

THE TIMELESSNESS OF MAXIMAL MUSIC

Flo Menezes

Studio PANaroma

Department of Music –State University of São Paulo
(Unesp)

ABSTRACT¹

If we consider as *music* that speculative, pleasant activity, yes, but which is at the same time essentially investigative, experimental in nature – the radicalism of which standing above all on the dialectical relationship between the new and the revisitation of the old in a new context –, we should recognize that, since such field of knowledge exists in a considerably autonomous manner, it has always been connected to its close cousins: mathematics and physics. From the earliest times, when Pythagoras expressed his view concerning *the harmony of spheres*, passing through the *trivium* and *quadrivium* of the Middle Ages and later through the scientific further developments of that Pythagorean concept by Johannes Kepler [2], until contemporaneity, when physicists themselves appeal to musical constitutions to solve problems of physics and the universe, the degree of relateness between music and science is remarkable and evident.

Simultaneities, decompositions, space/time and light are discussed here under an aesthetic approach.

1. MATHEMATICS OF AFFECTIONS

The distinctive feature of music in comparison with science lies on the fact that it unites mathematical structuring elements and the most abstract and affective expression of man. Therefore, music may be defined as a *mathematics of affections*.

Being so, more and more music – even if strongly charged with emotional character – shows a brotherhood of blood to physics, choosing issues common to both these spheres of knowledge as the focus of its attention. In that context, electroacoustic music seems to be the optimal field for the development of some relevant aspect of this intimate relation, since the possibilities of manipulation of time and space in studio are practically unlimited.

If time processing allows both radical stretching of structures and micro-fragmentation of spectra, spatiality – so well defined by Gottfried W. Leibniz as the ‘order of coexistences’² – develops to the utmost consequences the co-structuring of events traditionally so aimed mostly by the orchestral writing.

¹ This text is an abbreviated and varied version of an earlier article written in 2003 (firstly available at the Internet), which was later published in 2006 [1].

² In opposition to *time*, “order of existences”. Leibniz writes in 1714: ‘L’Espace bien loin d’être substance, n’est pas même un Être. C’est un ordre, comme le temps, un ordre des coexistences, comme le temps est un ordre entre les existences qui ne sont pas ensemble’, *apud* [3].

2. SIMULTANEITIES

Both the evolving process of language sounds performed by a child – named by Roman Jakobson as *stratification*³ – as much as the assertion held by biology, since Charles Darwin, that the universe may be described as a system in permanent (r)evolution of increasingly complex structures developing from simpler forms – an assertion proven by the thermodynamic laws in physics, concerning the conservation and dissipation of energy in a given process –, point to an eulogy of *complexity*, or said in musical terms, a growing and, luckily, unattainable apogee of *simultaneities*.

This is indeed what distinguishes speculative music from the “light” forms of music, called “popular”, and which are, in short, entertainment music. Along the history of western music, compositional thought went along a pathway of an increasing simultaneity of events. Even in the seeming simplicity of elaborate melodies, there is the unending search for evolving processes taking place at different levels of listening, independently and concurrently. In this lied the poetics of a master as Luciano Berio, for instance, who searched for a *latent polyphony* in the melodic line of his well-known *Sequenze*. To apply a term from the poet Edoardo Sanguinetti, so dear to Berio, we aim here at a maze of multiple entrances and exits, a *laborintus* carefully intertwined by the composer, without exercising absolute and unilateral control over the perceptive result, echoing the intuition of the physics of the superstrings, for which the microscopical fabric of the universe constitutes a multidimensional web, richly composed of twisted chords continuously vibrating. In this also lied the potential for openness, as formulated by Umberto Eco in *Open Work* [5]: not only in the casuistic operations of pretense “chance”, but mainly in the multilateral potentiality of experience even before the seemingly most “closed” object. Such is the definition of *maximalistic* or *maximal* poetics in composition⁴.

Maybe the closest proximity between *maximalism* in composition and the physics, who proclaims complexity as its motto, is the link connecting Albert Einstein’s relativity to that relativity which presides over the temporal processes in certain works of speculative music. Differently from entertainment, to which music performs the utilitarian function of a cushioning

³ German *Schichtenbau de Sprachlautsystems* (literally *construction of layers of the language system*) [4].

