

THE SECRETS OF ARTISTIC CREATION:
THE ORPHIC STRUCTURE

Iván González Cruz

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Contents

Introduction	7
Chapter I. The Beginning of the End	11
Chapter II. Tradition and Inspiration: The Tetractys	15
Chapter III. The Tetractys in Art and Literature	35
Chapter IV. Return to the Origin: The Orphic Structure	47
Chapter V. End of the Beginning	57
References	67
Index	87

Introduction

This book has several recipients: art students, natural scientists, humanities professionals who have devoted themselves to creativity, and specialists in the broad field of culture. On these pages, you will find an updated look at the origins of creative thought, underlying art as a science or science as an aesthetic act.

The approaches discussed in this essay will serve as a starting point for implementing various strategies: to provide an artist-writer with the tools to develop his creations and a researcher with a method of analysis when studying his works. Students will be able to receive my interpretation of the theses presented in the classroom, a theory that encourages practical experiments in the formation of creative abilities.

Studying Pythagoreanism or classical thought about antiquity allowed me to make several discoveries, which are discussed here. Among them is the representation of the Pythagorean Tetractys as a structural source of an artistic work, which I conclude based on a critical study of the scientific nature of the artistic. From this finding comes the concept I have created of *orphic structure*, which, from our viewpoint, underlies the construction of any story. To explain the aspects of the developed conclusions, I also had to offer my graphical representation of these ideas using various schemes in which they stand out:

- Figure 4 (Chapter III, page 40) related to character design and writing a story;
- Figure 7 (Chapter IV, page 48), which shows the scheme of the *orphic structure*;
- Figures 8 and 9 (Chapter IV, page 49) on linear and nonlinear constructions in a ternary form;
- Figures 11 to 19 (Chapter IV, pages 51–52) on the different levels of associations in the storyline;
- Figures 20 to 24 (Chapter V, pages 58–59) to demonstrate the connection between the Tetractys and the circular;
- Figure 26 (Chapter V, page 61), which reinterprets the connection between the plot and subplot in the geometry of the Tetractys;
- Figures 27–29 (Chapter V, page 62) are devoted to the unity of internal and external structure in a work of art.

The arrangement of this volume in five chapters is not accidental. They express respect for the creative meaning I recognise in this figure within the numerical metaphor of Pythagoreanism. The reader will decipher its symbol at the End of the Beginning.

Chapter One

The Beginning of the End

Wisdom is an act of synthesis. The search for such knowledge, capable of showing the universal in the uniqueness of the event, was the history of culture. *Pythagoras* stands out on this horizon, a pioneer who saw the complexity of life as simple. We must turn to this source to find out how it is symbolically encoded in humanity's desire for integration, called Tetractys, an allegorical standard of what we call an *orphic structure*, the source of creative thought, the embodiment of a work of art. The reason why we decided to call this structure orphic rather than Pythagorean is for several reasons, among which it is worth noting: the inspiring legacy that *Orpheus* had on *Pythagoras*, the union of *Apollo* (Pythagorism) and *Dionysus* (Orphism) [1], and the metaphor of creation that survives the destruction represented by death and rebirth of *Orpheus*.

Pythagoras even wrote a poem that he attributed to *Orpheus*, according to the testimony of several antiquity authors. This fact, together with the philosopher's involvement in the poet's teachings, confirms in practice what theory asserts is the root of Pythagoreanism:

“In general, it is said that *Pythagoras* was enthusiastic about *Orpheus*' interpretation and attitude and who worshipped the gods in the same way as *Orpheus*... It is even said that he was also the creator of a synthesis of divine philosophy and worship, aspects he learned from the Orphics, Chaldeans, magicians...” [2]

The biographies of *Orpheus* and *Pythagoras* are full of truth and fiction. Some, such as *Sextus Empiricus*, echo the presence of *Orpheus*, placing him in the prehistoric era of *Homer*; others, like *Aristotle*, doubted his physical reality, preferring to refer to the Pythagoreans or not mention *Pythagoras*' name if it were a shadow rather than a body. *Cicero* was categorical: “*Aristotle* teaches that the poet *Orpheus* never existed.” However, regardless of their lives' authenticity, both represent a living myth that has existed since time immemorial, giving them a poetic and philosophical plausibility where the Orphic-Pythagorean remains united [3].

Apollo and *Pythagoras*, *Dionysus* and *Orpheus* are persistent pairs studied within the Greek foundational period [4] but beyond the cult of *Apollo* of Pythagoreanism and the identification of Orphism with *Dionysus*, we believe that in the myth of *Orpheus* is contained the spirit of the Apollonian and the Dionysian that *Friedrich Nietzsche* thought he discovered in *The Origin of Tragedy*. *Orpheus* stands from the beginning as a symbol of invention, which cannot be understood, either in the ontogenetic or artistic sense, without an inaugural foundation of light and darkness, where *Apollo* and *Dionysus* concur [5]. In Orphic mythology, the world is created from Night (dark) or light, forming heaven or earth from an egg. This symbiosis of light and darkness is two images that seem to me more expressive of the origin and development of culture, since both are not only intertwined in the Apollonian and Dionysian but are also not understood without them. Neither *Apollo* is so sunny that he is not dark—it is enough

to approach its mythical history to know its excesses—nor *Dionysus* is so gloomy that he is not able to evoke light because behind this contrast lie two concepts that go beyond it, which have fertilised the great themes of culture: reason (*logos*) and passion (*pathos*) are metaphors of feeling, action and thinking, i.e., light and dark in being. Thus, a part of the face of Tetractys arises: the being (One), consisting of the dyad of reason-passion (Light–Darkness, Darkness–Light), is understood using the triad *Orpheus-Apollo-Dionysus*.

This vision, which has a critical and creative meaning, was in some sense anticipated in Ancient Greece, when it recognised the need for purification—Apollonian attribute—for those who went to *Hades* accompanied by philosophy, as a way to counter the circumstance reflected in the orphic verse, which was “many bearers of thyrsus and few servants of Bacchus.” *Orpheus*, *Apollo* and *Dionysus* coexist in the Pythagorean ideal, where cognition and contemplation are in harmony with the Dionysian holidays. *Diogenes Laertius* noted that *Pythagoras*’ philosophical feelings did not prevent him from comparing “human life with a festive competition.” This solemn and joyful feeling of the knowing, reminds us that even in the Dionysian festivals, together with the orgiastic debauchery, the processions and sacrifices, there was artistic knowledge in the poetic recitations, dramatic performances and chants performed in honour of *Dionysus*. Was not *Apollo*, after all, the god of plastic arts, music, poetry, and *Dionysus* the source of inspiration? Even the death of *Orpheus* reflects this unity. Some sources indicate that *Dionysus* killed him in revenge by the cult of *Orpheus* to *Apollo*. It also tells the legend that he died at the hands of Thracian women, and after cutting off his head, he continued to sing [6]. That is why this is another reason for naming *orphic* the creative structure that we will study here. Because art, like *Orpheus*, survives death.

