

Some symbolic possibilities specific to electroacoustic music

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Abstract - In the past, very often composers tried to show a part of reality or ideas with music. But their expression was limited by the use of instruments. Today, computers offer the possibility of using and transforming the sounds existing in the world (referential sounds). This is a real revolution, and now composers can make several kinds of symbolic music, according to their wish: narrative, argumentative or sound poetry. One will use the CH. Sanders Peirce's sign theory to analyse all these possibilities and their functioning.

Keywords: semiotics, symbolism, electroacoustic music, "im-sons"

I. INTRODUCTION

In Western art, since the Middle age, painting was representative and music was abstract. By being representative, painting could show something (for example a landscape), could tell a story (for example a mythological scene), or wanted to prove an idea (very often the absurdity of existence without God). In other words, painting can generate signification by using material elements transformed in symbols. In the XXth century painters like Vassili Kandinsky brought painting toward abstract.

We said higher that music was abstract. But, in the past and today, some composers tried to imitate and describe nature or to imitate human events: think to "les oiseaux" by Olivier Messaien or "La guerre" by Clément Jannequin. So, even if the music seems essentially abstract, there was always some composers trying to make it concrete or representative. Today computers, by mixing recorded sounds, offer nearly - but not exactly - the same possibility of doing music as representative and symbolic than painting, what is impossible with instrumental music. We are going to see how. But before we must think of Pierre Schaeffer: when he created electroacoustic music, or more exactly "musique concrète", he tried to impose "l'écoute réduite": he wanted to forget the cause of the sound to hear better the sound itself. Of course, very soon a composer used sounds from the world showing its cause: Luc ferrari composed "Heterozygote. By this, we can understand that to describe the world, and not only the mind, is a very old wish for composers. The possibility of recording sound was a great revolution not only by increasing to infinite sound possibilities, but also by the possibility of recording all the sounds and particularly all the sounds we can hear anywhere and whose cause one can recognise. To use this sort of sounds is one of the most important specificity of

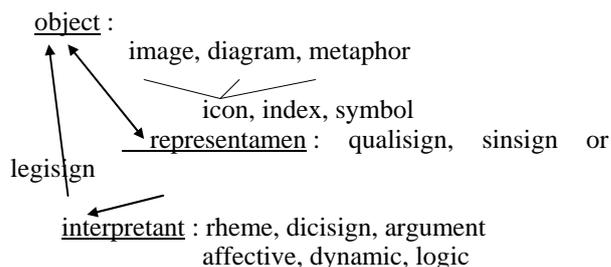
electroacoustic music. So composers today can do what formerly was exclusively reserved to painters.

On the other hand, Claude Levi Strauss demonstrated the link between myths and music: it can be interesting to use the sounds of the world to link them again, like F. B. Mâche did. The following demonstration will be from a composer point of view, that can also be useful for a musicologist, I hope.

II. PEIRCE'S SEMIOTIC THEORY [1]

Before analysing the symbolic possibilities specific to electroacoustic music, we must use an appropriate tool: this tool is the sign theory of Charles Sanders Peirce. I had chosen it because it is very used by the linguists - and the language is used essentially to generate signification -, it is used by semioticians who study pictures, and one can think of the comparison usually done between photographs and what François Bernard Mâche called "phonographies", and because François Bayle also used this theory for the music. Pierre Schaeffer knew it too: he used it and considered a sound as "index" of its cause. This is true in the real life: when you hear a car behind you, you think you'd better climb on the pavement, because the sound is the sign of the car coming. But, as Bayle noticed it, it is not at all the same thing if you record the sound of this car : when you hear it, you are in your studio and no car is coming. You perfectly know it and you know also that someone recorded it for one or several reasons. If you hear it in a musical piece (for example "points de fuite" by Francis Dhomont), you know this sound is an intentional sign.

Peirce was thinking that a sign was composed of three parts: the sign itself, that he called representamen, the object represented by the sign, and the relation between the sign and its object that he called interpretant. Each part of the sign was classified in three categories. We can represent this theory by the following diagram :



What kind of relation is there between these two last triads of interpretant? And why only two? How can it be apply to the music? I am going to try to complete this theory.

