

# PHENOMENOLOGY AND GENERATIVISM, SYSTEMIC ATTITUDES IN CONTEMPORARY COMPOSING *SOUPIR D'UN SON I* BY FRED POPOVICI

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*„I think that the undertaking I pursued is obvious: to constitute, in actu, a differential auditory processuality, based on a generative-transformational strategy. The essence of this undertaking resides in the fact that there is no interior mechanism - be it ever so rigorously perfected - that could successively apply to sound parameters, but one single dynamic dimension, which acts in all directions of the field of sound.”*

Fred Popovici

**Abstract:** *The perspective induced into the strategy of composing by what Husserl understands by phenomenological intuition is validated on one hand by the bottleneck of restrained possibilities of expression, proven by structuralism as a form of organisation in art, and on the other, because it has been noticed that „although related (more or less clearly and adequately) to essences, many linguistic expressions require a careful examination of their context (verbal, psychological, and situational) for their proper interpretation, for various reasons. Some expressions are vague or equivocal, some are modified from their usual form or sense, and others are shortened” [1]. The composer Fred Popovici reveals a description of what the phenomenology of the production of sound is through his work *Soupir d'un son I* (1983). Setting the focus on the alteration of a sound's voice, beyond instaurating any space of analogies, the attempt to discover this voice by going through the production modalities of sound as a resulting continuity constitutes the starting point of this study.*

**Keywords:** *Popovici, phenomenology, processuality, “Soupir d'un son I”*

## 1. Introduction

Placed under the incidence of the ideas of Husserl and Heidegger, Sartre and

Maurice Merleau-Ponty, all of which entrain the surpassing of any support pillar, imported with the aid of conjunctures external to the object, of any hypostasis

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”tradition” talks about, namely coming away from any metaphysical concept, placed outside the very process of being, F. Popovici understands both the lesson of contemporary science (which makes the false dichotomies of the type: internal-external, surface-depth, finite-non-finite, and, lastly, phenomenon-essence, disappear), and that of phenomenology. The knowledge model created by Edmund Husserl in *Logische Untersuchungen (Logical Analyses)* (1900-1901), where the aim of determining the relational *a priori* between *ego* and *non-ego* is proven, will allow a glimpse of the imperative to dissolve the operators that describe the *real* by means *external* to it. This model shows that there is *no beyond* in what we call the *notional* logic of the unfolding of things; and that *Everything* resides within the sequence of phenomena that surround us. Subsequent explanations will not be able to be reduced to day-to-day classification (generally offered by languages), but suppose the dexterity of perceiving it correctly, tending toward a transcendental logic which unites the expression of the *subject's* being with the *object*: „Husserl notes that the fullest form of evidence is the self-evidence of presenting to oneself the meant object (in its meant manner), in fulfilling intuition” [2].

We agree, I believe, to the fact that formal representations, born from conceptualisation, which we use and get from the outside, *ready-made* in the formula of linguistic conventions and strategies, then the digressions (more or less assumed) on determining the significations of the objects the being surrounds itself with, in an immediate signification relation, create important consequences in our manner to regard things, as well as a type of intellectual reactions, linked to this type of thinking. Here I speak of that module which generates the immediate reactions of

conscience, of those improper reflexes (let us call them pre-conditioned), in relation to the ideology.

The phenomenological attitude before the *real* is different in a nuanced fashion and must be attentively captured. Its independence from the one involved in classification and descriptivism will convey the former the possibility to extract new levels of understanding the essences. It will obturate the deficiencies of linguism through direct thinking, reduced to essences, which delimits the *proper* from the *improper* with specific tools (in order to release the object from structuralist inputs for good). The lesson of phenomenology, *to reduce* the consequences of noticing an object *to phenomena*, is grounded on a few key-concepts, two of which are determining: *intentionality* and *phenomenological reduction* (known under two more titles which complete its meaning: *transcendental reduction* or *transcendental epoché*) [3].

*Intentionality* lies at the basis of the conscience experience, partaking in the distinction generated by the entities of the *ego-pole* and *object-pole* (Husserl). The transparency conveyed by intentionality derives obligatorily, “because no object (including the ego) ever appears without an ego-pole, and because no ego-pole ever appears without some object presented to it, there can be no evidence for idealism (which tries to reduce all ego-poles to the ego) or for realism (which tries to reduce all ego-poles to objects)” [4]. We will therefore subject - by pursuing to translate the concept of *intentionality* into a phenomenological aesthetics - our object of study (*Soupir d'un son I*) to the above described perspective.

