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# François Bayle's Music: Archetypes and Visual Thinking

**Introduction**

François Bayle is one of the most famous French electroacoustic composer, and was the director of the GRM (the Musical Research Group) in Paris from 1966 to 1997. He developed, from 1974, the idea of what he called "acousmonium", which is an equipment constituted of many loud speakers on stage. The loud speakers are different, and each one has its own sound colour, just like string instruments in an orchestra for example. That is why sometimes the term "loud speaker orchestra" is used. The equipment is often completed by lightings or video. Whereas electroacoustic music, by definition, does not have any visual aspect since there is no performers on stage, the acousmonium has a clear visual impact. This is not the only visual aspect Bayle developed in his music. The idea of sound image for example is also very important, just as the use of visual archetypes when composing:

> There are three kinds of archetypes for me.
> The static archetype is about all what reminds the horizon, the gravitation, the temperature, the climate, defining the landscape and its population.
> The dynamic archetype, all what is about catching, flight, simulation, prevision of before and after; appearance, bringing closer, removal, to night, to day, to right, to left, to space, to light, to shade.
> The positional archetype sets up the difference between inside and outside, the scale of the body, the situation dominant/dominated, the call of the countless events that surround us.[1]

Static archetype, dynamic archetype and positional archetype seem to guide François Bayle when composing. This is pretty unfamiliar, and several questions arise. What is the musical meaning of such archetypes? Are they only a guide for the composer, or can they represent something for the listener? In fact, do they permit to create points of reference, both from his point of view or from the listener's one? Can they guide the listening? Do they constitute some elements of a musical syntax specific to Bayle?

**1. Figure and Background: Archetypes as a Guide for the Composer**

If the archetypes defined by the composer seem a bit obscure at first, he clarifies them later. The statical archetype, via the terms "climate" or "landscape", refers to acoustic situations in which sounds do not evolve, or evolve slowly, and for which time development is not a distinctive criteria. These sounds are kind of textures, they could have always existed and could last forever. A good comparison, often made by François Bayle, is the idea of background in visual arts. Background is to not to be understood as something in the back, less important, but as something occupying a large surface. By contrast to the notion of background, the dynamic archetype refers to the idea of figure. It may include sounds contrasting with the preceding ones: they are shorter, well delimited in time, and have a time development clearly perceptible by the listener. They can be compared to Pierre Schaeffer's well balanced objects, that is sounds with short or medium duration, with a beginning, a development and an end[2]. The positional archetype is a slightly different archetype, since it seems to include the two others. It refers to the duality inside/outside, and therefore to the notion of space. It is more a way of organizing the two preceding kinds of sounds rather than another type of sound. It may refer for example to the transitions between figures and archetypes, or the organisation of them. This later archetype will be commented later. The terms background and figure will now be used, respectively for the statical and the dynamic archetypes. If these words are more restrictive, they are used more often by François Bayle, and have an easier mental representation.

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[1]  "Il y a trois sortes d'archétypes pour moi.
L'archétype statique concerne tout ce qui nous rappellera l'horizon, la gravitation, la température, le climat, définissant le paysage et sa population.
L'archétype dynamique, tout ce qui aura trait à la capture, à la fuite, à la simulation, à la prévision de l'avant et de l'après, à l'apparition, rapprochement, éloignement, à la nuit, au jour, à la droite,à la gauche, à l'espace, à la lumière, à l'ombre.
L'archétype de position va fonder la différence entre le dedans et le dehors, posera l'échelle du corps, la situation dominant/dominé, l'appel des événements innombrables qui nous entourent.", BAYLE François, *Musique acousmatique : propositions, positions*, Paris, Ina-Buchet/Chastel, 1993, p. 76.

[2]  SCHAEFFER Pierre, *Traité des objets musicaux: essai interdisciplines*, Paris, éditions du seuil, 1977, 712 p.

