Bulletin of the *Transilvania* University of Braşov
Series VIII: Art • Sport • Vol. 4 (53) No. 2 – 2011

SPECTRALISM – INTERFACE BETWEEN THE CREATIONS OF GÉRARD GRISEY AND FRED POPOVICI INTERFERENCES, COINCIDENCES

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Abstract: *Spectralism is one of the most interesting and topical tendencies in contemporary composing. All processes that take place within the sound are resources for prospecting, investigating and then generating the poetics of sound composituum. The spectral music also represents a counterweight to what has been called Structuralism or Integral Serialism in music since the '50es. This study discusses the aesthetic product of spectral music like a return to nature, archetypes, the intrinsic need to restore the image to the sound, but also the composers who imposed this conduct in their creation strategy. Gérard Grisey, considered the father of spectralism, and Fred Popovici, the Romanian composer who plunges beyond the intimacy of sound and projects its inner processes into space, will be considered in parallel.*

Keywords: *spectralism, Grisey, Popovici.*

1. Introduction

Motto: Nous sommes des musiciens et notre modèle, c'est le son, non la littérature… non les mathématiques… non le théâtre, les arts plastiques… la géologie ou l'acupuncture. [We are musicians and our model is sound, not literature… not mathematics… not theatre, the visual arts... geology or acupuncture.]

Gérard Grisey

I will not insist too much on the importance of the paradigm change and „epistemic cut" [1] represented by the "ecological revolution" – as the composer G. Grisey defines Spectralism.

As it is known, the roots of spectralism (movement developed in France by the works of G. Grisey, T. Murail, H. Dufourt, M. Levinas, R. Tessier etc.), are rhizomatic [2] (in the meaning of Deleuze) and have their origin either in the famous Vorspiel at Rheingold, or in the refined and complex sonorities of Debussy's "Games". Its fathers (ancestors) can also be found on

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several lists, where the number of nominalisations varies according to their authors' preferences. In any case, O. Messiaen, G. Scelsi, K. H. Stockhausen (especially with his work *Stimmung*) are the figures mentioned most often.

French Spectralism is a school. The students of Messiaen's composing class – therefore from the same generation – decided (under the influence of a few personalities – the predecessors being mainly G. Scelsi and H. Rădulescu) to find the genuine nature of sound (electro-acoustic research also played a part in this choice), thus rejecting the structuralist perspective in music, in other words, the integral serialism.

Among these young composers (who later adopted a joint type of aesthetics and founded a contemporary music ensemble - *L'Itineraire*), Gérard Grisey and Tristan Murail are the most remarkable ones by the dimension of their projects. Particularly Gérard Grisey, by his premature step into posterity, becomes one of the "classics" of the sound art in the 20th Century (Angelo Orcalli's study *Fenomenologia Della Musica Sperimentale* (1993), dedicated to the works of I. Xenakis and G. Grisey, should be analysed).

2. Grisey – the father of spectralism

The cycle *L'espaces acoustiques* (Prologue, Periods, Modulations, Transients, and Epilogue) was often compared by Grisey with Wagner's Tetralogy. Beyond a certain presumptuousness in this comparison, it is very clear that *L'espaces acoustiques* represents a fundament of the music of today and of tomorrow.

The composition called *Modulations* (the cycle's fourth part), for 33 instruments, represents in my opinion the central part of the cycle, by its complexity, radicalism and writing manner. Here – according to the composer's own words – there is no longer any musical material in itself; it is simply turned into a becoming of sound, as everything is movement [3]. The only landmarks [4] in this fluctuation are: a spectre of harmonics, a reservoir of partials, transient areas, formants, additional and differential sounds, white noise, filtering.

Modulations allows – according to researcher Ivanka Stoianova – an *endless* [5] analysis regarding the grounds of Spectralism themselves.

Is Spectralism [6] the future of music? Tristan Murail asks himself. Today, several composers, musicologists, music players ask themselves this question. Moreover, Murail thinks that – at a certain point in time – Spectralism combines with computer-assisted music, thus standing every chance to be the decisive factor in pushing the future music towards new intentionality directions.

