

# ***PO.EX***

***ESSAYS FROM PORTUGAL  
ON CYBERLITERATURE &  
INTERMEDIA***

***BY PEDRO BARBOSA, ANA  
HATHERLY, AND E.M. DE  
MELO E CASTRO***

***EDITED BY  
RUI TORRES  
AND SANDY BALDWIN***

Computing Literature, the Center for Literary Computing, Morgantown, WV 26506

Published 2014 by the Center for Literary Computing.

Cover image by César Figueiredo.

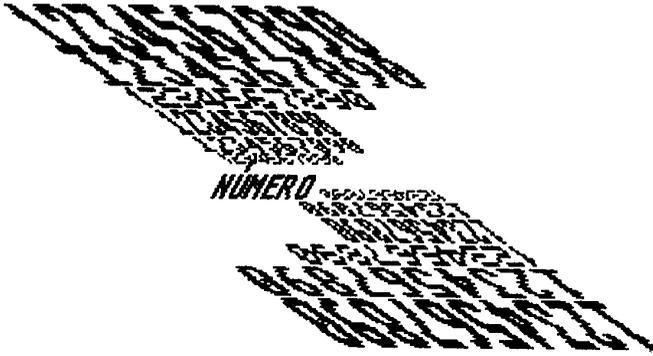
ISBN-13: 978-1-938228-74-2 (pb)

978-1-938228-76-6 (elec)

978-1-938228-75-9 (pdf)

# NUMEROLOGY AND PROGRAMMATIC POETRY<sup>91</sup>

E. M. DE MELO E CASTRO



**N**umbers measure—everything else mediates. This concept may sum up the value of the number as the first perfect abstract reality achieved by humankind. This is probably how the number was firstly understood by the Ancient Egyptians and afterwards in Classical Greece. The constancy and independence of numeric relations, regarding the psychological (i.e. subjective) nature of the human operator using numbers, cannot cease to astonish whatever the aim (be that pragmatic or speculative). Numbers are therefore divine, inhuman, and perfect.

The Pythagoreans believed the number *one* held exceptional qualities. *One* is the whole, the unity, the identity, equality, and concordance. This is due to the fact that once conceived as unit, *one* may repeat itself, resulting in the numerical series  $1+1=2$ ;  $1+1+1=3$ ;  $1+1+1+1=4$  and so on, endlessly. The infinite, therefore, holds similar characteristics to *one*, since it results from a principle of identical repetition, or a repetition of equal units.

But, *two* is different from *one*. *Two*, resulting from an identical repetition, establishes, simultaneously and in contradictory manners, the principle of duality and the rule of difference ( $2-1=1$ ).

---

91 E. M. de Melo e Castro, “Numerologia e poesia programática,” from *O fim visual do século XX*, 1993, pp. 103-112, translation by Isabel Basto.

Analogy and dialectics are the basic principles governing scientific thought, which, although stripped from all human passions, is nevertheless a creation of man for his own use and benefit.

However, a more detailed consideration immediately reveals several degrees of analogy and laws of proportionality that are not univocal (see Burrell). A certain degree of ambiguity is present in every numeric calculation. Such ambiguity can only be disregarded for pragmatic reasons.

On the other hand, the dialectical principle also implies several degrees of disparity, opposition, and contradiction, by following different paths to obtain the required final synthesis. This can be achieved by overcoming opposing conditions or by obtaining a new concept of unity resulting from mental operations.

But if unity is static and divine, difference and change are human and dynamic. The empirical observation of life and nature leads to this conclusion. Everything changes. Everything mediates between one thing and another. But everything may also be enumerated (numbered), and mediation can be calculated. The structure of the universe is numerological. Geometry measures the Earth, where everything is in constant flux with a seemingly binary relation: day/night; present/absent; alive/dead; big/small; hot/cold; movement/stillness; noise/silence; me/you; etc.

