

## *The visitors and the residents*

Robert Normandeau\*

### *1. A new generation*

One of the main problems with the actual generation that founded some of the most important institutions in contemporary music is that most composers come from the instrumental music world. Which means that essentially they came to electroacoustic music as pioneers, but most of them stayed only as tourists<sup>1</sup>.

Electroacoustic music was a difficult thing to achieve and still is, and practically no one — Boulez, Berio, Pousseur, Nono — made a career in the electroacoustic music world. Only few — Stockhausen, Risset etc. — were involved in the composition of pure electroacoustic music and even fewer — Messiaen, Ligeti — admitted their failure to produce truly good electroacoustic music, despite admitting the genre's contribution to the XXth century. It is quite admirable that in a 1988 interview, Messiaen considered electroacoustic music as the most important development in the music of the XXth century...

In my opinion — that of a composer who was born after the 'invention' of the *musique concrète* in 1948 — none of the composers at that time ever really understood what it was about. They often made big statements but almost none of them really knew how to operate a computer without the help of an assistant. It reminds me of Bach saying that the piano was not a good instrument for music, «claiming that the higher notes were too soft to allow a full dynamic range». The instrument was not ready and only pioneers were adventurous enough at that time to start composing for this new instrument. And to continue.

### *2. A new genre*

The younger generation (well, not that young anymore...) like me<sup>2</sup> never felt a distance between electroacoustic music, the new tools — let's call it new technology

\* Composer, Professor in electroacoustic music composition, Université de Montréal.

<sup>1</sup> This is documented in one of the CD of the box Archives GRM published by INA in 2006. This specific CD is called *Les visiteurs de la musique concrète* (The visitors of the musique concrète). Their names: Boulez, Barraqué, Milhaud, Messiaen, Boucourechliev etc. INA c 1031.

<sup>2</sup> I was born in 1955.

— and the language. This new musical genre is as far from the performance music as the cinema is to the theatre. Electroacoustic music is not a performing art anymore, it's a media based art. And let's be more specific: the word electroacoustic is too generic; I would prefer to use the term *acousmatic*<sup>3</sup>. It has nothing to do with instruments played in real time and its language doesn't deal that much with pitches and rhythms.

Acousmatic music explores the intrinsic nature of the sound. It is a timbre based art form. Relations between sounds are as important as they are in instrumental music, but they are not based on the same premises. The language of the instrumental music is originally based on a system that founded on the natural resonant characteristics of the vibrating acoustic sound generator. Unfortunately, these resonant characteristics are not favorable to harmonic writing. Before the baroque era, it was not a problem since Western music was essentially based on counterpoint, that is to say, horizontal writing. But when the composers of the 17th century started to privilege the vertical writing, the problem occurred: it was not possible to modulate to distant tonalities without retuning the keyboards<sup>4</sup>. Since it was not possible, Western music made a choice: equal temperament. It was a cultural choice made in order to make possible the vertical writing developed in the classical and romantic era. This choice produced a lot of very good works, this is not the issue. But this choice had a price: the abandonment of the exploration of the timbre of the instruments. And if one has a look to how the notation evolves over time, he will notice that the timbre was the last parameter to be written on a score, largely later than pitches (IXth century), duration (XIIth century) and dynamics (XVIIIth century). The timbre, that is essentially associated with instrumentation, appeared clearly and significantly only on the XIXth century as part of the language of the instrumental music.

But even if we consider the fantastic development of the orchestration in the XXth century, it is still related to natural vibrating bodies: the instruments of Western music based on strings, air columns and resonant skins. There was still a large number of the sound sources that were ignored by instrumental music composers. And this is where Pierre Schaeffer arrives. He essentially realized two things that completely changed the way we think the music and the way we compose. The first thing was that music, because of recording, was not necessarily a performing art anymore. The music could be based on recorded material that did not have to be played and replayed in real time. The music became a media art, like the cinema had, that did not need to be in real time anymore. It was a virtual art before the term even existed.

The second thing Schaeffer realized – in my opinion the more important one – was that listening to a fragment of sound repetitively changes our perception. And therefore, we can suddenly perceive aspects of the sound that are not perceivable during 'natural' listening, because these events pass by too rapidly and are not made evident

<sup>3</sup> A musical genre based on studio composition and presented in concert on a orchestra of loudspeaker, with nothing to look at. The word *acousmatic* used by Pierre Schaeffer and Jerome Peignot in the '50s was developed and described more precisely by François Bayle in the '70s.