*Phenomenological reduction* ("putting between brackets") has three mechanisms: a) - *retention*, b) - *bracketing*, c) - *eidetic reduction*, which I won't explain here at

large. They converge to one and the same goal: progressively revealing the law of truth, of presence and of the continuity of conscience. Thus,

a) „*retention* is the presence in this moment of a living trace (Husserl talks of sedimentation) of the moment just past” [5]. The full expression of the intentional content offered by this method is given by the example of a melody’s perception: „when you hear the last note [...] you still have the former notes in your living present (otherwise you would not hear a melody, but a group of unrelated single notes)” [6].

b) *bracketing* entrains another phase of the conscience experience: the subject changes its focus on the experience within the retention. The experience maintains itself unaltered, yet the look on the object is permanently pushed toward the present moment.

c) *eidetic reduction* is the last step of this complex experience, the step that connects the individual experience to a universal one, which contains the private experiences.

Contemporary man, through his existential experience, contacts the obligation to “encounter” not only networks of signs, structural entities, verbal conventions, complex constructions etc., but also the situation to surpass them through *phenomenology* - as a private method of *naïve* observation of the surrounding reality (“Phenomenology begins in the naïve attitude. You have an experience, in the normal or naïve fashion, then you hold it in retention, perform the epoché and describe”) [7].

More without being aware of it, contemporary man enters an interaction with the intrinsic properties of a given phenomenon (e.g., of sound), testing its temperature by an undeclared commitment, in the *listening* situation. Judging by the manner to perceive the

connection with the ensemble of surrounding facts, it is necessary to attempt bringing that what the contemplated object must obtain for itself to the conscience level: its *natural*, own space of autonomy.

The object must be disengaged from the place of the image it “bears” *of...* it must be disconnected from the questions regarding “it” - that is, from concepts we can *objectivate*. By the action of phenomenology, which reflects upon knowledge, we will seek to discover the object by the presence of its *signified*, as understood by Aristotle when he concluded that “we think that we possess absolute knowledge about one thing [only] when we believe we know the cause that thing depends on, namely as being *its* cause and not the cause *of another*, and then, when we have understood that it is impossible for that thing to be otherwise than it is” [8]. I think that the philosopher’s arguments could not find their coherence and measure in their indissolubility if the distinction between *to be* and *to seem* were not attained. In knowledge, what is more intimate in things pertains to the domain of *to be* and can be ascertained and justified through distinctions, by dissociating between the manifestation of *essence* and *appearance*. The significance of distinctions is further linked to accepting the truth that all which conditions and limits our perception are questions about the being and *not the being* itself. Hegel is among the first to find the correspondence between being and essence, noting that “Things generally <are>, but their being consists of manifesting their essence. Being goes over into essence; this can be expressed by saying: <Being supposes Essence>. [...] Essence is the genuine origin. The being returns to its foundation; the Being is surpassed in the Essence” [9]. Therefore, *Essence* is extracted from the nude concrete, bare of any *expression*: “The Concrete [...] is a totality that can

exist by itself and itself alone" [10]; this remark, belonging to Sartre, is validated when closing in on an object occurs at the level of the instantaneous, also implying taking a distance, both from *thinking about* the object, and from theoretical determination, or from assessments external to the essence which is within the object.

## 2. Fred Popovici and the Approach of the Phenomenological Method

F. Popovici approached the complexity of acoustic issues which ensure a rigorously phenomenological observation basis for the given sound, and he proposed to define the circumstances in which investigating the evolution of sound becomes possible, independently of the ideological (stylistic, aesthetic) assumptions sound is contaminated with by theorising or comments. His composing concept is inscribed on a trajectory which sets aside the determination laws, set up on the characteristics of Newtonian representations, of structural linguistics, on those founded on re-discussing the realism of music (the entire historically configured creation, until the emergence of integral serialism).

Concerned with the nature of *essence* as a matter which gets into the range of composing, like initially prescribed by Husserl, he considers that "phenomenological description has been seen to require intense concentration: one must hold a just-past experience in retention and describe it in an unfolding present" [11], acting on the musical material in an ingenious manner.

