

Christian Eloy

**Teaching composition in electroacoustic music,
not exactly a straight line... but,
a true musical and human adventure**

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I wish to dedicate these few lines to Ivo Malec for his qualities as a great composer and educationalist, a role model for me, and also for his kindness when he welcomed me to the Conservatoire in the rue Madrid, so many years ago...

Abstract

The first part of this paper traces my own musical journey, a kind of personal adventure of sounds and education, made of straight lines and turns, confrontations between the past and the future, alternating certainties and doubts, reflecting creation and education.

My description of certain bygone times has no intention of recounting any nostalgia or regrets, but only of illustrating my commitment to teaching electroacoustic music for nearly thirty years or so, leading to an understanding of how this commitment has flourished.

We shall also see how the foundations of this education were laid down in the sixties by the strong personalities that were Pierre Schaeffer, a born communicator and educationalist, and also by Ivo Malec, Guy Reibel and others again, who cultivated this taste and this talent to communicate and educate, sometimes merging the two.

Having lived through the change from analog to digital, both as a composer and as an educationalist, it is possible to assert that this period was not “a true revolution“ in the domain of teaching and promulgating this music.

The second part of this paper aims to reveal the synthesis between these foundations or bases, created by analog methods, and the need to follow the arrival of the digital “new technologies“; a synthesis that teachers were obliged to build (often empirically) as these technological developments came along. It also demonstrates how Schaeffer’s experimental approach is still the most solid and pertinent foundation of education in electroacoustic music composition, even though the studios and tools are radically different forty years on.

For me, acousmatic music remains an extremely demanding way of writing and composition. Thus, critical listening with the class group, peers in some way, remains in our teaching the great moment of education in composition and certainly the most exciting moment in the act and creative process of musical composition for a good number of young composers.

Of course, you still have to keep practicing, “faire ses gammes“ said Pierre Schaeffer, in electroacoustic music! Nothing has changed in that respect!

Departing on the adventure...

1 – the straight line, an initial journey, quite typical after a combination of instrumental, composition, and conducting studies in a regional Conservatoire, then at the Conservatoire National Supérieur in Paris; this was the start for me of a truly typical life as a professional flautist; initially as an orchestral musician, then teaching flute and chamber music in a conservatory, followed by an appointment as Head Teacher, then a truly fascinating and exciting job and experience with almost 600 young musicians...

Christian Eloy - Teaching composition in electroacoustic music, not exactly a straight line... but, a true musical and human adventure

2 – the line was broken

the conservatories in the eighties in France relied primarily on an understanding and a certain complicity with the Town Council teams responsible for culture, which was no longer the case for me after four years as Head of the Conservatory, when a new Town Council arrived following elections.

3 – the break, my resignation

after these, a brief diversion, beneficial, with a one year stay in an Irish University studying ethnomusicology, which gave me the ability to discover contemporary and electroacoustic music when I subsequently returned to Paris, and as I listened to the Cycle Acousmatique by the Groupe de Recherches Musicales (GRM) at Radio France during the eighties.

It was at this time that the great decisive encounters arrived in succession: first Ivo Malec, then Guy Reibel, François Bayle, the GRM¹, the Ircam²; finally a return to the Paris Superior Conservatoire and the Ircam's study courses were to open up a second musical life for me ...

4 – the return trips, the third atypical journey

my education in electro-acoustic music therefore took place at the CNSM³ in Paris and at the GRM; this was the height of the era of analog technology; the GRM studios, where I was quickly and generously welcomed, were all endowed with the very best professional equipment; the pioneers had already tamed the early imperfect machines, and nowadays it seems to me that this was to some extent the golden age and the peak of the analog studio with all the strong points of this technology.

It was also the golden age, when practising electroacoustic music was based uniquely on listening, without any representation of sound.

There is no nostalgia or regret for this bygone (or almost bygone) era of analog technology; because of my previous experience, it was quite simply a time of intensity, filled with discovery, culminating for me in musical maturity. In any event, it very quickly became a strong commitment, both in relation to the composition of electroacoustic music and also very quickly, with the desire to share and to become involved in teaching this music. It was at this time, and with these inspiring people, that this commitment grew and developed and brought me to practise for some thirty years as a teacher of composition of electroacoustic music.

