GEOMETRIZATION OF POETIC SPACES. MATHEMATICS AS A GAME

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Abstract: The paper explores and analyzes the influences of game and mathematical symbols on the poetry of the Romanian modern poet Ion Barbu. The paper presents the analysis of the theories of game as a poetic art as well as the analysis of the links between science and poetry in the works of Ion Barbu - links which led to the conclusion that his poetry is imbued with mathematical symbols. This was the reason why literary critics reviewed his work as original and a novelty in Romanian literature. Poet and mathematician Ion Barbu (Dan Barbilian) became known as one of the most significant modern poets of Romania, Barbus' lyric went not only through different phases distinct by various specific representations, but it also went through language modifications. Thus the motive of the game which we encounter in Barbu's poetry changes according to the literary phase through which the poet goes. The analysis of game as ars poetica by critics and other foreign and Romanian researchers represents the point of departure of this paper while the goal of this researche is to identify those components which demonstrate that game is not only a cultural and literary topic but also a way of life. Literature itself is a game of time and space, a game of different eras and fashions. Poetry is a game of words and a creator of a fascinating imaginary and complex space. Life unfolds within the space of an intellectual game, in a world created by the mind where things are different from those in real life and linked with links other than the logical ones. Game is thus an element that belongs within the field of poetry and every poetic form seems closely tied to the structure of the game.

Keywords: game, mathematics, poetry, Ion Barbu, symbols, modernism

Ion Barbu belongs to the period between two World Wars, and is representative of an original literary stream: hermetism, in the same way Blaga is representative of expressionism, V. Voiculescu of the mythic, and Bacovia the exceptional symbolist. Ion Barbu understood the poetic reforms of Poe and Rimbaud and their attempt to "purify" the romantic soul of poetry. This Romanian poet tried to overcome poetry's descriptive stage, envisioning a specific kind of generality, something that would bring him multiple possibilities of expression. Ion Barbu has been the subject of a vast and contradictory body of scholarship. For the hermeneutic path it follows, Barbian poetics is among the most complex not only in Romanian literature, but in European literature as a whole. Out of Romanian contributions to the European expressionist space, only the poetics of Lucian Blaga has a similar resonance, being supported not only by the poetry per-se, but also by theoretical writings. Lucian Blaga defined the expressionist product as incorporating a certain value, the most elevated of which is the absolute. Ion Barbu means no different when he speaks of "*the geometrical condition, and above it, ecstasy*". The poet does not negate poetry's capacity to rise towards the absolute, "towards *healing knowledge*, but only the impossibility to attain the state of grace in order to create that type of poetry. [...] The silence, the drama of the uttered, the tragic expressed through expression, are all encountered in great part within modern Romanian poetry" (Ruja 2008: 11).

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The *Mirrored Play* collection was published as the result of a bet with Tudor Vianu that Barbu could write poetry (other sources tell us about an understanding between the two: if Barbu would prove capable of publishing poetry, Vianu was to critically analyze his works). The poems are difficult to understand, literary critics consider that Ion Barbu is writing hermetic poetry in abstract language, while recent commentators on Barbu`s poetry "have drawn attention to the poet's stressing his own effort to get out of «the competition of individual forms», to impersonalize expression" (Pop 1985: 148). This shift from *mimesis* towards *poesis* is characteristic of modern lyricism, and Ion Barbu is one of its "most radical advocates" (ibidem). The *Mirrored Play* cycle has been translated into numerous languages of global circulation, and some of the poems from this cycle have been translated into Serbian as well. Barbu makes use of mathematical concepts, the most frequently encountered one being the notion of *group* (a mathematicallly structured mass, the elements of which can be brought together according to a specific law): „Out of a clock, inferred, the depth of this peaceful peak,/Come through the mirror into the healing azure,/ Cutting through the drowned rough herds,/ In ponds of water, an ever purer mirrored play." The understanding of Barbilian's works infers analysis through gradation. Ion Barbu was a university professor, up until the end of his life, teaching special courses in the finishing years of university, that only a restricted number of very good students attended. Following his death, a large part of his mathematical and his didactic works were published. These manuscripts had been scattered around numerous notebooks, separate sheets of paper or along the margins of the many issues of the *Gazeta Matematică* magazine from the years preceding World War I. After this date, Ion Barbu left the literary space, and only returned to it occasionally, now fully dedicating himself to his profession. He was considered a mathematician of European standing, imposing the geometrical term of "Barbilian spaces". There has been an interesting article on these "spaces", by Wladimir Boskoff and Bogdan Suceavă, published in the magazine *Observator Cultural*, nr. 286 of September 2005: "The Story of "Barbilian spaces", Or What Else Happened after *Mirrored Play*". In our time, Barbu is appreciated for his true value, both as a mathematician and a poet.

