Nature and the GRM

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It is a habit to invoke Aristotle when dealing, within the arts, with 'Nature' – that the Man–Artist (and not only the musician) would be, he says, 'inclined' to imitate. It is true, the history of music clearly attests to the temptation and of the 'pleasure' (as Aristotle also says) found in *mimesis*. We know that very lately in history musique concrète gives a new perspective to this question as well as to other questions, and changes the deal: because the sound objects of the world, of the whole world – the 'noises' – that needed to be imitated, can now be easily captured through technology, almost in a photographic way, and then they can be gathered, kept, and finally be composed. Hopefully Pierre Schaeffer, its genial inventor, has, concerning the question of nature within new music, a position that tears him apart, which is paradoxical, uncomfortable, fundamental: that the nature that is so easily captured, he does not want to exhibit; to understand the lessons, the hidden musical lessons, he only wants to examine it. This almost heroic model will only be partially followed by the composers (concrète, electroacoustic, acousmatic, anecdotical composers) who have been working during the last sixty years in this passionate domain. At the end of this article, the sketch of a typology, based on musical examples, tries to clarify the way nature is dealt with, when it appears in musique concrète.

1 NATURE AND SCHAEFFER

1. 'Nature' is a very large word, and a very fine thing; and so is Music. Its history has shown us that there has never been a time when the latter did not dream about the former. Thinking about the conjunction of the two topics is a very difficult problem for musicologists. But composers, who are beloved by the gods (who invented music before they thought about it), are, it seems, stimulated, helped, and see their inspiration witnessed and seconded by this dream …

… Which seems to begin with time's origins in Old Night,[1] but which took a fatidic momentous (and very special) turn with the invention of the music we call 'concrète', and which theoretically no longer has the same need to *imitate* (or copy) nature to make its way into its interior, but has only to 'record' it mechanically, as one makes a photograph, or at least to record the objects, or chosen sonic characters; and then have the charge of (re)composing them.

This shorthand way of putting it is of course inexact because of it being simplified, but the complex nature of these questions forces one to make choices. Here is one example. If we follow the thread, there are in the history of musique concrète (which is virtually synonymous with that of the GRM) two contrasting approaches to the question of nature, to the imitation (or mimesis) of nature.

2. According to Pierre Schaeffer, its 'unfortunate inventor', as he would say, but for all that an exemplary one (and we are greatly beholden to him for this little introduction), one confronts at the same time an *acquiescence* in, and a *rejection* of, nature. This twofold attitude is still grounded in its reality and has persisted through its changes, the alterations made in its final evolution. There was with Schaeffer a strong ideological investment in nature, and at the same time a hostility towards an anecdotal *naturalism*, that Schaeffer fought from the start in his own concerns – even at the foundation of his invention his back was braced against it – then, beyond that, all the composers, while following him, were inclined to let things go along according to 'natural' inclinations, to leave showing through their work sound images from the world that was too simplistic.[2] To quote Schaeffer himself, and his idealistic 'puritanism' which, anti-anecdotal (anti-concrète) is very much like that of his fraternal enemy Pierre Boulez, led directly to the invention of the famous 'appropriate object' (*objet convenable* in French) – a sublime outcome of the no less famous 'reduced listening' (*écoute réduite*).[3]

'I turn my back on music,' he complained in *À la recherche d'une musique concrète*, when he was in the course of enforcing something he had undertaken from the outset: the marriage of the two incompatible partners, Noise and Music. 'All these noises are

[1]Or at least with Aristotle, who started the fashion and gave the injunction that art should imitate nature.

[2]'I am responsible for the find, perhaps – what others do with it, that's quite another thing' (*Musique et Modernité*, radiophonic document, 1952).

[3]For these ideas, see the *Guide des Objets Sonores* by Michel Chion (Buchet/Chastel, 1983) and the *TOM* (le *Traité des Objets Musicaux*) by Pierre Schaeffer (Seuil, 1966).

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identifiable, and when listened to they evoke glass, or a bell, or a wood, or iron.'

