used in the main context.

I prepared a selection of sounds with different depths of field. I have worked with short sections of the same (or similar) sounds edited and treated with different reverberations. I thought of the structure as a simple creation of a climax working with these sounds along the time-line of the whole composition, making very slow evolutions of different materials. (The idea of working on a climax comes from the experience of listening to François Bayle's music; in particular the fascination of sound which grows out of his compositions in the album called *Erosphère*. The intensity of the atmosphere which rises from the composition *Transit in Tremblement de terre très doux* and the general quality of sound that characterizes all compositions of *Toupie dans le ciel*. The strength of the clarity of these sonorities is mainly characterized by a few structured sounds repeated during the composition).

Inevitably, I had to produce connections between the two extreme poles (noise and sinusoid). I had to use intermediate steps which were extremely useful in order to create a table of colours to use inside the musical structure. Therefore, I have simply manipulated sounds of both sources. I filtered noisy recorded sounds in order to modify them toward sinusoidal qualities and I distorted sinusoidal synthetic sounds in order to introduce noise in their spectra. At the end, I obtained a wide variety of sounds, with different qualities, which gave me the possibility of making a very clear contrast, as well as confusing them into a general context made by a 'single big hybrid sound'.

A further example of restriction in the choice of audio material is well represented by the composition *Disgregation* of the Body* where I only used recorded sounds with the simple addition of reverberation applied precisely to some selected files. The material I have worked with is mainly paper. Sounds come from different gestures that I recorded, such as ripping up a piece of paper, scrunching up new sheets of paper or just shaking gently one or more sheets of new paper. Further percussive cracking sounds were made by unfolding a folded sheet of paper or just pulling it vigorously from opposite edges.

* Etymology: disgregation was defined in 1862 by Rudolf Clausius as the magnitude of the degree in which the molecules of a body are separated from each other - from Wikipedia

I collected hundreds of sounds from this same kind of material with a very wide variety in terms of colours, lengths, pitches and, in a more general sense, characters of sounds.

Looking at the evolution of audio material over time, it is noticeable in my acousmatic compositions that I often play the material using loop techniques. (Some loops are made artificially, just repeating short sounds over time with software, and other loops are made by a long recording session of sounds simply using repeated movements of objects with a mechanical gesture. This is simply to produce a loop from a 'human' activity, which is not as mechanical as an artificial one, and thus involves many variables and imperfections). Sometimes I brutally cut the recorded sounds and I repeat them. These repetitions let the listener perceive that these fragments have a body. The continuous repetition of a non-homogeneous sound makes evident that this body is the body of the cycle itself. Furthermore, when I slowly modify the quality of the involved sound over repetitions, it is possible to perceive the loop technique, not only as a mechanical technique. This sound will maintain a sense of its own life. This happens in some experimental techno music (which is not dance music) and I was able to perceive this kind of approach for example in Panosic's music. To be honest, I am not a listener of techno music, but when I do happen to hear it, I find myself always fascinated by the quality of sound, the taste of psychedelic time management and the care that this music shows in the investigation of connections between sounds and colours. Therefore, just as a consequence of impressions generated by brief experiences of listening to techno music, loops in my music often become grooves which sound as if they are on the borderline of 'pop/techno' music. This approach inevitably focuses on horizontal forces (time direction), and on slow evolution of events as well as on static atmospheres produced by the general rhythm or the absence of it.

In the composition *Disgregation of the Body* I built a rhythm with concrete sounds, as mentioned before (a mixture of paper and non-paper sounds in this particular case). This rhythmic section appears to be like a modern groove of dance music. A kind of regularity, in terms of rhythmical repetitions, gives the impression of techno music, but always the same recorded sounds have been used to create this section. To give a more musical aspect to this section, in terms of human feeling of performed music, I have built the whole rhythm placing sound by sound. All sound clips are placed on the timeline in intentionally non-precise time positions in order to avoid the mechanical feeling of delays or other loop techniques. The general repetition is mainly regular, but all sounds, and particularly some patterns of them, are shifted by small and different amounts of milliseconds in order to give the music a kind of human feeling, typical of a live musical performance. This choice also rises from the memory of how rhythmic sections in jazz music works, where drum and bass constantly shift their rhythmic components, just a bit earlier or a bit later than the 'perfect' one. For this reason I think that I am able to protract grooves in my music, just because they are the result of many simple elements developed over time.

I mentioned previously my attempts at making indestructible bonds between musical elements. This represents a more advanced step in my musical research. But what is the genesis of this sentence? I can show some simple examples, but it is actually something

which becomes very complex, this thinking about the compositional structure which evolves in the composer's aesthetic investigation. It is the result of years of experience. The examples I am going to discuss represent just a possible starting point (one out of many) for further ideas. It is not possible to reduce these processes to simple examples as if they were the representation of a rule. To understand and to manage these compositional aspects, and mainly to acquire and to transform them as an awareness of a personal musical language, the only possible way is the time that a composer needs in order to investigate and to build his or her own experience. It is not something exact which is possible to teach through a formula. Of course, the investigation in the area of orchestration is for me crucial in the direction of my research, but in the end I think that artistic intuitions are the result of many influences.

The example I would like to mention is the Third Symphony of Brahms, precisely the beginning of the third movement (figure below):

The image shows a page of a musical score for the beginning of the third movement of Brahms' Third Symphony. The tempo is marked 'Poco Allegretto'. The score is for a full orchestra, including woodwinds, strings, and brass. The key signature is three flats (E-flat major/C minor) and the time signature is 3/8. The first two measures of the first violin part are circled in red and labeled '1' and '2' respectively. The cello part is marked 'mezzo voce' and 'espress. pizz.'.

Why this music works so wonderfully, of course, is because it is Brahms' music. But which are those details which make this music work so fluently and to be so dramatically expressive? Of course the timbre of the melody is an aspect. Brahms, instead of giving the melody to violins, wrote the singing line for cellos. Violins or violas could play this melody in terms of range, but of course they would completely lose the tension and the dramatic expression that cellos have in that tessitura. These are not extremely high for a cello, but high enough to play with significant tension in the strings (almost in a high section of the fingerboard). Moreover, what makes this melody so expressive is that instead of playing loudly, as the instrument and that range of the played pitches might suggest, Brahms wrote to play 'mezzo voce' (quietly). This looks like a contradiction, but it

represents the magnificence of the deep and dramatic impression we perceive from the expression of this melody; to have done otherwise would have been impossible.