These brief considerations of an inevitably vast and complex subject—such as numerology—explain the significance of this subject for Western thought from Ancient Greece and its resonance across the deep strata of medieval culture until now. In fact, numerology constitutes a sort of secret basis upon which outstanding moments of human creativity are set. It is secret because it is not obvious and also because it is seldom openly exposed by believers and sympathizers. Pythagoreans identified the number with wisdom. Plato inscribed the following words above the doors of the Academy: “Mathematical knowledge required.” The Medieval conception of cosmology is totally mathematical, and the rhetoric of numbers pervades all medieval knowledge. Numbers explain both theological considerations and aesthetic phenomena. Saint Augustine, among others, suggests that the mind can only fully understand something if it has a numerical form.

The Jewish Kabbalah and the Christian Kabbalah are interpretation and qualification systems through numbers. They constitute different (but related) semiotic systems of communication and reference for the initiated or the wise,

as well as a form of keeping secrets occult from others. They propose as initiatory knowledge a principle of binary differentiation between “yes” and “no” and between the self and the other.

Such numerical basis, in which numbers hold quality beyond their quantitative identity, is the stepping stone for numerological interpretation systems that can be applied to literature and indeed to all fields of knowledge, production, and creations of human spirit.

Dante structured *The Divine Comedy* through numerology. Camões structured *The Lusíads* through numerology. Notice also the studies “The Poet’s Number at the Centre” by Charles S. Singleton, in *Essays in the Numerical Criticism of Medieval Literature*, and *A Estrutura dos Lusíadas* by Jorge de Sena, revealing surprisingly accurate and arithmetic features.<sup>92</sup>

Portuguese Baroque poetry reveals a combinatory and numerical conceptual backbone. Ana Hatherly’s work *The Experience of the Prodigy*<sup>93</sup> reveals such underlying structures in labyrinths, acrostics, anagrams, epigrams, emblems, rhopalic verse, echoes, and lipograms, constituting a whole numerical wisdom applied to literary production in a systematic and even programmatic way. Such practice must today be considered modern and, at the same time, an accurate connecting bridge between Medieval literature and the most advanced twentieth century experimentalism, in the sense proposed by Ezra Pound, but here applied to the Portuguese and peninsular experiences. In the twentieth century, the poet Almada Negreiros should be referred to as the one who dedicated the greatest attention to numerology, not making it the basis of his written poetic creation but of his visual poetic creation.<sup>94</sup> Moreover, he made it his philosophy, becoming the “great invisible priest” Abellio refers to and whose essential activity, as Almada said of himself, “is to be at home winding the crank of the world” (Freitas). Almada’s lonely and ardent meditation contained the very reality of the universe and of things to which all others owe the miracle of escaping from the nothingness they are made of. To Almada, the “crank of the world” is number, through the relation

---

92 For other references on numerology: Ernest Robert Curtius, “Excursus XVI, Numerical Composition,” *European Literature and Latin Middle Ages*.

93 See also by the same author and on the same subject: *Anagramas Portugueses do Século XVII (Portuguese Anagrams from the Seventeenth Century)*, Colóquio Artes, 40, 1979, and *Labirintos Portugueses dos Séculos XVII e XVIII (Portuguese Labyrinths from the seventeenth and eighteenth Centuries)*, Colóquio Artes, 40, 1980.

94 For example, the painting *Começar (To Start)*.

9/10: the final expression of the principles of analogy and dialectic, which govern the binary system and interpret the universe and the paths of man (Freitas).

Even more recently, numerology experienced two revivals: one connected to the so-called non-rationalist Portuguese philosophy, which does not prevent such works as *Gramática Secreta da Língua Portuguesa* by António Telmo from being most interesting in terms of information and revealing poetic semiotics, whose creative potential can never be overstated. Another resurgence of numerology in Portuguese poetry had a rationalist and constructivist nature, constituting a key aspect in experimental poetry produced among us since the early 1960's. In experimental poetry, formulations are based on two principles: combinatory analysis as new syntax and the strict poetic development of a previously established program dealing with the rational structures of written language. This program is already a structural part of the poem, as the initial core developing textual assets.