To sum up: above all in musique concrète one must not be able to recognise a natural noise (that is, one outside the music itself), for then one does not strip down from the dramatic, or much worse, from the worldly – for music, to be true to itself, is not 'of this world'. 'If anything remains of semantic information, there has been an error. It is only when split from a causal context that the object becomes musical,' said Schaeffer later, authoritatively postulating an almost binary opposition between music and semantics. Or, again: 'Musical objects only exist when they are "lost objects", detached, profoundly distanced from these banal and at times ridiculous causations', etc.[4]

3. To insist upon the point, what he proscribed is what we call *anecdotalism* – not only the presence in the music of objects drawn from nature, but also in its material all the objects that are too figurative, those which one can recognise, or those that come from outside music. However, the figurative, or programmatic, music of the previous century tried to bring into the concert all stylised birds, storms and galloping horses. And 'anecdotal' musique concrète, which Luc Ferrari soon after invented to the annoyance of Schaeffer,[5] began to make heard very 'natural' sheep, grasshoppers, streams (real ones, this time), and also motor cars and so on, at the risk of turning music back on radiophonic art and on dramatic art. One can say that for Pierre Schaeffer the anecdotal occurs when one puts into music matter taken from nature (in the wider sense, where to say nature is to say outside music) *without due warning*.[6] Schaeffer did not want that, as that would destroy the eroticism of musical sound, for his superego and even his ego were essentially at the side of the great Johann Sebastian Bach.

4. We can only declare that this was a man with 'two men inside him'. This concept of musical, in a sphere ethereal, a virgin cut loose from the world – a music that if it was not pure was not music at all – would march beside a concept a good deal more 'mixed', much more modern and more profound.

More modern. Already he had an ear for noises, and was very sensitive to the musical qualities of natural noises. Noises – which it was necessary to learn to listen to – interested him, interrogated him, impassioned him; for him, these were models:[7]

> Messiaen works from nature; and Messiaen's approach to listening to birds – for inspiration, and for learning how birds sing – is exactly the analogue to our approach, which consists for example in beating on sonic objects to discover how they vibrate: *we are people who work alongside nature*; of course, such work alongside nature is for the musician a work of abstracting a certain number of *characters* which he finds in the natural sounds to which he listens; without that he only makes sound effects … But, the return to nature, to natural sounds, whether they be natural or machine-made, that is the best school for the modern musician.[8]

We see here thus designated the modern idea of models, to 'abstract' from 'concrete' nature[9] – a notion of nature less naïve, less immediate, and not at all decorative; François Bayle (prolifically and systematically) deepened the concept, Bayle being the other thinker and brilliant musician who concerned himself with the question.

Let us lay stress again on the *noises*, before tempting to go to *music*. It was really in connection with these that Schaeffer laid his most true, moving and new stresses. He always showed himself to be modest – too much so — as a musician and composer. This adorer of Bach dreamed of a new music to succeed by proceeding from natural material that the musical culture of the West had rejected, up to this time, quite systematically. But, for all that, he was always doubtful about whether the gamble had succeeded. In the springtide of new beginnings (tormented even so at the superego level), he had delightful flashes of wit, from this love, directed at this huge and tiny new world, and showed his claws in encounters with deaf musicians. In a broadcast of 1952,[10] on a background of charming sorcery made of recorded birds as if coming from an exoplanet, he remarked sardonically, if poetically:

> So what? What have you to say about that? Is it that it is pleasing or not? Have those little noises there the right to exist or not? Is there not a little world out there which is seeking a route to your ear? Is there nobody sensitive enough to gather them together, all these little signals, seemingly disorganised; from this world that lives without you, creatures of habit, men who sing the same refrains, the same old songs!

This manner of 'looking at nature'[11] reminds one of Roger Caillois, committed observer of the wildness of geology. This lover of 'generalised aestheticism', thinker–poet, saw for himself the sidereal silence of stones and their shapes and perceived there seeds of

[4] *Expériences musicales no. 5*, with Marie-Claire Schaeffer, radiophonic document, 1959.
[5] *Hétérozygote*, 1964.
[6] The 'precautions' are in the selection and arrangement: 'The question posed here is this: would it be possible in the rich matter of natural or artificial noises, to take up those parts which would serve as material for a well-arranged assemblage?' (*Présentation du 'Concert de bruits'*, 1948).
[7] Schaeffer's first works were called with perfect frankness 'Noise Studies' ('Études de bruits').
[8] *Les voix de l'avant-garde*, radiophonic document, 1959.
[9] Michel Chion calls that 'scientific reality', which he distinguishes from anecdotal 'human everyday life' (*Le poème symphonique et la musique à programme*, Fayard); scientific reality 'a complex of physical forces and laws' answers, however, more to Xenakis than to Bayle – and a forteriori than to Schaeffer.
[10] *Musique et Modernité*, radiophonic document.
[11] 'Do you observe nature?' is the question asked by Luc Ferrari in *Hétérozygote*.

