

Liviu Glodeanu's *Zamolxis*, at the confluence of music, mathematics and theology

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Liviu Glodeanu completed the opera entitled *Zamolxis* in 1969, his starting point being the play with the same name written by Lucian Blaga in 1921.

The text is charged with meaning, almost tangent to poetry and at times paradoxical, even shocking. From a musical perspective, Liviu Glodeanu concentrated the discourse until he reached a type of music that had substance, simplicity and order, music at the confluence between mathematic generation and ritual gestures, music that pertains to modalism, with influences from Messiaen.

Just like the play, the opera has five tableaux. The main protagonists are Zamolxis and the Magus; the crowd is the collective character and, at the same time, a decisive one during the play. There are several levels of interpretation of an opera and we may argue that the deepest one is the one at which the characters are actually symbols, personifications, metaphors, explicitations of feelings, ideas, states of the human soul. From this perspective, the protagonists of the confrontation in the opera can be seen as symbols that bring to the surface, in the world of conscience, the Living God, as perceived in the depths of the heart of man (Zamolxis) and what man perceives as god, the false image of God in the mind of man (Magus). The crowd, the collective character of the opera, could be interpreted as a sign of the multitude of thoughts and shadows in the restless mind of man. Thus, everything that happens throughout the opera leads towards the final conclusion according to which what we believe and feel about God is rarely close to what God really is in his infinite Kindness and Light. Our image is a static, rigid one that sometimes confuses us, gives birth to contradictions and determines us to move away from what we believe God to be.

We will proceed by presenting the plot of the opera and by mentioning a number of interpretations and theological explicitations¹ and in the end we will identify several interferences with Messiaen's system of composition. These interferences have implicit correlations with mathematics, and we may notice that recurrent sequences and combinatorics are also present in this work, at the level of substance.

The first tableau, the *Pagan Ritual* is a "celebration by the Magus of a myth of creation", as mentioned by Liviu Glodeanu in his stage directions. In a

¹ In several essential moments of the opera, Liviu Glodeanu leaves the text without music and this can be construed as another modality of emphasizing the abundance of theological meaning of Blaga's text.

couple of lines that could be construed as an aphorism or as an epiphany, Blaga synthesizes:

“Lumea nu este decât coaja lui Gebeleizis
El o însuflețește întru bine și rău
întru urâtenie și frumusețe.”

In other words, “all creatures are plasticized versions of the Supreme Reason, of the Maker’s Word”². Referring to the One who „enlivens the world in goodness and badness, in ugliness and beauty”, Blaga offers us a variant of the holy text: „I (God) kill and I make alive; I wound and I heal, and no one can deliver out of my hand” (Deuteronomy 32,39). Cioran gives us a detailed explicitation in which he reveals the paradox: “Philosophy has no answers. Compared to philosophy, saintliness is an exact science. It gives us precise answers to questions that philosophers do not even dare consider. Its method is suffering and its goal is God”.

The second tableau, *Exoration*, pertains to Zamolxis’s world, the transfigured world in which man enters a real dialogue with God. Blaga formulates, in a quasi-poetic manner, precise mystic truths related to mysticism, hesychasm:

“Iată sunt făptura Ta
Și-aici sunt ochii mei, îi vrei?
Din clipe, ca din muguri plini
rodesc în neam
o mare de lumină”

A possible interpretation of this fragment would be that the immediate presence of God-Love (“Tulburatorul chiot vine-vine”³) prepares the man for complete abnegation, in the spirit of self-sacrifice („Aici sunt ochii mei, îi vrei?”). Willing to sacrifice himself, man receives the gift of passing into the Infinite which fills everything (“din clipe, o mare de lumină”) and of getting to know what fulfillment feels like, through the transformation in the infinite of what he gave from his finite condition (“ochii rodesc o mare de lumină”).

The third tableau, *Opprobrium*, presents the dialogue between the crowd and God. The crowd, which is blinded, believes that God is also blind and, failing to understand the purpose of pain, wants to crucify God:

“Ne povățuiește învățătura unui orb
Să-l facem orb ca zeul lui”.

The narrow-mindedness of the human mind in relation to the Absolute Mind and Love is revealed by Blaga with the help of a metaphor under the form of a paradox: „God, blind and old”. Failing to understand the great purposes of life and the pain through which God gives man the possibility of getting to understand and to feel the mystery of living and of putting to death what must

² His Holiness, the Metropolitan Daniel, in a theological presentation Pr. Stăniloae.