Thus, the tradition of the *Orpheus-Apollo-Dionysus* myths and the unity of art and science embodied in *Pythagoras* make the *orphic structure* an original form committed to imagination and freedom of expression according to the polysemic spirit of Pythagorean teachings, among them one related to his biography: *Pythagoras* claimed that, like *Orpheus*, he visited Hell [7]. This episode related by *Hermippus*, far from provoking incredulity in the Pythagorean disciples, strengthened their admiration for their master. In this dimension, Orphism and Pythagoreanism also form the *orphic structure*. Every descent into the unknown holds the promise of ascending to knowledge and light.

Chapter Two

Tradition and Inspiration: The Tetractys

Orphism was one of the antecedents of the Pythagorean conception that encourages the orphic structure: the Tetractys. *Iamblichus* claimed that “the Pythagorean theology of number is given in *Orpheus*.” And he quotes the phrase of this poet, which made him the forerunner of the universal value of numerology in *Pythagoras*: “The eternal essence of number is the most supplying principle of all of heaven, earth and intermediate nature.” [1] Here underlies the transcendental, humanistic character that the Tetractys will have, from whose numerical construction will be possible not only a mathematical perception of life, but also an aesthetic one.

Apollo and *Dionysus* reappear in the Tetractys, tracing the beginning and boundaries of its composition. The implications of this conclusion, which we draw from the works of *Plutarch* and *Nicomachus*, pave the way for understanding the importance of the Tetractys in a new dimension: the artistic one. “Golden Verses” recognised in it “the source of nature, whose cause is eternal. [2] This condition has cultural significance if we apply the mythological study of numerology. *Plutarch* refers to the past when *Apollo* was associated with the one, and according to *Nicomachus*, *Dionysus* was identified with the four [3]. When these ideas are transferred to Tetractys, parallel messages are revealed in their numerical structure, as if the Apollonian and Dionysian, divinities linked to art, wished to show that they are the beginning and end of the source of nature, life. This fact highlights the creative mathematical power of Tetractys, warning us that there is no science without art. And art is science, *Orpheus* the musician seems to add, whom we guess metamorphosed into the numbers of the Tetractys, which define the harmonic chords of the musical scale—octave (2:1), quart (4:3), and fifth (3:2). Thus, the Tetractys can be included in the Pythagorean cosmogony with a socio-cultural function. It is analogical thought that will be able to glimpse in it the truth of its secrets.

The ancient Greeks designated with the word *arche*—or *arje*—the genesis of the universe. *Pythagoras* showed that mathematics can explain this origin and that the world itself is a number. This concept will directly impact the development of science and will have a vital effect on the progress of society. If “everything corresponds to number” and number is the beginning of “everything that exists,” [4] then reality can be known. The disciples will do nothing but confirm with their research the contributions of *Pythagoras*. *Philolaus* ratifies “everything cognizable has number,” and *Plato* in “*Epinomis* or the Philosopher” will sentence that “if we were to take number away from mankind, we could never ever reach any kind of wisdom.” [5] At the base of Pythagorean science, a significant lack of language was completed. Faced with the impossibility of comprehending the invisible sphere of the spirit’s action in communication, *Pythagoras* turns to mathematics to answer the age-old questions brought back by the silence of speech and writing. In the “*Life of Pythagoras*,” *Porphry* describes: “...as they could not explain by word the incorporeal forms and first principles, they applied themselves to demonstration by means of numbers.” [6] The fact that numerical abstraction came into connection with verbal abstraction in

the discovery of the interpretation of the world is one of the wonders of poetic reason. This meeting will expand the imaginary sphere of the Tetractys. Like a picture in which the painting is accompanied by text not to clarify the message but to deepen its meaning, the word within the Tetractys externalizes more than a translation, revealing open meanings that transform it into an abacus of inexhaustible possibilities. *Pythagoras'* biographers describe in detail that he used this tool in his arithmetic operations. In his hands, it must have fostered a kind of aesthetic-mathematical knowledge in the *I Ching* style. The Tetractys, similar to a “Book of Mutations,” suggests so.

Creation is a rite. The number is involved in it with all its scenic power. Is not the demonstration of an equation the great staging of the imagination? In this representation of the science of numbers, *Pythagoras* showed that mathematics is poetry. The proof is in the physical and metaphysical substrate of the components of the Tetractys.

1. Tetractys: $1+2+3+4$

1.1 The One

The contents of the Tetractys seem to cover the origin and evolution of life. Its numerical arrangement exudes a story, the history of a process that goes from unity to difference without renouncing being a unitive microcosm of its constituents. *Pythagoras* had made explicit: “everything that exists of an animate nature [is] necessary to be considered of the same kinship.” [7] The trace of this reasoning will run indistinctly in different writers and thinkers. The *Poem* of *Xenophanes* unfolds in an existential uneasiness of “let my thought be where it is / this All towards One is undone for me”; *Parmenides* versifies the succession and simultaneity of being “which from time to time is now all, one and continuous”; *Anaxagoras* deconstructs and constructs nature because “in everything there is everything, there is a sort or part of everything”; poetry returns with *Empedocles* where “One grew and grew so much at the expense of Many / that he became alone; / sometimes, however, / by unbirth, many arise of One”; until it derives in *Philolaus* with whom this reasoned spiral on the One is reintegrated: “Unity is the beginning of all things.” [8]

The relationship between the whole and the part will acquire a dialectical problematization with *Plato*. His dialogues “Cratylus or on the Accuracy of Words,” “Parmenides or Ideas,” “The Sophist or Being,” “The Laws or Legislation,” show an essential interest in this subject that in “The Republic or Justice” is transferred to the aesthetic: “see only if, giving to each part what is proper to it, we make the whole beautiful.” A civic dimension is incorporated into the debate, beauty affects the city and the individual, making the one and the multiple inherent in human discourse in “*Philebus* or Pleasure.” However, on the threshold of *Pythagoras’* One was a crucial warning to civilization: the emancipation of the individual is not possible without the universal. That clamour is prolonged in our days in the “I” and the “It” of psychoanalysis, and the voice of the eternal return of poetry, personified contemporarily in *Friedrich Nietzsche*, reminding us that “we savour the happiness of living, not as individuals, but in the unity of life.” [9]

