

Soteriology for a man in revolt

José Luis Menegotto

Department of Graphic Expression, Polytechnic School of Rio de Janeiro Federal University, Brazil
jlmenegotto@poli.ufrj.br - https://sites.google.com/a/poli.ufrj.br/dc_menegotto/home

Proceedings of the *Xenakis International Symposium*
Southbank Centre, London, 1-3 April 2011 - www.gold.ac.uk/ccmc/xenakis-international-symposium

The paper talks about some aspects of Xenakis' philosophical orientation from a soteriological perspective. The essay *The Rebel*, by Albert Camus, is used in a trial for characterize Xenakis. Some aspects of Xenakian thought will be related with two philosophical personalities: in one hand, the philosophy of art of Schelling, who also had as the goal of his reflection the construction of a "science of art"; on the other hand, with the tradition of hermetic thought represented by Giordano Bruno's philosophy of bonds. The soteriological perspective permits reflecting about the gnostic orientation of the Xenakian philosophy, especially in relation with the time. John Gray's thesis is used to characterize the Xenakis attitude in this subject.

This paper intends to reflect on some aspects of the philosophical orientation of Iannis Xenakis from a soteriological perspective. I start from the premise that in his theoretical writing there are strong allusions to destiny and thus to questions which touch, in some way, on the theme of human salvation. I would like to start drawing some parallels with the essay *The Rebel*, by Albert Camus. In this, the thinker establishes differences between revolutionary thought and the thoughts of individual revolt in human beings. Camus understands revolt as one of the essential dimensions of a human being, who, impelled by angst of a metaphysical nature, initiates processes of existential and cosmological questioning. According to Camus's formulation, the man in revolt would be one who to accept or reject the orderings of human systems, always passes through a phase of questioning and revolt. The metaphysical nature of this "existential revolt" leads Camus to reflect on questions related to the sacred and the myth, bringing to the fore the problem broached by the soteriological doctrines, that is, all doctrines which, formulated as currents of philosophical and/or religious thought, deal with the Salvation problem. Camus understands that, faced with the problem of death, human beings are capable of a leap which leads beyond the answers given by the established doctrines, in this way opening diverse perspectives for reflection. However, in Camus's words:

[...] before man accepts the sacrosanct and in order for him to be able to accept it - or before he escapes from it and in order for him to be able to escape from it - there is always a period of soul-searching and revolt. The rebel is a man who is on the point of accepting or rejecting the sacrosanct and determined on creating a human situation where all the answers are human or, rather, formulated in terms of reason [...] (CAMUS, 1975:26).

This declaration by Camus, I believe, fits in well with the work and artistic personality of Xenakis. As we know, the life of the musician was marked by the trauma which confronts human beings with the reality of death; even more so, an unexpected death of an unnatural nature, whose origins seemed to be the violence unleashed by negative and destructive human impulses. In the bellicose scenario of the twentieth century, in which Xenakis was directly involved, the dynamic of individual revolt was mixed with the dynamic of revolutionary and totalitarian processes. The latter, in general, carried in their idea systems some type of idealistic hypertrophy formalized soteriologically. In other words, the war could be understood as the consequence of the vehemence with which attempts were made to impose doctrinaire movements of salvationist intent, which preached new structures of existential order with the purpose of rescuing the human being from some theoretically undesirable condition. I must make it clear that I do not intend, however, to suggest that the causes of the war can be reduced to this aspect, nor to suggest that the soteriological values of the religious systems, formalized throughout the history of humanity, are intrinsically negative.

In Xenakis's writings we can frequently read ideas expressed in an adversarial style, either communicated in the form of all-encompassing projects, such as the utopia of the cosmic city, or reformist projects, such as his educational proposal to create alloys between art and science. He understood that the promotion of a "scientific art" would serve as an antidote to rescue the educational system of high specialization required by the organization of the

modern production systems which, according to him, “*produce intellectually and spiritually invalid people*”. He believed that the cure for what he classified as a “*disease of a spiritual nature*” could be achieved through this nexus between art and science (XENAKIS, 1985:24). In this way, there exists a soteriological component in his artistic thought, which, at the same time, combines with a philosophy of bonds. Therefore, I defend the idea that Xenakian thought can have significant epistemological relations with two philosophical personalities: on the one hand, with the philosophy of art of the German philosopher Friedrich Wilhelm Joseph von Schelling, who also had as the goal of his reflection the construction of a “*science of art*”; on the other hand, Xenakis could be associated to the tradition of hermetic thought, in particular, with Giordano Bruno’s philosophy of bonds. In the first place, we shall see some coincidences between the reflections of Schelling and Xenakis.