⁴ As I would come to define it in 1983: *música maximalista* [6].

backdrop on the grounds of a uniform, catatonic temporal grid, in radical music the time model and the easy parameterization of metrics are, by principle, absent. Rhythmic perception gives way to another perception, essentially lasting – a *durative writing* –, which prioritizes the extension (no matter how ephemeral it may be) of sound as data of its aesthetic essence: a clear reference to the Cartesian concept of *extensio* as the essence of matter. In the core of such attitude towards sounds, what vulgarly seems to be entertainment gives way, consequently, to an *intertension*. When the intention is not to *intertain*, let silences be heard!

3. DECOMPOSITIONS

The issue of simultaneities reflects both on the macroscopical level as in the micro-universe of matter and, in the case of music, of sounds. The wave patterns of probabilities proclaimed by physics more recently, especially through the superstrings theory, show that subatomic particles must be understood not as minimal entities, but rather as interconnections between increasingly subcutaneous aspects of the materiality of things, its weft constituting the fabric of events in the universe: contextures of interdependent aspects.

There could not possibly be anything more attuned with the vibrations emanating from music than this systemic view of physics. Berio himself had already said that a sound has no importance whether considered regardless of a context⁵. It may be that there is some interest – and there is always some – regarding its particular weft, apart from any syntactic contexture, but sound only deploys meaning when contextualized in a musical fabric through the interplay with other sound objects. Nevertheless, not only at the level of its “externalization” does sound acquire meaning and sense. In its very internal constitution we already notice how much its constitutive aspects – frequency, amplitude and duration, all conditioned to the energetic evolution of sound along time (sound morphology) and resulting in its global perception known as timbre –, which are articulated in perceptive regions more or less autonomous, are strongly related among themselves.

There lies one of the healthiest contradictions in music making: the dialectics between global sound perception and the particularized perception of its subsidiary aspects. Since the birth (or consolidation) of musical notation – the process of *notational* transcription should not be mistaken by the compositional elaboration process itself, which we may call *scripture* (*escritura*), as opposed to mere writing (music notation) –, musical composition went through the path of sound representation, at first attached to verbalism, which would account for the prosodic aspects of language.

Pitches, durations and, much afterwards, intensities came to be written autonomously, as elementary constituents of a global object: sound. In a highly abstractive exercise, such an articulation has allowed, despite its being based on the interdependence of these attributes, the concomitant elaboration of perceptive plans that accounted for the distinctive aspects of the rough, concrete experience of listening to sound as a wholeness of sound parameters. If, on the one hand, this compartmentalization of sound allowed the writing, *scriptural* techniques to evolve, it encouraged the illusion, on the other hand, that such aspects could be thought of as absolutely independent towards one each other.

The apogee of such disconnection of the sound attributes, which occurred during the phase of integral serialism in the beginning of the 50's, allowed for an increasingly responsible and totalizing awareness towards sound and composition parameters, as well as it led, paradoxically, to works in which the control over sound phenomenon itself was lost, so overwhelming was the pretense interdependence of sound constituents. Strictly saying, ultra-articulation led to syntactic disjoining of composition. However, notwithstanding the prevalence (at least apparently) of calculation over intuition, the acquisitions concerning the organization of musical material were unquestionable, and even irreversible – from the standpoint of a radically speculative music: sound *de-composition*, though problematic, proved to be totally necessary in regard of musical (re)composition.