But, where are the bonds that I have mentioned? From this melody, from the E flat played by the cellos in the first bar, rises the harmony played *pp leggiero* by the other string instruments. The first violins start their musical gesture from the note of the melody (noted as nr.1 in the figure above), the second violins start their musical gesture from the first violin's note just afterwards (noted as nr.2 in the figure above), and violas enter as a counterpoint, with an opposite shape of the gesture and they fill the harmonic function perfectly. The harmony unfolds itself and magically disappears after two bars. This happens through a *crescendo* followed by a *decrescendo* which gives a breath to the musical gesture and represents the genesis of the whole movement. From this gesture everything evolves slowly in order to create a big arc in time: the form. Flutes also work as a link in this gesture with a very soft sound, considering the low and inevitably soft range of notes that they play in the first bar.

Of course, there are many similar examples from the repertoire: Mahler's music, Ravel's music and the music of many others where the investigation into orchestration becomes more complex, involving the use of families of instruments inside the musical structure. Inevitably, moving on in history, the investigation involves a particular attention to timbre, its evolution and its importance in the musical structure.

As I said, the previous example from Brahms is just a 'simple' example. But, there is a connection with my music, more perceivable in my acoustic music like the composition *Germination*. I would like to explain this connection passing through some extract of other scores.

(*Germination*, extract bars 129-132, string section)

The image shows a musical score for the string section of the composition *Germination*, specifically bars 129-132. The score is written for five parts: Violin 1 (vln. 1), Violin 2 (vln. 2), Viola (vla), Cello (cel.), and Double Bass (db.). The music is in a minor key and features complex arpeggiated chords. A red circle highlights a specific section of the score, primarily in the Violin 2 and Viola parts, where the arpeggiated chords are most prominent. The score includes various performance instructions such as 'non vibr.', 'ord.', 'gliss.', 'p', 'f', and '5/4' time signatures. The overall texture is dense and intricate, characteristic of the composer's style.

Of course, what I am going to show is not extensive because this particular page is very complex in terms of orchestration, techniques, harmony and timbre. Actually, I am referring to the bi-chords arpeggios which characterize this section, giving it a particular

energy, mainly because I move this musical gesture through the whole ensemble. The peculiarity of this technique in string instruments is that the musician can play this complex gesture by just staying in a single position on the fingerboard, just like playing a chord.

The following extract shows a classic example of how voices and gestures can move between instruments of a same family. It comes from Beethoven's String Quartet Op.127, third movement Scherzando vivace:

The same musical gesture passes from the cello to the viola and then it moves to the first violin.

A more advanced step, looking at a gesture which moves between different families of instruments, could be represented by the following extract taken from Rimsky Korsakov's composition *Scheherazade*. The technique is more typical of string instruments, but the clarinet reproduce the same gesture. It plays like a background, introducing the cello which plays as soloist.

The second example shows how the same technique, played by the first violin, becomes advanced in a 'solo' context as a continuation of a 'cadenza'. This example shows how this technique can become very rich and fluid.

Scheherazade: example 1

38

Fl.

I. Solo.
Clar.

Timp.

I.
II.

V. Cello Solo.
V. Celli.

p
pp
M
Mpp

Scheherazade: example 2

122 Fl. **L** Tempo I.

Ob. *dolce*

Cor. ing. *dolce*

Fag.

Viol. Solo. *pp*

L Tempo I.

A more complex example is represented by Ravel's composition *Tzigane* where the violin technique becomes seriously advanced. In this case the violin player, keeping fingers in a still position, plays sequences of chords playing two by two notes simultaneously, adding richness to the phraseology and to the timbre.

17

The image shows a page of a musical score for Ravel's *Tzigane*, page 17. The score is for a full orchestra and includes parts for Bassoon (Bass), Celesta, Harp, Violin Solo, Violins I and II, Viola, Violoncello, and Double Bass. The tempo is marked 'Allegro' in a box at the top. A specific passage in the Violin Solo part is circled in red, showing a sequence of chords played two notes at a time. The score includes various performance instructions such as 'FA# SOL#', 'pizz.', and 'ff'. The circled passage is marked with a forte dynamic and a tempo change to 'Allegro'.

Of course, the musical context is more classical than mine, certainly my compositional concept and my idea of sound are inevitably different, but the result of the technique used in the example extracted from my score, comes exactly from these sorts of investigations (I will mention additional details in the following chapter).

Now, a more complex connection between the example extracted from Brahms' score and the extract of my score is represented by a particular section from Stockhausen's composition *Gruppen*. This example shows a complex orchestration where the general shape of the musical gestures reminds me of the quoted Brahms' example and where we can see similar instrumental gestures moving between instrumental families (in this particular case I am not concerned with the musical structure which is a completely different issue).

39
4/4 J=60
p

Kl. Klarinette
Alt-Saxophon
Holztrrommel
Trommel
Vibraphon
Klavier
Gitarre
Violinen I-IV
Bratschen I-II
Violoncelli

Flöten
Almglocken

weich
hart
Verzähler weit aufblähen
Dämpfer

Furthermore, the extract from Stockhausen's score shows how families of instruments use similar melodic patterns creating a single complex movement.

For example, working on *Germination*, I tried to develop the sound of a group of instruments with a single technique, just moving it from one instrument to the others, thus giving an unexpected perspective of richness around the timbre of the ensemble. But when the technique involved is more complex and it is strictly related to a family of instruments, or, more specifically, to a particular instrument, the technique appears fairly unique. Therefore, the effort of creating something similar with different instruments, using inevitably different techniques, gives a very much wider perspective of possibilities in the 'table of colours'. At this point, the research around the timbre of the ensemble becomes one of the main issues of my compositional process. This enables one to create a sort of homogeneous and flexible 'big instrument'.