What is striking with these three archetypes is their relations to the visual domain. The duality between figure and background, for example, can be found in Kandinsky's paintings. In his book *Point and Line to Plane*[3], whose title is already in keeping with the archetypes defined by Bayle, the painter explains how fundamental is the difference between figures (points and lines) and background (plane). Klee follows the same reasoning when he explains the dynamism of a line compared to the relative immobility of a surface[4]. François Bayle himself is fond of visual arts, and he often quotes painters or photographs. Several titles of his pieces refer directly to a visual artist, such as *Les couleurs de la nuit*[5] by Magritte or *Aux lignes actives*[6] by Klee. This may give a key to understand what could be called a "polyphony" in Bayle's music, and maybe in electroacoustic music in general. The meaning of polyphony in Bayle's music is to be understood as "sounds played together", rather than several voices which could be followed separately. These sounds are backgrounds or figures, and if translated into the graphical domain, their combinations create a kind of auditory landscape. Still having the graphical metaphor in mind, it is then possible to describe precisely the different types of polyphony. A brief typology reveals that some situations are recurring. Thus, a static background with figures appearing suddenly is quite common in Bayle's music, as it is the case, for example, in *Les couleurs de la nuits*[7]. Using different kinds of figures is also frequently used by the composer to create more complex situations. In *Petite polyphonie*[8], it is possible to distinguish three types of figures. The first one, very short, is presented alone, whereas the second type, constituted of sounds with decrescendo and vibrato, and the third one, based on fragments of flute sounds, are introduced progressively. Knowing the archetypes of figure and background is a guide for the listener to understand how the sounds relate to each other. It permits to perceive the recurring situations, and thus the general structure of a piece, as well as some elements of the aesthetic of a composer.

What is kept by Bayle is the general way of thinking in visual arts, not only the result. In fact, the problematic arisen by the notions of figure and background is not specific to visual arts. What is underlying is the question of continuity and discontinuity, the figure referring to discontinuity, and the background to continuity. Beside the fact that thinking about this question using visual notions permits to create new situations that wouldn't have been thought using only a musical thinking, this is also a way to create a poetic world going beyond the music. Electroacoustic music often plays with this aspect. Thus, the use of recognizable sounds always opens to new prospects. For example, when François Bayle wrote the piece *Jeîta*, intended to be played in a cave in Lebanon, he used among others sounds of water, and sounds recorded in the cave, to recreate the atmosphere. For the listener, perceiving the archetypes of figure and background, consciously or not, opens the imagination toward painting. He can make relations between music and some visual works he may know, which can guide him while listening. The function of the archetype in this case is to reactivate things already known in another domains, in order to create poetic relations. As the composer says:

> We are not listening to sounds any more, as soon as they are organised... And of course that is the more general function of music: metaphor and metonymy.[9]

If the general atmosphere of a piece can be understood using the three archetypes mentioned by the composer, the detail discourse can also be considered with the same tools. François Bayle often uses a limited material in his pieces. However, it sounds always renewed, and it is fascinating from beginning to end. Having a closer look, we notice that each sound is different from the others, but seems to be derived from a more general model. The composer plays on different variations of this model: the sound can be stretched or darkened, for example. In *Jardins de rien*, the composer uses several variations of the same model (a stroke on piano strings). The sound, presented under its original form at the beginning, is then transposed, cut, reverberated or filtered. All the different instances have a strong link with the model, while being all different. Another aspect of the archetype is brought to light here: the fact that it is

[3]    KANDINSKY Wassily, *Point and Line to Plane*, New York, Dover, 1979, 146 p.

[4]    KLEE Paul, *Théorie de l'art moderne*, Paris, Gallimard, 1998, 153 p.

[5]    MAGRITTE René, *Les couleurs de la nuit*, Bruxelles: Les Lèvres Nues, 1978.

[6]    Term used by Klee in *Théorie de l'art moderne*, op. cit.

[7]    BAYLE François, *Motion-émotion; les couleurs de la nuit*, compact disc INA_C 100, Paris, INA, 1986.

[8]    in BAYLE François, *Vibration composée; Grande Polyphonie*, compact disc MGCB 0392, Paris, Magison, 1992.

[9]    "Ce ne sont plus les sons qu'on écoute, dès qu'ils sont agencés... Et ça évidemment c'est la fonction poétique la plus générale de la musique: la métaphore et la métonymie", BAYLE François, *Musique acousmatique: propositions, positions*, Paris, Ina-Buchet/Chastel, 1993, p. 169.

a generic, idealized model of an object or a concept, from which similar instances are derived. In literature, for example, Ulysses or Don Quixote are two instances derived from the archetype of the hero. They share common characteristics, but each one has his own properties too. In the case of Bayle's music, this permits to constitute families of figures, closer or less to the model, and that the composer distributes along the piece. This is of course facilitated by the tools available to the electroacoustic composer. Effects such as editing, filtering, tape reversing, adding reverberation, can easily produce new sounds, whose origin remains recognizable, while having new personal characteristics. What is interesting is that the words used to describe these transformations often come from the visual domain. The words "stretch" and "darken" are the actual words used by the composer. Using visual archetypes implies for François Bayle the use of a visual vocabulary. It permits to describe transformations with a single word instead of a complicated technical description ("darken" would be, for example, "filter the highest frequencies"). It's then easier to think about multiple transformations, such as stretching and fragmenting a sound while darkening it.