1.2 The Two

The Tetractys will be organized around this conception of unity. *Anaximander*, *Pythagoras’* master, had anticipated that opposites are separated from the One. This observation will engender the Pythagorean theory of duality and complementarities that will be so decisive for art and science. Nature is structured from the dual by the contrast of its elements in a unity and struggle of opposites. The term *biform* is a category in *Pythagoras* of “the reason of otherness, of inequality, of everything divisible that is sustained in change and instability.” The *Pseudo Plutarch* will emphasise the ethical polarisation that follows from this dualism:

“...*Pythagoras*, considering that numbers have the greatest virtuality, and referring everything to numbers, the revolutions of the stars, and the generations of the living, considered two supreme principles, which he called the limited monad and the unlimited dyad; one, the principle of goods, and the other, the principle of evils.” [10]

Good and evil are erected as metaphors of the dual power that, over the centuries, will draw in mathematics a psychological profile for art. With *Heraclitus*, the two are unified in a reality in which “one is good and evil.” *Empedocles* makes transparent in this situation axiological qualities that will directly influence the field of drama: “by Friendship all things converge in One; / while, at other times, / by hatred of Discord each one diverges from all.” *Democritus* breaks the limit of any antagonism as if he were warning us of the relativity underlying behavior, since “from the same things from which good originates, evils can come from the same things.” And *Alcmaeon* will laconically summarise the characterological projection of this legacy by judging that

the generality of human actions are dual [11]. Dualism generates Pythagorean harmony, and fosters the Heraclitian perception that “things as a whole are everything and not everything, identical and not identical, harmonious and non-harmonious, the one is born from the whole and from the one all things are born.” From this negation of negations emerge the suggestive theses about “being” and “non-being,” [12] the logic of form and content, the infinite contraposition and complementarity within a structure.

The Pythagorean “Table of Opposites” synthesises the dialectical ideology of the Tetractys. The ten antithetical aspects it proposes are a starting point for the development of science:

Limit	Unlimited
Odd	Even
Unit	Plurality
Right	Left
Male	Female
At rest	In motion
Straight	Curved
Light	Darkness
Good	Bad
Square	Rectangle [13]

However, fantasy is also strengthened by its columns. Does not invention come from the boundless craving for knowledge and the limits of science? Science fiction? Fiction in science? What truth will the investigations of the future have without the present of illusion?

The Pythagorean dual-complementary leads us towards the *yin* and *yang* of the imagination, the structure that affirms.

1.3 The Three

The globality of the One, the versatility of the Two, obtain in the Pythagorean triad structuring. Both are implicit, the One ensuring the unity of meaning, the Two the diverse. *Porphyry* gives us the keys to the compositional function of the Three:

“...There is something in nature that has a beginning, a middle, and an end. In this form and this nature, [the Pythagoreans] proclaimed the number three.”

The beginning, middle, and end in *Pythagoras* warns us that form by itself does not signify. There must be an order to it so that it makes sense. This innovative appreciation inaugurates a new way of understanding the world in which we live, within which the triad is applied with dissimilar objectives that include science, creation and the oneiric. *Pythagoras* recommended “three different aspects of subjects worthy of attention, which is worth approaching and realized: first, the noble and beautiful; second, that which is useful to life; and, as the third and last, the pleasurable.” [14] In turn, the three concurs in the Pythagorean teaching system [15] transmuted into a triad of questions from which reflections germinated in the search for wisdom: What is it?, What is it in the highest degree? and What should be done or not done? Philosophy, aesthetics and ethics merge here. The love of knowledge, the contemplation of beauty and human improvement gravitate around the constellation of *Pythagoras*’ thought.

Plato will perceive the creative resonance of the ternary form in culture. Culture assimilated as an integrating whole of society, art and science. In “The Republic or of Justice,” “*Phaedrus* or Beauty,” “*Philebus* or Pleasure,” he deals with the convenience of order, crystallising in “*Parmenides* or of ideas” a systematising structural theory, “if it is a whole, will it not have at the same time a beginning, a middle and an end? Or do you think it is possible for a whole that does not have these three things?” “The Laws or of Legislation” will graciously take up again the importance of structure in the context of narrative. The Athenian character replies to *Clinias*: “I do not want the tale I have told to be without a head, for it would seem deformed to go wandering all over the place in this way.” The “Poetics” is indebted to this heritage. It was *Aristotle* who for the first time pythagorised rhetoric and art when, imbued with the language of tragedy, he saw the efficacy of the *unity of action* and the inexorability of the introduction–knot–denouement:

“...It is evident that fables must be structured, as in tragedies, in a dramatic way and around a single, complete and entire action, which has a beginning, intermediate parts and end, so that, as a single and complete living being, it produces the pleasure that is proper to it...” [17]

Pythagoras, *Plato*, and *Aristotle* become an ineffable triad modelled by the Aristotelian phrase:

“...Indeed, as the Pythagoreans also say, the whole and all things are defined by the three; for end, middle and beginning contain the number of the whole, and these three things constitute the number of the triad.” [18]

The order appears inverted, but it exists. End–middle–beginning gives us another perspective on reality. This variant incites experimentation. Even in it, without the

Pythagorean Three, word-art-science would be doomed to an endless beginning or middle.

1.4 The Four

This number codifies the “Poetics” of *Pythagoras*. From it emanate different names that are emblematic variants of the same spirit: quaternary, magic number, and Tetractys. *Sextus Empiricus* example illustrates to us:

“...they call ‘Tetractys’ (quaternary number) the number ten, as it is formed by the first four numbers, since one plus two plus three plus four make ten.” [19]

Four is the last number that integrates it; *four* are the numbers that, interrelated among themselves, characterise it (1, 2, 3, and 4); *four* is the figure that gives rise to the *perfect number*, ten, resulting from the sum of the *first four integers* ($1 + 2 + 3 + 4 = 10$). The power of this number does not lie in its arithmetic eventuality, but in the logical and imaginary virtuality that it induces:

“...The following [numbers] are kept in a class and power, which they called ‘decade’, as if it were a receptacle. Hence, too, they say that ten is a perfect number, or rather the most perfect of all, because it includes in itself every numerical difference, every kind of reasoning, and every proportion.” [20]

It exhibits the complexity of reality by turning imperfection into the ideal of a possible perfection. Mathematics, like the symmetry of a poem, establishing the rhythm of existence, announcing that there are no impossibilities.