In this sense, Karlheinz Stockhausen will define the *Dekomposition des Klanges* (*sound decomposition*) as one of the essential criteria of electroacoustic poetics [8]. Having recourse to studio devices, electroacoustic composition actually aims at the same decomposition of sound targeted by musical writing itself, though using more limited representational means, as it has always done and still does, in order to rearrange it and recompose it afterwards, bearing in mind the interactivity between its minimum components. Amidst such an investigation process, at some given moment, all decomposition stops to give way to distinct dimensions of a same constitutive element, releasing its potentiality into the realm of action/perception of another attribute, before which it reveals itself as essentially *interdependent*. The Cartesian extension that lets envision matter essentiality reveals itself, here, as a transference phenomenon. In this sense, the very notion of *entity* stands out in the speculative musical context, namely when referring to the endless possibilities of *harmony* in its broadest sense: as *interconnection fields*, structured in aggregates sometimes prevailingly synchronical (chords), sometimes prevailingly diachronical constitutions (modules, profiles).

⁵ ‘I am not interested in sound by itself – and even less in sound effects, whether of vocal or instrumental origin’; and referring to vocal gestures: ‘They must be considered and perceived in their proper context’ [7].

4. ACTIVE AND RELATIONAL SPACING

The concept of movement is relative; so says the physics of superstrings; so said Einstein's relativism. But relativity is not restricted, as we know well, to the notion of movement: space itself is relative. And furthermore, it is nonetheless *active*.

This assertion goes back to the theoretical duality that involved thinkers like Isaac Newton or, again, Leibniz. Differently from the British physicist, Leibniz stated that space did not exist in itself. The existence of space was possible due to the existence of things in the world. Without things, there would be no space. Thus, space mediated worldly things as much as it depended on them in order to be unleashed as a more or less autonomous notion. More than relative, space, in Leibniz' conception, is essentially *relational*.

On the other hand, as Brian Greene properly observes, the linkings between gravity, accelerated movement and curved space led Einstein to understand that the presence of a mass makes the space fabric to become curve [9]. Space would not be a simple passive "arena" where the events of the universe are staged, but instead it would rather be a relational *agent* conditioning the perception of these same events.

Both the relational aspect of space and its active capacity for perceptive conditioning can be regarded as vital factors in a pertinent electroacoustic poetics: *composing space* means acknowledging its syntactic potentialities, interdependent with the matters, i.e., with the sound objects themselves. If, without the existence of any mass, space in physics is flat, in music space does not even exist without sound. And beyond this seeming obviousness, space without movement, though existing, falls short from being acknowledged⁶.

5. MAXIMALISM AND TIME SUPPRESSION

One of the most extraordinary contributions ever made to understand complexities as motto of a radical attitude regarding sound listening, has been the formulation by Olivier Messiaen concerning the "laws that perfectly summarize the lived duration":

'Feeling of present duration. Law: in the present, the more time is full of events, the more it will seem short to us – the more it is empty of events, the longer it will seem to us; *Retrospective assessment of past time.* It is just the opposite of the preceding law: in the past, the more the time has been full of events, the more it will seem long to us now – the more it has been empty of events, the more it will seem short to us now' [10].

Under many angles, this formulation on behalf of complexity has already been detailed in some previous writings of mine. Though, it is a curious thing, in this

⁶ It was namely under this point of view that in 2009 I conceived MPSP (MusicPanSpace) – a standalone application written in Max/MSP and available for free at: flomenzes.mus.br

context, to understand it from the standing point of its relations regarding more modern physics.

According to all our deductions issued from the diagnostics that allow us to understand the incredible, though up to now unattainable magnitude of light speed, we draw the following conclusion: the more a particle approaches light speed, the *slower* it becomes from the point of view of an onlooker. According to Einstein's formulations and those of the special relativity concerning the division of movement among distinct dimensions, which in most circumstances lead us to the conclusion that the greatest part of an object movement occurs in time, and not in space, it arises that the more dimensions have the leaves of world – and the theory of superstrings supports that there might be more than 20 of such dimensions, the four dimensions we know being only the most tangible ones, according to our world comprehension/perception –, the slower will be the events in the universe.

Since white light is, as we know full well, a mix of all colors, hence there is a multiple simultaneity of sound events which we perceive as being shorter than it is in fact, and which becomes closer to light by means of a "colorist" perception, at the same time as it gets farther away from the somber diluting poetics which irradiate but a few reflections only. Thus, it will tend to be, in the memory of its past experience, paradoxically longer and longer. Memory extension is here (con)fused with temporal *rallentando*⁷. If the appraised suppression of the very idea of time arises, while listening, from the interest on colorful intricacies that such a complexity provokes on speculative listening, and if the sensation of lived time is substantially reduced, the pronounced enlargement of a significant event in the memory frame makes us understand well the real significance of such a formulation: good music is close to full-fledge light.