<sup>4</sup> Some nuances have to be introduced here but this article is not about temperament. Let's just then that the problem occurs mostly for keyboard music.

by composers. A complete new sound world emerges to our ears, one we have not finished exploring, even with today's technology, considered to be transparent. That means that there are no limitations in sound recording, the technology being powerful enough to make no perceivable distinction between the original and the recording. This means that the most recent generation of electroacoustic music composers work with the contemporary technology as if it didn't exist, like Liszt use of the piano in the second half of the XIXth century.

### 3. *A new social context*

At the turn of the XXIst century there was a very important social phenomenon that appeared: the democratization of technology. Suddenly, almost everybody in the Western world (but not exclusively) had access to a computer of some sort. The generation of composers currently studying in universities was born after the invention of the personal computer. That means that they do not consider it as 'technology'; they consider it to be an instrument. It is part of their daily life. And the most important developments are still to come. It is fun to acknowledge that the musical software now most used was designed by people of the previous generation wanting to reproduce the analog era of electroacoustic music. Audio sequencers look like analog mixing boards for example and borrow their functionality from these devices. McLuhan described that phenomenon: *The medium is the message*. It takes a while before a new art form generates its own language. In the beginning, cinema was essentially filmed theatre. It took a generation before filmmakers like Eisenstein or Murnau to establish cinematic language and cinema-specific elements, like close-up camera movements. From my point of view, this is where we are at the moment. The exploration era of acousmatic music is now finished and we are moving to the next step where the composers are composing music. I know that there are already famous works in the acousmatic music genre. There is no doubt about that. But today the difference is that composing with digital means is fluid: it has become natural. And the new generation is not concerned with gears anymore. The ICMC<sup>5</sup> conference still exists but it doesn't play an important role anymore compared to what it was in the '70s or the '80s.

### 4. *A new paradigm: the space*

The question today is, in order to follow MacLuhan's thought: what belongs specifically to electroacoustic music in terms of musical parameters? Pitches? Certainly not. Duration or dynamics, not these either. Timbre? Maybe a little more but this parameter was certainly explored quite intensively by the generations of instrumental music composers born after the Second World War. What is left? Space.

<sup>5</sup> International Computer Music Conference.

There are a few examples in history where composers have taken into account the notion of space. One thinks of Giovanni Gabrieli (±1557-1612) who used 'stereo' choirs in the Basilica of San Marco in Venice or Hector Berlioz (1803-1869), whose *Requiem* in Les Invalides in Paris used distance effects with various wind instruments. However, their music was rarely determined by this spatial parameter. The space had been added afterwards, like an effect, sometimes spectacular, but rarely essential. Stereo listening, even with mono recordings, doesn't change the musical value, whereas in some acousmatic music, this idea has been developed to such an extent that, without their original spatial context, the pieces lose much of their interest<sup>6</sup>.

There are two types of space in acousmatic music: the internal space — put in the work by the composer — and the external one — added by the concert hall (Chion, 1988<sup>7</sup>). The first one is fixed and is part of the work on the same basis than the other musical parameters. The second one is variable, changing according to the differences in hall and speaker configurations.

With instrumental music in the '60s, composers explored spatialisation, creating works that assigned performers to different locations in the concert hall (Stockhausen's *Gruppen* or *Carré*). However, these works are limited to the timbre of the instruments: the violin on the left side will always sound like a violin on the left. The sound and the projection source are linked together. What is specific to the acousmatic medium is its virtuality: the sound and the projection source are not linked.

A speaker can project any kind of timbre. Furthermore, today, with the appropriate software, all these sounds can be located at any point between any groups of speakers. What is unique in electroacoustic music is the possibility to fragment sound spectra amongst a network of speakers. When a violin is played, the entire spectrum of the instrument sounds, whereas with multichannel electroacoustic music, timbre can be distributed over all virtual points available in the defined space.

This is what I call *timbre spatialisation*: the entire spectrum of a sound is recombined only virtually in the space of the concert hall. Each point represents only a part of the ensemble. It is not a conception of space that is added at the end of the composition process — an approach frequently heard, especially today with multi-track software — but a real composed spatialisation. It is a musical parameter that is exclusive to acousmatic music.

A whole new approach to composition is now open to composers. To the residents.

<sup>6</sup> Some of the ideas presented here were previously published in an article called *Timbre Spatialisation: The Medium is the Space* published in *Organised Sound* in December 2009.

<sup>7</sup> M. Chion, «Les deux espaces de la musique concrète», in F. Dhomont, *L'espace du son*, Bruxelles, Musiques et recherches, 1988.