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inspiration: 'One would say that the accidents of geology, at other times, the delicate structure of ligaments and membranes prefigure the endeavours of art … At many recurring moments in history, painters have suspected these interferences, and have even drawn advantage from them' (*Esthétique généralisée*). He does not cite musicians, which are always, as one knows, behind their colleagues of the plastic arts. But musique concrète provided the chance, not to be missed, to catch up. This was the chance to hear, in sonic nature, these 'delicate structures of ligaments and membranes' (and many other things) which also exist there – 'a world which seeks a path to us', and to force an entry into music, whether by imitation, by the levying of designs, of characters, or more directly still.[12]

5. At length (and beyond the subject of noises), we find in Schaeffer this belief profound and mysterious, a little mystical (and in any case phenomenological) in 'a hidden correspondence between the World and Man, of which music is one of the keys'. 'If music is a *thing*, its seat is within the man who experiences it,' he wrote. In the dialogue which governs this venture, if the *subject* is man, the (sound) *object* is nature; listen to the advice of this object ('which has something to say to us,' he told us again and again) – it is the advice given by Debussy on listening 'the lessons from the wind that passes by'. And music becomes the reconciling principle of this dual nature: the Nature–World, and the Nature–Man.

Finally, ideally, and logically, successful musique concrète will be at the point dreamt by their agreement. Musique concrète, for Schaeffer, ends by being (even if he forced himself a little, and even if we ourselves ask for this), 'the hope of being an answer to the questions about man.' One also remembers the celebrated variant on this, which forms the last line of the *Traité*, 'It is man, described to man, in the language of things'.

Thus musique concrète, which Schaeffer wanted to be abstract – or, to put it better, disconnected from reality (perhaps to save it from a misunderstanding that reminds one of the period, now far off) – comes to nature, in a manner of speaking, 'from on high'.

2. NATURE AND MUSIQUE CONCRÈTE

What follows is less a *reflexive* work than an *illustrative* one, illustrated by snatches of music. *Nature in musique concrète* (or rather the reverse: *musique concrète in natural itself*, as one might say 'on holiday', or even 'having a good time on an outing'): our intention here is to give a simple glimpse of it, and we have chosen what was easiest to get along with, where that famous nature gets going and bursts the screen of what François Bayle would call 'acousmatic'.[13] In short, nature in the shop window rather than as an abstraction or underlying archetype. The Nature–World was music Schaeffer did not want in the way that it is perceived in the common-or-garden sense (which all concrète musicians use – that is to say, those who are not completely at one with their master's reservations!): 'Sound recorded in nature'.[14]

This is not very serious, and, who knows, may be the proof of a surprising consistency in an anthropological sense. The musicologist Jean Boivin noted, in a learned article,[15] a tendency in our history of music to 'reduce the concept of nature to its most picturesque and least challenging manifestations' – from what I have called Nature–World. He is not speaking *only* about the Romantic age, which began before this – and in my opinion this tendency persists, in today's post-musique concrète, electroacoustics, acousmatics, despite the purist dictates of Pierre Schaeffer and the progress of theory! For better or worse: whatever may be necessary for our modern happiness (indeed, today, 'ecological'), and let the spirit of the great Olivier Messiaen rejoice. For us, musicians in the young twenty-first century, Nature is always, in the end, spontaneous, just like little birds.

2.1. Edenic

Let us begin with 'edenic' nature. Landscapes are embedded within musical works – deeply rural ones, an obvious example – using the facilities (photographic or phonographic) provided by magnetic tape to capture a simple reality. Landscapes, fragments of nature in the naïve meaning of the word are perhaps Romantic (Beethoven's dream in the Pastoral Symphony, that of Berlioz in *Scène aux champs*). These fragments, somewhat stylised, disconnected, are put together using a possible form of writing. And, indeed, one is always conscious of the writing, of a choice of writing, even when one has no wish to write. But here, this choice, is to give to these fragments this function above all others: that of being what one calls *recognisable*, that of having an impact by *evoking* the familiar, of making an *effect of realism*.