This process gives the possibility of creating textures of sounds, to develop them simply working on the evolution of timbre. Other non-conventional techniques, like scraped sounds for string instruments or flutter-tongue sounds for wind instruments, were used, for example, in order to enlarge the spectral quality of the sound. Moreover, I have also worked around harmony, gradually developing a simple process. I usually move harmonic fields slowly, from a pole I could define as dissonant, to the opposite pole, which is more consonant. This is, of course, a very traditional concept, but my intention was carefully to modify each harmonic field in order to have balance in terms of complexity and quality.

Starting from the quoted example extracted from Brahms' music, there is another perspective that I would like to mention and it concerns form.

This quoted musical gesture represents the beginning of a process. But, actually, this gesture is already well defined in itself and it represents a micro-structure of something bigger. The connections between instruments inside this gesture become a sort of paradigm of a gesture on a wider scale. This micro-structure can be considered as a single part of a bigger gesture making continuous connections for an infinite process. A gesture becomes part of a structure and this new structure part of a wider structure building a very wide perspective in the time direction. Little arcs penetrate each other in order to collaborate in building a big structure.

In my composition *Germination*, the focus of the whole process is not, in the end, the recognition of the process itself. Like the sponge technique in Bacon's painting, I destroy the edge of each harmonic field, mainly using the glissando technique in the string section. The glissando touches different pitches of the harmonic field involved and often, with the glissando, I move from one harmonic field to another, just going horizontally through the pitches. Therefore, a glissando which started from a precise pitch of a harmonic field, moves until it finds itself inside another harmonic field. The gesture which began with the pitch of the first harmonic field, disappears when a new harmonic field comes into being. This process looks just at tensions and releases of energies over time. Destroyed gestures are part of a bigger structure which build the general form.

A wonderful example, possibly the best one, of a huge arc-form made by small structures which are arcs themselves and which penetrate each other over time with an extraordinary propulsion in the time direction, with a progressive accumulation of energy which brings the music to a unique peak of intensity is, of course, the *Prelude* to Wagner's *Tristan und Isolde*. This is surely a peak of mastery in the history of music where the ultimate structure is built through a process of non-finished arcs.

At the end, other compositions in the area of contemporary electronic music have also influenced me. I was fascinated by Bernard Parmegiani's work *La Creation du Monde* and *De Natura Sonorum*. *Géologie sonore* appears to be like a mass of audio material with a romantic perspective of sonority. Many times, external influences interact in modern music, something which is non-musical but which interacts in the imagination of composers. Parmegiani describes the initial idea of this composition like a conversion into music of an image in this case of the Earth seen from an aircraft. Forms are not precise, some details are confused and the main view is about global mass. Even though this is a very general description, it transmits the feeling perfectly, when *Géologie sonore* is heard. A very similar description, which has always fascinated me, was Ligeti's explanation of the idea behind his orchestral composition *Lontano*. The issue is always focused on the perception of the *distance* from the composer (the viewer) and the subject which he describes with music. Therefore, the work is specifically focused on impressions, a sort of impressionist picture of a landscape translated into music.

Ultimately, there is no perfect rule behind the compositional process, but a huge number of elements which interact together between individual professional and non-professional experiences. Referring to the secret mentioned at the beginning, there is also something irrational which rises from creative processes and which enable artists to investigate and to develop a personal sensitivity.

3. Thinking acoustic/acousmatic

I have always been fascinated by timbre which was one of the most important issues in music over the 20th century and which, with the arrival of electronic music, has changed the concept of composing.

My personal focus in writing acoustic music is to think of the sound not only as the simple result of sound produced by an ensemble. I am interested in thinking about acoustic sounds as a possible interpretation of a variety of colours using expertise I have from the world of electronic music, trying to extend both experiences into a single idea of sound.

The starting point which persuaded me to think about acoustic/acousmatic was the work of the French group of composers called *Itinéraire* with spectral music. Their investigation into electronic techniques gave them the input of translating information of sound properties and electronic processes into acoustic techniques, developing new perspectives in acoustic musical language. I was particularly interested in Gérard Grisey's music and his way of looking at electronic music when composing acoustic music. His cycle *Les espaces acoustiques* is a collection of compositions for solo instrument, ensemble and orchestra. It shows excellent examples of modern techniques and orchestration. The composition *Partiels* is the 'manifesto' of the *Itinéraire's* aesthetic and it involves many examples of this sort of translation of the electronic investigation of sound into acoustic music, even if this composition appears to be rather didactic. Grisey's composition *Vortex Temporum* for ensemble is very different. This is a masterpiece of modern musical expression based on a rigorous structuralism of form, considering both time structure and harmonic structure (which comes from his peculiar electronic investigation of spectra). At this point, if French music had a long tradition around the investigation of timbre, with spectralism, European modern music had a new unexpected innovation (and a movement where a group of people invented and shared a common language, creating a new aesthetic in music).

When I think of acoustic/acousmatic, it is just the idea of approaching acoustic music from the point of view of having in mind, as I have already said, the experience of electronic music. However I am also referring to acousmatic music with particular reference to twentieth century acoustic music. This necessitates bearing in mind the evolution of the musical language (which is historically acoustic) and moving on to investigate acousmatic music simply as an evolution of the musical language. The fact that acousmatic music uses technologies is not sufficient reason to avoid all bonds with the history of musical language. We are all aware that acousmatic music opened new possibilities but we have to consider that we are always talking about sounds.

When I talk about musical language, I am referring to the abstract rules which work together behind the compositional process. I strongly disapprove of modern 'acoustic composers' who do not want to experience any acousmatic music. On the other hand, too

often 'acousmatic composers' show a lack of control of the compositional language, mainly because often they do not have a strong historical compositional background. The result is a lack of full awareness of the musical language. Even if some modern experiences have to be considered as a provocation (and some of them work efficaciously), very often they become weak. Often they result in nonsense because of an absence of control of the real potential of the musical language itself, without distinctions between acoustic or acousmatic music. Only a thorough knowledge of historical and contemporary work can offer the opportunity to composers of creating something new or, at least, something different.