One know that Peirce established the principles of firstness (the idea of things that exist or not), secondness (all that exists) and thirdness (the law that always joins different elements). Here we must quote Eero Tarasti: “The art work itself can doubtless be considered a primary act, its performance or reception a secondary event, and a text written about a product of a “third degree”” [2].

I don't totally agree with him: if we follow Peirce, the third degree is not a text written about the creation act, but is the product that results from this act, the product in which is the meaning of this act, so the art work itself. I'll try to demonstrate it: just think of the description of communication act by Roman Jakobson. There is the sender, the message itself and the receiver. Or, better here, the Jean Molino's trichotomy : poietic, neutral, esthetic. The first triad of Peirce's interpretants (rheme, dicisign, argument) can only describe the message itself (neutral level) : a sign as a law that determine the kind of relation with reality : so it is thirdness by definition. For example, a picture of the Minotaure is a simple possibility (because nobody had never really seen it, and one knows it is an imaginary product), so it is a rheme. The photo of Churchill refers to the real: it is a dicisign. A mathematical demonstration proves something: it is an argument.

The second triad (affective, dynamic, logic) describes the way by which one react when one receive signs (esthetic level) : so it is secondness. In this system, it misses the triad of firstness, I mean the triad concerning the sender (poietic level).

So, what are the three elements of the poietic triad? The first element, by its firstness could one say, concern the possibility of existence before any materialization. For this reason, it is necessarily in the conscious of a creating subject and concerns the process of production. This element must have a character of possibility and immediateness : one recognize the “intuition” - or inspiration - of which Greimas says : “intuition could be considered as a component of the cognitive competence of the subject, which manifest itself at the time of the elaboration of the work hypothesis” [3]. But, by there, he gives at this word a purely cognitivist meaning, and forget all its philosophical tradition: it was formerly link to the sensible, to the direct relation of an individual to the things, their existence as pure consciousness, without the mediation of the language. This deep comprehension which goes from appearance to reality, Henri Bergson called it « Intuition » too : « We have designated by this word the metaphysical function of the thought, principally the intimate knowledge of the mind by the mind, subsidiaryly the knowledge, by the mind, of which is essential in the matter »[4]. Here, we'll consider these two definitions: the immediate knowledge both by hypothesis and by contact with things.

The second element of this poietic triad, by its secondness, establishes relationship in the existing or by the realisation of possibilities in sort that these are really affected by their object, or by association of some existing, having strength of law as interpretant: one recognise the metonymy, which governs relations of proximity. If the classic rhetoric attributes to this term a sense of relationship by correlation or by correspondence, Jakobson and Lacan unmistakably widened its meaning: for the one as for the other one, what is at stake here is the word for word; and it is true that two words or two placed elements the one next to the other one are going to interact the one on the other one. This enrichment can be particularly precious within the framework of the artistic production: so the metonymy becomes the key notion which manages the syntax, the relation between the various elements of a discourse at the linear level, but also, transposed at the musical discourse, at the vertical level, where different elements can coexist and interpenetrate themselves.

The third element of this triad determines the relationship of reference and replacement being made on the basis of laws: it is the Metaphor (that we shall write with a capital letter, to differentiate it of the metaphor, which has nature of icon) which governs the relationship of similarity. The Metaphor can express itself as well by the "as" of the poet as by the sign = of the mathematician. There also, the extensions of the term proposed by Lacan and Jakobson are particularly useful: by the principle of “a word for another”, which is the principle of paradigm, the Metaphor open the door of the unconscious, and thus, from a certain point of view, to the myth. But the Metaphor is also a fundamental function of the language and of the production of discourse. The Metaphor is the indispensable condition of the demonstration and even of the production of what Peirce called « a deduction », which is a particular sort of argument. This use of the Metaphor as a poietic interpretant seems on the other hand justified by Paul Ricoeur's hermeneutics on Aristotle's metaphor: “are we not here in the plan of the find that is this heuristics among which we said it violates an order only for create another that it deconstructs for redescribe?”[5].

This last triad (intuition, metonymy, Metaphor), if it is constituted by already well known elements, allows us especially, replaced in its context, to be guided in our choices of composition, at the poietic level. Indeed, if the triad (rheme, decisign, argument) relates to the message itself, to the neutral level, because it determines the sign, the triad (affective, dynamic, logical) applies manifestly to the listener or at the esthetic level.