The reason I have given you these few stages of my professional past is that I am convinced that these are important and even determining parts of everyone's personal history, but also of the musical and educational history of a composer and of a teacher too; I keep a precious memory of a remark made by Ivo Malec, who spoke of "lived-in music" ("musique habitée" in French) in a comment on my work.

Anyway, to conclude on this journey, which might seem somewhat erratic, but which was such a foundation for me, I finally and quite soon felt the benefit of the warm support of my elders and peers; and this is the other adventure, the human adventure of teaching composition; this very adventure opened the way for me to be appointed to and to run study courses, GRM and Ville de Paris workshops during 15 years, then to obtain teaching assignments in different institutions, followed by commissions, and finally the call to Bordeaux as professor at the "Conservatoire National de Région", responsible for running a whole musical creation department.

¹ GRM : Groupe de Recherches Musicales

² Ircam: Institut de Recherche et Coordination Acoustique Musique

³ Conservatoire National Supérieur de Musique

Christian Eloy - Teaching composition in electroacoustic music, not exactly a straight line... but, a true musical and human adventure

A few words about the background to this teaching assignment: the GRM courses, the CNSM class, classes in other conservatories, etc.

We know how the foundations of such teaching were laid during the sixties and seventies with the renowned GRM courses (“stages“ in French) attended by all kinds of composers, then the opening of a class at the Paris conservatory in 1968 by the strong personalities that were Pierre Schaeffer himself, a born educationalist and communicator! but also Ivo Malec and Guy Reibel, who cultivated this taste and this talent to communicate and educate. We will illustrate this later, but it can even now be said that the “digital revolution“, as some have called it, was no such thing in the domain of teaching and promulgating this music.

During visits to conservatories for examining boards or encounters with other electroacoustic composition classes, in France and beyond, I am always extremely astonished by two things:

- one is the realisation of how criteria and judgements in the evaluation of students’ work are often very similar; very often we come to an agreement on a comparable value, without lengthy discussions among the members of the examining board, and without entering into long debates; in any event, and because I have attended both, much less than instrumental examining boards, which have to deliberate on the interpretation of pieces from the repertoire, technique, tradition, schools, etc.
- the other is that I find many educational constants among teachers, often with the same methods, the same principles, even exactly the same practices, a common vocabulary, similar educational conduct, comparable musical development, etc. When writing this article and through several accounts, I have also been able to confirm that a good number of these practices and methods, still commonly used today, came straight from the sixties and seventies, from Pierre Schaeffer himself and from his close collaborators at that time.

One can also see how certain places have played an important and fundamental role; some of them, where this music was taught, especially the CNSM in Paris, thanks to a handful of extraordinary teachers and composers.

This first stronghold was a very rich melting pot of composers and teachers who, although they are not all working there any more, have widely and faithfully promulgated this exceptional legacy. Most teachers in French conservatories, and most heads of creation centres and research groups have come through this class, and their influence has often spread well beyond their class and structure.

More than formal teaching, simple grammar or a code of composition, it really was a completely original approach to a relationship with the world of sound, as well as a deep personal process, that were to be communicated and developed in these places in a way so different from that of other classes during those years when tradition still weighed heavily in the conservatories.

From deconstruction to reconstruction...

It is easy to demonstrate that the development of the language of music belongs to a virtually analog continuity; one passes through all the intermediate states, there is no escape, even from passing through what some people call breakaways, but which are in fact only accelerations or rapid backward steps followed by advances towards new innovations, and so on...

The 20th Century could not escape from this logic, nor even could the language of electroacoustic music; hence, the period of change was bound to be followed by one of reconstruction, needed to rebuild the coherence and continuity that music cannot survive without. This is one thing that makes the teaching of composition so fascinating, since often in the initial stages of these movements, it must accept them and digest them all the better to regurgitate them through this new music.

Teaching electroacoustic composition was initially based entirely on perception and experimentation. Students were inserted into the famous loop : writing-listening-modifying-listening etc (“musique

Christian Eloy - Teaching composition in electroacoustic music, not exactly a straight line... but, a true musical and human adventure

concrète“, in French): this is where listening and creation are relentlessly linked.

For this, we had analog technology, with its numerous and heavy constraints. In order to create this music, machines were often diverted from their original function.

This teaching brought its adepts together in very specific places, often gravitating around radio studios, then the first experimental groups obtained similar equipment and copied these very singular and specialised places, which they dedicated to the composition of electroacoustic music alone; whereas today one often sees people working on a laptop with headphones, more or less anywhere, at home, but also in all sorts of situations and places.