6. ACOUSMATICS AND INVISIBLE LIGHT

Einstein had claimed that all objects in the universe are always traveling through space-time at a constant speed – i.e., light speed –, but the multidimensionality necessarily slows them down. It is as if each and every object were rendered equal, hypothetically, to the quality of that supreme mix of all colors, but since it is inserted in the world through more dimensions, its speed "is split up" and never actually reaches full light itself.

The conclusion, both aesthetically and according to the stand point of physics, is implacable: if an object traveling at light speed throughout space does not leave any speed available for its own movement through time, becoming absent and light-years away from our most worldly aspects, we will come to realize not only that light itself does not get old, but also that at light speed time does not pass. Also, within the scope of

⁷ And how interesting sounds by now the maximalistic phrase of Ezra Pound when he minimally writes: 'Confusion, source of renewals' [11]!

complexities, absolute suppression of time and the approach to *lux aeterna*, even though they are and have to be aimed at in every work, are not possible, whether humanly or worldly. Full-fledge light is, therefore, unattainable.

Luckily or fatefully, however, an illuminated work is not restricted to light itself, and in art, the process means are always more significant than purposes themselves. In art the first ones do justify the latter. The *intention of work* is revealed in the core of the very work in progress, as being more important than its bare appearance, and from that aspect emerges the importance of the *musical gestures*, which, as light beams, point out the unattainable perfection through the bias of *directionalities*.

It is in such a context that the fragmentary motto of Anaxagoras, who with a simple phrase so wisely predicted phenomenology almost 2500 years before its remarkable statements were formulated by Edmund Husserl and Merleau-Ponty – bringing us to the “reduced listening” supported by Pierre Schaeffer, and by the electroacoustic music also –, reveals all of its contemporaneity, reinforcing the value and pertinence of an acousmatic piece. In the world of life (*Lebenswelt*), no light can be completely full-fledged, since ‘what is shown is just an aspect of the invisible’ [12].

7. REFERENCES

- [1] Menezes, F. “A estonteante velocidade da música maximalista – música e física: elos e paralelos” (November 2003), firstly published at the Internet, then later in [6], pp. 447-462.
- [2] Kepler, J. *The Harmonies of the World*. BiblioBazaar, Charleston, 2008.
- [3] Rovira, R. *Léxico Fundamental de la Metafísica de Leibniz*. Editorial Trotta, Madrid, 2006, p. 18.
- [4] Jakobson, R. *Kindersprache, Aphasie und allgemeine Lautgesetze*. Suhrkamp Verlag, Frankfurt am Main, 1969, specially p. 59.
- [5] Eco, U. *Opera aperta*. Tascabili Bompiani, Milano, 1962.
- [6] Menezes, F. *Música Maximalista – Ensaio sobre a Música Radical e Especulativa*. Editora Unesp, São Paulo, 2006.
- [7] Berio, L. *Luciano Berio – Two Interviews* (interview 1: with B. A. Varga). Marion Boyars, London, 1985, p. 141.
- [8] Stockhausen, K. *Texte zur Musik 1970-1977*, Band 4. DuMont Verlag, Köln, 1978, pp. 360-401.
- [9] Greene, B. *O Universo Elegante – Supercordas, Dimensões Ocultas e a Busca da*

Teoria Definitiva. Companhia das Letras, São Paulo, 2001.

- [10] Messiaen, O. *Traité de Rythme, de Couleur et d'Ornithologie*, Tome I. Alphonse Léduc, Paris, 1994, p. 10.
- [11] Pound, E. *The Cantos*. Faber and Faber, London, 1975, p. 100 (Canto XXI).
- [12] Anaxagoras. *Fragmentos*. Aguilar, Buenos Aires, 1966, p. 66.