Musique Concrète Today: Its reach, evolution of concepts and role in musical thought

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Musique concrète has become a well-known word and concept. The history of the concept permits us to understand how it evolved and how its inventor, Pierre Schaeffer, felt about it and its impact. The terms have gone through several transformations, the main one being that into the term *acousmatique*, which implied a change of perspective in the reach of the concept. Today musique concrète is an active concept, not generally applied to describe contemporary musical creation, however embedded in musical thought and theory.

The term musique concrète[1] applied to a musical style is almost obsolete nowadays even if some composers continue composing music with this name; however, the concept is very strong and describes an attitude towards sound and musical composition with important implications for musical thought. Pierre Schaeffer was the initiator of this concept, back in 1948, when he composed in a radio studio his first works called the *Études de bruit*, or *Studies on noise*.[2]

In past centuries, music has had a quite slow evolution, where small modifications in musical style and in instrument manufacturing brought a continuous change, leading us from the middle ages to the beginning of the twentieth century in a kind of uninterrupted journey. The twentieth century brought ruptures - that is, strong changes - which can be identified at a precise moment and location and generally accompanied by a theoretical framework, as with twelve-tone music by Arnold Schoenberg. Schaeffer's initial work could have been just an experimentation with recording tools (as often done in the radio environment) with no major consequences on music; however, he had an intuition that, by combining pre-recorded sounds, he was opening a new way to musical composition with strong consequences on musical thought. Not only had he this intuition, but also very quickly he gave his work this strange name of 'musique concrète'.[3]

From a procedural point of view, if we consider the act of composing as organising sounds together in a continuity that creates sense for the listener, we can say that manipulating pre-recorded sounds is a compositional act. However, it was very distant from traditional musical practice because the essentials of music - score, instruments and performers - were nowhere to be seen and not necessary for musical performance. The loudspeaker had replaced that environment and proposed music as a purely listening experience. As Pierre Schaeffer clearly explains in the introduction of his 1967 book on musique concrète:

> On March 18, 1950, in the respectable hall of the École Normale de Musique, the audience was invited to a 'First *musique concrète* concert'. They were the very first to undergo an essential deprivation for concert listeners: the absence of musicians. The very first also to withstand an incredible test: not only sounds never heard before, but sounds assemblies where it was impossible to say if they obeyed laws laid down by the authors, or if they simply stood together by chance. Even if bewitching, this new language was strange, not to say a stranger. Was it even a language? (Schaeffer 1967: 5)[4]

It might seem strange that the inventor of musique concrète should doubt the musical nature of what he was presenting to the audience and hesitate about the potential impact it might have on listeners. While describing this impact and the two facts that disrupt the tradition of music-making and listening, he also leaves the door open for all those who would not appreciate the concert to decide if what they were listening to should be called music or not.

1. WHAT IS MUSIQUE CONCRÈTE?

Musique concrète is often described through the story of its invention: a musician experimenting with recorded sounds in a radio studio constructs senseless structures, with a radiophonic background, and at some point he considers this music; he then gives it a name and creates a group to work on and experiment with his discovery. The important factor is that he may use any kind of sound from any origin and, through sound modifications and sound superposition,

[1]Even if the expression *concrete music* can be used in English as a literal translation from French, there is a strong tradition that prefers the use of the expression in French.

[2]All of Pierre Schaeffer's musical production is accessible on the GRM website: www.institut-national-audiovisuel.fr/sites/ina/medias/upload/grm/mini-sites/schaeffer/co/Accueil.html

[3]Two references can be found concerning the use of the words musique concrète: Schaeffer (1949, 1952: 22).

[4]Unless otherwise stated, all translations are my own.

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he blends them together in a musical structure (which is actually not very different from cinema production methodology). He then attracts composers to work on his ideas and in the studio; the first and one of the most productive and original is Pierre Henry, then many others come to the studio to test musique concrète and experiment with its possibilities.

This story is true as a general description; however, it is incomplete regarding the theoretical work and experimentation done by Schaeffer to understand the nature of his discovery and to give it the necessary basis for its development. He was not only working on a new way of making music but also working on musical phenomena as a whole, since the fact that the sound sources had been totally changed brought the suspicion that sound and music were not exactly what they had always seemed to be, that music was a much more extensible concept with strong relations to our perception and to our sense making mechanisms.