Furthermore, he remains in consensus with Gérard Grisey - who asserts that, in the production of sound, the distinction between an acoustic model and its aesthetical shaping is not possible, as a *principle of incertitude* takes place here -, Fred Popovici defines his work on a territory where composing is contemplated *through* and *in itself* as an

aesthetic object. The organic character results from not representing the physiognomy of sound under a local and global aspect at the same time. Therefore, the bottleneck generated by the impact of the sound object with notionality and conceptuality vanishes. The model of the sound phenomenon described by Grisey - attentive to Heisenberg's quantum theory (1927) - will lead to the assessment that *there is no* function of a complete description of a real state of any particular case. This is exactly where the condition to approach the work *Soupir d'un son I* by the method which set its trajectory, *phenomenology*, imposes itself. The ability to *detach* from the mental pattern - from that of musical formulas and *forms* which dictate the enumeration of abstract entities as a *network of addenda* to the being of music, of which the triad *exposition, development, reprise* is the best-known, then the cadenzas (conventions pointing out the finales of musical "phrases") - is only given by releasing the phenomenological intuition.

*Soupir d'un son I* follows exactly the steps for *detaching from the pattern* (the score itself being one of them), as, through the composing project, it is based on a phenomenological datum, the manifest role of which "[...] in philosophy is to clarify the essential features of the meanings we live, rather than to replace empirical investigation. While essences are unconditioned by anything factual, they serve as the *a priori* conditions of the possibility of factuality or existence" [12].

However, it will be interesting to discover the composing project of this piece, which is projected *beyond* the function of the score as a space of abstract transformations. I mention in just a few words that the *score* represents an embodiment of subjective proposals for the musician (composer, performer, musicologist), as it is not offered, phenomenologically, to a *here and now* (see Heidegger's *Dasein*). For the moment, until the kinetic presentation occurs, the

score addresses more the *visual* (with which the being merely collaborates - at a first level - on its way to the *auditory*), and within which the phenomenological perception is quasi-absent. The score, a concrete of orientation, represents *another* concrete than that of real music, carried out by the becoming of sound. Phenomenological intuition is reflected on the forms of the score only in the moment of that *processual now*, when the events under the signs of notation are not only foreseen, but lived, experienced in types of *reactions* of sound, through its motion from A to B. The accounting of parameters (which we generally try to observe) only remains a sum of formal objects, being the bearer of the convention itself. No sign, implanted in the score, in the existence of the written form, can be the duration itself, the pitch, the acoustic colour itself, the propagation space of sound, because we can still only talk of imagined approximations, of the *quirks* present in any (culturally accepted) written form meant to say something - in the pre-existence phase of a phenomenon - about the intuitions of the real.

### 3. The Composing Achievement of the Piece *Soupir d'un son I*

Written for violin, the piece starts on the path of a pure phenomenology of the production of sound, which uses an entire chain of spectral manifestations. Through them, intentionality is defined as a conscious process, but also the other forms of reduction, with which the phenomenological experience can melt in a natural manner. Using the technique of sampling, the composer will dilate the micro-processualities of sound production on this instrument. This application is achieved by the zoom procedure, after these micro-processualities have been visualised, studied, standardised through sonograms. Only the motion of passing from the violin's free string to a finger-articulated sound on a duration length within the tenth part of a second (e.g.) determines obvious consequences, perceptible sensory relations. Thus, the indetermination relations existing in *micro* will unfold along the piece in *macro-time* (figure 1).

**«SOUPIR D'UN SON» I for Solo Violin**  
Fred Popovici

Fig. 1

The starting point of the piece is a gradual actualisation of the lowest sound of the violin, the free string G = 198 Hz, which proposes a spectral *incipit* through the *attack transients* (entrance to the sound), is further defined as a manifestation through entering the *sustained regime* of the spectrum, after which it will progressively exit the sound's stable zone (through what are called *extinction transients* in acoustics) (figure 2).

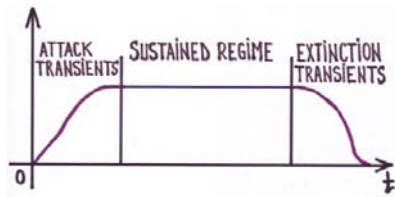


Fig. 2

An aspect which configures the phenomenological experience in *Soupir d'un son I* is the transition from the *Fourier integral* to the *Fourier series*. It is a clarification process given by the relation *continuum* → *discrete*, which takes place when the actual entrance into the sound occurs. By the motion of the bow (different speed and hardness degrees), the spectrum will be induced, defined, articulated, starting from the noise which traces all frequencies until the selective determination of harmonic tones, of a specific acoustic colour. The selection steps of this number of frequencies are mathematically expressed through the *Fourier integral* and *series* (figures 3, 4). The transition from the *Fourier integral* to the *Fourier series* occurs under the sign of complexity, that is, of non-linear functions.