Moving to the research I have done concerning sound, my composition *The Time of Disillusionment* had a particular influence from Hugues Dufourt's music and his exploration of sound, in terms of timbre, using acoustic instruments. These are mixed with electric instruments such as electric guitars or typical '70s keyboards, which produce synthetic sounds. I was fascinated by the 'colour' of the sound that Dufourt was able to generate in his music. Dufourt joined the group of *Itinéraire* later and his influence was not particularly strong, but some of his music sounds extremely mysterious. For example two compositions: *Hommage à Charles Nègre* (for ensemble) and *Saturne* (for large ensemble). These are two very different compositions where unusual instrumentations are clearly apparent, just from looking at the score. There is, in my opinion, an interesting process in Dufourt's music which consists of an in-depth research into the timbre of sounds, working with a very wide range of colours produced by the instruments. If *Saturne* is a very complex composition, made by long and articulated sections which make the structure very difficult to understand, *Hommage à Charles Nègre* appears surprisingly simple, in terms of musical gestures over the whole form. This simplicity of the language that Dufourt uses in this composition allows the music to reveal a kind of deep mysterious feeling of sounds.

The first section of my composition *Disagreement* is a pale and distant picture of a feeling, a premonition of something that is about to happen, as the text clearly describes. The video of the first section is a visual composition made by a kind of superimposition of layers. Natural materials, some of them recognizable and others much less obvious, create a soft and pale texture which reminds one of something, some kind of distant place which exists in memory. The soundtrack works in the same way, looking for a familiar feeling. I have created a soft texture of long sounds made by instrumental colours treated with long reverberation. Often the sound is only the result of the effect, without the original instruments. These are hidden behind the reverberation effect also when they play patterns of notes. The 'game' consists of giving one's memory back only the colour of sounds and pitches written in the score, but without hearing the real sources of these sounds clearly. From this long texture some recognizable sounds arise, as if from a very distant landscape, making evident the depth of audio perception. I was very interested in making a calm and thoughtful atmosphere where the voice whispers words, giving a general impression of a premonition of something which is about to happen.

The fourth section, called *Intolerance*, represents a different and more advanced example of my music where I try to reconcile acoustic sounds with electronic ones. Aggressive sounds of instruments in this section are mixed with electronic sounds which reproduce the same gesture described by instrumental lines. Everything starts with a common effect, simply produced with the instrumental technique which is written in the score. These sounds are glissandos, and they are spread throughout the whole score. The electronic sounds are distorted synthetic glissandos, which underline the instrumental gesture, creating a sort of disorientation. There is no clear ending, but there is a constant tension.

Working on the composition *Disgregation of the Body*, my focus was to work with concrete audio material but thinking about the composition in the same way I generally think about composing acoustic music. This was because I wanted to use sounds not only for their individual qualities, which are inevitably involved, but to subordinate those recorded sounds to the compositional process. The main issue concerns the recognition of sounds in a context. Of course, we are able to recognize sounds and their qualities in a composition, but for this reason my interest was in using a collection of similar sounds, to give them an abstract aspect within the compositional context. The perception of an abstract sound is not only related to the characteristics of the original source, in other words, its recognizable aspects, but it is much more related to the sound functionality in a musical context, such as an instrument which plays in an orchestra. In terms of perception, people recognize the sound of an instrument, but they do not generally ask themselves why the composer used that sound, or about the meaning of that sound in the context. This is because an instrument is a conventional tool built to produce musical sounds.

Without implying music for soloists, my main interest is in chamber or orchestral music. Sounds produced by an instrument, which is played in a musical context, are not perceived by listeners as the sounds of that particular instrument, but rather these sounds are perceived more like a timbre of the ensemble. I explain this process as a common practice of our perception when listening to acoustic instruments. This is mainly because instruments are, as I said, tools for making sounds. Therefore, we do not generally look into the nature of this tool when we listen to its sound in a musical context. A different reaction of our perception is manifested when listening to concrete music made by recorded sounds, where these sounds are produced by unconventional musical tools. Our perception reacts by focusing more intensively on the nature of the source and its semantic meaning. At this point, our minds are more attracted by the source, abandoning the true purpose of the act of listening to the music. This could be resumed like a free abstract perception of the musical language made by sounds along the structure.

At this stage, my attempt was to use mainly the same kind of sounds, with all the varieties I mentioned previously, just trying to make the source (paper in this case) as abstract as possible, encouraging the listener to focus on the purpose of listening to the musical result, instead of being more attracted by the source.

At this point, the solution to the question of why my music sounds modern is to look into all the elements I have mentioned. My acoustic music sounds modern because string harmonics sound like sinusoids, pizzicatos sound like electronic interferences (glitch) and the Bartók pizzicato sounds like a cut in the 'virtual tape' represented by the score. It sounds modern because when I work with an ensemble I think of the orchestration as though it was the result of a spectrogram where, if harmonics sound like sinusoids, flutter-tongue effect for wind instruments, phonemes whispered by musicians or scraping sounds generated by strings interact as if they were electronic noise. Of course they are noise, but the experience that we gain working with electronic music shows that noise can be filtered and modified. But also in acoustic music it is possible to control many different colours of noisy sounds and this is possible just by working carefully with instrumental techniques and by combining them in the orchestration. All this becomes a big 'organized acoustic noise' like the following example from my composition *Germination*.

germination

42

© 2014 by the author. All rights reserved. No part of this score may be reproduced without the author's permission.