As quantum physics has been and still is the subject of discussions regarding the spectacular changes by probing the image and nature of reality, in the '60es a new creative machinery, full of potentialities regarding the specificity of the knowledge of sound as element in itself of the composition's construction could impose itself in music. This was possible by cultivating the perception according to the latest conquests in the field of electro-acoustics, to progress in the domain of sciences, of promoting a non-formalist vision on the global sound phenomenon. Local causality, which circumscribes the relationships between sounds regarded as items outside itself (in this case, the inner dynamics aspects of vibrating processes are not highlighted, but the temperate aspects of sound) was replaced with a far more refined concept, that of "global" causality. Sound items stop being separate, and "somehow seem to touch each other, no matter how far apart they are from one another." [7] These sound items come to

life within the dynamics of the vibrating act and are actually a complex of transient manifestations, micro-particles conditioned by the dynamism caused by the pair sound-noise.

Thus, in accordance with quantum theories, "the classical concept of [sound (n.n.)] matter in the sense of substance was replaced by the idea of tissue or network of relationships between events." [8]

The items with which the composer used to work – even after the waterfall of challenges brought by the techniques of Integral Serialism – were replaced with new relationships, connections, vibrating processes and patterns, thus coming away from those producing local causality.

The newly appeared pattern is taken from the ever more obvious presence of new types of physics on the firmament of scientific knowledge, but also from the art that has become according to the consequences brought forth by these new physics, in which "time does not look like a straight railway at all anymore, on which one can only go in one direction [...]" [9]. We are talking about a time not sustained by classical assertions, which become – at a deeper, more responsible look – simplistic, with organisations of the sound material that inhibit prospecting and coming closer to some ultimate, more dynamic, more creative principles of understanding reality.

3. The spectralism in Romania

First of all, a brief, „historic" look at the spectral phenomenon. There is a Romanian Spectralism, but which cannot be considered a school [10] – and even less a homogenous movement; it originates on one hand in Byzantine chant (in which the acoustic relations between melody and fundamental are well marked [11]) and, on the other, in George Enescu's creation, who succeeded, through heterophony, to see the complex relationships between sounds and their functionalities – what greatly anticipated today's electro-acoustic research [12].

Here I must mention that – starting with the '60es – the composer Corneliu Cezar had the intuition of a music different from the epoch's context (serial, post-serial, mathematic, random etc.), music that relied on the phenomenological data [13] of sound production. His generation colleague Octavian Nemescu also exploits the spectra of harmonics in an ecstatic, contemplative music, initiated by an "archetypal sound programme".

The most radical of all Romanian Spectralists were, however, Horațiu Rădulescu and Iancu Dumitrescu. The first, a musician of international fame – had a decisive influence on the French spectral School.

His music explores the extreme areas of sound range, by means of a complex and bold instrumental technique. At the same time, Dumitrescu (who calls his music "hyper-harmonic") puts together the phenomenological approach of vibration production with an non-conventional (non-standardised) instrumental technique.

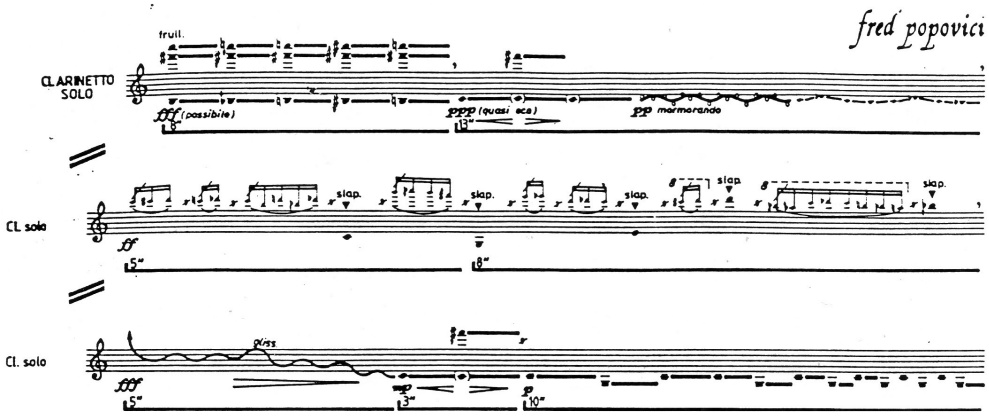
The acoustic situations for which Iancu Dumitrescu opts are to be found at the border between the psychodynamics created by the behaviour of the sound item, shaped by the experience with the quest-dominated values in the area of computer-assisted music, and the tendency to translate this experience in the field of instrumentalising a "hidden" potential of sound within its manifestation.