So one can build this table of interpretants:

	firstness	secondness	thirdness
	poietic	esthetic	neutral
firstness	intuition	affective	rheme (or term)
secondness	metonymy	dynamic	proposition (or dicisign)
thirdness	Metaphor	logic	argument

This table doesn't mean that the limits between each line are insurmountable. I mean, for example, that a proposition can move the dynamic interpretant. This table only shows the privileged link between the different levels of interpretant: intuition, affective and rheme, secondly metonymy, dynamic and proposition, and, at last, Metaphor, argument and logic interpretant. All that proceed can be applying to the music, and particularly is very useful to determine the different sorts of symbolism in electroacoustic music, with referential sounds, what is our purpose.

To progress in our discussion, we now are going to apply each division of the sign to the music, considering that a recorded sound is a sign.

III. POIETIC LEVEL

A firstness (intuition or affective interpretant) can produce or receive only a rheme, a simple possibility, that it is perceptible or logical. A secondness (metonymy or dynamic interpretant) can produce or receive a rheme or a dicisign, a true or false real object. A thirdness (Metaphor or logic interpretant) can produce or receive a rheme, a dicisigne or an argument, an object inevitably sign of law and being able to reproduce itself because of this law.

From there ensue that to produce an argument implies the Metaphor, but that an emotional interpretant can seize an argument only as a rheme. If one crosses a Chinese in the street and if he begins to produce an extraordinarily rigorous reasoning in his mother tongue, ignoring everything of this one, one will seize only a suite of sounds, without being even able to discern if they imply something real: so this argument, for us, will be a rheme. Conversely, it is possible to use the metonymy in its syntagmatic role and the Metaphor in its paradigmatic role to generate a rheme: such was the case of the music during centuries, and often even today. But, once again, what will occupy us here, are just sounds of the world, whose one recognise the cause.

A. Intuition

We have already seen that the intuition can be applied as well to the understandable as to the perceptible. In conformance with the understandable, the intuition can generate Metaphor and metonymy, but the intuition will stop being intuition once taken in consciousness, in the fact that she allows a return on itself. In conformance with the perceptible, it orders especially the management of qualisigns, which address our senses:

"The music symbolises the space, the fundamental psychic states (peace, excitement tension relaxation, ecstasy, depression) being usually translated by gestural forms having a given rhythm, by tendencies and spatial directions (ascent, depression, horizontality), by the modalities of organisation of the partial forms within the global forms (stubborn repetition), variety, periodicity, evolution)" [6], to what it is advisable to add the colour of timbre. By associating a psychic state, a gesture or a modality of

organisation in an element of the world, the intuition allows to establish a direct, almost animal contact with the world. It plays in it an irreplaceable role.

But qualisigns can become legisigns (e.g.: red = blood or aggressiveness) if they are interpreted, by one or several receivers (the composer making a return on its work being at this moment considered as receiver), by one of the affective, dynamic, logical elements of the triad, and will have meaning only by this last one and will so reach the quality of symbols. The intuition will manage especially the quantitative choices (more or less reverberation, intensity...), and sometimes qualitative choices (harmonic timbre, mass...) when several sounds with the same cause are possible. Some of these choices will remain in the state of firstness, especially if they are produced by an instrumental gesture where always intervenes a part of felling. Others will pass by the riddle of the judgement and will be modified until to obtain the wished effect, and will thus take value of symbols. I shall analyse it more in details in a next section.

B. Metonymy

The metonymy produces sense, at the same moment by the elements which it puts in contact, in relationship of proximity, which recovers from the empiricism, and by its management of the syntax, which defines connections of proximity as Jakobson showed it. The metonymy is going to manage as well the minimal sound unit in the structure of qualisigns, the horizontal and vertical dimensions as the great form.

We are not going here to define the all the possibilities of sense generated by this syntax. Only import the fact that it produces a meaning which, at the poietic level, will be seized by intuition or by empirism. However, I am going to quote some of these possibilities.

