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« The energetic perspective of musical form in sound art. Understanding the sense of duration in a sound art event. »

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Abstract:

What are the features of the temporal experience we do listening a sound art event?

Sound art in its multiplicity of forms reveals the immanent character of music. More than other musical practices it lies at the heart of the issue of contemporary musical paradigm.

By analysing the compositional technics used in *Corpo e mente* (2021), the first experimentation of my thesis project, I will introduce the analysis of musical form from an energetic point of view. We will put our focus on the energy that materializes itself in sounds (Simondon, 1963), on the virtuality (Bergson, 1939) of duration transforming sounds and moving throughout them. This project is based on methodologies (Delalande, 2019) and musicological theories (Kozak, 2020) which consider the active presence of the listener, as a part of the musical phenomenon analysed.

Keywords: musical form, listening, sound art, time, flux, experience, forgetting, aural analysis, piano, modular synthesizer, minimalism.

Sound art is a discipline that does not have a commonly accepted musical system, whose methods of composition are not always explicit and are still very much linked to experimentation. Sound art works don't have a *a priori* form: the materials coexist in a not a functional way, their duration is varied, their structure is plastic, and the form is often elusive. We can apprehend them only by listening to them, for that, the temporality of these works is lived: it is a *continuum*, made of oscillations and variations carrying meaning. The latter can be clearly received: « generality of signification is not absence of signification » (Morris, 1946: 193).

The musical experience in an intersubjective context, composed by the relationship between the work and the listener, has the temporal characteristics of the life experience. Consequently, the analysis of these works must consider the reception of the listener, and even if it cannot describe in the smallest detail the (living) musical phenomenon, at least it can find landmarks that would guide us in artistic creation and in listening. Listening to the contemporary repertory, from electroacoustic, to radio art, noise music, field recording etc., we can observe that there are some recurrences. In this perspective, the hypothesis of my thesis project is that an aural analysis of the sound art temporality

from an energetic point of view could bring reading keys on our comprehension of works which don't have any audible or pre-established architectures.

Listening to *Se Mouvoir*, the first experimentation of my thesis's project we can observe from a poietic point of view, which are the compositional choices generating this kind of temporality. *Se Mouvoir* is the fourth movement of *Corpo e mente*, a 40-minute piece for piano and electronics, it is a 4' long and can be listened independently from the rest of the piece. All the movements of *Corpo e Mente* are conceived as modular, even if all together they create one entity. In this piece the sound textures produced by the synthesizer are smooth at first, then begin to vibrate. The piano patterns repeat themselves with little variations. My intention was to compose a setting in motion which gradually becomes a sustained movement in the fifth part of the piece. The feeling of moving is the result of the micro-variations and the constant timbral interpenetration between the two instruments. In fact, there is a vertical complementarity due to the different timbre of the instruments: the modular synth plays high frequencies, while the piano sounds are more in the mid-bass frequency range. The harmonics of the two instruments mixed with each other and influence each other all long. We could locate *Se Mouvoir* in the immanent music production tendency. We are close to the minimalist music because of the repetition used and the economy of the materials employed. Composing *Se Mouvoir*, I have imagined the piano patterns as different entities. On the other hand, the synth sound is made by two different fluxes giving only one texture. So, the relationship between sound and instruments is not functionalist (Charles, 1978), although there are some moments of intentional synchronicity.

Daniel Charles, who wrote the thesis *The new musics and the question of time* in 1977, had already extensively studied and highlighted the non-functionalist tendency, and the ontologization of the sound materials of minimalism and experimental music (Charles, 1978: 258) of '60s. He calls them the « musiques flux » (ibidem: 266), based on the process of forgetting and don't reproduce any memory (ibd.). He asserts that those works don't have any structure by the fact of being composed by sounds that distend everything: « time, pitch, timbre and dynamics » (ibd.: 258), or by using repetition. In the latter case, the memory would make it possible to receive non-functional events based on repetition and would consider them as a single entity and not as repetition. (ibd.: 259). If in the '60s and '70s the notion of « forgetting music » was going to contrast the thinking of the structuralist current, today, without the context of the time, this conceptual provocation is no longer sufficient. In fact, the notion of forgetting, used in a logical way is too abstract to allow the construction of methods to defines musical temporality. But if it is taken in account as a concrete part of the apprehension of reality it could bring results. Not forgetting as the negative expression of remembering but forgetting as an activity as well as remembering. Daniel Charles indirectly raises the problem of the lack of analytical instruments to study *musiques flux* based on the notion of forgetting, otherwise if studied by a structural analysis based on the tonal musical system the risk would be to miss their peculiarities. The Daniel Charles's studies are crucial on the temporality research of the new musical paradigm. It's an important starting point to study new musical forms.