Several circumstances grouped in the number ten contribute to forge the hope of the perfect creation. In it congregates the same quantity of even and odd numbers; it includes the prime and compound number [21]; it possesses linear, flat and solid numbers; it stars unity and equality by being twice five; and it is a paradigm of vital harmony for having in its interior the musical intervals of octave, fifth and fourth. The splendid force of its nature captivated *Aristotle*, who did not disguise his dazzle before the polysemic nature of the Tetractys in the book “Problems”:

“Why do all men, both foreigners and Greeks, count to ten and not to another number, for example, two, three, four, five, and then repeat again one and five, two and five, as they do with eleven [one and ten] and twelve [two and ten]? And why don't they stop beyond ten and then repeat from there? ... Of course, it is not by chance, for it seems that they do it all and

always: for what always and everywhere occurs is not by chance, but something natural. Is it because ten is a perfect number? For it has all kinds of numbers: odd and even, square and cubic, linear and flat, prime and compound number.” [22]

It was to this enigma that the “Golden Verses” answered, in which the *quaternary number* figured to be, as we have mentioned, the source of the universe [23].

Nature is a cosmic self. That is why the Tetractys cannot be reduced to a mathematical event. The humanism of *Pythagoras’* ideas will reach our days, despite its fragmentary nature, in the objective administration of his knowledge for systematic knowledge. The number ten, rising from heterogeneity, encoded the homogeneous, adding up. The Tetractys never subtracts freedom.

2. Tetractys in Life and Society

In *Pythagoras*, number implies the study and expression of the content of things. This does not mean that mathematics is excluded from the sphere of form. It is enough to approach *Socrates’* general theory of universals, *Plato’s* theory of ideas, *Gottlieb Frege’s* definition of number, or *Whitehead*, to appreciate their connections. The Platonic “*Timaeus* or of Nature,” already foresaw that “all things can be reduced to geometry.” This certainty was implicit in the Tetractys:

“...if one imagines a fourth unit that is added to the triad, that is, a fourth sign, the pyramid arises, a solid figure and body, because it has length, width, and depth; so that the ratio of the body is contained in the quaternary number.” [24]

The following diagram is sketched from this exposition:

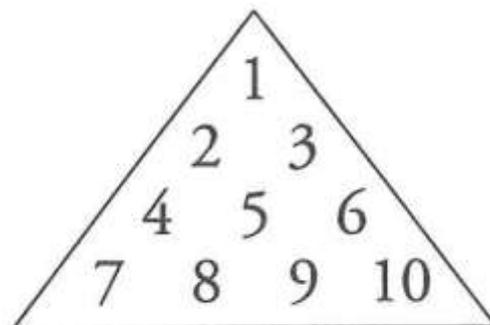


Figure 1

Diogenes Laertius, quoting *Alexander* in the “*Successions of the Philosophers*,” specified the correspondence between number and image in Pythagoreanism:

“...Numbering comes from unity and indefinite duality. From numbers come points; of these, the lines; of the lines, the flat figures; of the flat figures, the solids, and of these the solid bodies, of which the four elements, fire, water, earth, and air, consist...” [25]

The geometric representation of the Tetractys makes its physical incorporation into space tangible, which favours associating it *metaphysically* with reality. A numerical symbolism is intensified with which the “Kabbalah” and the “Tarot” will be impregnated. In an existential alchemy, the number populates society: one is equated with the intellect; two, to opinion; three to the masculine, two to the feminine—by whose union the five personifies marriage—; starting from the concept of justice as equity and equality, they estimate the four or nine symbol of justice, and the seven of opportunity. Pythagorean science promotes a mythical sociology. A precedent of it appears in *Hesiod* for whom the “principles of everything” were Chaos, Earth, Tartarus and Love. Hidden in these four elements lies the Tetractys that the mathematical fantasy of *Pythagoras* will endow with renewed symbolism. As a magician of science he will make the quaternary 10 (1 + 2 + 3 + 4 = 10) and 36:

$$\begin{array}{r}
 1 + 3 + 5 + 7 = 16 \\
 2 + 4 + 6 + 8 = 20 \\
 \hline
 36
 \end{array}$$

The sum of the first four even numbers with the first four odd numbers produced the miracle that would so influence Kabbalistic method and semantics. However, *Pythagoras’* influence was not limited to ancient times alone. The parabolic language of his scientific and poetic imagination will trace his parabola to the present day.

When we read in *Iamblichus*, in his exegesis of the axioms of Pythagoreanism, “all men without exception are relatives and next of kin by nature”, an immediate link arises in us between the One—the Pythagorean unity—and the discoveries of genetics. The dyad is in force in the *binary system* of computing; the three, the triad, slips into the pillars of the theory-practice duality: deduction, singularity of proof, and general application of demonstration. Like the binary system, we can speak of a *ternary system* of research with resonance in art, regardless of whether the creator intends to *prove* something with his work. The One encompasses the question of *what* is studied within the unity of what exists; the Two, problematises the object of research by contrast or opposition; the Three girdles the premise (beginning)-hypothesis (middle)-thesis (end) of what is analysed. This triad underlies the exercise of the scientific and artistic imagination: the One, the interrelation in the Universe; the Dual, vitality by the unity of opposites; the ternary, the formal expression of life—birth, development, death—

which allows us to undertake the examination of things and to understand the relative truth of their content.

In the past, the Three and the Four typified a style of learning. The *Trivium* taught three of the seven liberal arts—grammar, rhetoric, and dialectics—and the *Quadrivium* the other four—arithmetic, geometry (plane geometry and stereometry), astronomy, and music.

In “The Republic”, the *quadrivium* is assumed by *Plato* as the school of the “true philosopher”, a criterion that accentuates the affinity with Pythagoreanism, since according to *Iamblichus*, *Pythagoras* “was the first to give a name to philosophy and who said that it was a desire and a kind of love for wisdom, and that wisdom was the science of the truth of beings.” [27] *Boethius* will delve into the ethical and psychological function of music that, coming from *Pythagoras*, is introduced in the Platonic *quadrivium*:

“...Hence, since there are four disciplines of the *mathesis*, and the others are certainly concerned with the investigation of truth, music, in reality, is not only linked to speculation, but also to morality. There is, in fact, nothing so typical of the human being, as relaxing with sweet ‘modes’ and constraining oneself with the opposites.” [28]

Likewise, the methodology of the *quadrivium* will be transferred to the Pythagorean “Arithmetic Theology” of *Nicomachus* in which special relationships are established between the first four numbers and the *four mathematical sciences*: the monad presides over arithmetic, the two over music, the three over geometry and the four over spherical [astronomy] [29]. From this Tetractys will bifurcate others regulating time and space: four are the seasons of the year, four are the ages of life, four are the elements, four are the parts of the soul... [30] The Pythagorean heritage does not stop.