F. Bayle began to think of the semantic of this syntax, that he resumes in this table [7]:

Dynamic sorts	figure targets of the semantic field	operating processes of acousmatic writing
Temporal shape	to appear to disappear to deform, to twist to interrupt to substitute	closure, opening molten / chain modulation assembly inversion put in buckle
Spatial shape in 2 dimensions	to pull, to push to rub, to slide	stretching transposition
Spatial shape in 3 dimensions	to drill, to cross, to turn, to screw	intermodulation interpolation
spatial materialr	to break, to kink to hurt, to cut to appear, to spring	Microediting reproduction reverberation filtering harmonisation
shape / Spacio-	to rest, to crush to penetrate,	Mixing overprint

temporal material	to invade to wind, to gobble up	admixture spatial distribution
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In "Penser la musique aujourd'hui"[8], Pierre Boulez produces boards summarising the various possibilities of horizontal syntax concerning time, timbre, height, intensity (amplitude) and space, at the level of the macrostructure. We shall reproduce only the one who, of his own opinion, can be applied to the various parameters:

I Homogeneous spaces

A streaked spaces :

1 definite, fixed or variable cut

a fix modulo: straight space

b modulo variable: curved spaces

focused one focus

not focused several focuses

2 fixed or variable Modulo

a determined fixed cut: regular spaces

b variable definite cut: irregular spaces

focused one focus

not focused several focuses

B smooth spaces

indefinite cut : no modulo

statistic distribution of frequencies :

equal: non aimed spaces

unequal : aimed spaces - pseudo

focus(es)

II not homogeneous Spaces

smooth / streak Spaces {alternation, superimposing

Even if this table wants to be purely formal, one can see the semantic use one can make of it. In fact, it defines processes that recall literary or painting processes. As painters put some elements in the light or in the darkness, or at the intersection of formal lines, to define a grammar helping us to read the picture, it is possible to apply this table to compose with referential sounds: inevitably, it generates meaning: a horse neigh will not signify the same thing in a streaked space or in a smooth space. In the first case one has movement, in the second case dream, for example.

Another possibility of syntax is the use of UST (Unités Sémiotiques Temporelles)[9] Some of them are structures, as I showed it[10]. These structures produce certain sensations, link to a gesture or a feeling (for example "en flottement" or "trajectoire inexorable"...) that have an effect on the sense.

The metonymy also defines itself by the relationship of proximity which it causes, and which can line up in two categories: on one hand, the actual proximity, in case it indicates the part for the whole, the contents for the packaging, the effect for the cause (what one name synecdoche) and which assumes a role of index, by emphasising however the advanced element, which will be considered as icon. On the other hand the metonymy allows to associate a-priori different elements, and to create between them a link which does not exist in the natural state, by simple link.

With the figure of the synecdoche (the part for the whole, the contents for the packaging), the metonymy is situated in the border of the Metaphor as process of replacement. In the case of a musical language based on the loan of sounds in the reality, it is imperative at once insofar as the sound is supposed to represent the object, and insofar as it is impossible to represent it by another part than by this part of itself; the synecdoche becomes obliged figure.

Other remark: the sounds of the biotope, whatever is their origin, can be read in a double way: by making appear the representations connected to their cause, when these exist, and those connected to themselves, when they also exist. So we obtain marked or not marked categories, that is with or without particular ideological echo. For example, for the animal cries, one can establish the following categories: one will use + to design marked categories, - no for marked, C for cry and A for animal :

(A +, C +) the wolf

(A +, C-) the peacock

(A -, C +) the cricket

(A -, C-) the hen

One will consider the group (A +, C +) as the most powerful from the point of view of the emotion and of the meaning, but with the danger to sink into the cliché. On the contrary, the group (A -, C-) conceal a certain weakness, but lend itself to numerous associations, both on the metonymical plan and on the metaphoric plan. The couples (A -, C +) and (A +, C-) will insist on the cause or the sound.

From then, the choice, when it exists, between several different sounds emanating from the same object will not be neutral: to represent a horse by a neigh or by a gallop, for example, will have no same implication at the level of the meaning. The gallop will send back rather to the speed and to the muscular power of the animal; the neigh will join more to a certain nervousness, a raw way of asserting its existence. But the horse itself whether is the sound that symbolise it, will conserve its own symbolic. By the process of synecdoche, the sound can assume the symbolism attached usually to the objects which produce it and this meaning is inevitably recalled when you hear it in a musical piece.