$$\int_a^b f(x) = \frac{1}{x} + \frac{1}{2x} + \frac{1}{3x} + \frac{1}{nx}$$

Fig. 3 (*Fourier integral*):

$$f(x) = \frac{1}{x} + \frac{1}{x^2} + \frac{1}{x^3} + \dots + \frac{1}{x^n}$$

Fig. 4. (*Fourier series*)

The spectrum as an entity is generated gradually, according to the addition of sinusoids which contribute to the “pigmentation” of sound (figure 5). This complex of sinusoids is called the spectrum of the sound's harmonic tones. The continuous strengthening of the spectrum leads to the strengthening of the fundamental tone as an entity of sound. In the formula below, obviously,  $x_p$  is the harmonic tone with the sequence number  $p$ , while  $N$  is the frequency of the fundamental tone ( $a_n$  is the phase, and  $t$  is the time).

$$\begin{aligned} x_1 &= a_1 \sin(2\pi Nt + \varphi_1) \\ x_2 &= a_2 \sin(2\pi \cdot 2N \cdot t + \varphi_2) \\ &\dots \\ x_p &= a_n \sin(2\pi \cdot pN \cdot t + \varphi_p) \end{aligned}$$

Fig. 5

The formulas from figure 6 configure the generating mechanism of the partials of a multitude of sinusoids.

$$\begin{aligned} x_1 &= a_1 \sin 2\pi(n_1t + \varphi_1) \\ x_2 &= a_2 \sin 2\pi(n_2t + \varphi_2) \\ &\dots \\ x_p &= a_p \sin 2\pi(n_pt + \varphi_p). \end{aligned}$$

Fig. 6

The composer addresses the violinist with a rich vocabulary of motion resources, of transformations within the spectrum (figure 1). The formation of sound involves both precise construction

laws, and statistical laws, in which determinism (i.e. the rigour of traditional notation) is abandoned. The frequencies of harmonic tones will often have quasi-unpredictable durations, depending on the fluctuation of speed, on the inertia of the string acted upon by countless bow techniques (different quantities of hair, distinct contact areas with the string), the differentiated use of the *vibrato*, the use of *pizzicato*, of *gettato* (techniques that cause strong noise areas). Popovici achieves clashes between spectral elements by sudden transitions from *ponticello* to *molto ponticello* or *tasto*, or, on the contrary, pretends sounds *senza atacca*, as if insinuating that the properties of sound cannot be fully known (“conscience is the conscience of something” - Husserl). In the second system of the same example, we notice the modification of intonation, resorting to non-temperance; the relation between the sound  $G_1$ , intoned (a little) lower, and that intoned normally (the harmonic tone 1 of the free string) will lead to inducing a *frequency modulation* (see Chowning: *The Making of Complex Audio-Spectra by means of Frequency Modulation*).

#### 4. Conclusions

Up to here, I have described, in several steps, a manner to capture *phenomenology* as a step over [any] boundary (Heisenberg), next to the test of generativism, constituted at several levels of capturing the complexity of sound. The attempt to bring the legitimacy frameworks of this attitude in contemporary composition to the foreground is, of course, supported by a mathematic apparatus, which also ensures the consistency of the spectrality envisaged by the composer Fred Popovici.

The piece *Soupir d' un son* therefore reveals a phenomenology of sound

production, as a genuine vibratory domain, at a particular instrument, with all its specific issues, namely the violin. I have rigorously pursued that “universal correlational *a priori* of the object of experience and of its manners to convey itself” [13].

The work represents a turning point in the creation of F. Popovici, as, after the works composed in the same time period (1980-1988) - *concerto for clarinet*, *concerto for cello*, *Introduction a l'anatomie du son* - this one achieves the transition from a *canonical* spectralism to a more advanced one, the guidelines of which are: fractalisation, the theory of complexity, and deconstruction. The transition works to this last orientation of his thinking are *The string quartet no. 1*, the chamber symphony *Dall un concerto grosso*, the work *Itinéraire à l'intérieur du son I*.

Fred Popovici, by surpassing any prejudice, by the manner he addresses the reader, refers with each and every occasion to the “event of an encounter”. He defines, through his creation, “the representation of a *necessary* connection of perceptions” (Kant) by letting us understand that “what comes into the world without diseasing us is worth neither attention, nor patience” [14].

#### References

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