4. Interferences between spectral technique of Grisey and Popovici

It is interesting to prospect a special case of Spectralism – defined and emancipated both theoretically, but also in his own creation by the composer Fred Popovici.

The *Concerto for Clarinet and Orchestra,* the *Concerto for Cello (Contrabass) and Orchestra* and *Introduction to the Anatomy of Sound* are works where the world of the small infinite, of moving harmonic quanta, creates a world in which the differentiation tendencies are not obvious, but "hidden". These "hidden" trends, which may appear weak, evolve, become important and strong in a world in which the particles of sound are preserved, compressed and then expanded to a large scale in the orchestra.

The *Concerto for Clarinet and Orchestra* (1980 -'82) evolves on the coordinates of two neighbouring spectra (C and G), using an acoustic-mathematic (logarithmic) pattern of organising spectra (Fechner's Curves). The ratio of their fundamentals is 3/2 (the quint ratio is the one offering a large intersection regarding component sounds of these spectra). Moreover, specific electro-acoustic procedures are used here (ring modulation, residual areas) with the aim to configure the microstructures of form by *simulation*. The composer also tackles this work from a heterophonic perspective, in which he alternates distinct temporisations of the large musical form. We are talking about the sustaining state (giusto) implemented to the orchestral construction, and the rubato state for the solo instrument – the latter implies a quasi-random writing (see the example below).



Concerto for Clarinet and Orchestra – score, page 1

The *Concerto for Cello (Contrabass)* (1983-1984) is an exercise of elaborating an algorithm for generating possibilities (probabilities) of a becoming of sound by inter-dialecting several neighbouring spectra. Fred Popovici proposes the following layer sequence of spectra: the sound C^3 from the over-high register is, in a row, the harmonic nr. 31, 29, 27, ..., 1 of some ever changing fundamentals. On the other hand, the same sound C (this time in the low register) is the fundamental of another spectrum, which is enriched with the fundamentals 1, 3, 5, ..., 31. The two spectrum types (corpuses) unfold simultaneously in the sound development, but following different algorithms, as they are distributed on two stereophonically positioned ensembles. The concern of Popovici is to provide here an answer to issues related to correlating efficiently the multitude of variables specific to the domain of sound formation processes.

However, the decisive work on the phenomenology of the vibrating process is the one called *Introduction to the Anatomy*

of Sound (1981-1983). This is a collection of compositions [14] written for: I – contrabass solo; II – ensemble of 8 instruments; III – ensemble of 10 strings solo (plus/minus live electronics). Here, we also have to follow what Grisey's work *L' espace acoustique* proposes; the chosen spectrum is that of the 4th free string of the contrabass (starting from the 1st harmonic and going until the 64th).

We are talking each time (but with obvious differences) of a basic frequency of 41, 25 Hz. On the 4th free string of the contrabass, a set of paradigms is built, which organises the microstructures:

- harmonics spectrum/ non harmonics spectrum
- sounds/ noises
- periodicity/ non-periodicity (at the level of sound/ noise parameters)
- frequency modulation (MF);
- Fourier integral/ Fourier series (IF/ SF)
- filtering, white noise.

This work is – in my opinion – among the only ones that own a revolutionary conceptual support, joining some perspectives that are as penetrating – among the formulae through which they ‚interrogate' sound as a productive teleology – as those deriving from Horațiu Rădulescu's creation.