My acousmatic music comes from all these interactions, probably combined with some influences from pop music as I mentioned in the previous chapter. I like using glitches to

enrich the sound with little curious elements, sometime like a real constellation of little objects, sometimes like proper musical elements. A very crude starting point which fascinated me was to use glitch sounds generated by the control code 'randh' with the software Csound (randh is a random generator of numbers in the amplitude dimension). This code works for controlling dynamics if used at low frequencies or it can be used to generate proper noise. Using it as controller, but without anything to be controlled, I simply obtained a very primitive generator of glitch sounds. Organizing these codes at low frequencies and using a few different independent lines, I was able to create rhythms. At this time controlling them with the same code (randh) as the proper controller I generated random variations in the dynamic for each glitch in each line with the generation, resulting in a very complex and variable rhythm. This is an example of a basic idea, comparable to using pizzicato in my acoustic music. A more advanced evolution of this primitive idea happened listening to modern music like techno (i.e. Pansonic as mentioned in the previous chapter or Aphex Twin) or simply listening to pop music like Björk's. I think that Björk is very creative and she generally uses an interesting investigation of sound which is similar to modern academic acousmatic music. The main difference is the genre where these sounds are used, in this case just good pop music.

The meeting of these basic elements stimulated me to look into glitches with the idea of working with those micro-compositions I introduced in the first chapter. These are simply short sounds made by sinusoids, proper glitches, short cuts of noises (often metallic noises) or short extract of other sources. At this point creativity does not find any limit in making all varieties of this micro-composition.

I strongly believe that music is made by sounds, independent of whether they are produced acoustically or electronically. The most interesting aspect, given knowledge of both sources, is to create a mixture of colours in our imagination in order to enlarge the variety of combinations, either acoustically or electronically when thinking about a musical composition.

4. Thinking audiovisual

My viewpoint on audiovisual composition is that this modern genre of art, considering the advanced knowledge we can have about artistic languages, is not to be considered as a combination of media, either audio plus video or video plus audio. There is the necessity of creating a well-defined area of exploration which is different from the areas of cinema or the video-clip. It does not share the same focuses, and audiovisual composition has to explore creative ideas investigating the complexity of a unique audiovisual language.

There are many studies and much research which investigates the interaction between sound and image, but they usually generate categories of listening, of viewing or more generally about interpretation. These categories tend to define the functional state of each medium. Very seldom have I lighted upon a serious line of reasoning which investigates the integrity of an audiovisual thought, where sound and image were considered as part of a single language instead of two autonomous entities. It is necessary to think of a unique complex linguistic entity which becomes the starting point of the artistic process. It becomes the genesis of the creative idea.

My attempt is to start from the concept that, as the embryonic state of a thought, constitutes a unique artistic idea which involves sound and image as a unique linguistic element. Of course, this requires a good acquisition of the properties of both languages: on one side the musical language related to sound and, on the other side, the photographic compositional language involving image. Both languages, either music (that I have already mentioned) or still picture, involve a distinct embodiment in time. The time related to images that I am referring to is not that one which comes from the cinematic concept (timeline and editing process), but is rather the property of a typical time contained in the subject itself of a still picture – i.e. the concept of time contained in "Lectures on Film Directing (notes from classes taught by Tarkovsky at the State Institute of Cinematography)". *Iskusstvo Kino*. The image captured with a still picture brings an inner time even when we have the impression of an absence of movement. To give an example from my production, the photographic material I used when creating the audiovisual composition *Disgregation of the Body* is a collection of macro-photography of rusty pieces of steel. Each picture is perfectly still, without any sort of dynamic and movement effect, but the image brings an inner meaning of time due to the presence of rust, which implies the concept of time as the result, for example, of weather erosion. Therefore, I am not referring to time as a flowing of minutes that we perceive while watching a video, but I am considering instead a previous conceptual time embodied in a still image. I am referring to two different approaches to time, talking about music and image. The idea of erosion is particularly apt, when applied to my composition, thinking of the slow evolution of material.

Inevitably, knowledge of both languages is a necessity because the audiovisual language involves a synthesis of them, and the audiovisual composer needs an awareness of what

they consist of in their pure form. At this point, the audiovisual composition investigates a new creative language with a personal and unique concept of time which is one of the most important essences of the compositional process.

The concept of audiovisual composition does not consider media as independent, but neither does it consider them as dependent one on the other. There is no prevarication of one of them upon the other. We just need to make the effort of thinking about fluctuations (tensions and releases) of the whole material as part of a unique audiovisual language. There are not parallels but only units, the fluidity of a complex language. A solid knowledge of music and image composition is the prerequisite to going beyond what we consider limits in creation using a shared language.

Many studies focus on perception, but I am interested in creation. Often people talk about the evocative aspect that arises from the relationship between sound and image. I am interested in the entity of a unique audiovisual concept. For example, I often hear about synchronization of sound with images, but without a concept which underlies the creative idea, this synchronization can become a simple game of perception which can rapidly change into a trivialization of the artistic idea.

I considered the issue of synchronization when I worked on my audiovisual composition *Filtering Emotion*. The principal interest was to create a labyrinth where people are 'ensnared' in a space without an escape. This is obviously symbolic, but refers to the choice of setup for this work; the attempt was to put the audience in the middle of a specially constructed environment, like a crowded town square, created with videos. The general subject of the images are people, but, unexpectedly, only people's feet were shown as they walk along streets in different cities. I shot these videos in different places in Europe, but there are no clues which allow us to recognize in which cities they were taken. At the same time, we tend to recognize details of bodies and places as if they show something familiar. We have a feeling of doubt, we are not sure if we are able to recognize which view, which angle, which station or airport is shown. It might be that something similar exists in our memory. In the same way as filming only the ground and footsteps of people who are walking, I have looked for the uncertainty of being able to identify them. We can only see half their bodies; there is something familiar about their clothes. Fashion, shoes, trousers, bags with advertisements on them; we recognize people as being men and women but we are not able to identify who they are or where they come from, neither in the simple direction they are taking, nor in their cultural origins! As I wrote in the programme note, people walk along the same roads, crossing the paths of many other people's lives every day.

Therefore, the audience, standing up in the middle, is attracted as well as repelled by many details and movements both familiar and yet unknown.