Combinatory poems may be divided in macro-combinatory and micro-combinatory types, because, even though their governing mathematical laws are the same, their combinatory analysis (combinations and permutations) and linguistic and poetic outcomes are different.

Therefore, in the macro-combinatory types—whose typical example is the text *Máquina de Emaranhar Paisagens* by Herberto Helder<sup>95</sup>—we depart from large heterogeneous units to produce a series of combinations and permutations before the very eyes of the reader. Through these means, we reach a superior (or second degree) metaphorical climate regarding the present metaphors in the early texts.

Examples of the micro-combinatory types appear in the texts by E. M. de Melo e Castro, such as the books *Versus-in-Versus* and *Álea e Vazio*.<sup>96</sup> These works perform a strict arithmetic combinatorial phrase by phrase, sometimes even word by word, obtaining a juxtaposition syntax that fully subverts a logical (and poetic) conventional discourse. As a result, they achieve a high level of informational content (novelty) and a detachment both from metaphors and from the semantic strata at stake.

---

95 Poem first published in *Poesia Experimental (Experimental Poetry)* 1, Lisbon, 1964, included in the volume *Poesia Toda (The Whole Poetry)*, Lisbon, Assírio & Alvim editors.

96 Books published in 1968 and 1971, respectively, and collected in the volume *Círculos Afins (Related Circles)*, Lisbon, Assírio & Alvim editors.

Also, Salette Tavares in her “Composição Alienatória”<sup>97</sup> visually performs a rigorous micro-combinatory operation with the phonemes from the word “parlapatic” (claptrap), obtaining a new, non-alienating phonetic discourse with a high level of irony.

Ana Hatherly explicitly assumed the programmatic component stemming from combinatory experiences (mathematical laws working as a non-explicit program). Firstly, her book *Estruturas Poéticas (Poetic Structures)*<sup>98</sup> proposes a programmatic method right from the start. Later, this program in “Leonorana”<sup>99</sup> consists of the opening verses of the villanelle by Camões, “descalça vai para a fonte...” The program is now random and consists of a full repertoire of experimental techniques and resources: from syntactic to visual, from conceptual to calligraphic-emotional, and from numerical to chaotic.

During the 1960’s and early 1970’s, computer-generated poetry would be a utopia very close to reality. Little development has occurred since the first of Balustrini’s experiments, despite the huge evolution in computing and the invasion of microprocessors. However, a qualitative leap is expected at any time. The poet will then become the program maker and the one to decide the variable parameters and changes to include in such programs. The computer will elaborate that data beyond human ability. Numerology will have achieved one more instrument to disseminate its knowledge. The *one* will—through tens of centuries of vicissitudes—increasingly approach the infinite.<sup>100</sup>

Specific textual practices flow from a poetics of the number: parallelism, serialization, combinatorics, and, in general, the program and the project. There, the semiotic potential of letters, phonemes, words, or phrases becomes text and plunges into the risk of meaning.

In this context, Affonso Ávila’s poetry intertextually crosses Portuguese experiments with the use of structural series and permutational research. For instance, in the poems *Código de Minas*, intertextuality is remarkably present in parallel methods and dates (the 1960’s), unequivocally exhibiting coincidences

---

97 Poem published in *Poesia Experimental-2 (Experimental Poetry-2)*, Lisbon, 1966.

98 Published in *Operação-2*, Lisbon, 1967.

99 Published in the book *Anagramático (Anagrammatic)*, Círculo de Poesia, Lisbon, Moraes editors, 1970. Poem included in the book *Poesia (Poetry)*,

100 See the experiments in producing visual poems using computers by Silvestre Pestana in Oporto.

in its experimental potential for syntactic renewal of the Portuguese language in both Brazil and Portugal.

But such textual concomitance is not to be considered merely at the level of synchronic performance. Both texts connect to Galician-Portuguese songs from the twelfth and thirteenth centuries. These songs are the famous “cantigas de amigo” from Medieval Galician-Portuguese poetry and employ a dominant parallel structure, even at a subliminal level, as highlighted by Roman Jakobson in his letter to Haroldo de Campos regarding a song by Martim Codax.