These “groups“ we referred to earlier, and the word has not been chosen randomly, were able to develop an esprit de corps through different types of collective work, workshops, collective listening and even works of collective composition, and so on; group dynamics, already stimulated by Pierre Schaeffer, was widely used and certainly contributed to welding together and linking these personalities, often arriving from far horizons, all the more so in a domain where individualism is an imperative and so very essential.

And yet we must remember the long quarrels, the thundering arguments and break-ups of the period of the “studio d’essai“ and later!

I think that these are part of the history of electroacoustic music and that therein lie the origins and reasons for a good number of educational methods, composition teaching methods, improvisation workshop practices, the inner life of some studios, and so on.

I also think that it is these methods and practices (the doing) that have forged a respectable number of composers and teachers; they were to allow them to live through and even to survive this first deep technological evolution without getting lost or sacrificing anything to the Schaefferian legacy: I’m talking about the change to digital technology.

The change to digital ... gently

Resistance to this new technology was very scarce among composers during the eighties and nineties; there was an enormous demand for the new digital machines (digital Reverbs, Publison, Eventide, DX7, etc.), which they quite naturally added to their range of tools at a relatively terrifying rate for a few years (let us not mention synthesisers and samplers for pop music!).

It was probably the teachers who first felt that something was to alter the way of approaching and practising electroacoustic music after the appearance and subsequent omnipresence of screens and graphic sound displays. At this particular moment of the digital whirlwind, financial pressures were enormous and I must mention Guy Reibel, who, as a teacher at the CNSMD, managed to respond, both in his own works and in his teaching, by relocating the musical notion to the centre of the compositional set of problems, with in particular some important work on the “séquence-jeu“, on the “idée musicale“ and the “geste musical“.

At the same time, two phenomena developed rapidly in parallel before coming together:

- large powerful machines for making and/or transforming sound started to become accessible in certain places dedicated to music (Syter at the GRM and the 4X at Ircam as far as France was concerned)
- small, reasonably priced personal machines allowing music to be created via MIDI systems very quickly became widespread among the general public (Atari, Commodore, Thomson, Yamaha).

The composers blithely (and often joyfully) mixed and accumulated the different machines and technologies that were available, all for as long as possible, in a search for efficiency and productivity, before the jump to fully digital could be possible and perfectly operational and reliable.

One can certainly justify, at least to some extent, this absence of any aesthetic breakaway by what we were describing earlier with this deeply ingrained collective approach, which made it possible to overcome this huge technological and economic upheaval.

I can testify here, in an anecdotal way, to the appetite of most of the composers at the GRM (young and not so young) for these new rather mysterious machines at the start: first, Studio 123, then Syter, then samplers,

Christian Eloy - Teaching composition in electroacoustic music, not exactly a straight line... but, a true musical and human adventure

then sound cards and software on Macintosh; I can still see the amazement mixed with greed of the composers at the meeting where the GRM engineer announced that they would soon have all these tools on their personal computers, at home – yes, yes, I can assure you, he was saying! This was the first generation of GRM-Tools⁴ in 1984!

However, one has to admit that the learning curve, the methods, the theory and the practices that came with these new machines would change our teaching methods and sometimes the music itself, particularly at the time when some machines first appeared (the DX7, the early samplers), not forgetting “Max“ first real time interactive software (MIDI only).

The more concrete aspects of this were apparent when it became necessary to make the complete changeover to digital hardware, often for financial reasons, as audio tape recorders became too difficult and too expensive to maintain.

Two different approaches to teaching were then seen to emerge:

- one that directly transposed its practices and methods onto computer by seeking software as close as possible to the analog studio concept,
- and another that would attempt to open up to higher or lower level computer programming by building new environments and new tools.

However, it is fairly easy to show how the Schaefferian experimental perceptive approach, if it is well managed, remains the strongest, the most convincing and the most efficient basis for teaching composition of electroacoustic music.