The archetypes used by François Bayle are generally shared by the composers working at GRM. The writings of these composers often mention it, though with a different terminology. Some instrumental composers share some of these ideas too. This is the case, for example, for Xenakis, who worked for some time at the GRM. While the aesthetic preoccupations are quite different for the two composers, François Bayle agreed that they were both working on the concept of figure and shape[10]. Thus, the notion of figure and background can be considered as an archetype, and not just as an element of the aesthetic of a composer. This principal is general enough to permit freedom of writing for different composers.

## 2. Ambiguity in Perceiving Archetypes

However, if these archetypes seem to be shared among certain composers, it is not explicit. By nature, the archetype is general and can cover many different things. It can refer to a short electronic sound, as well as to a piano one with a long reverberation. From an auditory point of view, is it then useful to speak of such archetypes? Isn't it more interesting to consider each instance as unique and specific? A first observation in this way is the absence of conventional words to describe these archetypes, which may reveal the diversity and specificity of each instance.

For example, Bayle uses the words background, texture or plane to describe the statical archetype. For the dynamic archetype, the terms figure, shape, emergence are used. Even if they all refer to the same model, there are several differences between these terms, they are not completely equivalent. This is even more true when considering that each term can have a different meaning when used by different composers, and therefore multiply the connections it has with the original archetype. If this does not question the existence of archetypes, it shows how differently the instances can be perceived. That is, when listening to a piece, the perception of the archetypes defined by the composer may not be obvious, and some other listening strategies may occur. For example, it may sometimes be more obvious to classify the sounds according to their reference (piano sounds versus water sounds, for example) rather than on their belonging to the types figure or background. The absence of convention in this domain makes the listener completely free to choose his approach. A parallel may be drawn with the absence of convention in writing electroacoustic music. The same figure or background will be represented differently according to which parameter of the sound is most important for the person realizing the score. The question of the graphic translation has always been important in electroacoustic music. Although not a necessity when composing, since everything is directly recorded on a medium, many composers have felt the need for a graphical representation of their music. Beside the practical aspect of doing so (to play the piece in a concert, for example), it reveals the necessity of a representation for analysis or reflection on music. The GRM has made several realizations in this domain. An attempt to create certain graphical conventions has been made with the development of a piece of software called "Acousmographe". This program is a tool to represent music with premade shapes. This is not an automatic tool: the user has to choose the shapes according to what he wants to highlight, and has to place them to the good time position. The two archetypes of background and figure are obvious when using such a representation, since shape and background are given data of the program. However, each representation is subjective, and different persons using the piece of software to represent the same music may use different shapes, according to what they perceive or want to emphasize. Thus, the perception of archetypes is personal and may vary from people to people.

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[10]    Interview with François Bayle, November 18th 2007.

Moreover, it has to be reminded that the archetype, for François Bayle, is primarily a concept useful for the composer himself, before being useful for the listener. As he says,

Daydreams are not only a posteriori considerations on musical production, but are real tools.[11]

Having archetypes in mind when composing is a guide for the composer, especially in electroacoustic music in which any sound can be treated as a musical sound. A first attempt in this domain had been realized by Pierre Schaeffer in *Le traité des objets musicaux*[12] in 1966. He defined several types of sounds which are a guide for some composers. However, certain conceptions such as reduced listening (that is listening to sounds for themselves, without imagining their cause), if useful for the composer, are very difficult to be practiced by the listener. In the case of reduced listening, listening to a door, for example, without actually hearing the reference to the door, requires concentration, and is almost impossible at first listening. There is a discrepancy between what may be obvious for the composer (the practice of reduce listening), and the perception of the music by the listener. Trying to find archetypes in music should always take into account the two points of view: the one from the composer, guiding him when writing, and the one of the listener, guiding him when listening.

Another important aspect of the archetype is the idealization of the object. Archetypes are abstract concepts, and can not be concretely fully realized. The actual instances are always copies more or less faithful to a model. Thus, pure figure or pure background never exist. Depending on the scale used, a figure may appear as a background, and vice versa. If referring to the Gestalt theory, the grouping phenomenon may play a role, and the repetition of the same figure may be considered, on a larger scale, as a an homogeneous texture. Archetypes can not be quantified, thus, from a listening point of view, there is always a freedom of interpretation.