During the courses of Philosophy of Art in Jena (1802-1805), Schelling created the famous metaphor according to which architecture is petrified music. In his philosophy of art course he mentioned the following:

[...] The most original schematism is the number, where the formed, the particular, is symbolized by the shape of the universe itself. Therefore all that which is within the domain of schematism is submitted to mathematical determination in nature and in art; architecture, as music in forms, thus necessarily follows mathematical relations; but, as it is music in space, as it is, one might say, petrified music, these relations are at the same time geometrical relations [...] (SCHELLING, 2001:219)

We see that the metaphor arose here in a tangential manner, only as the rounding off of the reflection which seeks to highlight architecture and music as quantitative (arithmetical) and qualitative (geometrical) arts. Other eighteenth century thinkers such as Mme. de Stael, Schopenhauer, Goethe and Hegel used or referred to this metaphor; the first did so through Corinne, the protagonist of one of her novels, while Schopenhauer did in a critical manner in “*The World as Desire and Representation*”. For him the comparison between architecture and music did not merit being taken too seriously. Goethe used it to make political and epistemological criticisms. We shall begin with Goethe’s criticisms. In Goethe’s *Maxims and Reflections* we can read:

[...] A noble philosopher described architecture as frozen music and as a result had to watch much negative head-shaking. We believe this beautiful idea cannot be more aptly resurrected than by calling architecture music that has merged into silence. Imagine Orpheus, when he was assigned a great desolate building site, shrewdly settling at the most appropriate spot and forming a large market place all around him by the life-giving music of his lyre. Rocky stones, rapidly reft from their massive blocks by the powerful command, the friendly enticement of music, were compelled to form an artistic and craftsman-like structure in their enthusiastic approach, and make up a fitting and orderly pattern of rhythmic stacks and walls. And in this way street may be added to street! Nor will strong protective walls be lacking. The sound of the music dies away but the harmony remains. The citizens of a town of this kind walk and work surrounded by eternal melodies; the spirit cannot sink, action cannot fall asleep, the eye takes over the function, the due work, the duty of the ear, and on the most ordinary day the citizens feel they are in an ideal state; without taking thought, without inquiring into causes, they enter into the highest ethical and religious delight. Make a habit of walking up and down in St Peter’s basilica and you will feel an analogue of what we have dared to put into words. The citizen of a badly built town, on the other hand, where fate has swept the houses together with a slack broom, unknowingly lives in a desert of dismal conditions; a stranger entering it feels as though he were listening to bagpipes, whistles and tambourines and would soon have to be watching bear dances and leaping monkeys [...] (GOETHE, apud SCHELLING, 2001:219).

Based on the writer’s commentary, expressed in a letter mentioned in *Conversations of Goethe with Eckermann and Soret*, in which he declares that the idea implicit in the metaphor sounds repugnant to him (GOETHE, *et al* 1850:146), I assume the target of his criticism to be the passive and unreflective attitude of men who pass through life without questioning themselves, accepting with passivity the effects of the senses. This contrasts with the individual who “*unknowingly lives in a desert of dismal conditions*” and, who, in spite of living “*unconsciously*” in this situation, will force himself intellectually for surviving in the adverse environment. It may be, fundamentally, a warning of an epistemological nature on the part of Goethe in relation to Schelling’s metaphor, which relates to the problem of the origin of knowledge or, in a general way, between an active vision of the search for knowledge opposed to an intuitionist and contemplative vision. It could also be read as a political criticism, which Goethe aims

against the aristocratic ethics of his age. In the twentieth century we can find variations of the metaphor repeated in the works of Matila Ghyka and, of course, in Xenakis. One common aspect which we can detect in the quotations from Stael, Goethe and Ghyka is that the three use Saint Peter's Basilica as an object of contemplation. Contemplation of the monument helps Corinne, Stael's character, to restore the lost balance of her soul:

[...] I often come here to restore to my soul the serenity that it sometimes loses. The sight of such a monument is like permanent, continuous music waiting to benefit you when you draw near [...]
(De STAËL, 1999:59).