Jean-Claude Risset: *Sud*

Denis Dufour: *Notre besoin de consolation est impossible à rassasier*

Michel Redolfi: *Desert Tracks*

2.2. Repressed

The musical superego being one of the most powerful that exists, came late enough that musique concrète,

[12]Pierre Henry was inspired by texts by Roger Caillois for his work *Pierres réfléchies*.

[13]An 'acousmatic situation' is one where one hears, listens and understands without seeing, theoretically all the better for it – and this has been held since Pythagoras.

[14]It is an attempt to classify this exploration. This rapid taxonomy is just a reflection sketch: the 'demonstrative' pertinencies that will appear while reading it, will be truly understood only through the *listening* of the referenced musical examples. This is then a text with an *obbligato* musical accompaniment.

[15]*Musique et Nature*, in *Musiques du XXème siècle*, Actes Sud, 2003.

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despite its name, agreed to make this simple gesture of abandonment: embed in an *artificial* work a concrete bit which is not concrete, but a piece of *nature* – at the risk, for the author, of diminishing somewhat the prestige of the demiurge, rival of God. Actually, this music had begun by repressing as much as possible the least reference – the most trivial as Schaeffer would say, to the nakedly real. It was to achieve this that this music had to constitute itself. (One may compare this to Pierre Daix's reflection on Picasso, speaking of collage as the embedding in art of a body foreign to it, and speaking of it as a risky operation: 'With his first collage, Picasso came to justify the idea that he had at his disposal a pictorial space able to absorb a foreign body, something that was crudely real, a piece of non-painting.' (*Dictionnaire Picasso*, article – *Collage*, Laffont, Bouquins).

Thus, to stay with our idyllic or bucolic nature, Pierre Schaeffer mistrusted even the innocence of birdsong, and preferred to recreate a mechanical bird from a radio signal, which he would automate and make rhythmical to the point where it could form a mix (an exquisite one) of a feathered creature and a railway.

Pierre Schaeffer: *L'oiseau RAI*

In the same way, Bayle's *Mocking Bird* makes a mockery of nature. It certainly contains real birds as well as false, using their real voices but these natural ingredients are only the accompaniment, the 'landscape' of the bird in the title role which is, itself, artificial, all embracing and composite: even if at least the instrument which we hear there (an oboe) is its symbol, linked to its 'recto-tono' laugh.

François Bayle: *L'oiseau moqueur*

2.3. Manipulated

Then there are the electroacoustic and concrète musical works, once they had come to their aesthetic and technical maturity (which allowed them to *quote* the real insofar as it could accommodate itself within the expurgated spaces that had been 'de-realised'), these works for the greater part present the real in forms that have almost always been manipulated or twisted – one can say ambivalent, hybridised, transmuted. It is entirely normal to profit from the media, and the distancing and intervention that it authorises, to this *fixed* reality, this *reality* becoming an image, to work on it and modify it. The majority of natural landscapes thus will be 'fantasy landscapes', and from these there will be a proliferation of diversity.

2.4. Microphonic

The first *manipulation* (which is hardly one at all, but for all that a radical one) will be the one that consists in *enlarging the detail* of the landscape in the recording. Exploration of the unknown lies at the microscopic heart of the phenomena, where the microphone at once has the effect of the microscope; in effect, awakening the secrets in the sounds that one had thought to be the most familiar.

Iannis Xenakis: 'Little ember' from *Concret PH*

This simple change of scale itself guarantees the dislocation, giving it – already – a dimension that is at times fantastic, something that partakes of the 'marvellous'; that of *Alice in Wonderland* where one is suddenly smaller when we had been larger before. But – and this important – when one reaches the level where one no longer recognises anything, it also brings into the account the imperative of abstraction, a paradoxical imperative, which was, as we said, virulent from the first moment of musique concrète.

Ferrari used to evoke (and with relish) the memory of what he would call his 'microphonic improvisations, with big designs on transfigured micro-sounds'. He would specify what these big designs were – it was in order to make 'abstract music'; for one would make out phenomena of energy (energy being the underlying texture of nature), taking as examples the crackling (immediately audible in the music of Xenakis) or the 'rebounds'.