C. Metaphor

The sound being polysemous, and being able to besides overlap in the others, an argument necessarily generated by a Metaphor, even if a Metaphor does not generate automatically an argument, admits of this fact a dose of metonymy - itself indispensable to the syntax, as we have just seen it. «It is necessary to define the metaphor by the setting-up in a signifier chain of an other signifier, by what that that it supplants grave to the rank of signified, and as latent signifier perpetuate there the interval where another signifier chain can be transplanted" wrote Lacan[11] In this way, the Metaphor governs the relationship of exchangeable elements according to laws, but as break that opens a breach susceptible to receive itself a signification.

These laws can command a simple isomorphism and, in that case, the limit between metaphor and Metaphor is thin, and the difficulty of seizing it likes maybe the fact of cutting discontinuous categories in a continuous reality. But the comparison between "birds" by Olivier Messiaen and "Kassandra" by F. B. Mâche offers a possibility of clarification: in a case the imitation of the nature is the pretext of a game on the shape. In other one, the imitation of the shape is an invitation to think on the identity of nature: The first one is icon, the other symbol.

The same vagueness exists between the Metaphor and the metonymy: a syntax which symbolises the space, the fundamental psychic states or the gestures, as showed it the works of R. France, lead sense, and it is not rare to see the metonymy ending in Metaphor. It is also on this border that is situated the notion of "fluidity". An element metamorphoses into another one, which shows the identity of nature in spite of the difference of shape, and emphasises the legisign more than its materialisation, its replica, and then the proximity means the similarity.

IV. NEUTRAL LEVEL

THE RECORDED SOUND ITSELF (a sign put for its object, what Peirce called the representamen)

The three kinds of being of recorded sounds are:

A) qualisign: "quality which is a sign, but which cannot act as a sign before its materialisation". This defines all the potential qualities of a sound: timbre, dynamic, height, allure and so on...

B) sinsign: "real existing which implies several qualisigns". This can be or the materialisation of qualisign or the replica of a legisign. This level is very ambiguous: all the sounds one can hear have qualities. So legisigns are also materialisation of qualisigns. We'll see this ambiguity later.

C) legisign: law which is a sign, usually established by human. It is manifest by its replica.

The legisign appears in the form of representamen (or signifier) which was conceived to serve as sign and only as sign: it does not exist, usually, in the nature and is the brand of the humanity that is the culture, and the thought. However, in its materialism, it exists as object (sinsign), itself being structure of miscellaneous qualisigns. For the comment which interests us, let us note that in a certain context, a qualisign can have a signification, I mean can be use as a symbol. The example which often quotes F. De Saussure of this speaker inviting his colleagues in the silence, by repeating on different intonations: «sirs, sirs, sirs» show that the intonation (qualisign) takes sense (becomes legisign), and this implies that everybody understand it.

It is advisable for this stage to distinguish two sorts of legisigns. By applying this analysis of Piaget: "in the reality as in mathematics, any shape is content for those who contain it, and any contents are a shape for

those whom it contains" [12], one pull that there are legisigns form and containing legisigns. The first ones have for vocation to realise an element which appears in the form of law (for example a word). The function of the second ones will be to permit the transmutation of the real in a symbolic element. The containing legisign is the philosophical stone which transmute qualisigns and sinsign in symbols, incompatible elements in the Peircean logic.

The containing legisigns can be subdivided in abstract legisigns (for example a mythology, an ideology, a theory...), and concrete legisigns (as the television, a book, a painting, a record... which, at this moment, will not be simply considered any more as an object).

It is what had anticipated Marcel Duchamp with his "ready-made": a sinsign "public urinal" acquires another status in a legisign "museum".

At the musical level, this metamorphosis of qualisigns in legisigns is going to play fully. It is a part integral of the profession of composer or interpreter. We shall quote, as example, an extract of the note of "Saturn" by Hugues. Dufourt: "... The remorseful affection of Melancholy is embodied by the paralysis of the grave winds, fixed to the very shrill of their attributes, or by the dark and shrill textures of the electronic technology. The paradoxical management of the temporality transcribes a psychic state of apparent inactivity"[13]. Any element of the TARSOM can become legisign.

The legisign implies an intention to communicate, a language. As any language, besides the paradigmatic functions, it implies a syntagmatic function. This one is going to play on two levels: in the micro-shape, by the arrangement of qualisigns, and in macro-shape by the arrangement of sinsigns

The arrangement of qualisigns, at the level of the micro-shape, can result from the pure fate: if we use a patch of polystyrene as sound object, all the criteria of sound material will depend certainly on laws of nature, but will be independent from the will of the manufacturer which does not probably care about it. On the other hand the musician can use them if he finds there an interesting resultant.