An even more intense effect is produced in Ghyka, who said:

[...]Novalis (Or was it Schelling?) has already written "architecture is frozen music". The exterior modulation of the apse of St. Peter's always produces in me a sensation, or rather, I would say almost a direct musical audition [...](GHYKA, 1977:259)

I'm assuming that "*direct musical audition*", is a stylistic hyperbole by Ghyka, with which he proceeds - I risk saying, consciously -, to invert Goethe's idea according to which, we remember, architecture would be a "*music that has merged into silence*". I make this collocation assuming that as an erudite scholar, Ghyka would have known Goethe's formulation. The fact that he does not mention him and that he shows doubt concerning the author of the metaphor (*Novalis or Schelling?*) could signify, perhaps, a certain elegance of style in an intellectual dispute, criticizing the content of ideas rather than their authors. Making architecture sing again, we can say that Ghyka places the metaphor on the field of speculations which defend the value of intuition and contemplation in art and in life.

Xenakis will try a new version of the metaphor, understanding music as "mobile architecture". In other words, he locates himself in the epistemological discussion centralizing the attention not in the sound phenomena, but on the indeterminate dynamic of movement. Addressing the discussion with this new angle, I believe that Xenakis, as an intuitive artist and, at the same time, as a man of experimental science, can conciliate the mystery, which presupposes the concepts of intuition, revelation and in general, all acts of creation, with the growing scientific materialism of the 20th century. In other words, I can see Xenakis's ideas coinciding with those of Schelling, who also defended the idea of *ex-nihilo* creation and art as revelation of beauty, but at the same time, Xenakis seems attentive to the warnings of Goethe, for whom revelation would not be a sufficient condition for knowledge; it must be accompanied by reflection. By placing art above science, Xenakis perhaps expresses his revolt against agnostic science which, in its beginning, rejected metaphysics because of its intrinsic irrationalism. In this sense, I see Xenakis as a man who places himself, - permitting me to alter Camus' formula -, as a man in revolt who is simultaneously before "and" after the materialistic science of his time.

The other connection suggested, according to which Xenakis would be related to the hermetic tradition, could become evident when comparing his thought with the current of thought called secular humanism. The philosopher Luc Ferry, characterizes the soteriological attitude of secular humanism as "*wisdom of enlarged mentality*" (FERRY, 2008:134). Some elements present in the Xenakian idea system, such as his habitual invitation to widen the frontiers of thought, might suggest congruence with this attitude, although, as in the ideological base of secular humanism there are anti-metaphysical elements of a positivist origin, contrary to the metaphysical predisposition of Xenakis, it is necessary to examine the limits of this congruence. The Xenakian idea of "Metamusic" permits the establishing of a counterbalance to the materialistic philosophies, approximating him with the hermetic tradition, in particular, with Giordano Bruno, who, in the sixteenth century, established a philosophy of bonding, in works such as *De la Magia (On Magic)* and *De vinculis in genere (A General Account of Bonding)*.

In his works, Bruno begins by categorizing the types of magic, which are classified by him according to the way in which the "magi" approach different types of object. In the first place, Bruno typifies the magi as wise men, including in this category trismegistos, gymnosophists, magi, sophists and cabalists; a second class, classified as "natural magic", would be composed of those magi who perform transformations on material through alchemy; if mathematical formulas, words, schemes, designs, numerical and temporal relations were added to this natural magic, Bruno would classify it as "*mathematical magic*" or "*occult philosophy*". Another

class of magic would be that which invokes superior intelligences through rites, in this case *transnatural magic*, "*metaphysics*" or "*teurgy*". Bruno also includes the necromantic magicians, who invoke the dead through observation of the entrails of corpses and finally the diverse types of seers, composed of hidromancers, piromancers geomancers etc. After mentioning all these types, Bruno recommends caution when using the term "magician", explaining that a magician would be "*that man who allies wisdom to the power to work*" (BRUNO, 2007:16). He summarizes the types of magic into three: the divine, the natural and the mathematical. Starting from this distinction he begins to construct a general theory of the bonds which exist between human relationships and things, which we may call an introduction to the general theory of knowledge which today we classify as holistic. For Bruno, those who form bonds

[...] penetrate into the reason of everything: or at least into the nature, disposition, trends, fitness, utility and purpose of that reality which must be bonded [...] (BRUNO, 2007:75).