Fred Popovici, through the three compositions mentioned above, institutes a homogenous corpus of "pure" investigations into the "anatomy" of sound. Their form is not imposed from outside (the atavic reflex of the great form), but it derives homothetically from the nature of the vibrating phenomenon's processes.

As in the prospective literature of the 20th Century the *writing of an adventure* turned into the *adventure of a writing*, spectral composition (or that derived from Spectralism, i.e. *computer music*) envisages exploring the intrinsic-phenomenological data of sound production and their integration into a specific form of psycho-cognitive assimilation.

The work Introduction to the Anatomy of Sound is constituted similarly to L'espaces acoustiques of Grisey, as both works present some aspects less known by the acquisitions of this "pattern" of exerting the new thinking on the technology of composition – and aspects of obvious impact on the latest contemporary music. As Gérard Grisey also considered, I think that Spectralism is more than a creation technique; it actually is an attitude towards music, which traces an imposing arch over the ever so ancient history of sound, of vibration.

5. Conclusion

The composer Fred Popovici, by the spectrality he elaborates, answers a call of duty: that of not being the supporter of a reductionist approach of the creation experience. Along this formula of prospecting the reality of the "anatomy of sound", he refutes theoretical and practical self-sufficiency in creation, talking about openness, about dynamic mechanisms that surpass the old homogenous, closed systems, about the step of the world of sound *beyond the border*, which causes, to a considerable extent, the production of differentiations at the level of "hidden" tendencies in the manifestation of sound.

Notes

1. "Epistemic cut" is a concept belonging to Jacques Derrida. It is a "cut" at the level of a paradigm, beyond which something different occurs than an event that usually appears within that paradigm.
2. *Rhizomatic* in the meaning by which the elements of sound are scattered, disseminated (like a tree root hidden in the ground, expanding) until they get lost, out of the hearing range.

3. A musical theme is a construct, a fixed structure; on the contrary, the movement sought after in Spectrality is just a flow.
4. The various points on a field, where something important occurs (marks, reference points used in navigation); Delimitation of a space, of a road, with the help of visual, acoustic or radio signals. Cf. DEX (*Dicţionarul Explicativ al limbii române [Explanatory Dictionary of the Romanian Language]*, Univers Enciclopedic Press, Bucharest, 1998, 2nd edition, p. 82).
5. As any analysis, it ends eventually, but, of course, in an arbitrary manner; the analysis might, however, continue endlessly, because there is room to discover something more than the already noticed at any moment.
6. Only the computer helps to understand the intimacy of sound. Spectral music, in its most intimate logics, is computer-assisted music.
7. Nuţă, Adrian: *Interconexiuni*. Fizica cuantică povestită de un psihoterapeut [Interconnections. Quantum Physics Told by a Psychotherapist], Sper Publishing House, Bucharest, 2008, pp. 69.
8. Ibid., pp. 30.
9. Ibid., pp. 30.
10. The Romanian ‚spectral' school does not have a unitary feature (each composer develops starting from his own idea) like that in France, where all composers who called themselves Spectralists started from a joint idea in researching the sound phenomenon.
11. The aspect of (non-tempered) intonation highlights these relations very well.
12. See the 3rd Sonata opus 27 for piano and violin "In Romanian Folk Style".
13. By the phenomenology of sound I understand the very sound itself. The sound is no construct, but "nature". In the case of a J. S. Bach, sound is the pretext for constructing a fugue. The construct is a *something* which overlaps over the phenomenology of sound production.
14. A "collection of compositions" is represented by a series of works that derive from the same composition strategy. A historic example of "collection of compositions" is, e.g., the last three great string quartettos of Beethoven (op. 131, 132, 133). At the composer Yannis Xenaxis, the term occurs for designating three works: *Stocastic* 4, 10 and 48. At the Romanian composer Aurel Stroe, a "collection of compositions" includes works that contain the same composing pattern; one first collection are *Cantos*, *Laudes* 1, 2. The 3 works comprised in the cycle of the *Orests* (I, II, III) are also a "collection of compositions".