Knowing the Barbu`s works, perceiving the vast universe of signification, expressed in laconic language and within such a rigorously elaborated sign system, represents a difficult process for the modern reader: "The geometrization of poetic space, the spiritualization of the mathematical one; the essentialization of lyrical perception, the individualization of algebraic discourse – these are the coordinates that, in the Barbu`s opus, axiomatically fixate the transcending of the real into the space of pure Knowledge. The mathematical discourse, as well as the poetic one, both borrow from the unique beauty of Superior Knowledge. The stylization of a poetic image, just like the stylization of a mathematical demonstration, up to the point where they come to express an Idea in its purest and most abstract form, in the form closest to the very essence of knowledge, is the "sign" that Barbi(li)an creation aspires to. The gnostic aspiration thus puts him side by side with the great thinkers of the XIX century" (Şerban 2007: 229).

As a poet, „Ion Barbu's place appears to be singular within Romanian literature, as well as within the European one. [...] His poetic experience through deliberate construction, imposed by himself, is indeed unique. We know of no other poet who combined, through such condensed lyrical synthesis, the most abstract of conceptualizations with the most

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spontaneous of inspirations" (Mincu 1990: 338). As a mathematician, Dan Barbilian invented the spaces that carry his name today, thinking up „other modes" of mathematical existence: „The crisis of the Greek scientific civilization was the impossibility to conceive of the irrational number. Not the Roman conquest, but their inability to overcome certain prejudices concerning mathematical strictness, to accept other modes of mathematical existence, quickly jaded the Greek genius" (Barbilian 1988: 5). „The relativization" of mathematical discourse, its opening up to new perspectives and approaches, establish the coordinates of an outstanding mathematical mind.

The works, be they poetic or mathematic, map out the landmarks of a unique destiny, not only in the space of Romanian culture, but within universal culture as a whole. Ion Barbu "is the most difficult poet, not only in Romanian literature" (Mandics: 2001: 7), his difficulty is found „in the existence of an imaginary univocal object, unuttered though, only circumscribed by means of a methodology peculiar to the mathematician" (ibidem). This is what Lovinescu says about Barbu's poetry: „From the very first verses, I sensed a remarkable poetic talent. *Sburătorul* honors itself by opening up its pages to this poet whom we have given the name of Ion Barbu. No person will miss the genetic envisioning, the intricacy of expression, the relative sobriety of this young man, who evokes, in beautiful and cold verse, the poetry of the powers of nature, of inert matter, of universal pretense and of the mysteries of germination. Through geometric vigour and conceptual novelty, as much as through the poet's mastering of rough form, Romanian literature has been enriched with a new talent." Ion Barbu opted for „cryptic, essentialized poetry embued with enigmas; initiating poetry" (Ruja 2008: 11).

Of the beautiful and cold verses the poet himself affirms in interviews and correspondence that: in his „versifications" he wanted to bring about „the equivalents of the absolute states of intellect and vision: the geometric state and, above it, the ecstasy" (Barbu 1968: 39-40). „The latent nadir" (Barbu 2003: 17), lost in the elevated candour of Knowledge, the Barbian poetry becomes an Odyssey in a world of the Logos, not excluding, however, the existence of emotion: „Everybody recognized his talent; but they did not see his feeling and his emotion. [By the critics of the time] Ion Barbu was identified as a poet of glacial forms. Impassable Parnassianism. Confusion. – A confusion provoked by the delimitation of the notion of emotion" (Mincu 1990: 338). Barbu`s lyricism is much more subtle than that, far from „the mellodic wailings" of common poets: „There are also emotions of an intellectual order. But they are rare and less accessible. And therefore more precious" (Mincu 1990: 24-25). The „burning and prophetic word", the „lazy poetry", „the banal rehabilitated" (Barbu 1968: 84-87) do not make part of the Barbu`s lyric formula: „There is a level of poetic experience wherefrom the verse proves to be rigor and fervor, and not an elaborate interjection or a more or less harmonious celebration" (ibidem: 105-106). The axis of Barbu`s poetics is constructed around a different kind of romanticism, one from the domain of gnoseology.