Bruno highlights the imagination as the "*bond of the bonds*" (BRUNO, 2007:63), as does Xenakis, who defines the "*liberation of the mind*" as a primordial value within the process of invention and the acquisition of knowledge. Ending his paper *Towards a Philosophy of Music*, Xenakis said:

[...] The space ships that ambitious technologies have produced may not carry us as far as liberation from our mental shackles could. This is the fantastic perspective that art-science opens to us in the Pythagorean-Parmenidean field [...] (XENAKIS, 1992:241).

The Greek thinker seems to embody an active demiurge which defends the need to liberate the intellect and the imagination from the restraints which make the generation of ideas difficult. In this way, all belief after its formulation becomes an obstacle to the creative imagination. Converted into belief, technology and history can become transformed into an obstacle for the imagination. Bruno also calls for the imagination to be accompanied by and reinforced by intellectual capacity,

[...] The bond of the imagination is in itself weak if the intellectual forces do not reinforce it. Indeed, the spectres which connect and enchain the spirit of the idiot, the sly, the credulous and the poor believer in superstition are the object of mockery and disparagement and are considered empty shadows by a rational, well-founded and rigorous intellect. In turn all magicians, doctors or prophets do not achieve anything if they lack faith [...] (BRUNO, 2007:63)

We hear the same advice from Xenakis, for whom art and science are constructed in the domains of inference and experimental verifications. He believed that calculation alone cannot guarantee answers. The answer belongs in a third dimension, which is exclusive to art: the immediate revelation of beauty, it is here where intuition enters as a fundamental factor in the process. Nevertheless, in the same way as Bruno, he believed that an artist cannot be satisfied remaining in the plane of revelation, isolating himself in the universe of forms and their changes. Revelation must be followed by validation, and for this to be possible, he stated that the artist needs to embrace the vaster horizon of knowledge and problems, guided by principles of independence, liberating himself as much as possible from all contingencies (XENAKIS, 1992:xi).

In this way, in the attempt to liberate himself from contingencies, understood as restrictions imposed by reality, Xenakis penetrated into the Platonic and Pythagorean universe of ideas and numbers, in other words, into the universe of the "unconditioned". At this point, we see him once again close to the ideas of Schelling, who requires from art the internal satisfaction of being true, beautiful, expressive and universally meaningful. For the German philosopher, art must dispense with the contingent of attraction (SCHELLING, 2001:209). Schelling understood the idea of the contingent of attraction as the aesthetic tendencies artificially enforced by cultural ideology or by individual taste. For Schelling, the active fruition of a work of art signifies the force of "*reconstructing the work by understanding*"; the passive fruition would merely be the reception of this work by the senses. Schelling placed the immaterial forces such as the spirit, the imagination and intellectual intuition above the senses, as "*the supreme force of the spirit is to produce ideas (infinite) which are above the material and the finite*" (SCHELLING, 2001:196).

Xenakis remains faithful to a belief which seeks to reflect on reality through the exploration of diverse bonds, as his artistic forms pass through ordered geometry, chaotic geometry, organic forms and mechanical forms, from the stochastic, - why not say - to serialism. I believe that

the Xenakian General Art of Morphology is directly affiliated with the tradition of the bonding of Bruno. Analogical and pre-deductive thought would be the best guide through the methods adopted by a general art/science of morphology which intends to relate disperse fields of knowledge, in a form of epistemological synthesis (the Metastasis/Philips Pavilion experiment). In order to construct analogies, the analogist needs the active intervention of the imagination, fantasy, memory and the passions; in other words, sympathetic movement among men, things and ideas. If the analogist intends to verify the validity of the analogies proposed, he cannot do without recourse to logic, numerical calculation and all the tools available from rational, axiomatic or deductive thought. It is at this moment that the art of Xenakis cedes intuitive thought to the science of Xenakis. Seeking the original reasons, the art of general morphology is, in essence, an art of aggregation, which does not leave elements outside its orbit. Metamusic can be understood as the search for bonds which go beyond music.