If in fact, parallelism (a term coined by G. M. Hopkins) is the essential technique of all poetry structured in verse, our intentional use of parallelism from macro-textual to micro-textual levels is an extreme phenomenon. It unveils an inventive radicalism that becomes a characteristic trait of a linguistic attitude: the search for a non-descriptive enhancement, representative, and objective, between sound and sense, or what could be called textual isomorphism. In his study, “A Variação Subliminar na Poética de Cantiga,” Stephen Reckert stresses this aspect regarding the song, “Levantou-se a Velida” by D. Dinis.

Despite being exaggerated, this song partially reflects a perfectly normal use of repetition as an intensifying device. If the poem ends up leaving us a bit dizzy, there is no doubt that such was the poet’s intention: certainly the beautiful laundress was also stunned with the perverse whirlpool of her white laundry. And there is also no doubt that such an effect derives not only from the refrain but also from the fourteen interactions, along thirty verses (and short ones), of a single word: “alva” (white). That term, arising fourteen times, is and is not always the same . . . The difference of meanings is not progressive but simultaneous: each time the word “alva” appears, it denotes at the same time “a menina branca” (the white girl: “a alva”) and “ao amanhecer” (at dawn: “à alva”). As a result of the differentiation by means of a double entendre, the intensifying power of simple repetitions is greatly enhanced, accomplished through accumulation or overlapping of three different mutually reinforced “alvuras” (whitenesses): the snowy skin of the beautiful girl, her white laundry, and the morning light blanketing and illuminating both of them.<sup>101</sup>

We thus witness parallelism working as an intensifier of meaning and not diluting or fragmenting the logical discourse, as happens for instance in surrealist

---

101 See Appendix 1 for original Portuguese.

poetry. Parallelism, serialization, and combinatory writing by experimental poets are part of a constructivist project to enhance the poetic function of language and its concomitant social sense, with the purpose of highlighting “the common ground to language and society, the principles governing these two structures, first defining the units that in one and in the other can be susceptible to comparison and subsequently to enhance its interdependence,” as stated by Émile Benveniste in *Problems in General Linguistics*, declaring an intertextual postulate between linguistic production and social fabric.

Regarding parallelism, serialization, and combinatorial operations, the principles are susceptible to comparison within the poetic text or social fabric because in both contexts governing laws mathematically correspond.

It is, therefore, conceivable that the poetical/social relationship must occur both ways, i.e. with no prior subordinating of one context to the other. This project may seem utopian because it is based on an interdisciplinary and utopian relationship: the conception of textual production as a place for social transformation and the possibility for such transformation to be recognized by its contemporaries.

Mallarmé witnesses this transforming role of textual invention when he declares himself a “poet on strike”<sup>102</sup> for whom everything that may be offered is inferior to his conception and to his secret work.<sup>103</sup> As an attitude of refusal of the immediate and obvious that society may have to offer the poet—with its inevitable submissions—the strike is, therefore, a path of denial. It makes possible affirmation through dialectics, which in fact is the core of the secret work of poetic invention, resisting and testing its own materials, including the poet’s own existence. In this sense, Ana Hatherly states:<sup>104</sup>

The contemporary writer is submersed in the surrounding world’s intertextuality. His/her information is excessive, redundant to the extreme, rendering his/her text obsolete. He/she knows that and illustrates that knowledge through his/her work. He/she denounces that knowledge in his/her work. Communication, in a world exhausted by an excess of dissemination, no longer has to do with expression: it is a fact that contemporary authors are painfully starting to learn. They no longer express themselves: they merely express the fact that they are trying to do it, they express the attempt to communicate, and in that re-

---

102 See for instance the article “Mallarmé—O Poeta em Greve.”

103 O.P.: “tudo o que se lhe pode propor é inferior à sua concepção e ao seu trabalho secreto.”

104 See Appendix 2 for original Portuguese.

sistance test the materials that constitute poetic art, the resistance of the human who processes himself/herself is also tested, the test of the resistance of all values pertaining to humanity.