But then how do we create and listen to forgetting music? It is necessary to build the theoretical context for an analysis which considers the ephemeral character of the musical phenomenon, and which would study the thresholds and identify the factors which cause the memorization and forgetting behaviours. The musicological theory which considers the work as an experience - everyday life or privileged one, but let's not enter this aesthetic debate - is in the process of being anchored in the musicological panorama. First, thanks to the importance of ecological thinking, here

to transform the planet into a great musical instrument, and our ears into those of the sound artist. But above all thanks to the existence of innovative contemporary musicological methodology like the François Delalande's listening behaviours (Delalande, 2019) and theories like the one developed in *Enacting the musical time, the bodily experience of new musics* by Mariusz Kozak (Kozak, 2020).

We can observe that in this music which has no *a priori* form, the concept of immanence can help us to define the non-system on which it is based. The immanent principle, find the cause of things inside themselves, instead of a transcendental point of view, in which the cause of things is external and *a priori* from them.

In *Se Mouvoir* we can see it by the independence of the sound elements. The composition technic I used is a circular displacement of independent patterns. I composed piano patterns and synth textures separately, then I put it together. Therefore, we have seen that in *Se Mouvoir*, the sound elements develop each other independently. After designing the patterns, I worked on the composition process, starting by some improvisation sessions, and in a second time I wrote the piano part. Every sound element in this composition is independent from another, but they participate to the same moment time. We can imagine a flow as a horizontal drive that crosses the sounds. The piano patterns are repeated with a time lag. Without having a system of relationships chosen beforehand, we find ourselves faced with the immanent character of music. This concept seems to be appropriate for this kind of music, which has no form, and where variations are generated by a transforming energy. Several works from the electroacoustic repertory highlight the immanent character of sound art. In *Triptych* (Radigue, 1978), in the three parts that make up the piece, the drone of frequencies changes very gradually, it appears static, but it advances by micro-evolutions and progressive appearances. There is a very fine play on intensities and different plans, which draw a certain space depth. Pure frequencies vibrate and evolve in the same space independently. In *Natures Éphémères, De Natura Sonorum's* movement (Parmegiani, 1975), we observe immanence through the iconic character of the sound elements. An icon is a sign which refers to the « Object that it denotes merely by virtue of characters of its own, and which it possesses, just the same, whether any such Object actually exists or not ». (Peirce, 1940: 102). The sound objects of the work act and disappear, often they are presences doubled by a spatialization effect. We follow their movements within the stereophonic space.

Listening to a work of sound art we continuously experience a sound environment in which we may or may not distinguish between elements, without knowing the existing relationships between them. These elements participate at the same temporality, as well as the listener time. What interests us here is the immanent temporality that envelops all sound elements of the work. If they participate all to the same duration (Bergson, 1939), what is the temporal feature that is common to them?

An important point to discuss approaching the analysis of the sound art temporality is undoubtedly the notion of flow. Overall, listening to music is a temporal and continuous experience. Contemporary studies in sound art often underline this important point, from an ecological or philosophical point of view. For example in *Listening to noise and silence* Salomé Voegelin writes: « The time and space of my listening is permanently displaced by the sound heard. I cannot freeze sound, there is no room for contemplation, narration of meta-position, there is only the small sliver of now which is a powerful influence but hard to trace » (Voegelin, 2010: 30). Christoph Cox defines sonic flux as « an immemorial material *flow* to which human expressions contribute but that precedes and exceeds those expressions » (Cox, 2018: 2). As Christoph Cox affirms, the material *flow* doesn't lead only to the

aural perception, is the condition of the existence for living beings: « [...] the most profound, to the universal matter or *continuum* from which the essences are finally made » (Deleuze, 1968: 47).