In relation to the Gnostic orientation of the Xenakian idea system, we can start from the thesis of John Gray, who characterized the attitude of the Gnostic idea system as an "*individual search which supposes liberation from time*" (GRAY, 2008:97). Thus, the ideas on time and eternity in Xenakis's work can be expressed through gnosis. The mysterious birth-date of the musician could be interpreted as a birth *outside-time*, which cannot be dated with precision, therefore a stochastic non-deterministic birth, which belongs to the sphere of the eternal, outside the temporal domain. Here is, I believe, an existential gesture which indicates a symbolic direction in his work, translated in the conception of musical structures *in-time* and *outside-time*.¹ Through the formulation of three types of algebra for musical treatments (XENAKIS, 1996:170) and through the promotion of the study of symmetries in *outside-time* structures, Xenakis appears to theorize as a Gnostic who concretely try to liberate music from time, recognizing therefore the reality of temporal structures, which cannot be manipulated by symmetries. In this way, from a soteriological perspective, the formulations of *in-time* and *outside-time* musical structures, although produced in the field of music and with scientific instruments, seem to respond to a greater extent to personal and philosophical existential questions of the musician more than strictly musical problems.²

In relation to the mysticism we can compare a quotation from Goethe, dated 1829, a few years before the death of the writer, coinciding in some way, with the Xenakian attitude of declared aversion to the ephemeral "*impulses of the moment*" (XENAKIS, 1992:ix). Goethe said:

[...] What is classical is healthy, what is romantic is sick [...] (GOETHE, 2008:264).

And Xenakis said with vehemence, perhaps influenced by his readings of Marx and contrasting with his own definition of music as a mystic and atheistic asceticism (XENAKIS, 1992:181)

[...] Music cannot lead to mysticism. The imbeciles who listen to it that way are the mystics. Mysticism is a drug. One thinks that one is making mysticism – look at Messiaen! – but the high value of his music is elsewhere: Religious sensitivity evolves so quickly that before long this mysticism takes on the appearance of superficial froth, linked to the colour of the times.[...] [...] A work of art, it too, remains thanks to its hard yolk. It is neither the perfumes of an era nor the mysticism which gives it this power [...] (XENAKIS et al. 1987:23).

It can be said that the theoretical attempts of Xenakis express the latent conflict of an artistic conscience which, in spite of its elitist individualism, seeking all-encompassing solutions and transcendental units, feels the need to establish limits of contention for the arbitrariness of human actions, but also wishes that these limits remain open, preparing a metaphysical escape route against the avalanche of the reductive sciences of agnostic materialism which manipulate the material universe and serve the process of serializing men into things. The Xenakian absolute is composed, almost entirely, by elements brought from the irrational universe (the infinite, eternity, nothingness, and destiny). This affinity with the irrational, expressed in his speculations on ex-nihilo creation and destiny, is present from his initial works. Although Xenakis's methods apply to the search for absolute, universal and objective answers, they originate from arbitrary analogical choices to remain, in the realm of the symbolic.

Perhaps it is not by chance, nor an extravagant speculation to see coincidences between the transformation of the motif insinuated by Beethoven into the *Funeral March* of the second movement of the *Eroica Symphony* to the celebrated motif of the *Fifth Symphony*, popularly

known as the “*symphony of destiny*”. I speculate that Xenakis could have repeated this symbolic linking when relating the musical form of *Metastasis* to the architectural form of Philips Pavilion. A representation of a human being destiny which, in the 20th century, could be expressed as a way to the death caused by technological artifacts or as a form of spiritual salvation, thanks to the re-bonding of art and science.³ It is worthwhile remembering the reaction of Xenakis to hearing Beethoven’s Fifth Symphony:

[...] One day, I listened to Beethoven’s Fifth Symphony which hit me like an apocalypse [...] (XENAKIS, 2006:17)

Returning to the thesis of *The Rebel* by Camus, I suggest that three revolts can be summed up in Xenakis: metaphysical revolt, scientific revolt and romantic revolt. In the first place, metaphysical revolt impels him to look for transcendental units: Metamusic and the Self. His speculations on the possibility of an original creation ex-nihilo and his search for the “indicators of destiny” could be seen as signals of this revolt, saying “no” to Gods. On the other hand, he stated that the formulation of Metamusic could be understood as the expression of another revolt – the revolt against agnostic science, saying “no” to men. As a Gnostic, he appears not to admit the acceptance of definitive truths, which limit thought, even though stated by science. Finally, romantic revolt, which seems to coincide with the epistemological and political daring with which Goethe, subtly, urged men not to surrender to the passive contemplation of beauty, or to the ugliness of suffering caused by disorder. Therefore, for Xenakis, art cannot be measured only by the rule of beauty, but first by the intelligence. In this sense, he proposes remove the aesthetic element of art, which places him next to Schelling and the theorists which understand art as a science or expression of human intelligence, with everything that possesses of rational and irrational, instead of understanding art as the science of the beautiful and the ugly. Romantic, because he is saying “yes” when he dares, despite all the obstacles, to imagine another destiny, opposing systems of established thought with the anti-gravitational force of his imagination, within the limitations imposed by the time (non-reversible) and the uncertainties of the future (the unforeseeability of destiny).