Probably the the success of musique concrète was based on the fact that Schaeffer developed an experimental approach and started a series of activities and actions:

1. He continued his own experimentation as a composer in order to better understand the functioning of composition and the possibilities of technology.
2. He created a structure first called Club d'Essai and then changed in 1951 to GRMC (Groupe de Recherche en Musique Concrète: Musique Concrète Research Group) in order to obtain financing facilities and a place where to work within the French National Radio and Television Company.
3. He started, with his studio engineer Jacques Poullin, the development and invention of new machines dedicated to sound manipulation in order to expand the tools for composition.
4. He began a body of theoretical work and a regular writing activity to describe his actions and to analyse his experimentation work.

For each of these activities he surrounded himself of experts in different domains in order to expand the range of research done on musique concrète; this included psychologists, sociologists, technicians of various kinds, engineers and any people interested in collaborating in this new adventure. He also made regular presentations on the radio and at concerts and conferences where the works were explained, thus generating a general interest from media and newspapers on this new compositional domain.

For Pierre Schaeffer the expression musique concrète had had a very clear meaning from the beginning; in 1949 in the review *Polyphonie*, published in Paris, he formalised the concept:

> One can indeed accurately compare both musical approaches, the abstract and the concrete. We apply, we have said, the term abstract to the usual music, since it was first conceived by the mind, then theoretically noted, finally achieved in instrumental performance. We called our music 'concrète' because it is made from pre-existing elements borrowed from any audio material, whether noise or music, then composed experimentally by direct construction, leading to achieve a compositional will without the aid, become impossible, of an ordinary musical notation.
>
> Both processes can be compared in two schemes, which are presented as an evolution and involution exactly equilibrated:

REGULAR MUSIC	NEW MUSIC
(So-called abstract)	(Called Concrète)
Phase I	**Phase III**
Conception (mental);	Composition (material);
Phase II	**Phase II**
Expression (symbols);	Sketches (experimentation);
Phase III	**Phase I**
Execution (instrumental).	Materials (production).
From abstract to concrete	**From concrete to abstract**

In fact, Schaeffer defines two different approaches to composition. The first of these is the so-called (by him) regular or usual music, which is instrumental music, in which the composer conceives the work in his mind (abstractly, without listening to sounds), writes the instructions for performers and finally arrives at the execution of his music, which makes of it a concrete event. in the second, in contrast, is New Music (under which he positions musique concrète), where composers work first with sound, the concrete material for music, then through experimentation and essays arrive at the final expression of the music, the abstract combination of sounds capable of provoking a musical listening. In 1957 after eight years of production and experimentation, he outlined more precise rules for the concrete musician:

> Postulates and practical rules for musique concrète:
>
> *First postulate*: Primacy of the ear. – The potential for development, along with the boundaries of any new music, depends on the capacity of our hearing.
>
> *Second postulate*: Given the first assumption, a preference for real acoustic sources for which our ear has been long conditioned (especially refusal of an exclusive use of electronic sources).
>
> *Third postulate*: Search of a language. – New musical structures must tend to ensure communication between the person who constructs and the one who perceives.
>
> These three principles apply to any attempt to renew the musical domain, and are in no way conditioned by any technical background.

> Five rules also draw practical conclusions regarding musique concrète:
>
> *First rule*. – *Learn a new Solfeggio* by systematic listening to sound-objects of any kind. The only needed capacity here is *to know how to listen*, although rudiments of technique (acoustic and electronic) are naturally likely to facilitate learning.
>
> *Second rule*. – *Create sound-objects*: that is to say, practices the actual realisation of diverse and original as possible sounds, as opposed to the traditional act of writing on staved paper writings that correspond to abstract sign configurations.
>
> *Third rule*. – *Model musical-objects*: that is to say, learn to use 'devices to manipulate the sounds' (not to be confused with musical instruments): tape recorders, microphones, filters, etc.
>
> *Fourth rule*. – Before conceiving works, *carry out studies*; similar to the 'school exercises' of traditional music, they will force the beginner to choose among the variety of available resources and possible implementations.
>
> *Fifth rule*. – *Work and time*, indispensable to any real assimilation. (Schaeffer 1967: 16, 29)[5]

What is interesting here, eight years after the original definition, is that the three postulates are conceived of as applying to any kind of 'new music'. Pierre Schaeffer used to think that musique concrète was the widest possible and general music in the world since it eventually contained all the other kinds of music, even if the second postulate tends to limit the use of electronic sounds, which is a clear position against *elektronische Musik*,[6] seen not as a sound-source-based work but as a method for composition arising from *serial music*. The third postulate is also interesting since it talks of communication and the need to establish a link between the composer and the listener.