Luc Ferrari: *Tête et queue du dragon*

This very rich seam of *enlarged micro-worlds* has been continually exploited ever since. This is perhaps because situated on the abstract–concrete margin of knowable nature and also of our selves is a place where all the ambiguities are, offering us the unknown Nature–World and, using an analysis such as that of Rorschach, our most intimate ideas of ourselves, namely a territory associated with our fantasies, and where pure and unpublished formal propositions are tangled together.

François Bayle: *Labyrinthe*

2.5. Anthropological

In this fragrant place, in this 'fertile country', musicians are pleased to find again those dreams described by the philosopher Gaston Bachelard – anthropologically speaking – which are anthropomorphic projections, based on the 'four elements' of ancient Alchemy and imaginary archaic thought: this understands the world of the senses in materialist and dynamic terms, and is thus completely compatible with the 'primitive' nature of the materials (suggesting an abundance of textures, colours and the tactile) of musique concrète.

One does not include any more in this account the 'music of water' (this is very stylised).

Bernard Parmegiani: *Aquatisme*

… From 'earth', (which the sounds will evoke all that is harsh, dry, powdery, piled together).

Bernard Parmegiani: *Moins l'infini*

… From 'fire'.

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Bernard Parmegiani: *Dedans-Dehors*, a fragment marrying in luxuriant fashion the two extremes of water and fire.

… and from 'air'.

If these cones of sound (which we know to be the traces of gliders slipping through the open sky) in a way communicate something, as birds do, from their surrounding and 'natural' habitat.

Luc Ferrari: *Hétérozygote*

Immediately (for it is thus that Bachelard put it in evidence – working himself from poets' texts) these elements, recognised in the subconscious in virtue of their sounds, make us dream, or rather associate: are hypercharged, made personal. They give way to fantasmagoric constructions and inspire examples from the landscapes of dreams. Nature there mingles with humanity. Our desires are submerged.

Bernard Parmegiani: *Dedans-Dehors*

2.6. Life-size

So much for nature on the microscopic–microphonic level. At the other end of the scale we find the *macro-objects in life size*, those that one calls for example 'meteors', wind, rain, storms, etc. There are also, of course, the singing of the streams and the swing of the waves. Less abstract – one greets them with (re)cognition – than the ambiguous enlarged mini-noises, they are the terrestrial or cosmic celebrities, These have also shaken off their natural context, the 'wide world': cut-off, reframed, replaced on the page, they benefit aesthetically from their splendid isolation.

Jean-Claude Risset: *Elementa*

2.7. Simulated

Macro-objects are sometimes *simulated*, for instance at the aid of their miniature equivalents – which are their structural relatives. There was an ambiguity, one frequently recalls, dear to Da Vinci: is this a great noise heard from afar, or a small one heard close to?

Parmegiani simulates in this way, very close to the natural model 'storm', with its surges, its flashes, its streams of water, followed by relief.

Bernard Parmegiani: from *Natures éphémères* to *Matières induites*

The whole form of a fragment such as *Etude élastique* by the same author is based on this 'archetype' called natural (a criss-cross of tension, fulfilment, explosion, appeasement) where the storm which one recognises (although reconstituted) is also the metaphor for our human psycho-physiological explosions.

Less anthropomorphic, also all simulated or reconstituted, this is the false night, a hybrid of the instrumental and the electronic, of Parmegiani's *Points contre champs*.

2.8. Photographic

So, here we are in the middle of fantasy landscapes. Before we go a bit deeper, let us cast a glance on natural landscapes, without special effects, 'edenic'. Intact nature and true 'naïve' photographs, this time taken with a wide angle, without the semi-doctoring of the close-up that comes close enough to disorientation: holiday snapshots.

Luc Ferrari: *Presque rien no. 1*

Ferrari who, to be sure, used to be pleased with these 'lessons from things' taken in close-up, is also the person who invented what he called 'anecdotal music': derived over all from an open landscape, and with a preference for the 'natural' in the ordinary sense of the word, that is also to say, often mixed with the 'human' – proportionately more natural, and proportionately more recognisable.