³ In hesychasm, the efforts are directed towards the preparation for the arrival and the lighting up of the inner fire, sign of man’s deification

die, so that only what is eternal remains, man, who is given the chance of becoming infinite, locks himself up in his mind and judges the Creator according to human standards: “If God does not see so much pain, God must be blind”.

Zamolxis is blinded by the crowd and Blaga’s text reaches an intensity which reminds us of God’s unsettling presence in the Old Testament:

“O, oameni neputincioși
sămânța de înțelepciune ce zace-n voi
o aruncați în prund
dorința de înalt o jertfiți fricii”.

“Un gol umplut cu disperare
un gol de necredință
un gol umplut cu patimi”.

The fourth tableau, *Conjuration*, depicts the condition of man in the absence of Harmony⁴, distanced from God; however, this man, that is made present in the opera by the Magus, still has some Light within him and has struggled to reach the Light. Again, Blaga reveals in a poetic, aphoristic, elliptical manner, deep truths:

“Din cuibul veșniciei
(El) s-a coborât pe trepte de lumină
să vă-nvețe
tinerețea și durerea”.

According to the truths explained by Priest Staniloae, the warm nest of eternal life is the communion between the Persons constituting the Holy Trinity, this being “the structure of supreme Love”. Christ is the one who brings freshness and joy into the world (“youth”), which have their origin in the power of Resurrection, as well as complete submission to the will of God, submission of the kenosis type, the “pain” that is the only path towards Resurrection.

The fifth tableau is entitled *Ritual for Zamolxis*. In his text, Blaga made several implicit references to God-Christ, That of the sacrament⁵, That of the Apocalypse⁶. The God-Christ revealed through Zamolxis is also that of kindness and humility:

⁴ Sometimes the music is absent and the text is present by itself, which suggests a breaking of the Harmony.

⁵ “caut în nisipuri/ Sângele ce-a curs/ din trupul Său/ Când sorb o picătură/ mă dezmeticesc/ și iarăși mă fac om”,

”Tot sângele vărsat din trupul lui Zamolxe/ adune-se-n aceste picături de vin”,

”Ne-a adus pe Dumnezeu/ orbul e iarăși printre noi/ și-n noi”

⁶ ”Întoarce-te, Zamolxe-ntre/ stăpânii cei dintâi/ ai gândurilor, brazdelor, luminii și ai apelor!/ Răsune stelele-n ecouri/ Sub sandalele nălțării Tale/ Urcă pragul veșniciei/ Și mângâie cu mâna Ta/ Ursita ăstui trist norod”

“Pleoapele-mi se zbat
de cerul tău
ca niște fluturi de-o fereastră
nu-i numai o poveste
sunt aici”.

One interpretation would be that the mind of man, with his vast potential (“cerul tău”) becomes closed to God through any sign of doubt (“Nu-i numai o poveste”). God’s all-knowing eye (“Pleoapele-Mi”) is close, but respects, with the delicacy of a „butterfly”, the freedom of man, man who sometimes does not even suspect that the Infinite can lie in a moment (“Sunt aici”).

In the end, Zamolxis is killed, a sign which suggests that man can fall incessantly, until he reaches that spark of the divine which lies within himself. To become aware of this fall and to repent (“life is Zamolxis”), brings through God’s kindness:

- Resurrection – “Nemuritorul chiot vine.”
- growth, until one becomes worthy of the entire creation – “Pământul răspunde, munții răspund, apele răspund” and
- the exit from the time of evolution in order to enter the eternity of light – “Din clipe ca din muguri plini/cresc veșnicii rodind în neam/o mare de lumină”.

The entire opera is based on the modal structure 1312131, which is naturally associated with the structure 1331, that which is in a complementary relation with the overall chromatic. We noted⁷ the mode with 7_c (C, D-flat, E, F, G, A-flat, B, C). Its complement is noted with 5_d and is (D, E-flat, F-sharp, A, B-flat)⁸. Generally, the complement of 7_x is 5_{x+2} for any x of Z_{12} .

Amongst the techniques used by Messiaen, procedures that are present especially in the *Turangalila Symphony*, we find:

1. the logic–aesthetics of numbers, reaching, in the third tableau, „a poetry of numbers”, expression used by Messiaen in his presentation of the *Turangalila Symphony*, presentation included in his *Traité de rythme, de couleur, et d'ornithologie*;
2. the sound-duration association
3. the rhythm-intonation dissociation
4. permutations
5. the preference for prime numbers.