The five rules create a series of practical instructions on how a composer should work; the main aspect here is the necessity to train the ear to new sounds and structures and to a new way of listening music. On of the strongest and most original concepts Schaeffer developed around musique concrète was the capacity for the composer to develop what he defined as 'écoute réduite' (reduced listening), which implies the listening to sound detached from its causes so to concentrate in its structure and evolution and not be distracted by its origin and meaning. This listening is indispensable for Schaeffer to identify and produce *sound-objects*, which are like compositional bricks, which through modifications can become *musical-objects*, meaning that they can be used for compositional purposes as will be seen later.

As explained, postulates are not conditioned by technology: they describe the general attitude a composer should have when attempting to renew the musical domain. It is strange that a definition could be so ambitious in its scope as to include the renewal of the whole musical domain. As will be seen later on, Schaeffer often called himself the unfortunate inventor of musique concrète, meaning by this that his invention had a far larger impact than he had ever expected. His initial experimental intentions were to expand the domain of possible sounds in music via sound recordings because technology permitted their easy reproduction; however, his invention became a new paradigm which not only brought new concepts for composition but also had an impact on the thought and the renewal of the musical practice. After the first experiences at the end of the 1940s, the 1950s became the decade of experimentation, with the GRM, the Electronic Studio of Cologne and many other studios, but also with new orchestral conceptions like those proposed by Iannis Xenakis and the diversification of musical tendencies in new, sometimes revolutionary approaches to creation. These phenomena went on through the 1960s and embraced not only music but also all arts.

As for the five rules, they are very reasonable and still applicable today: listen, record, analyse, describe, then experiment and bring together sounds with time and patience. Schaeffer insisted on the need of a solfeggio that would embrace this new domain of practice and production; he tried to impose a systematic analytical work on researchers and composers in order to structure the sound domain in spectral categories and behaviour models, which finally led to the typomorphological approach to sound. He worked for eight years on his masterwork, the *Treatise on Musical Objects* (Schaeffer 1966),[7] which is a compendium of his work and thoughts dealing with sound and music, not exclusively musique concrète.

The second and third rules particularly concern the concepts of *sound-object* and *musical-object* introduced by Schaeffer as operational tools to organise and structure sound. The concepts are based on the idea that a sound can be isolated from a context and imagined like an object, by stressing a certain number of internal characteristics. It is the role of the composer to work on the sound trends, eventually modify them or edit the objects in order to generate what he calls *musical-objects*, which are *sound-objects* ready to be used in a musical environment. It was indeed a quite original approach, although not very far removed from the concept put forward by Edmond Husserl regarding *Temporal-objects* (Husserl 1928), which apparently

[5]This text is a reduction of the original text in (Schaeffer 1957: 3).
[6]The Studio for Electronic Music was started at the West German Radio (WDR) in Cologne in 1951.
[7]This essential book for the understanding of Schaeffer and his vision of music is undergoing translation by a team coordinated by the GRM and will probably be published in 2015.

Schaeffer was not aware of. It was a practical operational tool essential for any activity of sound analysis and sound classification in order to understand not only the nature of sounds but also their behaviour in a musical environment. The *musical-object* was indeed very important in Schaeffer's theory since it became the main subject for his *Treatise*.

These concepts are not used today where a more loose conception of sound is at play, in order to include as complex and diverse-sounding situations as possible. The concept of sound is strongly related to the way it is perceived, which doesn't work in a fixed way in a musical situation and is highly contextually dependent. However, it proved to be quite useful at the beginnings of musique concrète, where conceptual tools were needed to understand what was happening. This approach reveals the scientific profile of Pierre Schaeffer, who on one hand produced new music, being highly concerned with its musicality and acceptance by listeners, and on the other hand wanted to understand the reasons for its musicality, as well as establishing methods for composers that could lead to musical results.

2. WHAT WERE THE IMPLICATIONS OF MUSIQUE CONCRÈTE?

In western culture, since the end of the middle ages music has been mainly concerned with writing – that is, the capacity to make an abstraction of instrumental sounds and to represent them through symbols, which can be combined on a framework called the score. This was possible because the set of sounds used in music (instruments and voice) was rather small and was known to any musician in such a way that they could make a mental representation of most of sounds.[8] Instrument manufacturing equally contributed to the stability of sound through time.