The reason for developing this multimedia idea was mainly to explore the possible strength of synchronization of the two media. I have worked on each video track, editing and

mixing very short clips in order to create very frenetic sequences on the timeline. I worked on tension and its release, just by altering the concentration of video clips on the timeline. There are moments when all the videos have a frenetic rhythm; this tension creates a pressure on the audience which is standing up in the middle of all the projections. When I talk about very short video clips, I mean that I have made thousands of cuts in the video files and all these cuts are precisely associated with short sounds. This process creates energy. I have simply used a variety of short recorded sounds. I used a variety of fragments from similar video clips, and I managed the same process of generating an independent general rhythm for each projection. At this point, the whole audio and video material generates a frenetic movement around the viewers. Without knowing exactly the process, people perceive thousands of little events moving and surrounding them. Therefore, the viewers are involved in a general action/attraction, which consists of a simple editing process made by apparently familiar materials, but, at the same time, the whole general movement appears difficult to understand precisely.

Sounds are managed on different layers. One of them consists of what I have described above. It is a constant swarm of little acoustic events, not predominant in terms of presence and volume, but constant and synchronized with the videos.

I was also interested in creating some suspended moments in the video structure which look like breaks. The function is to perceive a pause time. They are generated by the editing of still pictures, a collection of continuous shots of still pictures (instead of a movie) shown in reverse order. Therefore, the main difference is in the perception of a slower time. Even though they are still pictures, they are edited in longer sections than video clips. The final effect is a sensation of suspension of time.

Very often, audiovisual composers focus mainly on technical problems with sound and image, thus losing the most important aspect of the act of composing: they forget to look seriously into the conceptual/artistic content. But audiovisual composers, paradoxically also seldom look deeply into the genesis of signals which have many aspects in common, through digital technology. The digital signal, either audio or video, starts from the scientific process of the sampling technique and quantization, passing through all stages of the digital conversion and also other technological manipulations. Digital signal processing (DSP) is a process independent of which signal is involved. Therefore, the investigation of similarities in the technological processes can be very deep and complex.

The analogue and the digital technologies share for both media, for example, the same concept of noise, feedback, equalization/color-correction, or other processes such as the understanding of components of spectrograms/histograms. In digital technology the synthetic generation of signals is the same concept for both media (i.e. additive synthesis for sound composing is the same concept of Vector Graphic technique for image composing). Therefore, I am talking about an awareness of the genesis of the digital signal.

At this stage I would really like to mention an evolution of this idea of genesis, looking at a more advanced concept which concerns the area of concrete audiovisual composition.

A very good example of the synthetic aesthetic is represented by the audiovisual production of Ryoji Ikeda. The strength which binds so intensively all media in his audiovisual compositions is, first of all, the aesthetic coherence which comes from the techno world. The second aspect, which is the practical translation of the first one, is the synthetic generation of material. The techno aesthetic grows from the combination of raw synthetic materials like sinusoidal sounds and white noise and psychedelic synthetic images. Therefore, Ikeda cleverly revealed the power of this complex audiovisual language making unique audiovisual compositions.

With my audiovisual composition *Vivid Roughness* and particularly in *Disgregation of the Body* I worked in the same direction, looking for the strength of the bond of a unique source. As introduced above, this is the interest in using concrete materials for both media, audio and video. Concrete material is something which carries within itself a story, a perception of time and a depth of quality of the material itself. The intention of these compositions was to explore the potential of an enlarged 'concrete' world with a unique audiovisual idea. As already mentioned, the video is made with photographic material of unusual textures, mainly old surfaces of different substances like steel damaged from the action of weather corrosion. I have only modified colours into a uniform single colour in order to give the video composition a homogeneous aspect. The audio material I worked with, as already mentioned, was mainly recordings of the sound of crumpling and tearing actions on paper.

As well as in the audiovisual composition *Vivid Roughness*, in *Disgregation of the Body* I worked with superimpositions of audio and video layers in order to generate a unique and complex evolution of materials in the compositional structure (I am now referring to the timeline), investigating the 'physicality' of audiovisual concrete material, colours and the natural depth of field contained in the material itself.

Developing these concrete audiovisual compositions I discovered a fascinating peculiarity. While traditional narrative videos have key frames in the narration, which means fixed points that make links in the evolution of the narration, my concrete audiovisual compositions, which are more abstract, show a fluidity in their own evolution of material and give the impression that each frame becomes a key frame.

Even if cinematographic experiences have demonstrated that there is more than a single key point in a single clip of video, the video artist Bill Viola also talks about the function of key points in traditional narrative videos. There are single frames inside each clip of video which represent the essence of the clip itself (the key point). Previous and subsequent frames inside the clip work generally as a function of this key point: as connections with other clips or just as introduction/preparation of this key point.

A more conceptual, but extremely good example of a different approach to audiovisual composition is the video-opera *Three Tales* of Steve Reich and Beryl Korot. The coherence shown in this work is the result of a minimalist aesthetic experience.

In Act I - Hindenburg, sub-section *Nibelung Zeppelin*, there is strong evidence of the concept which drives the minimalist American aesthetic manifested with audio and visual material and, mainly, with audio and visual gesture. Two elements are the timbre of the percussion instruments in the music and the colour used for the images. The former is just an ensemble of anvils and the latter is the silver colour generated by the emboss effect (this is just like a bas relief effect which transforms the image into an engraving on aluminum paper). Therefore, the audiovisual profile appears to be rather raw considering the connection of rhythmic metallic sounds and repetition of movement of silver silhouettes. Furthermore, the silhouettes are of workers with metallic tools in their hands, repeating short and mechanic gestures. The video background is monochromatic, grey, and the layout is made by apparitions of a geometric scheme made with the silhouettes. The frame presents just a very primitive idea of perspective introducing silhouettes in different dimensions; the general impression is of a very flat image which is also the general first impression listening to the music made by those metallic sounds. The result is a naked and dry audiovisual material repeated mechanically.

The main element which gives effectiveness to this act is the dynamic of movement: as described above, short movements are repeated mechanically. But even if these short actions are the repetitive actions of manual working gestures, comprising the effective visual gesture, the video shows a more rigid movement resulting from the editing process, repeating only fragments of the actions. These fragments are just clips obtained by 'brutally' cutting the original complete movements made by the silhouettes. This rigidity gives energy to the action which matches at a profound level the musical gesture consisting of the mechanical and dry repetition of metallic coloured rhythmic patterns.