Poetry, therefore, in Barbian concepts, is a „play", but not one stemming from reality, but rather from reality's reflection „in the mirror", which is to say, in the spirit: it is a „mirrored", a superior play, a game of Ideas, of Essences, of pure Knowledge. Beyond the *original play* of appearances, the poet seeks a *mirrored play* of their meaning; poetry thus becomes a transcending of the real into archaetypal Platonic signs. Barbian poetic art starts

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from an abstract understanding of the world, it does not concern itself with things, and the immediate realities, the evident, the contingent qualities – are all materials that art does not recognize.

In order to contour a vision about universe's unity, and answering the primary, universal questions of mankind, Ion Barbu pleads for the return of poetry to the original function that the Pindaric ode had in Antiquity. Barbu himself affirms that what could be passed on as modernism in his poetry is nothing more than an interweaving with the very farthest point in poetry's past: the Pindaric ode. Geometry in Barbu`s works, therefore, is more than a scientific branch, it is a concept, a principle, a mode of perceving the world, a stylistic category. Pindar's „Odes", Euclid's „Elements", Apollonius' „Stoics", Pappus' „Mathematic Collections" become symbols of an Apollonian Greece: „After all, Greek thought is expressed not only mythically, in fiction, but also directly, in theorems. The gate through which the Greek world may be discussed – and without the knowledge of which, in my opinion, one's culture can not be deemed complete – is not necessarily Homer. Greek geometry is a wider gate, through which the eye might grasp an austere, yet essential landscape" (Barbilian 1967: 11-13).

The poet and mathematician proposes an original formula for this new humanism: what differentiates classic humanism from the modern one is precisely the stress put on „mathematical formation" (Barbilian 1967: 11-13). Having as its starting point the Apollonian geometrical vision, as the expression of the intuition of the essences circumscribed to a single synthesizing principle, Barbu`s humanism proposes *a configuration of possible worlds*. The fundamental axis of this new humanism: the opening toward innovation, towards probable interpretations: „In new humanism, probability, as a dialectical opening on the plan of method, becomes fundamental, in comparison to the hieratism of Greek geometry turned philosophical dogma" (Mincu 1990: 89): Barbu speaks of the relation between mathematical concepts and his poetry in: „We are Einstein's contemporaries, and he rivals Euclid in imagining abstract universes, so we inevitably have to rival the demiurge in imagining probable worlds" (Barbu 1968: 39).

The Greek spirit is revealed in all its splendour in Barbu's poetry, in his poems we find a mysterious Hellas. The geometric state, the rigor and the Apollinian light are not the only coordinates that his works gravitated towards. The bipolarity of the Greek soul also has as its forms of expression the Dionysian lyrical aspects: catharsis, cosmic eternity, the immanent light of dreams, which brings Barbu close to the Romantics: „The cultural aspects of Hellas are seen in the themes and motifs frequently encountered in his poetry, but also as an essential element in the configuration of his poetics. The relation to Ancient Greece means the relation with a tradition..." (Ruja 2008: 11). The poet also openly manifested his affinity towards the works of the great Romantics. In his own poetry, he stopped at the gnoseological aspect and at the Greek Orpheic mysteries. Certain literary historians, like Marin Mincu, in *Ion Barbu's Literary Works* (Editura Cartea Românească, 1990), talks of the possibility to classify the poet as an expressionist, because through „a bursting of latent energy", through „a tragic vision of human destiny", expressionism becomes the last crepuscular tentative" of art (Mincu 1990: 210-211) to survive the pragmatic epoch that came afterwards. Synchronically speaking, Ion Barbu is rather an expressionist than a romantic, for his predominant aspiration to the absolute, for the „gnosticism" of vision that opens up the romantic perspective over the poet.