Thus, the writer is placed in the center of the social struggle with his/her own peculiarities: the resistance performed through transgression, through refusal, through strike, and through negativity. The word No emerges as the most effective, dynamic affirmation of inventiveness.

## Note

Subsequent to the debate originated by this communication—presented during the 3rd Module of the Cycle of Comparative Studies in Portuguese and Brazilian Literature, on September 29, 1982, in the UFMG Faculty of Humanities—Prof. Maria dos Prazeres Gomes (PUC, São Paulo, Brazil) raised the following issues that demand clarification:

1. the existence of other areas of intertextuality in experimental production research; and
2. the issue of ascertaining whether the use of numerology in experimental poetic production is a matter of intratextuality rather than intertextuality.

Yet, it seems that these two issues involve a more rigorous definition of concepts such as interdisciplinarity, intertextuality, and intratextuality, which are actually explicit in my communication.

Therefore, interdisciplinarity occurs regarding entropy, a notion borrowed from thermodynamics and, when using numerological laws, borrowed from mathematics.

One may also find in Portuguese Experimental poetry close interdisciplinary relationships with music, mainly avant-garde music. We should mention that *Poesia Experimental-2* included the study by Jorge Peixinho, “Música e Notação,” in which this relationship is established and extended from musical notation to visuality. Also, the first happening was called *Concerto e Audição Pictórica* (1965), which chaotically integrated poetry, music, visual arts, and theater.

However, the appropriation of musical structures as performed in written poetry goes further in rigor, as for instance in my poem “Canon,” published in

1971, in *Álea e Vazio*, in which a Baroque clone is executed through three verbs: to see, to have, and to be. On that subject, see the essays by José Blanc de Portugal, “Quatro Novíssimos da Música Atual,” in the annex to the magazine *Rumo*.

The appropriation and use in poetry of the notion of silence that is eminently musical is an example of a remarkable interdisciplinary relationship. The blank page by Mallarmé simultaneously materializes and interiorizes exactly that. It is important to state that the process of achieving abstraction is what enables the writing of a concrete work of visual poetry today, where significant are lying on the blank page.<sup>105</sup> In plastic arts, the relationship is also intense and structural, mainly through visual poetry, which incorporates in the text the spatial dimension in a physical and significant way, thus destroying the univocal character of the time dimension in the conventional poetic text.

Intertextuality is today the substance of inventive literary production, because one can no longer bear the illusion of being the first to produce texts and to understand them as literature.<sup>106</sup>

Nevertheless, different intertextual relationships may be established apart from those of mere negativity or inversion of textual meaning. Intertextual appropriation always alters the appropriated text and, therefore, constitutes violation. But this may be achieved in different ways or degrees, such as: amplifying or reducing, contradicting, randomizing per analogy and per comparison. The translation will be considered an analogical intertextual production.

Intertextuality is preferably considered at the syntactic level, and in that case, the use of numerology (once the interdisciplinary appropriation has been completed) is to be intra-textually considered as a way of establishing new meaningful relations among signs at stake in the morphologic and phonetic game. That is the poetic combinatory principle.

Still, there is the issue of the intertextual relationship between the new experimental poetic texts produced that way, all medieval numerological poetry, and also more recently with Baroque poetry.

Such relationships are surprising and fascinating for they reveal trans-textuality: unexpected points of connection and openness at the distance of centuries. Through certainly diverse and not even similar paths, echoes and resonances

---

105 Regarding silence see also *O Próprio Poético*, São Paulo, Quífron Editors.

106 See Julia Kristeva's work, *Desire in Language: A Semiotic Approach to Literature and Art*, New York: Columbia University Press, 1980.

that are very disturbing and difficult to integrate in the prevailing schemata are used for understanding general and/or literary historicity.