This bond appears to be very strong between video and musical attitudes, which becomes representative of the authenticity of the minimalist aesthetic.

I think that this audiovisual composition also represents a very good example of how to manage human figures, abstracting the subject into a game of silhouettes. The human presence disappears for the benefit of the expressive language.

When human figures are involved in audiovisual productions, the compositional questions become more complex because the subject introduces aspects more aesthetically inclined to the cinematographic or photographic languages (i.e. portrait photography). These languages generate different kind of links if used in multimedia environments. The human presence introduces more aspects related to the narration of a story or just of feelings expressed by facial expressions of simpler actions. They introduce a different concept of time and they move the perception towards more emotive or evocative links between languages, which is not my aim. (Wassily Kandinsky said that the modern age is less

interested in these traditional emotive/evocative feelings and artists – painters in his case – need to look for something more evolved and refined).

My general view is that in the modern artistic area, investigation is very often not focused on artistic quality so much as on technological aspects. The interest is mainly focused on perception and effects, therefore, as previously mentioned, this approach works more on the level of consequences instead of focusing on the level of creation, which has the greatest importance in the compositional process.

In conclusion, the discussion mainly concerns the artistic idea, the necessity of a deep discussion about languages, either in technical or aesthetic aspects. It inevitably allows one to develop new practical and creative solutions which become important stimuli for the compositional process. But, there is the edge of failure of contemporary art where artists and performers focus mainly on the astonishing result of their production rather than the real value of the content. They have lost the sense of limit and quality of the artistic language which comes from a deep awareness of history.

5. Conclusions

As I wrote in the earlier sections of this text, music is made by sounds, independent of whether they are produced acoustically or electronically. The most interesting possibility, given knowledge of both sources, is to create a mixture of colours in our imagination in order to enlarge the variety of combinations, either acoustically or electronically, when thinking about a musical composition. The understanding of the history of music through the evolution of the musical language is crucial for understanding what contemporary music is and how (and where) to research new perspectives into unexplored areas of expression.

My research at the University of Birmingham focused mainly on audiovisual composition, investigating the possibility of creating a unique language made by sounds and images thought of as a unique entity. This exploration was focused on both technological and expressive potentialities.

Since I had the opportunity of teaching audiovisual composition, my interest was also to give a practical form to this experience, thinking about how to convert my audiovisual investigation into a teaching programme. Of course, this project was very complex because of the necessity to extrapolate information from all the experiences I had in audio and video environments, either production or postproduction. Furthermore, according to my viewpoint of the necessity of having historical and compositional knowledge, I had to summarize what I consider essential about music and video in order to create a starting point from which to develop a precise teaching programme. Inevitably, I had to define a precise working area because the multimedia environment is not technically and aesthetically defined by only a few genres. Actually, there are no rules or limits which define shared working areas. There are some 'normal' technical approaches, but the production of audiovisual compositions has no limits or restrictions. The working area is extremely wide because of the multiplied combinations offered by using different media. Of course, also the artistic quality fluctuates over a very wide range of evaluation, depending on the quality of the technical control, the artistic investigation, the final application or the investigation of aesthetic necessities.

I had many varied experiences just visiting a number of galleries where audiovisual/multimedia works are generally performed and I realized that the result is always a delicate balance of many aspects. Of course, it depends on the quality of the investigation and, mainly, on the depth of the content that the artist has in mind. But, to have good ideas is not enough to produce a good artistic work. One needs good skills in order to transfer ideas into the practical result. Therefore, my starting point in order to project an audiovisual teaching programme was to create a gradual path made of theoretical knowledge as well as practical skills through exercises and practice, both in the studio and on location, either for production or postproduction. The focus is to give

students the correct intellectual and practical tools to understand where to pay attention for quality and how to get free creativity.

The second choice is to circumscribe the working area for practical reasons. Therefore, I focused my teaching project on 'concrete audiovisual composition'. Of course, this represents my actual experience and my personal artistic choice, but my artistic production was not involved in creating the teaching programme. There is a more important reason which I considered, while trying to determine the best structure of a gradual and useful programme. For example, for both audio and video, I think that real-time technology/practice is an advanced step, and is something which should come after a solid understanding of the basic rules of the artistic language. Real-time technology involves substantial energy in programming with software and the quality of the result is always delicate, looking at the balance between intentions and result. Real-time is a very difficult issue because, very often, it involves random processes and uncontrolled parameters. Therefore, my choice when thinking about a teaching programme was to focus on fixed media, where students can approach, step by step, many different technical and aesthetical aspects, practising carefully and looking at the best result. Actually, when working on fixed media, it is also possible to approach and practise with the most advanced technologies used in postproduction (for example, which real-time processes are not able to be managed completely or with high precision). These technologies allow one to understand thoroughly what it is possible to obtain with modern software. There are also technologies used in production and postproduction in the film industry (with which it is necessary to be familiar); therefore, when a student fully understands the potential, s/he will be able to control technical aspects and to develop an aesthetical interest. S/he will also be able to look at a wide variety of applications with a real awareness of what the job entails. At this point, artistic exploration becomes the primary focus.