Musique concrète brought a huge shift to this practice due to the diverse amount of sounds used to compose new works. Each work has its own new set of sounds, since one of the original characteristics is to work with any possible sound as long as it can be adapted to a musical function. Symbols representing sounds like those used in instrumental scores were useless since they would very poorly represent sounds for which a mental image is lacking in the composer's mind because of the novelty and diversity of sounds in use. This situation is in a way a regression, since composers have to revise permanently, through listening, the sounds with which they work (which can be hundreds of them) to verify and discover their expressive or associative potential. The comfort of writing instrumental music through the association of precise symbols was washed away by the challenge of renewing what seemed to be the most stable element of musical practice: sound itself.

Using instrumental sounds is not only using an established and limited set of sounds, which can easily be represented in the composer's mind; it is above all working with a set of relations, potential combinations and established rules resulting from centuries of listening to their interactions and establishing behaviour models within an organised canvas. It implies knowledge of their mechanical dependency to human interaction with well-established limits in duration, speed, pitch and intensity. This stable sound production environment was suddenly disrupted with unforeseen consequences in musical thought by the arrival of musique concrète, which opened the door to the use of any sound; even more important, the mode of production was modified, since performance was no longer needed and a set of new technical tools was used to modify and assemble sound in a musical structure.

The relations among sounds can no more be easily predicted and imagined and have to be constantly checked through listening in order to validate a sound combination or association. This implies that the composition process is no longer happening in the composer's mind, with no active listening of sounds, and places the composer in a situation in which he or she has to listen to sounds again and again as part of the compositional process that takes place in this sounding environment.

When analysing the implications of musique concrète and the strong changes it induced in composition and musical thought, one must keep in mind that composers in those days rarely had technical skills and were unable to use the studio machines unless assisted by a technician[9] who would orient and influence their work. On the other hand, working with 'sounds' was a new situation in which the references and habits of composers were totally upset; they had to learn how to compose in a different way, and this is why Schaeffer had tried since the beginning to formalise and establish procedural rules and methods. Finally, this new way of composing, in which the composer had to put confidence in the audible result more than in his intentions and preconceptions, was contrary to the way many composers understood composing and provoked serious reactions against the method, which was considered too empiric to be applicable to music. The Electronic Studio of Cologne would provide tools and methods for composers to control the different constituent parameters of sound in a predictable way with an acceptable level of precision; however, it was necessary to work with rather simple sounds in order to

[8]When I talk about a *Piano* for example, I don't have to show the reader an image of the instrument or make him listen the sound of a piano so he may understand what I'm talking about. Our mind creates visual and sound representations of the most common objects and sounds.

[9]Pierre Henry was the 'assistant' of Edgar Varèse, Olivier Messiaen, Henri Sauget and Darius Milhaud. Other young composers such as Karlheinz Stockhausen or Pierre Boulez made their own way, and very quickly learned how to use the technology.

permit the parameter permutations and variations to be perceptible.

Schaeffer was totally against this preconfigured approach and was convinced that musique concrète should be composed with the strong assistance of listening and not as an intellectual construction independent of the sound material. This discussion is still going on more than sixty years after the first *Études*, even though most contemporary composers now not only have the traditional skills in musical writing for instruments but are equally trained in digital tools for sound processing, mixing, score writing and using assistance tools for parameter control. It is an interesting and never-ending discussion to decide if music should be made mainly of quantities or qualities; is it the joy of listening the relations among the parameters of sound or is it the happiness of listening to sounds evolve in time and space?

3. WHAT HAPPENED TO MUSIQUE CONCRÈTE

The expression was used regularly until the end of the 1950s. The GRMC was based on it, and in the second part of the 1950s Pierre Henry had a huge world impact through the music he composed for Maurice Béjart's ballets. The expression was thus not only used but also well known. From 1954 to 1957 Schaeffer was away from the studio and it was Pierre Henry who was left in charge of it. When Schaeffer came back he brought new collaborators, changed the name from GRMC to GRM (Groupe de Recherches Musicales) and expanded the scope of the group's activities, since the plural in the word *Recherches* implied that the group would work on different musical domains and explore the fundamentals of music, sound and musical perception.