The art of cryptography and cryptanalysis owe to Pythagoreanism the *symbolic-expository mode* of its technique. *Pythagoras* possessed this language of oriental culture. The mastery of the Egyptian language favoured the use of “words in a proper sense, by imitation, and in an allegorical sense, by a kind of enigmas.” *Iamblichus* refers to the Pythagorean procedure, in which “by means of symbols they concealed the conversations and writings they had among themselves.” [31] It was essential to be initiated into the codes of this language in order to decipher it. Those who heard or read the words of *Pythagoras* at a glance seemed ridiculous to them, because the true meaning was encoded inside.

The Pythagorean theory that “ideas are numbers” will resurface with renewed value in contemporary times. The combinatorial capacity of the Tetractys, where the number dialogues with the universe, will be the antecedent of the coding of messages in World War II. Mathematics is a language, and like words, it communicates.

Pythagoras knew it, and that other great genius of mathematics, *Alan Turing*, to whom his country will never be able to thank enough for the exemplary service of his intelligence in the overthrow of fascism. He, a master of decoding, was convicted after victory for a strange crime, being homosexual.

3. Harmony of the Spheres

Creating was science in Pythagoreanism. Cymatics [32], the use of sound in medicine, in the aura of living organisms, are precluded in the Pythagorean musical universe, the “harmony of the spheres.”

The birth of harmony is related by *Hesiod*’s “Theogony”:

“... In turn, with *Ares*, piercer of shields, *Cytherea* conceived the fearsome Fear and Terror, who confuse the compact phalanxes of men in bloody warfare along with *Ares* destroyer of cities; and also *Harmonia*, whom the very hard-working *Cadmus* made his wife.” [33]

This is a central conception in the creative thought of *Pythagoras* for whom *all things exist through harmony*. The chroniclers of Pythagoreanism recorded the wide spectrum of this category where the literary, scientific and artistic converge:

“...[Pythagoras] listened to the harmony of the universe, because he understood the universal harmony of the spheres and of the stars that move in it, and that we do not perceive it because of the smallness of our nature.”

Music, the soul, the cosmic, *orchestrate* the harmony of the spheres. Its horizon is immanent, it goes outside to return to the individual in a transcendental contemplation of being. The galactic expansion of his gaze is a pretext to delve into the human without abandoning experimental rigor: “*Pythagoras* perfected the science of celestial phenomena and defined it with complete arithmetic and geometric demonstrations.” [34] *Copernicus*’ heliocentric system stems from this projection. *Simplicius*, in the “Commentary on the Aristotelian treatise ‘On Heaven’,” had documented the Pythagorean belief that the Earth is not at the center of celestial space. The promoter of this judgment in Pythagoreanism will be *Philolaus*.

The trail of cosmic harmony was felt, beyond astronomy, in the domain of art and literature. *Pythagoras* himself would encourage this lyrical connotation by calling the souls gathered in the Milky Way the *people of dreams*. *Heraclitus*, with the characteristic brilliance of his poetic enunciation, immersed in the sidereal Pythagorean fluency, saw that “an invisible harmony is more intense than a visible one.” [36] The effect of this

contrast has been the cause of a timeless meditation on what is the best chord of the universe for the melody of our spirit.

The Pythagoreans liked to recognise the cosmos by the name of *grotto* or *cave*. *Plato* seconded this tradition in his work with the image of the *cave* in “The Republic.” Another metaphorical passage of this work will allude, with the song of the Sirens, to the harmony of the spheres. The immortal and unfailing intelligence attributed to these nymphs reminds us of the Homeric Sirens who promised to know everything [37]. Later, the “Timaeus or of Nature,” that monument of the Platonic imagination that we are pleased to call the Bible of classical Greece, will create the world with a mathematical cadence in which we also recognize the imprint of Pythagorean harmony. Some elements involved in the formation of the soul, such as the *middle term*, would mark the thinking of other heirs of Pythagoreanism, *Aristotle* and *Cicero*. The latter, like *Plato* and *Aristotle* [38], a supporter of the soul governing the body, in “The Dream of Scipio” pays homage to the Pythagorean theory of the harmony of the spheres through the revelations that Africanus makes to *Scipio*:

“I had been astonished contemplating these things, when I came to myself and asked: What sound is that so intense and so sweet that it fills my ears completely? He explained to me: ‘It is the one produced by the impulse and movement of the spheres themselves, which do so at unequal intervals, but nevertheless proportional; by combining the low sounds with the high-pitched ones in a balanced way, they achieve different symphonies with regularity’...” [39]

The fascination for this theme will reappear in *Macrobius* associated to the human soul and in *Quintilianus* to the importance of music in the training of an orator [40]. This indicates the presence in the harmony of the spheres of other aspects coupled to it, which, as happens in the harmonic, are adjusted and combined in their composition

3.1 Harmony or Concordance: We

The universal language par excellence, generator of *imago*, without the need for translation, is music, expression of harmony. *Plato* highlights its edifying sense, of anagnorisis with being:

“...Having contemplated the periodic movements that the intelligence has in heaven, we will make use of them, transferring them to the movements of our own thought, which are of the same nature, although disturbed or clouded, while the celestial movements know nothing to disturb them.”

The harmony of the spheres signifies a return to the creative unity of the individual and the world. We are music, *Plato* seems to tell us, but a music under construction that needs to move from chaos to order so that it can be realized, to make the work through the unity of opposites:

“... the *Muses* have given it to us as an ally of our soul, since it tries to bring to order and in unison its periodic movements, which in us have become out of tune.” [41]

Cicero, in “*Tusculan Disputations*,” following the Pythagorean *Aristoxenus*, a disciple of *Aristotle*, seems to want to discover why this situation occurs by identifying the soul with the *tension of the body*:

“...similar to that which in singing and stringed instruments is called *harmony*, so that, according to the nature and conformation of the body as a whole, different vibrations would be produced, similar to the sounds in singing.” [42]

The *Pseudo Plutarch* adheres to this artistic interpretation of existence:

“...music, the closest to the soul, inasmuch as it is a harmony product of the mixture of different principles, and that tenses with its melodies and rhythms what is relaxed in the soul and relaxes what is excessively tense...” [43]

The progressive incorporation of the harmony of the spheres in the knowledge of the human induces us to sense an ethical and psychological dimension in it. Various sensitivities will fertilise this path from then until today.