Bibliography

- Chion, Michel, *L'audiovisione – suono e immagine nel cinema* (original title: *L'audiovision. Son et image au cinéma.*), 2^aed., Torino, Lindau, 2001, pp. 204.
- Christiane, Paul, *Digital Art*, 1^a ed., London, Thames & Hudson Ltd, 2003, pp. 224.
- Deleuze, Gilles, *Francis Bacon – logica della sensazione* (original title: *Francis Bacon. Logique de la sensation.*), 4^a ed., Macerata, Quodlibet, 2002, pp. 241.
- Dufourt, Hugues, *L'artificio della scrittura nella musica occidentale*, 1987, Milano, in: I quaderni della civica scuola di musica, pp.7-14
- Ejzenštejn, Sergej M., *Teoria generale del montaggio*, 4^aed., Venezia, Marsilio Editori, 2004, pp. 434.
- Grisey, Gerard, *Vers une "ecologie des sons"*, in: Entretiens nr.8
- Harrison, Jonty, 'Sound, space, sculpture: some thoughts on the what, how and why of sound Diffusion' in *Organised Sound*, 3(2), Cambridge, Cambridge University Press, 1998
- Hatje Cantz, *Ars Electronica, A New Cultural Economy, The Limit of Intellectual Property*, Ostfildern (Germany), Hatje Cantz Verlag, 2008, pp. 364.
- Kandinsky, Wassily, *Lo Spirituale nell'Arte* (original title: *Über das Geistige in der Kunst, Insbesondere in der Malerei*), SE Srl, 1989, pp. 166.
- Manovich, Lev, *Il linguaggio dei nuovi media* (original title: *The Language of New Media*, The MIT press, 2001), 7^a ed., Milano, Edizioni Olivares, 2008, pp. 408.
- Metz, Christian, *Cinema e psicanalisi* (original title: *Le signifiant imaginaire. Psychanalyse et cinéma*), "Tascabili Marsilio", 2^a ed., Venezia, Marsilio Editori, 2002, pp. 317.
- Murch, Walter, *In un batter d'occhi – una prospettiva sul montaggio cinematografico nell'era digitale* (original title: *In a Blink of an Eye. A perspective on Film Editing*), 4^aed., Torino, Lindau, 2007, pp. 159.
- Negroponte, Nicholas, *Essere digitali* (original title: *Being Digital*), collana "Saggi Paperback" 3^a ed., s.l., Sperling & Kupfer Editori, 2004, pp. 267.
- Pierre, John R., *La scienza del suono*, Bologna, Zanichelli editore, 1988, pp. 252
- Pousseur, Henry, *La Musica Elettronica - Testi scelti e commentati da Henry Pousseur*, (prefazione Luciano Berio), 1^a ed., Milano, Feltrinelli Editore, 1976, pp. 333

- Salgado, Sebastiao, *Africa*, Koln, Taschen, 2007, pp. 335.
- Schaeffer, Pierre, *Traité des objets musicaux, Morphologie et Typologie des Objets Sonores*, livre. 5
- Schaeffer, Pierre, *Traité des objets musicaux, Solfège des objets musicaux*, livre. 6
- Smalley, Denis, *Spectromorphology: explaining sound-shapes*, Essay, extract pp. 107-126
- Smith, Steven W., *The Scientist and Engineer's Guide to Digital Signal Processing*, 2^a ed., San Diego, California, California Technical Publishing, 1999.
- Tarkovskij, Andrei, *Scolpire il tempo* (original title: *Zapečatlënnoe vrenja*), 6^a ed., Milano, Ubulibri, 2002, pp. 215.
- Tarkovskij, Andrei, *La forma dell'anima- Il cinema e la ricerca dell'assoluto* (original title: *Iskusstvo Kino*), 1^a ed., Milano, RCS, 2012, pp. 200.
- Thomas, Jean-Christophe, Philippe Mion, Jean-Jacques Nattiez, *L'Envers D'Une Œuvre - De Natura Sonorum de Bernard Parmegiani*, Bibliothèque de Recherche musicale, Éditions Buchet/Chastel, Paris, pp. 143
- Townsend, Chris, *The Art of Bill Viola*, 1st UK ed., London, Thames & Hudson Ltd, 2004, pp. 224.
- Viola, Bill, *Bill Viola – The Messenger*, 1^a ed., Durham, The Chaplaincy to the Arts and Recreation in North East England (59 Western Hill, Durham DH1 4RJ), 1996, pp. 42.
- Viola, Bill, *Bill Viola: Going Forth By Day*, 1^aed., Berlin, Deutsche Guggenheim Berlin, Berlin, Guggenheim Museum Publications, 2002, pp. 152.
- Viola, Bill, *Reasoning for Knocking at an Empty House*, 1st UK ed., London, Thames & Hudson Ltd (181A High Holborn, London WC1V 7QX), 1995 (reprinted 1998, 2002, 2005), pp. 302.
- Walsh, John, *Bill Viola: The Passion*, 1st ed., Los Angeles, Getty Publications, 2005, pp. 307.
- Wheeler, Paul, *Manuale di ripresa digitale – teoria e pratica della direzione della fotografia nel cinema digitale* (original title: *Digital Cinematography, Focal Press*), 1^aed., Roma, Dino Audino, 2006, pp. 176.
- Whitaker, Jerry, *Manuale di produzione video – Standard dispositivi – sistemi* (original title: *Master Handbook of Video Production*), 5^a ed., Milano, Hoepli, 2006, pp. 412.

Musical Works Consulted

Bayle, Francois

Erosphère - Toupie dans le ciel

Erosphère - Tremblement de terre très doux

Beethoven, Ludwig van

String Quartets

Berio, Luciano

Points on the Curve to Find

Sequenze

Sinfonia

Benjamin, George

At first Light

Björk

Selection of songs

Brahms, Johannes

Symphonies

Dufourt, Hugues

Hommage à Charles Nègre

Saturne

Grisey, Gerard

Les espace acoustique

Vortex Temporum

Ligeti, György

Orchestral Work

String Quartets

Maresz, Yan

Eclipse

Entrelacs

Metallics

Metal Extensions

Murail, Tristan

Treize couleurs du soleil couchant

Nono, Luigi

A Pierre

Panasonic

Aaltopiiri

Parmegiani, Bernard

Chants magnetiques

Dedans-Dehors

De Natura Sonurum

La creation du monde

L'oeil Écoute

Plain-temps

Pour en finir avec le pouvoir d'Orphée

Rouge-mort: Thanatos

Violostris

Ravel, Maurice

Tzigane

Daphnis and Chloé

Reich, Steve

Music for Mallet Instruments

Octect

Piano Phase

Three Tales.

Voices and Organ

Schaeffer, Pierre

L'Oeuvre musicale

Stockhausen, Karlheinz

Gruppen

Kontakte

Kontra-Punkte

Twin, Aphex

Richard D. James Album

Varese, Edgard

The Complete Works

Wagner, Richard

Tristan und Isolde

Xenakis, Iannis

Anaktoria

Concrete Ph

Metastasis