In sound art this notion raises up more than in other kind of music, because of the composition technics and sound devices used. In fact, in sound art we overlay continuous signals using sampler devices or synthesizers. This *flow* gushes out from the simultaneity of different fluxes. Artists often use several devices at the same time. In my artistic practice, I work with modular synthesizers, and I manage different fluxes manually. The basic actions are to decide which sound to put on or off, but also to choose its attack (in which way it will become audible), how to mix it with the other and finally how to make it disappear (release). The activation of the sound flux and the modulation of his intensity and texture are the most important actions working with analogical synthesizers. Those actions are completely dependents by my gestures and influenced by my aural sensitivity. I transform those sounds while listening on them, in a way, following them. Controlling fluxes during a live performance highlights the presence of this virtual flow. When playing *Se mouvoir* I was controlling two fluxes: two separates sinus, one D and one E, that at the end become two Ds. I controlled their volumes, cutoffs and the speed and the amount of their LFO to produce the variations wanted. I was modelling the synthesizer signal which is a flowing signal and not a stationary object. We have just seen that the flow represents the least common temporal denominator which corresponds to the present moment. It is the continuous experience of listening and it embodies the main characteristic of sound creation devices. The flow of electroacoustic devices is superimposed on the flow of listening and in this way, it is experienced by the listener. But it does not coincide neither with the auditory perception nor with the electrical signal of the synthesizer. About this John Dewey observes: « We see a painting through the eyes and hear music through the ears. Upon reflection, we are then only too much given to supposing that in the experience itself visual or auditory qualities as such, are central if not exclusive. This carrying into the primary experience as part of its immediate nature whatever subsequent analysis finds in it, is a fallacy — one which Williams James calls *the psychological fallacy* » (Dewey, 1934: 214). In a musical experience the flow is mainly ensured by our presence and engages our whole body: « Music becomes constituted *as music* through the body's patterned movements, making it truly an embodied experience in the most fundamental sense ». (Kozak, 2020: 95). From the Heraclitus's « ever living fire » (Heraclitus, 2001), passing by the thinking of Baruch Spinoza, until the modern philosophy represented by Bergson, over all his concept of *duration*. Then thinking to the Nietzsche's *eternal recurrence*, to Deleuze and Guattari with their *plan d'immanence*, and the *pre-individual* concept of Simondon, we could find many ways to explain the energy of flow in philosophy. These concepts can help us to structure the aural analysis and define the energy of something moving throughout sounds.

Heraclitus described it as an eternal life movement, already from an energetic point of view: « That with always was, and is, and will be ever living fire, the same for all, the cosmos, made neither by god nor man, replenishes in measure as it burns away » (Heraclitus, 2001: fragment n. 20). The flow is an endless flow of elusive and undifferentiated moments. But concretely how can we distinguish something in this eternal flow? In *Se Mouvoir*, by the meeting of the two instruments something happens. But not only, in this horizontal temporal shift, we are witnessing variations. There are some energetic oscillations that ensure that what you listen to, is always different as what you just heard, even if the patterns played are the same. How does the change happen? We can observe some variations, which are brought by the time lag, by the transformation of a pattern or texture, by a moment of synchronicity or by the presence of mixed harmonics of the piano and the synthesizer.