Sextus Empiricus, by invoking the doctrines of the Pythagoreans, revives the musical-vitalist proposition that the world and living beings are governed by the harmonic. *Ptolemy*, devoted to proving the scientific truths of music, comes to the same conclusion:

“...The harmonic exists in all things, and corresponds to the most perfect natures, but it is mostly observed in human souls and in celestial movements.” [44]

The “*Protrepticus*” of *Iamblichus* shares these ideas when he speaks of the coupling in us of the *harmony of the body* and the *symphony of the soul*, a reality that *Boethius* will subscribe to:

“...music is by nature combined in such a way that, even if we want to, we cannot be deprived of it. Therefore, the strength of the mind must be tautened so that what is by nature innate can also be mastered once apprehended by science.” [45]

Arthur Schopenhauer will be the depository in our time of this wealth of the harmony of the spheres in musical exegesis, convinced that “we could also call the world music made body.” [46] *Friedrich Nietzsche*, with platonic fervor, asks by answering “and what is man if not a dissonance made flesh?” However, the Socratic spirit that always inhabited him, in spite of *Friedrich Nietzsche* himself, whispered other answers to him, “music is the true ‘Idea’ of the world.”

3.2 Reason and Feeling

Plato in “The Republic” reflected the complicity of *harmony* with other fields of knowledge. Cosmography, politics, ethics, enter into *concert* with their characteristics in the achievement of an ideal education that shapes the character for the modulation of the spirit. All these disciplines are complementary to the duality of the harmonic in the forge of consciousness. Sensory perception becomes intellectual in this magisterium:

“...just as the eyes have been constituted for astronomy, in the same way the ears have been constituted for harmonic motion, and these sciences are like sisters to each other, as the Pythagoreans say...” [47]

This conjunction of the physiological and the cosmos, based on harmony, attracts the active concurrence of music in the formation of the personality. Senses, science and music reveal a *logos* and a *pathos* in *Plato* that design the coordinates of future research. *Ptolemy* will circumscribe these links to hearing and reason in his study of the proportions and numbers of consonances:

“The two criteria of the Harmonica are hearing and reason. But in a different way, that is, each one in his own species. For hearing operates materially (in the physical) and in sensation, while reason does it according to the form and cause (of the alteration).” [48]

The sinusoidal components of the periodic wave provide an artistic simile: music embodies the rationality and feeling that animates the creative intelligence in the universe.

Porphry, in “On Abstinence”, appropriates the Ciceronian image of the soul-body as a *musical instrument*, in order to highlight the ascendancy of *passion* in the panorama of existence:

“...the cautious man who is on the lookout for the charms of nature, who examines the nature of the body and knows that the body is linked, like a musical instrument, to the powers of the soul, knows that passion is ready

to make its voice heard, whether we want it to or not, when the body is struck by elements from outside and the percussion reaches the sensitive perception.” [49]

We are thus warned that the language of sound, music, is psychology.

In Pythagoreanism the correlation between sense and reason was already insinuated, which would become *instruments of the harmonic faculty* with *Ptolemy* and *Boethius*:

“...the Pythagoreans let themselves be carried away by a kind of intermediate route; for they neither deliver all judgment to the ears, and certain things, however, are not explored by them except with the ears... For, although the values of almost all the arts and of life itself are the product of an occasional action of the senses, yet there is no certain judgment in them, no comprehension of truth, if the free will of reason is turned away.” [50]

This duality gives the melody a prenatal idiosyncrasy. In its realization, mathematics and emotion provoke a unanimous language. We understand before we know through music. We are in unison with it. The unity of reason and sense, the Tetractys, represents its *logos*.

The time of music creates space. In it, sensation is image, feeling is memory. Feeling is a way of thinking.

3.3 The “Harmony of the Spheres” in the Tetractys

The Tetractys symbolised, according to the oracle of Delphi, “harmony par excellence.” The relationship of the One and the parts in its structure, the dual, confers on it a universal validity in the intellection of the harmonic in the world.

“Epinomis or the Philosopher,” in describing the correspondence between being and the cosmos, alluded to the Tetractys without mentioning it:

“...when the universe, for several nights and days, has been unceasingly presenting these same spectacles, it has never ceased to teach men the one and the two, until the most obtuse spirit has even learned to count satisfactorily. Well, there is also the three, the four and the manifold, each and every one of us will notice it when we see these heavenly bodies.”

The text ends with an exhortation to unity. Was this just another coded message about the pressing role of the Tetractys in understanding the universe? It seems to alert us

that whoever desires wisdom will not be able to attain it if he neglects affinity in nature:

“...it is necessary that every figure, every numerical system, every harmonic combination, and, finally, the concert of all sidereal revolutions, manifest its unity to those who methodically study these things, and this unity will become manifest, I repeat, if one learns correctly, with one’s eyes always fixed on unity; for, in such a case, reflection will prove how there is a single link that unites all phenomena together...” [51]

Union is an allegory of harmony. Concordance, one of the properties of the manifestation of music, is intuited behind these words. Pythagoreanism incited this theory, convinced that music involves *the study of number in motion*, and astronomy *the study of space in motion*. Aristotle explained:

“...[the Pythagoreans] saw in numbers the properties and proportions of musical harmonies; since all other things in their whole nature seemed to resemble numbers, and numbers seemed to be the first of all nature, they supposed that the elements of numbers are elements of all things that are, and that the entire firmament is harmony and number.” [52]

Hence the Pythagoreans assume music as if it were a theorem for the *understanding of the whole*, whose axiom infers the Tetractys and the harmony of the spheres.

Alexander of Aphrodisias clarifies how the world is music in *Pythagoras*:

“They [the Pythagoreans] also affirmed that the sky in its entirety was composed according to a certain musical scale... because it is composed of numbers and according to the number and musical intervals.”

The first four whole numbers of the Tetractys form the octave, fifth, and fourth intervals of the musical scale:

“...seeing that musical intervals (*harmoniai*) are composed according to a certain number, they affirmed that numbers were principles of these. For the octave consists of a double proportion (2:1), the fifth in a proportion of one and a half to one (3:2), and the fourth in a proportion of one and a third to one (4:3).” [53]

Music being a temporal art, space being constituted by the scale, and the latter being codified in the quaternary, Pythagoreanism stealthily communicated the omniscience of the Tetractys. Nature made music turns our lives into melody:

“...there can be no doubt that the state of our soul and body seems to be configured in a certain way on the basis of the same proportions with which the subsequent dissertation will show that the ‘harmonic modulations’ are combined and coupled.” [54]

In that time of music we are the space, the harmony of the spheres.