Of course, the composer is aware of this phenomenon, and plays with it. A good example can be found in *Toupie dans le ciel*[13] by François Bayle. The electronic sounds remain the same throughout the piece and, at first, constitute a background. But when listening carefully, the sounds constituting the background sometimes form a group. They emerge from the background and become an independent figure. Then the feeling disappears and the sounds are back perceived as a background. In such cases, a graphical metaphor is important to perceive better the aim of the composer. The comparison with the painting *Sky and Water I* by Escher, in which the black background becomes the figure of a bird and the white one a fish, may permit to understand better one aspect of the relations between background and figure. Concrete realizations of the archetypes are always ambiguous. They may cover a wide range of different situations, making difficult the perception of the underlying archetype.

### 3. Hidden Archetypes

Indeed, abstraction is another main characteristic of the archetype, this is a reason why appropriateness to concrete instances is not obvious. In fact, working with archetypes is adopting a way of thinking rather than conforming to premade models. By analyzing both writings and music, we discover what could be called a hidden, or implicit, archetype. The composer never mentions it directly, but it is underlying in Bayle's thinking on music. This archetype gives the idea of an organization, that is the relations, between three propositions:

- a first proposition,
- a second proposition contrasting with the first one,
- a third proposition, whose subject is different from the two firsts, often more general, which opens to something else, and which balances the first propositions.

Several manifestations of this archetype may clarify this kind of organisation.

a. The three archetypes studied before reflect this organization. The simple opposition background/figure is completed by a distinct, more general notion. If the first two ones are related to the material itself, the "positional archetype" is more about organizing both them in time and space. The third proposition is here a way to open the reflection, and avoid the simple opposition between two poles. It brings new metaphors which can help considering the relations between these poles, such as "dominant/dominated" or "inside/outside".

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[11]   "les rêveries ne sont pas seulement des considérations a posteriori sur la production musicale, mais véritablement des outils de travail.", BAYLE François, *Musique acousmatique: propositions, positions*, Paris, Ina-Buchet/Chastel, 1993, p. 170.

[12]   SCHAEFFER Pierre, op. cit.

[13]   BAYLE François, *Toupie dans le ciel*, compact disc MGCB e102, Paris, INA, 2002.

b. From a musical point of view, it is also possible to find expressions of this thinking archetype. In the cycle *Grande Polyphonie*[14], for example, a first group is constituted by several short pieces. These pieces are contrasted and alternate between two techniques. The last piece of the cycle is much longer (as long as all the short pieces), and uses all the techniques used previously. This kind of organisation is common in Bayle's cycles.

c. Moreover, in several pieces, the internal structure shares this organisation. In *Jardins de rien*, for example, a first part is constituted of the alternation, and interrelation, of two different materials. One is based on strokes on a piano, called "solid" material by Bayle, and the other one is based on water sounds, called "liquid" by the composer. On the other hand, the last part uses a completely different material, based on electronic sounds. The initial duality is over, this creates an opening toward something else. Moreover, this permits the listener to remember the first part of the piece, and to realize better the antagonism of the beginning. In a way, it clarifies the structure of the piece.

The segmentation in three parts, "certainly not two, to avoid dualistic effects"[15], as says Bayle, is omnipresent. Though it is hidden, it is underlying the musical and theoretical discourse of the composer, and it creates an equilibrium, a brightness specific to Bayle's music.

### Conclusion

Finally, when trying to find out what are the general characteristics of the archetypes defined by Bayle, what appears is a tendency toward non linearisation of music, that is trying to find a way of organizing sounds other than a logic based on succession and deduction. Thinking with visual terms permits in a way to put apart the notion of time. The archetype of figure does not have in itself the notion of absolute time, even if, in a concrete way, a musical figure does have an absolute duration. The figure, considered as an archetype, is a spatial concept rather than a time concept. Shape is the essential characteristic of the figure, absolute duration being only a result of that shape. The piece is then a real "composition" in the first meaning of the word, that is the distribution of different figures along the piece. The organisation is not deductive, one sound or one fragment is not the consequence of another. Instead, as in a painting, all sounds of a piece or a fragment refers to a more general model.

Perceiving archetypes in electroacoustic music can create points of reference. However, the archetypes used are never explicit, since they are deep structures having manifestations at different levels of the composition. Its importance is global, and it appears after a more or less long time. This is especially true in electroacoustic music, which still young despite its sixty years of existence. Perhaps, one day, the use and the perception of these archetypes will be much clearer, until becoming stereotypes, and may be replaced by others.