A composer, by filtering or mixing timbre, will look for the tone which appears to him the best to what he wants to express. The modification of qualisigns on a well identified sinsign can itself be considered as a legisign, that F. Bayle expresses in the following way:

"If the "concrete" is at the same time object "anecdotal", representational, let us put a human "step" (in "Tremblement de terre très doux ") the operation of distortion (here dilation-contraction, that is slowing down - progressive acceleration) has at the same time a direct incidence on the thrown meaning, on the sense of the image. The semantics, strictly correlated in the formal, modifies itself at the same time " [14].

François Bayle has also understood the consequences of the introduction of a sinsign in a legisign "musical piece":

"All the capacities of a technique which substitutes for the object its image, acquire there then the status of a rhetoric. Assembly, extraction, insertion, illustration,

swelling, but also crack of time, explosion of places, but still mixing, overprint, metamorphosis of outlines, but finally introduction of the speed and the space, become then together average and contents, medium and message"[15]. These containing legisigns will be these "middle-place" (mi-lieu) which permit to extract the sign from its ordinary context, so it can receive or generate other signification.

"So the image will become established from the *central notion of double disjunction*: that physically produced by the structure of the other causes, according to a law of simulation - and that psychological which distinguishes the indication of an enactment, an interpretation, a sign"[16].

This insertion of a sinsign in a legisign possesses the same nature as the myth and is the essence of the myth. "The wild thought defines itself at the same moment by a voracious symbolic ambition... and by a scrupulous attention turned toward the concrete, at last by the implicit conviction that those two attitudes are only one."[17] Through these words of Lévi-Strauss, appears the parallel between the myth and the systems of representation taking support on the reality. From the techniques of reproduction of the reality is born the "middle-place", "that is as well a place really tri-dimensional, that on the contrary a cleanly utopian place, constituted by no special place but also and especially by numerous places "[18] where thus are going to mix, merge and to regenerate what was icon or index with what is symbol.

V. RELATIONSHIP OF THE SOUND TO ITS OBJECT

A) Icon: " sign determined by its object (example: vision); sign which would possess the character which makes it significant, even if the object did not exist (example: a line) "In the sound domain, François Bayle called them "i-sounds". We shall content with reminding just one kind of "i-sons" and one definition:

"- the uniform image (iconic, referential), or im-sound"

It is them, put in the context of a musical piece that will occupy us here.

We shall add however that a referential sound, in its firstness makes reference to its qualities, in its secondness facilitate the metonymy, and in its thirdness can symbolise a concept, if one consider that a symbol is an abstract idea represented by a concrete object, that is if one take this term in its literary and not strictly semiotic meaning. This implies that an icon generates several interpretants: on one hand, it makes reference to the represented object and to the context in which it exists, and on the other hand it represents a concept and its semantic category.

It is the reason for which, in the term of icon, Greimas preferred that of iconicity: "the specificity of semiotic of view [or sound] dilutes itself then in this two macro-semiotics that are the natural world and the natural languages... If we formulated [the problem of the iconicity] in terms of intertextuality (between semiotics constructed and semiotic natural),..., we

would see that the iconicity finds its equivalent under the name of referential illusion. This one can be definite as a set of procedures organised to produce the effect of sense "reality", so appearing as double conditioned by the conception culturally variable of the "reality" and by the realistic ideology assumed by the producers and the users of such or such semiotics". And to clarify: "the individual joins from his birth... in a significant world made at the same time by "nature" and by "culture"[19].

So the icon placed within a legisign (and, as icon, it is necessarily) lends itself magnificently in this double semiotics, and allows as well to mythify an object, to register it in a culture, as to de-mythify it and to examine this culture.

The only icon has the power of this ambiguity, only it allows navigating in shady waters of this no-man's-land between the natural languages and the natural world. So the "im-sounds" have the wonderful power to generate different levels of symbolism.

B) Index: "sign determined by its object by virtue of the relation which it has with it (ex: symptom of a disease); sign which would lose at once its quality of sign if its object was suppressed, but would not lose this quality if it did not have an interpretant (ex: hole in some plaster)". A sound cannot be the indication of another sound, the echo set aside (if one do not hear the causal sound), but it can be the indication of the cause which products it and, in all days life, it is only that.