4. The Tetractys and the Kabbalah

Beyond the Pythagorean musical nomenclature [55], the “Kabbalah” makes use of the conception of the Pythagorean number that through it the world can be known. In its ontological meaning of the numerical, or in its desire to merge the Kabbalistic spirit and life, we feel the imprint of Pythagoreanism, whose philosophy advocated the unification of knowledge with the vital. Just as the Tetractys is conceived around the One, the “Zohar or Book of Splendor”, the most important work of Kabbalism, contemplates the *All* in unity [56]. In it the similarity-difference with the dialectic inherent in the complementaries of the *quaternary* takes place. The *sephirot*s—mediators between the *infinite Being* and *creation*—are ten [57] as in the Tetractys, and suggest a *sacred* link between the “masculine or active principle” (Wisdom) and the “feminine or passive principle” (Intelligence) [58]. The dual also derives in the ternary. The Kabbalah includes three orders of the world—astral, natural and divine—and in it the *sephirot*h are articulated by triads: Crown-Wisdom-Intelligence, Love-Justice-Beauty, Triumph-Splendor-Foundation. The four is present in the *four Kabbalistic worlds*: the world of emanation, the world of creation, the world of formation, and the world of action. Finally, the number ten will possess in the “Kabbalah” the transcendental Pythagorean symbology. *Rabbi Eliezer* spreads in “The Zohar”:

“...I see that primordial Light, which was used during the first six days of creation, that its displacements and descents are found in the mystery of the ten.” [59]

The ten *sephirot*s form the *sephirotic tree* built around Beauty, and model the *Celestial Man* named *Adam Kadmon*. His human and cosmic condition seems an analogy of the Pythagorean being and universe in the “harmony of the spheres.” This duality integrated in the *Celestial Man* will strengthen in the “Kabbalah” the expression of the divine and the possibility of its translation by the human.

In Kabbalistic language, two triads alternate. *Sefar* (the number) [61] / *sippur* (the word) / *sefer* (the letter) and *miṭvâ* / *michtav* / *mashbav* “pronunciation, writing and thought” are the significant keys of its teachings. In this new dimension, the influence of Pythagoreanism can be seen in the combination of figures and words in the elaboration of the messages. As in *Pythagoras*, in the “Kabbalah” numbers and words are symbols of reality that contribute to its nomination and decipherment. *Gematria*, *notarikon* and *temurah* are methods employed for this purpose. *Gematria*, based on the

numerical value of the Hebrew letters, promotes associations between different words with the aim of finding secret meanings if an identical sum is obtained; the *notarikon* searches in a word—with the help of its initial letters or endings—other different words as if it were a monogram of complete sentences; and the *temurah* is in charge of varying the position of the letters in the same term with a view to revealing hidden meanings. This *science of letters* is to be found in the *orphic structure* as a science of forms, where the play of numbers engenders puns. Similar to the structural triad beginning–middle–end [62], in the “Kabbalah” the changes in the order of the letters refer us to the possibility of giving messages with the structure and creating meanings by their ordering. In this way, the application of numerology to language allows us to modify the text, its situation within the discourse, and to transfer unknown expressive possibilities to us.

“Sefer Yetzirah (Book of Formation or Book of Creation)” conveys that God created the world “by thirty-two mysterious paths of wisdom” and “in three forms: in writing, number, and word.” The 32 *paths* originate from the 22 letters of the sacred alphabet and the ten *sephirot*. If we practice a Pythagorean-Kabbalistic method, we surprisingly discover that we remain within the Tetractys:

$$\begin{aligned} 22 \text{ paths, } 2 + 2 = 4; \\ 10 \text{ sephirot, } 1 + 0 = 1, \end{aligned}$$

the return to unity in the *quaternary*. And the sum $4 + 1$ adds the number that in Pythagoreanism represents circularity, 5 [63]. Should we understand this finding as a coincidence? We think not. The semantic-decoding function of the Pythagorean number in the word that the “Kabbalah” inherits, the unlimited compositional montage that is revealed to us in the orphic structure in tune with the nature of the *sephirot*, which have neither beginning nor end and can be combined and exchanged infinitely, show in their foundations not chance, but an objective law of creation. The Tetractys in art and literature proves it.



Figure 2

Chapter Three

The Tetractys in Art and Literature

In science and culture, the orderly-rational and the instinctive-ungovernable coexist, not under the guise of a solution, but more importantly, with the enigmatic form of the nature of the creative, where any answer to a question is neither univocal nor one-dimensional. There is as much rationality and irrationality in mathematics as there is in art and literature. It would take us a long time to demonstrate this fact that is obviously not limited to the mythical *Apollo–Dionysus* duality. *Euclid* had predicted that “there is no royal road that leads to mathematics”. This phrase inspires us with an equation that is a treatise for creativity:

Mathematics and imagination = *poiesis*.

Science can cause aesthetics. Was not *Plato’s* “*Timaeus*” one of the first known attempts at *Creation* with the beauty of mathematics and Aristotelian “*Poetics*” of *recreation* from the science of art?

Two works distanced from the artistic in their object of study illuminate the field of art: *Aristotle’s* “*Physics*” and “*Metaphysics*.” With them he will verify “a certain similarity between necessity in mathematics and necessity in things generated according to nature.” Here beats the vital unity pondered in the Tetractys—the foundational and integrating principle of everything—the reason of talent—the necessity of invention—and the impulse of creation—the *generation* of the work of art—. However, science is also the meta-scientific:

“...those who affirm that the mathematical sciences say nothing about Beauty or Goodness are mistaken... the supreme forms of Beauty are order, proportion, and delimitation, which the mathematical sciences manifest in the highest degree.” [1]

This idea of structural beauty will allow us to understand the *orphic structure* as an architecture of senses.

Proclus highlighted in the exact sciences another emblematic attribute of art, the faculty of providing pleasure [2]. This observation underlines in mathematics the poetic–genesiac imagery of the Tetractys by sharing terms and categories of creative discourse. Number centralizes and spreads the persuasive power of arithmetic by being able to produce delight and suggest, sharing the rhetoric of literature and art, an aesthetic context. Expression in mathematics is itself an artistic–literary language. The denominations “real number,” “imaginary number,” “magic number” transport us to the world of cinema and novels; the “inverse number,” “mixed number,” “congruent number,” “random number,” guide our mind in how the story is organised; the “simple number,” “complex number,” “positive number,” “negative number,” “friendly numbers,” “irrational number,” “rational number,” [3] “natural number,” “surd number,” “perfect number,” “characteristic numbers” seem to stage the psychology of the characters; and the “flat number,” “broken number,” “transcendent number” appear to offer us the style of dramatic construction. Before

the possible disturbance by the avalanche of a numerical spirituality, we can circumvent the shock with *Friedrich Nietzsche*:

“...What is not understandable to me is not necessarily the incomprehensible. Perhaps there is a limit of wisdom from which logic is banished. Maybe art is a correlative, an obligatory supplement to science.”