Schaeffer set a series of research objectives that would lead to the *Traité des objets musicaux* in 1966 and expanded his research approach to other media. He came from the radio domain and his first productions were made for that medium; he also worked on radio tools available in the production premises of the Radio and Television Office, of which the GRM was a part. It was not strange, then, that he would expand his approach to other media through the creation in 1960 of a *Service de la recherche* (research service or department), which contained the GRM, a GRI (image research group), a GRT (technical research group) and a GEC (critical studies group). These four groups permitted new images for television to be covered, along with new technologies for sound and image production and processing as well as the intellectual environment for studies and analysis, and the impact on society of the consequences of technology in broadcast programmes. His service was a huge success (not always in terms of audience) until 1975, when French Radio Television was restructured and Schaeffer retired. Hundreds of productions from this period show the originality and creativity put to work in order to revolutionise the concepts and techniques of the audiovisual domain.[10]

After 1958, the term musique concrète was less used; Schaeffer was not very convinced by it, and in 1960 he started using the term *musiques expérimentales* (experimental kinds of music) even if the term electroacoustic[11] had already started to be used to designate concrete or electronic music. In a not well-known book called *Entretiens avec Pierre Schaeffer* written by a journalist by the name of Marc Pierret (1969), a very interesting discussion takes place concerning the denomination of musique concrète. What is interesting in this book is that neither person seems to be really at ease in their discussion. Schaeffer seems quite irritated all the way through the book and Pierret seems to constantly provoke Schaeffer, with whom he doesn't seem to agree on most of the subjects. At one point Schaeffer, when talking of music, uses the word 'electroacoustic' and then corrects it to 'concrete'. Pierret asks why he corrected the word; Schaeffer's answer follows plus the continuation of their dialogue:

> P.S.: Around 1958 I wanted to clearly distinguish between the realisation modes of new music and the trend or inspiration of which they availed themselves. The term 'concrete music' had two meanings: one aesthetic, the other methodological. When I gave this name to the particular way of making music of which I am the unfortunate inventor, it is the realisation process I was thinking of and not a new fashion that I was launching: in a reverse way regarding the traditional approach that goes from the score at performance, the concrete approach goes from the sound material to organisation…
>
> M.P.: Could you explain more precisely what this approach is?
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> If you want … first you start recording sounds; based on current radio techniques, sounds can be of any origin. No exclusive a priori in this choice: it can be either a piano note, a pizzicato violin, a Sicilian Jew's harp sound, the humming of a top, a creaking door. Once these sounds are recorded, one can put them through a series of transformations: accelerations, slow-downs, filtering, etc.; however, it is better not to abuse this, because this kind of mechanical operation quickly becomes a procedure… We

[10]All Schaeffer's actions from 1942 until his death in 1995 are perfectly documented in the book: *Sur les traces de Pierre Schaeffer* (In the Footsteps of Pierre Schaeffer), by Jocelyne Tournet-Lammer (2006). This book is a catalogue of all the activities of Schaeffer in all the domains he worked on, it is 450 pages long and contains more than 1,500 references.

[11]The term 'electroacoustic', or 'electro-acoustic' as it used to be written, is not new. It was already in use in the 1940s to describe any electric object capable of producing sound: a radio was an electro-acoustic device. The term was widely used in France and many Latin countries; in Britain and north Europe the term 'electronic music' was more popular and is still in use in many places.

> may, without further processing, repeat these sounds, extend them, cut off their attack (which is enough to radically alter some of them), or superimpose or assemble them together. Thus, by mixing and editing, through techniques that remember cinema technique, the 'concrete composer' arrives at musical organisation as a last step, starting from raw sound elements. You see now why he did not write a score? What would he do with it since he works directly with his own sound material?
>
> M.P.: Is a musique concrète – or better, let's call it electroacoustic – made by such methods necessarily indicative of a musical trend that would justify in a different way, the qualification of concrete?
>
> P.S.: Pierret, your are a good student, you will have a good mark … You deserve all the more since it took me a few years to understand this distinction that you have just noted. And when, later on, I wanted to avoid the ambiguity, I didn't managed to launch the term 'electroacoustic', which is not very engaging it is true. Everyone says 'electronic', which is incorrect. In short, as you have observed, music composed by the 'concrete' approach can achieve musical abstraction, highlight a structure, and the reverse is also true: music composed by the most canonical 'abstract' process may seek to bring to the forefront concrete elements…

Schaeffer supports the methodological meaning of musique concrète, and is sceptical regarding its aesthetic implications. He talks of a concrete approach more than of musique concrète, and this is a strong trend in his thought from this period onwards, where he becomes less interested in the musical results and more interested in the method, the listening, the perception mechanisms developed by our brain. In fact, he is less convinced of the success of the music produced through this methodology and prefers to concentrate on the philosophical aspects of its production. This is why he proposes the term 'experimental music' at the end of the 1950s so to position the production of musique concrète in a quasi-musical position without necessarily achieving this intention. Once again, it is up to the listener to judge.