But the sound affectations undergone by the original sound, which everybody is sensible to have in the ear, are the indications of an action of the composer, which one can classify in three categories: what Michel Chion called "Indices Sonores Matérialisants" (ISM, Sound Materialisation Index)[20], where the microphone is going to serve in a sense as magnifying glass to enlarge the details of the sound and confer them more presence. Continuing on this logic, one can define two other categories.

On the contrary, a filtered sound, emaciated could one say, indicates "Indices Sonores Dématérialisants" (ISD, Sound Dematerialisation Index), which will be the mark either of a passage by a system of broadcasting in a narrow band pass, as the telephone, or of a will to make the sound immaterial. Finally effects as the flanger or the "time compress / expand" can be considered as "Indices Sonores Transformants" (IST, Sound Transformation Index,) which are directly going to testify of an action of the composer on the perception of the real. In this way, the composer is going to leave indications during three stages of the elaboration of his work: the recording, the mixing and the treatment of the sound.

Finally a last type of indications is going to appear during the interpretation, even if, in the acousmatic music, interpreter and composer often become confused: what is within the competence of nuances, rallentando... which inform us about the intensity of the feelings without the mediation of an interpretant.

C) Symbol: "determined by its dynamic object in the sense of which it will be interpreted; sign which would

not be sign without interpretant; the symbols, and in a certain way other signs are either terms (rhematic symbolic legisign), or propositions (symbolic dicent legisign), or arguments (symbolic argumental legisign); a term lets its object and interpretant be that they can be, a proposition leaves the interpretant to be that it can be, an argument represents clearly its interpretant, called its conclusion, that he intended to determine".

From this definition, it emerges clearly that a symbol has to be a legisign, and that it enters inevitably in the composition of a term, a proposition or an argument which could not exist without him. They turn out thus indispensable to produce arguments, and we think of having shown how a qualisign or a sinsign can become symbol.

The language set apart, there are some sounds or symbolic organised sounds following this definition: fireman's sirens, alarms, national hymns, ritual music but which constitute the tiny minority of the sounds which we perceive.

VI. INTERPRETANTAS: RELATIONSHIP BETWEEN SOUND AND CONCEPTS

One find here the neutral level. By all that proceed, one can now define the different kinds of musical symbolism that only electroacoustic music permits by using "im-sons".

A) Rheme (or term): «for its interpretant, represent such or such sort of possible object, in its characters".

This definition recovers what we shall call the sound poetry, as one can find it in Francis Dhomont or Denis Dufour music, for example. "Im-sons" are used first for their morphologies, but one still can recognise them, merged or not with abstract sounds, and their meaning is in our brain when we hear them. It corresponds exactly to what Roman Jakobson called the poetic function of the language. At this level, one can compare sound poetry and poetry, and they both can assume the hermeneutic function that was described by Paul Ricoeur: a kind of reflection on the real different from the philosophy. Poetry focuses on the media to reach the real, philosophy on concepts.

B) Dicisign: "for its interpretant, sign of real existence. Cannot be an icon, which does not send back necessarily to anything real. Imply a rheme to describe the interpreted fact as indicating".

This definition recovers narrative pieces, as "Presque rien n°1" by Luc Ferrari or "Corazon road" by Kristoff K. Roll, and correspond to the referential function of the language. This level seems to describe simply the reality, but everybody can imagine a secret meaning. Of course, the literature teaches us that very often the particular means the general, so when one shows something, he shows in fact an hidden idea.

C) Argument: "for its interpretant, sign of law. Sign understood as representing its object in its character of sign... An argument represents clearly its interpretant - called its conclusion - which he intended to determine".

The mere case of musical argument that I know, if one except "star spangled banner" by Jimi Hendrix, is my work "Reflections" which intends to develop a reasoning. It is another case of referential function.

VII. CONCLUSIONS

In cases, the formal exigency of the music implies what Jakobson called "poetic function". But to use referential sounds - or "Im-sons" - is very specific to electroacoustic music. Each alteration, each horizontal or vertical association, each structure, each equivalent of this kind of sound can means something. It considerably increases the symbolic possibilities of the music and, by the metonymy and the Metaphor, can expresses the modern myths.

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