The sound-duration association In the third tableau, in measures 13-20, the 5_c mode is used at the hornpipes. A duration expressed through a number of options is associated to each sound: D-flat – 1, G-2, C-3, E-4, A-flat -5. By arranging the sounds according to the order that we inferred from the ascending

⁷ Thus, the initial sound and the cardinal are mentioned

⁸ Again, the notation mentions the initial sound and the cardinal

arrangement of the durations, we obtain the succession D-flat-G-C-E-A-flat, with the modal structure 6546 which reminds us of the quartal harmony of Messiaen, with the structure 65656. W.G. Berger's idea of taking as a unit of measurement another interval but the small second is also present here. We may also notice a modification of the resulting sequence, if the perfect fourth (5) is taken as a reference.

The rhythm-intonation dissociation. At the brass, in measures 13-20, the mode 7_{B-flat} is also used: $7_{B-flat} = (B-flat, B, D, E-flat, F, F-sharp, A, B-flat)$. Also present in the melodic pedals that overlap one another at each voice, is another permutation of the generating cell (the mode), all the permutations being cyclical. Just like in the *Turangalila Symphony*, from a rhythmic perspective, the latent polyphony of a chromatism of duration, with a pedal of rests in eighth notes is used at each voice. For example, at trumpets 1, the resulting rhythm is $3\underline{1}4\underline{1}5\underline{1}6\underline{1}7\underline{1}1\underline{1}2$ (the duration is expressed in eights, the underlined numbers represent the durations of the rest; each voice has a different cyclical permutation of durations, which means that some cyclical permutations are used for the pitches of the sounds and some others for the durations of the sounds, fact which proves, in a rigorous manner, the rhythm-pitch dissociation). If we note, like in mathematics, the elements of the set $\{B-flat, B, D, E-flat, F, F-sharp, A, B-flat\}$ with $a=E-flat, b=D, c=F, d=F-sharp, e=B, f=A, g=B-flat$, we obtain the pitch-duration associations

A3	B4	C5	D6	E7	F1	G2
C7	D1	E2	F3	G4	A5	B6
E4	F5	G6	A7	B1	C2	D3
G1	A2	B3	C4	D5	E6	F7
B5	C6	D7	E1	F2	G3	A4
D2	E3	F4	G5	A6	B7	C1
F6	G7	A1	B2	C3	D4	E5

On the vertical plane, we find the “by twos” sequence at the level of the letters and the “by fours” sequence at the level of the numbers.

The preference for prime numbers An illustrative example can be found in the fourth tableau: the musical form is determined by the meaning of the text and is circumscribed to a periodicity of 13 measures, periodicity that is also characteristic to the development of the dramatic scenes:

- measure 13 “Am fost întâiul care l-am brodit / C-o piatră în obraz”.
- measure 26 “Nemuritorilor, vă zvântă necredința”.
- measure 39 “El nu s-a-ntors, dar totuși e aici.”
- measure 52 “Zamolxe n-a fost om”
- measure 65 “Poporul va striga”.

The explicit mathematical system used comprises the combinatorics and the recurrent sequences. There are the permutations generated in lexicographical order, as they appear in the structure of the first tableau: if we note a=F, b=E-flat, c=F-sharp at the oboe, we will obtain the sequence abc, acb, bca, bac, cab, cba – cyclical permutations.

In the first tableau, at the chorus, various timbers are assigned to the word “Ehove”: we observe that we have cyclical permutations comprised of 5 elements out of 6.

The recurrent sequences are present in the second tableau. As far as the rhythm is concerned, we may notice the overlap of the voices, each voice having its own generation mode, governed by a sequence. Voice I results from the sequence inspired by Fibonacci: $x_{n+2}=x_{n+1}+x_n$, the number-durations being 1, 3, 5, 8, 13, 21, 34, the respective sequence being exposed in a direct or recurrent manner.

Voice II results from an arithmetic progression with ratio-3, the number-durations being 21,18,15,12,9,6,3, in a direct or recurrent sequence.

Liviu Glodeanu was extremely talented at music, as well as at mathematics. The Zamolxis opera stands out through its simplicity and concision that are the result of the attainment of reaching depth and substance.

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Abstract

This study aims at presenting L. Glodeanu's opera, *Zamolxis*, with emphasis on the interferences between his work and O. Messiaen's universe of composition, on the mathematic notions underlying the musical structures and on the theological meanings outlined by the ethos of music, starting from the poetical and aphoristic work of Lucian Blaga.