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Exploring archaic mysteries (Egyptian, Greek) and the mysteries of modern mathematics, he puts himself in Pindar's hypostasis (who himself was an initiative in Hermes Trismegistus through the re-working of Egypt by the Orphic lyra). Hermes Trismegistus (God of Revelation, the name Neoplatonists used for the Egyptian god Toth – the one holding the mystery of Creation, of Knowledge), the poet Ion Barbu encrypts the mystery of existence using a metaphore, a symbol (Şerban 2007: 233). The poet's hermetism tends to realize a unique/autonomous sign system, just like in Romanticism. Through „the formula of gnostic romanticism we understand a synthetic vision of lyricism from all the times) (ibidem: 211).

The contact with German expressionist poetry gives him a different understanding of poetry and a different concept about the poet: „The poet raises the sum/Of dispersed harps, harps you lose in counter-flight" (*Out of a clock, inferred...*), that is, he becomes an archetype, making an archetypal gesture. The theme, the heroes, the conflict, the subject, have in mind a fundamental knowledge of the world, which we can see in the analogy with universe: „And the song is hazed: hidden, as only the sea / When the medusae walk under the green bells" (*Out of a clock, inferred...*). Ion Barbu himself recognizes in the poem *Out of a clock, inferred...* the influence of classic poetry, of Pindar's ode, through the harmony and the echilibrium of the compositions, but also through the association of symbols: harps", „bells", „song", through the concept of *mimesis* („mirrored play") and *catharsis* („healing azure"), taken from Aristotle's *Poetics*. The need for objectivity determined the Parnassus poets to cultivate poetry of fixed form. Precisely because of that, in the majority of poems belonging to this stage, Ion Barbu used the fixed sonnet form.

Romantic by nature and inspiration, classic-like by concept and expression, drawing out the shapes of a new humanism as the starting point for modern thought, the genius poet and mathematician adds to his creation a new fundamental dimension: essentializing, the maximum condensation of artistic expression. His opinion is that anything superfluous should be carefully removed, because no other language is possible when talking about essence but the elliptic language of theorems. He „derives from a certain concept of the art of theorems, which Gauss saw as a majestic text, as an inscription, the laconism of which stands itself guarantee of its longevity" (ibidem: 192). The fundamental axis of the thinking of the poet and mathematician Barbilian becomes the formula defined as: „The minimum of blind formulae united with the maximum of visionary formulae" – as Minkovsky defines Gaussian hermetism (idem).

Literary critic Marin Mincu makes a subtle difference between two concepts: ermetism/hermetism[1] (Mincu 1990: 101-105), once more underlining the uniqueness of Barbu`s works in the context of Romanian, but also European literature. Unlike Mallarmé, whose poetic message is a purely hermetic one, and thus devoid of lyricism, Ion Barbu created poetry that reveals the world through its own system of symbols whose signification generates the new lyricism. Ermetism means all that is not revealed directly, the knowing of truth supposing initiation, so that, therefore, the message of Barbian works is not „communicated" directly. The perception of their semnification presupposes an initiation into

[1] 'Ermetism' is the Romanian spelling of the word 'hermetism', giving the mentioned critic space for a non-translatable word-play (transl. note)

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the universe of Knowledge, a universe built by the poet according to the rigorous laws of geometry and „crypted" by the mathematician through a Gaussian formula for the maximum of meaning by a minimum of signs. The hermetic message may be communicated through a multitude of artistic forms, meaning a language open to diverse interpretations. The maximum concentration of the poetic formula opens up multiple perspectives for deciphering the mystery (ibidem). Although „closed" inside the outline of abstract knowledge, poetic ermetism becomes the starting point of a „work Open" to multiple interpretations which re-create and discover the meanings of poetic discourse. About this kind of poetry misunderstood at first reading, Barbu himself says that if a poem „admits an explanation, rationally it admits an infinity. An exegesis can in no way be absolute. A poet provided certain mathematics can give not one, not two, but a great number of explanations of a hidden poem" (Barbu 1968: 54-55). Ermetism proposes in this way a unique vision of universal order, absolutely determined. The work may suggest a multitude of meanings open to creative interpretation by the receptor, and the reader can understand it in the way that he or she feels it.

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