We must keep in mind that the development of musique concrète happened in a restless European musical environment where what was called New Music was rapidly changing the cultural scene. Musique concrète had many friends but also many enemies, who didn't accept the works it produced as being musical. Among its strong critics was Pierre Boulez, who wrote a subsequently well-known article for the *Fasquelle Encyclopaedia of Music* in 1958 where he destroys the method of musique concrète (Boulez 1966); he uses strong terms as 'naïve way of addressing the problem … poetical collage … absence of dirigisme … amateur work … no creative intentions' and ends saying that it is the studios in Cologne or Milan they are really making important and interesting music. He wasn't the only one to attack musique concrete; most serial composers adopted a similar position, continuing the scandal started at the Donaueschingen Festival, where Pierre Schaeffer and Pierre Henry presented, on 10 October 1953, the first concrete opera, *Orphée 53* (Orpheus 53), with singers, text, instruments and … musique concrète. The first performance produced a large amount of whistling in the audience, mainly during the concrete sections. Schaeffer wrote a wonderful description of this experience, which didn't really help to improve the image of musique concrète among contemporary music circles![12]

4. FROM MUSIQUE CONCRÈTE TO ACOUSMATICS

Pierre Schaeffer progressively distanced himself from musique concrète and the GRM. He handed over the direction of the Group to François Bayle in 1966, who led the Group to a more compositional perspective, promoting the development of new tools dedicated to music and opening the studios to younger generations of composers. Many of the masterworks of the GRM were composed at the end of the 1960s and beginning of the 1970s by composers such as Bernard Parmegiani, Michel Chion, Guy Reibel, Ivo Malec and François Bayle himself; the Group shifted from experimentation to production and worked on the diffusion of music among the audience through specific tools for concerts and concert series dedicated to a new appellation promoted by François Bayle: *musique acousmatique*.

François Bayle felt the need for a specific denomination for the type of music the GRM and many composers like him were composing. During the 1960s the two main tendencies were 'electroacoustic music' and 'computer music', which are not very well positioned words since they describe the production method. The term 'instrumental music' was forged as an opposition to these two names. The main issue was the fact of working for a specific medium: magnetic tape, which was the only medium and carrier during the 1950s and the 1960s. However, with the development of synthesisers and computer sounds in the 1960s, tape was slowly being abandoned by 'instrumental' composers and live performances were taking over. Magnetic tape, and carriers in general as the final aim for music, was progressively criticised as a minor way of producing music, the implication being that, if great composers had worked on it, it was only because there wasn't any better technical solution at the time. When these solutions started to grow, carriers were then strongly discarded.

Bayle's point was to use a clear label to identify all those composers for which the carrier was considered as an ultimate means for their music. Music was made

[12]The description can be found in Schaeffer (1967: 22).

for the ear and loudspeakers could take charge of the production of music; composers created music with this precise objective. This is how *acousmatic music* was born, and how the terms started to describe the method and the aesthetic, in a similar way to how Schaeffer understood the dichotomy of musique concrète. In the case of *acousmatics* there were other terms associated to it, such as *acousmatic listening* or *acousmatic situation*. In an article I wrote in 1993 I tried to define the objective and the aesthetics of it:

> A new term has being softly entering the world of electroacoustic and computer music: this is the French expression 'musique acousmatique', technically meaning: music made with electroacoustic or computer means and using tape or other kinds of magnetic and optical means as its final support.
>
> From an esthetical point of view acousmatic music concentrates on the poetical and spectral richness of sounds and plays with this very particular characteristic of sound hearing in which the perception of an acoustic phenomena is associated with its cause; hence the perception of a sound whose cause is unknown or unrecognizable for our perception, induces the listener to imagine non-existing causes and to perceive music as a complex creative phenomena in which musical sense and musical sounds have to be interpreted simultaneously, with generally very little relation with our perceptive reality. The question is not to find out how sounds are made but how their combination will generate imaginary perceptions of imaginary realities in our mind. (Teruggi 1993: 17)