Variations are based on little contractions and little releases. The synth's sounds thus follow one long and definitive movement of release-contraction, while the piano, perpetuating patterns, create several of those movements in relation with the patterns played. The energy variations in this case are regular. The 60-bpm tempo brings the temporality of the piece closer to the human breath and contributes to highlight this ebb and flow. Here we can experience here the notion of pneuma: the first movement in which we can identify the virtual flow that we are talking about, the first element that allows us to guide ourselves in the infinite space constituted by the continuous and undifferentiated flow of instants. It is an ancient philosophical notion that had for a long-time a « purely material reality » (Mansion, 2018), before to be spiritualised by the influence of religious tradition of Judaism (Mansion, 2018: 138). The pragmatic philosopher John Dewey find the pneuma in the movement of natural elements, as the rhythm of life, which is part of every life experience, and from which the internal rhythm of an art piece is created as well. Pneuma here is thought in an energetic sense: « like the waves of the sea, the ripples of sand where waves have flowed back and forth, the fleecy and the black-bottomed cloud. Contrast of lack and fullness, of struggle and achievement, of adjustment after consummated irregularity, form the drama in which action, feeling, and meaning are one. The outcome is balance and counterbalance. These are not static nor mechanical. They express power that is intense because measured through overcoming resistance » (Dewey, 1934, :16). Today, the philosopher Emanuele Coccia, who recently wrote a book in which he rebuilds the cosmogony through the life of plants, offers to us another contemporary vision of pneuma, he defines it « the paradigm of this reciprocal interweaving » which is the world (Coccia, 2019, :15), : « the vibration by which all things opens up to life and mixes with, for a moment, animates the matter of the world » (ibid., :49). For Coccia the pneuma is the intersubjective movement between the beings and the atmosphere created by the plants, which allows life on Earth.

To summarise, from a musical point of view, the simultaneity and independence of the sound fluxes bares the underlying *flow* that inhabits *Se Mouvoir*. By the round trip of the pneuma, we see that something is moving, that the sound moment we are listening to is likely to be transformed. We thus differentiate the continuous flow in which we are immersed. In a non-functional music the variations of the pneuma become more evident. But what are the minimum conditions required to perceive the pneuma in a musical moment?

In *Exercice I*, movement of the electroacoustic piece *Mouvement-Rythme-Étude* composed by Pierre Henry (1970), we are faced to a typology of objects-action repeated without ever being identical. The materials are once again independents (tonics and non-tonics, short pulses, and resonances) and they cross each other creating simultaneities, we can feel the pneuma. In Mika Vainio's *Onko* (1997), in a different way, we can see the same type of vibration, although, this time, the sound elements constitute a monolithic whole and not a plurality. They follow one another without silence. *Onko* is worked with slight modulations, and yet the oscillation of the pneuma is no less present. This points out to us that the existence of the pneuma is inseparable from the presence of the listener and therefore from a dyadic context that contains it. The latter is the prerequisite for the existence of pneuma.

« However, what I mean is that although an acoustical signal unfolds regardless of a listener's actions — indeed, regardless of the listener's presence — this presence is necessary if the signal is to be meaningful *as music* » (Kozak, 2020: 50). This at first glance obvious statement carries with it important reflections: pneuma does not exist without our presence as living beings who breathe. To resume, we have seen that the pneuma is produced by the presence of the listener and that the factors

which contribute to its apprehension are the choice of a non-functional musical environment and the plurality of distinct sound elements.

We begin to orient ourselves in this virtual musical temporality. We argue here that studying the temporality of sound art from an energetic point of view could bring results. The word « energetic » needs an etymological explanation. It means, in the simondonian sense, an energetic potential expressing the reality of a meta-stable state (Simondon, 1963), a state that found a balance by itself. We will put our focus on the energy that materializes itself in sounds. Simondon calls it the *mediation activity*, necessary to create a brick from clay and a mould (Simondon, 1963: 41). From the energetic point of view, the form can no longer be conceived within the hylomorphic bosom, as form and substance, but rather as a process where they coincide between them. A transformative process such as travel or human life. The directional process of biology and drama (Grisey, 2008: 56), which can be vectorial or static. In this process we may withhold events or be dazzled by their elusiveness. « It is the process that comes first, it is this process that manages the mutation of sound figures and leads to the constant creation of new ones » (Grisey, 2008: 31). This same process fights against the erosion of entropy (ibid.: 90).

The first mark of the energetic gradient, with which we would define the degree of apprehension of the musical moment, is constituted by what we cannot discern: when we cannot distinguish the sound materials from each other and when we have no predictability about their future (the present moment, the blurry flow). The pneuma is the first identifiable change, the first projection in time, repetitive and regular. Understanding the temporality of new musical forms bring us inevitably on the problematic of meaning. The search for an underlying and communicable meaning must be considered here in the desire to make sound art accessible and to promote an active listening. Meaning is understood as significance, its widest possible meaning: « Significance is a process that is enacted in the dyadic relationships between environmental affordances—opportunities for and constraints of action—and a situated agent » (Kozak, 2020: 13).

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