References

- Bruno, Giordano. 2007. *De la Magia; De los vínculos en general*. 1º Ed. Buenos Aires: Cactus.
- Camus, Albert. 1975. *The rebel*. London: Penguin Books.
- De Staël, Mme. 1999. *Corinne or L’Italie*. London: Oxford University Press.
- Eddington, Sir Arthur S. 1948. *The Nature of the Physical World*. Cambridge: University Press.
- Ferry, Luc. 2003. *Homo Aestheticus*. Coimbra: Almedina.
- Ferry, Luc. 2008. *Vencer os Medos*. São Paulo: Martins Fontes.
- Ghyka, Matila C. 1977. *Estética de las proporciones en la naturaleza y en las artes*. Buenos Aires: Poseidón.
- Goethe, Johann Wolfgang von. 2008. *Escritos sobre arte*. São Paulo: Imprensa Oficial.
- Goethe J. W, Eckermann, J. P and Soret, F. J. 1850. *Conversations of Goethe with Eckermann and Soret*. Vol. II. Trad. John Oxenford. London: Smith Elder & Co.
- Gray, John. 2008. *Misa Negra. La religión apocalíptica y la muerte de la utopía*. Barcelona: Paidós.
- Gray, John. 2006. *Cachorros de palha. Reflexões sobre humanos e outros animais*. Rio de Janeiro: Record.
- Matossian, Nouritza. 2005. *Xenakis*. Lefkosia: Moufflon Publications.
- Schelling, F.W.J. 2001. *Filosofia da arte*. São Paulo: USP.
- Voegelin, Eric. 2006. *La nueva ciencia de la política. Una introducción*. Buenos Aires: Katz.
- Yates, Frances A. 2007. *A arte da memória*. Campinas, SP: Unicamp.
- Yates, Frances A. 1995. *Giordano Bruno e a tradição hermética*. São Paulo: Cultrix.
- Xenakis, Iannis - Brown, Roberta and Rahn, John. 1987. “Xenakis on Xenakis”. *Perspectives of New Music*, Vol. 25, nº 1-2. Pp.16-63. University of Washington: Seattle.
- Xenakis, Iannis. 2006. *Musique de l’architecture*. Marseilles: Éditions Parenthèses.

Xenakis, Iannis. 2000. "Determinacy and indeterminacy". *Organized Sound*, Vol 1. n° 3. Pp. 143-155. Cambridge University Press.

Xenakis, Iannis. 1992. *Formalized Music. Thought and Mathematics in Composition*. New York: Pendragon.

Xenakis, Iannis. 1995. *Arts/Sciences: Alloys*. New York: Pendragon.

Notes

¹ Adding up the birth dates that appear in the biography of *Les Amis de Xenakis* Foundation, institution supported, between others, by his wife Françoise and her daughter Mâkhi, to the dates mentioned by his biographer, Nouritza Matossian, we have a total of four possible birth-dates. The loss of documents during the war explains that doubt. As the war began during his late teens, I allow myself to speculate if wouldn't be a Xenakian gnostic gesture about the time.

² In this sense, all the Xenakis's achievements for the musical art would have its origins outside the music. I would say that he added new values and technics to this art without trying to eliminate the old ones.

³ Here, I'm specifically understanding the clinical effects implied by the word "metastasis" (toward death), linking it with the symbolism of technological progress expressed by the spirit of Expo58 in Brussels and the Xenakis's critical point of view about technological artifacts that he expressed in "Destiny's indicators", ending yours reflection of *Towards a Philosophy of Music* (XENAKIS, 1992:241). Couldn't it be a sarcastic, ironic or subversive vision of Xenakis in relation to the technological progress?