Luc Ferrari: *Presque rien no. 1*

2.9. Urban

Here it is the seashore, a village. That is already something more than what Umberto Eco has called 'an unspoiled environment': in this natural setting one has humanity itself, with its engines or its farmyards, which, like spices, offer a sense of relief to the landscape. A nature changed again, more spicy (which might be for us more 'natural' than the other), is that of the towns. The *townscape* – which is of course anecdotal – certainly implicates itself with nature a little, in a classical or ecological sense. One can even say that it *exists* as a second sort of nature, we have been familiar with it for so long. Nevertheless, we will hold onto it as an image integrating classic nature, leaving aside the effects of the Bachelardian imaginary (see *La flamme d'une chandelle*) to 'naturalise' the noises of towns, the habitat of engines – a genre obviously illustrated in anecdotal music. Townscape has been translated into a more complex composition (Jacques Lejeune, Luc Ferrari, Évelyne Gayou). For example, superimposing several pictures, several spaces, mixing the spots, bringing in flashes of the 'artificial': in brief, letting the composing show – just as a town perhaps also rewrites nature?

Luc Ferrari: *Musique-promenade*

Jacques Lejeune: *Cantique des cantiques*

Évelyne Gayou: Zaoum

2.10. Concerning fantasy

This special effect is a composite and complex treatment, so that sometimes one does not know if it is natural or not – in natural surroundings, or as the result of a carefully thought out reconstruction (for the single recording is perhaps very clever, if one opens a well-adjusted ear). This opens up the large category of artificial landscapes: those that have been subjected to

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tricks, retouched, invented, rewritten. Their character (dream-like or surrealist as it may be) will be able to diversify according to the whim of inspiration and the creative temperament – as fantastic as a fairy tale.

Between good form and anxiety…

Jacques Lejeune: *Blanche Neige*

… Or quite comic/poetic (like sprites spluttering and teasing) …

François Bayle: *Jeîta*

… Suggesting the terrifying …

Lionel Marchetti: *La grande vallée*

… Science-fictionesque, redolent of the cinema, the strip cartoon…

François Bayle: *L'oiseau triste*

François Bayle: *Derrière l'image*

François Bayle: *Le sommeil d'Euclide*

François Donato: *Annam* — where the elegant sounds of combustion, coming as straight trajectories, launch our imaginations conventionally into outer space.

… Or cop stories – based on chases in the mountains, with hairpin turns and screaming tyres.

François Bayle: *Jeîta*

2.11. Written

And all that one will wish or be able to imagine. But now let us leave the semantic typologies. Let us change strategy for defining, given that we defined the landscape of fantasy by the written experience – with its free if arbitrary creator – and in conclusion let us take a look at *how one writes nature* and let us make out some 'figures' at the heart of a list that of course remains open.

2.11.1. Colourisation

Almost at ground level in writing, comprising the tinting of an anecdotal landscape by confining it more or less harmoniously in a jumble.

Michel Redolfi: *Desert Tracks*

2.11.2. Mixtures

More difficult and subtler is the mixing between 'concrete' music streams. There are three of these: the fly from a famous western, a flow of fresh water, and a distant aircraft:

Michel Redolfi: *Desert Tracks*

2.11.3. Fusions, hybridisations

Acousmatic ambivalence is the rule in these forms of music: since one sees no more, one confuses them. Risset speaks in a pretty phrase, of chimeras (in the sense of assembling a monster of different parts) for his own hybrids. His are above all made from the famous 'cross-synthesis': a kind of transplant, a way of marrying together in close proximity (and technologically) diverse sounds – the contours of one object will go towards affecting another, which while keeping its *matter* will change its energetic *profile*. But Ferrari, using the oldest of techniques, at one time used to obtain very convincing results with pebbles, grinding in a backwash mixed with, perhaps, the sound of a glider in flight. A fusion of archetypes, if one listens while applying Bachelardian terminology: it is water 'gone with' (as Rimbaud would say) earth and air.

Luc Ferrari: *Hétérozygote*

The same thing, with fire mixed with air, if one wishes very much that these dry cracklings are fireworks.

Luc Ferrari: *Hétérozygote*

This beautiful wave resembles a hybrid, all layered electronically, and as if reconstructed in the cubist manner from a number of facets.

Michel Redolfi: *Pacific tubular waves*

Here the concrete object is interwoven and rhythmically striated: is it a train or is thunder?

Christian Zanési: *Saphir, sillons, silence*

2.11.4. Contrasts

There the bubble of 'nature' is placed in a straitjacket of rough-cut rhythm – which if carelessly closed will open up again like a geodesic dome; and under the carapace a heart of emptiness and of wonderful birds appears.