### Santrauka

### François Bayle'io muzika: archetipai ir vizualinis mąstymas

François Bayle'is (g. 1932) – vienas žymiausių elektroakustinės muzikos kūrėjų Prancūzijoje. Šalia keleto jo įdiegtų naujovių, tokių kaip „garsinio vaizdinio" idėja ar *acousmoniumo* (koncertams skirtos garso sistemos, kai naudojama daug garsiakalbių) sukūrimas, dėmesio verti yra ir jo pamąstymai apie archetipus.

Pasak autoriaus, kurdamas jis vadovaujasi trimis pagrindiniais archetipais:
- *statiniu* archetipu, susijusiu su fono idėja; jis gali apimti, pvz., ilgai skambančius, lėtai plėtojamus ir mažai kontrastingus garsus;
- *dinaminiu* archetipu, susijusiu su figūros idėja; jis gali apimti garsus, kontrastuojančius su ankstesniaisiais – jie yra trumpesni, tiksliai apibrėžti laiko atžvilgiu, o jų plėtojimas klausytojo yra aiškiai suvokiamas;
- *poziciniu* archetipu, susijusiu su vidiniu/išoriniu dvilypumu ir kartu su erdvės sąvoka.

Šių archetipų naudojimas aiškiai atspindi Bayle'io muzikinio mąstymo vizualinį aspektą. Anksčiau fono ir figūros atskyrimą ir galimą sąveiką plačiai nagrinėjo Vasilijus Kandinskis, kuris kartu su Paulu Klee, Maxu Ernstu ar René Magritte'u kompozitoriui yra vienas didžiausių įkvėpimo šaltinių. Šiuos archetipus

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14  Op. cit.

15  "surtout pas deux, pour échapper aux effets dualistes", BAYLE François, quoted by THOMAS Jean-Christophe, in *Musique acousmatique: propositions, positions*, Paris, Ina-Buchet/Chastel, 1993, p. 120.

galima rasti ir geštalto teorijoje. Kalbant apie archetipo (kaip apie bendro idealaus asmens, objekto ar koncepto modelio, iš kurio išvedami panašūs pavyzdžiai) sąvoką, Bayle'io pasiūlyti sprendimai yra ypač aktualūs. Jų naudojimas leidžia skirtingas sferas susieti ne paviršutiniškai, o iš esmės. Todėl tai suteikia kompozitoriui galimybę į muziką perkelti tam tikras technikas, būdingas vienai kuriai nors sferai: pvz., remdamasis figūros idėja Bayle'is siūlo iš vizualinės sferos kylančias garso transformacijas – skaidymą, glaudinimą ar projekciją. Panašių fono ir figūros nevienareikšmiškumų galima pastebėti tokiuose meno kūriniuose kaip M. C. Escherio „Dangus ir vanduo I" (1938), kur fonas gali virsti figūra ir atvirkščiai. Tokių fono ir figūros transformacijų galima įžvelgti ir kai kuriose Bayle'io kompozicijose.

Dar daugiau – figūros idėja veda prie kintamo pavidalo archetipo, kurį galima apibūdinti kaip gimimo/ gyvenimo/mirties procesą. Šis atvejis tinka tada, kai kalbama, pvz., apie garso gaubtinės intensyvumą: minėtas tris stadijas atitinka garso ataka, stacionari fazė ir slopimas. Tačiau pavidalo idėja, Bayle'io nuomone, taikytina ne tik intensyvumui; pvz., garso aukštis ar tembras taip pat sąlygoja kintamą pavidalą ir yra tokios pačios – pradžios/perėjimo/pabaigos – struktūros. Tipišką pavyzdį galima aptikti viename iš pirmųjų kompozitoriaus darbų, „Espaces Inhabitables" (Negyvenamos erdvės), kuriame medžiagos yra labai nedaug. Klausantis šios muzikos, svarbiausia yra suvokti skirtingus ir nuolat besikeičiančius jame naudojamos medžiagos pavidalus, ir būtent tuo šis kūrinys nuo pradžios iki pabaigos yra nepaprastai įdomus.

Taigi kompozitoriaus naudojamų „paslėptų" archetipų įžvelgimas – tai būdas susieti jo kūrybinį procesą su klausytojo suvokimo galimybėmis, o ši sritis muzikologų dažnai lieka netyrinėta.