I had some fun, with a didactic objective, in making a chronological list of the GRM’s sound-generating machines, from the oldest with the mixing desk and the “sillon fermé“, moving onto the “phonogène“ and the “morphogène“, then the computer programs of the “studio 123“ and “Syter“, and ending with the latest generation of the “GRM Tools“. All of this perfectly demonstrates the consistent nature of the musical approach and the aesthetic purpose of these machines, which extend well beyond the technology used; it is the musical project, the actual concept of playing with sound, making music with sounds, as well as this notion of an instrument (practice your instrument, Schaeffer said!), which support the very foundations of our music; the different generations of “GRM Tools“ are a perfect example of this.

Critical listening in groups ...

Another important aspect in composition teaching, which I was able to confirm after making enquiries with a certain number of conservatory teachers in France through AECME⁵ (association of Teachers of composition in Electroacoustic Music), which I founded in 2002, is that of the importance of “collective critical listening“.

Teaching electroacoustic composition in the conservatory is still based on the widely proven practise of critical listening, especially listening in groups; these particular moments continue to be the most rewarding way for students and composition teachers whose duty it is to achieve a result and a musical creation within our current systems of examinations and competitions.

These are the moments of strength and the favourites of our teaching, and they are certainly among the most exciting moments in the creative act of musical composition, sometimes it could be a real communion.

I think it is interesting also to emphasise the “social dimension“ of this group:

it is a group of fellow students within the framework of our class, for the students, it is their first audience, often as critical as the teachers themselves, but at the same time, it is a protective and almost confined framework for their first attempts, here there is freedom of speech and they can express themselves with and about the others!

⁴ well known software developed by GRM

⁵ AECME : Association des Enseignants de la Composition en Musique Electroacoustique

Christian Eloy - Teaching composition in electroacoustic music, not exactly a straight line... but, a true musical and human adventure

There is no need to go to great lengths to explain the value of such confrontations to the students; they are very quickly perceived as a preferred and unique educational domain; the students seek them and it is rarely necessary to moderate critical comments inside this circle, where everybody is subjected to the same demands, and the rules of the game are tacit and quickly accepted.

Every year, experience shows that it is here, and in this way, that the musical personality of these young artists is created and strengthened, as well as their uniqueness and originality, which are precisely our true objectives.

Few teachers of electroacoustic music composition incorporate into their teaching creation and invention, means and methods of analysing musical scores, in spite of the existence of very good tools (acousmographe from GRM, iAnalysis⁶ from Pierre Couprie, the UST⁷ from MIM⁸, and some others), which are highly relevant in a musicology context, and are often very attractive in the first instance (always fascination with the script and the prestige of the score), although they are still very infrequently used as precursors to composition of electroacoustic music.

By way of a conclusion, since there must be one ... *carry on practising your scales !*

Of course ! You still have to *practise your scales* in electroacoustic music! *Practise your instrument ...* said Pierre Schaeffer!

To make this music in physical terms, to rise above “making“ it, to work in “a loop“ between listening and production, to give priority to perception, to give life to the class dynamics through listening, to make the most of group listening, and so on ... all of these methods inherited directly from Pierre Schaeffer remain our main assets in education of composition in electroacoustic music.

Whether you handled a pair of scissors and magnetic tape thirty years ago, or use a computer mouse in front of a screen nowadays does not really change anything much to the set of problems of musical composition, on the single condition of giving listening (one should say different ways of listening) a crucial role in any compositional decisions.

I always have the same curiosity and very often the same emotion after having guided a student's first steps in composition, to be able to follow and observe the evolution of his/her musicality, language and maturity; the same questions and astonishment return every year: when? why? how? do these multiple and delicate balances appear in works by young composers? and again when? why? how? is the beginning of a true musical personality revealed? Through their acoustic colours, the uniqueness of their discourse, the originality of their material, and so on? Even if certain qualities can be detected very early, and must be constantly developed during their education, a touch of deep mystery remains in the development, evolution and progression of young composers, both female and male, in the composition classes of our conservatories, which remain privileged centres (in France) of listening, culture and blossoming of our young talent.

Such will be my conclusion on what remains my only certainty after these thirty years of teaching electroacoustic music composition: the part of deep mystery that subsist in this miracle which is repeated every year in the life of a composition class, that which consistently enables the creation, or, more modestly, helps to bring to musical life, young composers of electroacoustic music.

Thanks to Alison

⁶ Software developed by Pierre Couprie, compositeur formateur, improvisateur avec les phonogénistes

⁷ Unités Sémiotiques Temporelles

⁸ Laboratoire Musique et Informatique de Marseille