The methodological or procedural description is very short and general, and tends to concentrate on the final objective: a medium (once again the comparison with cinema is very interesting since the objectives are exactly the same, another name for *acousmatic music* has been 'cinéma pour l'oreille' (cinema for the ear)). The aesthetic description is more surprising and definitely written by a composer showing what he looks for in sound; however, it explains the mental process of hearing and reconstruction of unseen sources of sounds. This is the *acousmatic listening* process, where the ear reconstructs a more or less realistic environment as being responsible for what one is hearing, as happens daily when one listens to the radio or to recorded music.

This is how acousmatics started to grow as term describing a specific type of music and slowly replacing other terms such as electroacoustic music. The term musique concrète was already in disuse in the 1970s, even if some composers continued using the term to describe the music they created. François Bayle did not invent the term *acousmatique*; Pythagoras, who lived from circa 570 BC to circa 495 BC, is said to have forged the term and used this concept in his teaching, where a curtain separated him from students so they would concentrate on the reception of his message and not on the visual production of it. The term continued in common language and it could be found in French dictionaries. Here is where a collaborator of Schaeffer, Jérôme Peignot, found it in 1955 and suggested it to Schaeffer. Schaeffer found the concept attractive but didn't use it very often, seeing acousmatics from a listening perspective and not at all as a definition for music.

Through the impulse of François Bayle, first in France and then abroad, the term made its way in the musical world, and most contemporary composers today are aware of what acousmatic music is as well as its difference with electroacoustic music, which is perceived as a more generic concept. In simple terms acousmatic music can be defined as music composed specifically for loudspeakers. The affiliation of acousmatic music with musique concrète is evident and very present in French composers aware of the history of GRM and Schaeffer. It may be less clear in other regions; however, even if this affiliation is not evident, there is a general impression that *acousmatique* is a French thing.

When analysing the postulates and rules of musique concrète as presented by Schaeffer and comparing them with acousmatic music, the main ideas are there. There is no clear definition of what acousmatic music is and how it should be done; there are as many trends as composers. However, the final objective remains the same. As I have described it earlier in this paper, the five rules can be brought down to: listen, record, analyse, describe, and experiment and bring together sounds with time and patience. Which sounds are used, and how the composer listens to and conceives of his music are all within the creation process and in general difficult to explain. The creative process is totally free, and what matters is the final presentation context for music; is it *acousmatic*? Live-performances with machines? Instruments plus machines? Here is where the composer positions himself and decides which kind of sounds he will use, which methods he will employ, which kind of audiences he is aiming at and in which context will he present his works. Many composers have a conservatory or academic background, many don't; but both academic and self-made composers have composed splendid music which has gained wide acceptance in our musical world.

In this wide range of possible roads in music many composers, myself included, justify the composition of acousmatic music; everybody is free to call his music what he wishes and this is how the range of terms for music grow. There has always been a certain ambiguity regarding acousmatic as a kind of listening process or as an aesthetic trend, implying that there are rules and modalities which need to be followed. The reality is that there are not, but there is probably a GRM-oriented acousmatic music in which the richness of sound is analysed and exploited which gives much of the music composed in the studio a certain density or

warmness. But composers coming to work in the GRM studios have absolutely no directions to follow; the studios are free places where anybody does the kind of music he wishes.

Acousmatic, as heir of musique concrète, has really expanded and renewed the initial impact of these terms. *Acousmatique*, always under the impulse of François Bayle, created a series of derived terms which have been incorporated in musical language and practice: for example, *acousmonium* (the loudspeaker orchestra to perform acousmatic music), the *acousmographe*[13] (software for musical representation and analysis, which produces *acousmographies*!) or the *acousmathèque* (library and archive of acousmatic works). *Acousmatics* have been around for more than forty years and are now well integrated in the musical landscape.