François Bayle: *Derrière l'image*

2.11.5. Métamorphoses

The most spectacular metamorphoses are those perhaps which are made to pass from a transcendental abstraction into the most familiar of images: one recalls in *Hymnen*, region 2 (Stockhausen) the emergence of the ducks (singing the Marseillaise!), issuing jokingly by a transformation from a shapeless substance. Here, more dramatically, low-frequency pulsations shrink progressively, revealing giant steps.

Jacques Lejeune: *Blanche Neige*

2.11.6. Kaléidoscopies

Multi-facetted writing also operates metamorphoses: placing the emphasis this time on discontinuity. One synthesises a new image, kaleidoscopic, all glowing with brief flashes of insight, of scraps (of nature) in contrast.

Denis Dufour: *Notre besoin de consolation est impossible à rassasier*

2.11.7. Transplants, collages

This flock of sheep can be shown as a group in movement, a mass acquiring grafted on bits of great diversity (something of the role played by Mahler's *Symphony* in Berio's *Sinfonia*!): collage for a

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multicoloured marquetry of images, where 'nature' carries to one's liking its conciliatory flow.

Luc Ferrari: *Hétérozygote*

These are the abstract punctuations that Michel Chion on the contrary interleaves in his continuum of the noises of concrete crickets.

Michel Chion: *Préludes à la vie*

2.11.8. Musicalisation

This atmosphere of seraphic nature (a group of little bellflowers like stars) becomes more seraphic yet when a modulation, 'musical' in the most classical sense of the word, tonal, makes its inflection artificial:

François Bayle: *Jeîta*

2.11.9. Musicalisation and mechanisation

The concepts are not very far apart – that of music and that of mechanisation: such flashes of contingent sound that are made mechanically become music very 'naturally'. The mechanism first of all prolongs their life, a case of *maintenance*; the most intelligently made will open out into any modulation one wishes; the mechanism from the start evens out oddities, then it proposes regulated variations. This is a basic principle of musique concrète – again to be found in the most sophisticated of today's software.

Here is a sound stream that is almost smooth; one might describe it as being knitted from the flashes of a broken jar.

Denis Dufour: *Bocalises*

Droplets of dancing water, enclosed in a sort of echo chamber like a box, make a swing that is both mechanical and organic.

François Bayle: *Jeîta*

2.11.10. Suggestion: nature subtitled

A way of writing nature, of manipulating it, without touching the substance of the music, that is to play with the sense – such as is conveyed by those powerful non-musical media which are words (or situations). A text, a simple title, an intertitle (a verbal sequence placed within the work, or attached externally on its threshold) is enough to colour our perception. It is an effect made by all paratexts (to use a word of Gérard Genette's) – above all when concerned with music, an art semantically very easily led, very subject to being influenced.

This unreal wind, exhausted, sound of the desert, sound of silence – will it be as eloquent without its announcement 'The Desert'? (Equally, do these little crackling twigs profit by being described as some bivouac or other?)

Michel Chion: *The Temptation of St Anthony*

At the same time, that other landscape of fantasy is constructed, proposed, imposed by the text: the minute dry cracklings of the surface of a black disc become without damage the liquid lapping of a river (excepting the 'thin reeds' of the Nile that clatter together) in the weightlessness of half-sleep.

Michel Chion: *The Temptation of St Anthony*

There can also be porosity between the two sound systems, without words this time. That child-like displaced voice (let us assume that it symbolises nature), the tonal chain that accompanies it deceives the malaise already latent there. There is transferred from the sense between two surfaces: the low-pitched chain, threatening, apparent as a text (with the effect of a cinematographic coding), impregnates with anguish the fresh voice; the shadow carried from one wipes out the free semantic virtualities of the other.

Daniel Teruggi: *Instants d'hiver*

2.11.11. Arbitrary assembling

And, on the contrary, it happens that the person (musical or even dramatic) who is at the first surface does not comment on (and is not commented upon by) the bottom, does not establish with it any rapport: purely gratuitous, provocative, dadaist? This gamble once made, with an 'exquisite corpse', daring in the '*why not?*' that is its make up, will function mysteriously: it is for each person to say why, finding which seeds migrate for them between the two ends, from sound that one can recognise and word that one can understand.

Denis Dufour: *Messe à l'usage des vieillards.*

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