5. MUSIQUE CONCRÈTE TODAY

Other names such as 'electronica', 'sonic arts' or 'live electronics' accompany *acousmatique* in the technological landscape. The word electroacoustic has slowly lost its impulse, even if it is still being used by many composers to define their work. In fact, the naming of music is an issue mainly controlled by composers themselves through the way they define their own music to the audience in programme notes, CDs or on their websites. Most composers try to align themselves with existing terms in order to inscribe themselves in already identified categories; however, composers may use their own definitions to describe what they do, such as Michel Chion with the 'musique de sons fixés' (fixed sounds music), or terms describing the sources as 'computer sounds' or 'acoustic sounds' or even 'concrete sounds'.

The term musique concrète tends to refer then to a localised movement initiated in France at the end of the 1940s and launched by Pierre Schaeffer followed by Pierre Henry. Nevertheless, the impulse and impact this music had on musical thinking and music-making is still being felt today. The fact that musique concrète created wonderful musicians and music, but equally initiated the concept of musical research and the creation of dedicated institutions such as GRM to work, research, study and disseminate music, has had a strong influence and often served as a model for new activities or for bringing together composers wishing to collaborate. The new trend of music being associated with technology slowly entered the academic domain, where conservatories and universities started teaching the specific procedures and necessary technical knowledge needed to approach composition from a totally new point of view.

The sense of musique concrète has slightly shifted to a more colloquial form; many young composers use the term 'sons concrets' as a synonym for 'recorded sounds' or referring to what some call 'real sounds' (as opposed to synthetised sounds) and even meaning everyday sounds (like pans and pots or trains or birds). This is a strange evolution, which reveals that there is still this original impression that musique concrète was done with ordinary everyday sounds, which produced a more poetic than musical impression.[14] It is also a contradiction, since it implies that electronic sounds are not concrete! This is really a contradiction to the general approach of Schaeffer, who defines musique concrète as the most general type of music thus containing all the existing and nonexistent sounds of the world. Probably we have to understand in these deviations the underlying original criticisms about the amateurism of composers or the fact that they did not use noble (instrumental) sounds but concentrated on *noise* instead.

Very important French composers such as Michel Chion use the term musique concrète to define their work and to place it in the direct lineage of Pierre Schaeffer's ideas (Marchetti 1998). Another curious use of the word comes from German composer Helmut Lachenmann, who refers to his works as *musique concrète instrumentale*, implying a musical language that embraces the entire sound-world made accessible through unconventional playing techniques. The word is widely used in online music distribution, where there is always a category called 'musique concrète' or just 'concrète', where one may find musique concrète from the 1950s, lots of electroacoustic and acousmatic music but also Lady Gaga or Messiaen!

However, the importance of musique concrète is to be found in the way it has definitely influenced composition and ideas. It has slowly established itself as a procedural trend with an associated aesthetic position. Probably the strongest influence is on listening and the importance that sound has in music, which is itself evidence, but it needed to be pointed out exactly at which moment music started using unusual sounds.

6. CONCLUSION

Pierre Schaeffer started a revolution in musical thought and practice; his initial intention was not to change the musical world but to profit from recording technology to enrich the orchestral palette and open

[13]This tool has been developed by the GRM since 1995 by Olivier Koechlin and Didier Bultiaw: more recently a totally new version has been developed by Adrien Lefèvre with outstanding new possibilities. It is downloadable at: http://musique.inagrm.com/accueil/outils/acousmographe

[14]In an online call for an MzTEK technology workshop on musique concrète in 2011 we can find this definition: 'Musique concrète ('concrete music' or 'real music') utilises sound as a compositional resource in unusual ways. The material does not have to be exclusively derived from musical instruments or voices, nor to elements traditionally thought of as 'musical' (melody, harmony, rhythm, tempo and so on).'https://mztek.eventwax.com/musique-concrte

the use of non-instrumentally produced sounds in music. His discoveries went far beyond the intention, to the point of shaking the fundaments of music and opening a new road for creation and research, and by introducing technology (electric and electronic initially) as part of the musical environment. He didn't stop there; he felt the need to question music-making and music perception, to understand that sound is a movable concept and that it is the composer's intentions that give sense to music and not the nature of the sounds he uses. He spent most of his professional life struggling for his ideas and trying to change the way musicians and researchers confront the musical creation process and analyse the role of sound in this process.

Pierre Schaeffer was not always understood, and his writings generated numerous discussions and controversies. However, the work was done, and he and his successors managed to carry on his approach and impulse, even if underwent strong transformations, such as the acousmatic concept. Today the term musique concrète has a general meaning that is well embedded in musical thought and practice and in contemporary music.

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