[4]

This fabulation of the scientific has its system in the Tetractys.

The technique of number responds in the *quaternary*, centuries in advance, to the request of the “Protrepticus” for “a science in which the creation, knowledge and use of what is elaborated coincide at the same time.” [5] Model and image, the Tetractys, constitutes a *poetics*, the genesis of the structure of creative thought. The existence within it of unity, the dual and the structural triad (introduction–development–denouement) are the basis of its classical and universal objectivity for the construction of the story of a work of art.

1. The One

Symbolising the Tetractys the *source of nature*, the unity of the whole and the parts, will allow its assignment in art as *part* of that Whole [6]. The One, aesthetically, refers externally to the totality of the artistic work and internally to the unity of action. Its scope is not limited to the story, being a starting point in the creation of characters. *Diogenes of Apollonia* had pointed out that “all beings are but diversifications of one and the same, and that they are all that one and the same.” We are a planetary self. We live in the world, but the world is also in us. When designing his protagonists and antagonists, the artist is impregnated with the experiences of the people around him, but he cannot renounce his reality as a motive for the psychological types he develops. Being aware of life and self-aware of our actions is the way to manifest the vitality of existence in the work. Knowing oneself reveals the selfhood of the other. *Democritus* had sentenced: “Man: world in small.” [7] The *harmony of the spheres* is in accordance with this approach. The universal is a way of being ourselves.

On the frontispiece of the temple of *Apollo* at Delphi was read “Know thyself.” [8] The Delphic Oracle founded the origin of wisdom from this truth, and according to *Iamblichus*, the Oracle of Delphi was the Tetractys. The fact that it is—the source of creation—the cause of knowledge, represents one of the most significant metaphors of culture. Since then, the authentic creator will be defined in the action of a general

law: truth is known by doing, creating. From here comes scientific and artistic experimentation, their unity, to create is to know. Are not science, art, truth, an act of invention?

Heraclitus eternalised optimism: “It is in the hand of every man to know himself.” That One, the human being, author of the characterology of his *whole*: person, character and story.

2. The Two

The person–character–story *triad* evolves in the dual. The duality dramatically encompasses in the Tetractys the beginning and the end of the work, the tension-release of tension in the development of the rhythm of the dramatic action, and the harmony in the unity of opposites. This opposition was outlined in the Pythagorean *Table of Opposites* [9] with a series of complementary ones transferable to creation. The placement in it of the limit and the unlimited, the unity-plurality, the right-left have an essential validity in the structure of the work of art.

In “The Sophist or of Being,” *Plato* exposes a style of thinking articulated by the bifurcation of reasoning. From the argument of an idea, two variants are separated that are successively divided when the resulting right part splits, which causes the following distribution:

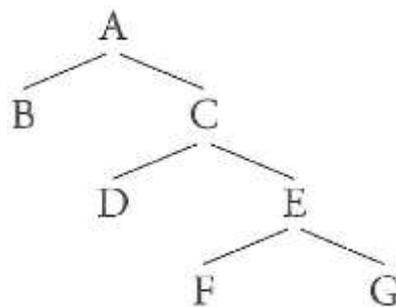


Figure 3

In this *double form* we perceive the influence of the dual on the Tetractys. However, its image inspires us with another perspective of representation in artistic discourse where unity and plurality, the limit and limitless are identified with the open work. Unlike the Platonic proposal, ours includes not only the two originated fractions, but also the infinite possibilities of branching of its parts, thus wishing to express the *open* interpretation that boosts language and the work of art:

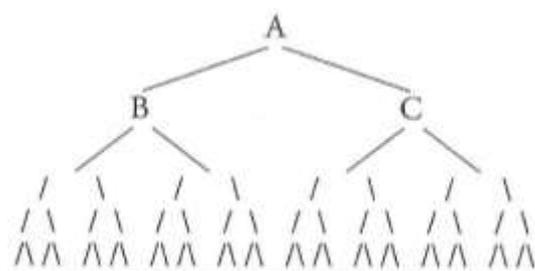


Figure 4

This new ordering is intended to explain the complexity of the characters and the constructed story or to serve as a reference in the initial process of creating the characters and structure of a work by exploring in the plot the various options and ways of making it. The artist thus has at his disposal an organic method for the projection of the form, the conflict (balance-rupture) and contrast of the characters.

The allusion to rest and movement in the *Table of Opposites* agrees in the drama with the treatment of action, montage and acting. The Stanislavskian system would base some of its teachings on the innovative scenic assimilation of *rest in movement*:

“The scenic action does not reside in the circumstance that the performer has to walk, move or gesticulate on stage. Action does not consist in the movement of the arms, legs, and the rest of the body, but in the inner action of the soul, in its longings. Therefore let us now agree, once and for all, that under the term ‘action’ is denoted not the acting representation, not the *exterior*, but the *interior*; not *physical* action, but that of the *soul*.” [10]

The dramatic parable, the rhythm, the progression towards the climax in the denouement, are prefigured in the straight and the curved Pythagorean, just as the counterpoint of light and darkness of the *Table of Opposites* will take root in the orbit of the writing and characterisation of characters.

Pythagorean dualism invites characterological synesthesia. *Diogenes Laertius* says that for *Pythagoras* white “is of the nature of good,” black “of the nature of evil.” [11] The contrasting polarisation emerges as a covering of the contradiction of being and non-being in Pythagorean harmony. The creator, by working on the verisimilitude of his characters, delves into the limit of this confrontation, the unlimited chiaroscuro of its meaning. *Stanislavski* advised: “When you play the bad guy, find his good side.” [12] Glimpsing the beautiful in the ugly [13] cultivated a future tradition in *Pythagoras’* aesthetics.

The dyad in the Tetractys summons, in addition to creative praxis, the theoretical debate on creation and the created. *Euripides* from the stage inquires “who knows, if life is not a death and death a life?” The *orphic structure* gives shape to that endless

dialogue between the mortal and the imperishable in the triad of all dramaturgical possibilities: beginning–middle–end.

3. The Three

The Pythagorean theory of the *beginning–middle–end* is embodied in number three of the Tetractys, providing multiple alternatives when used in the structuring of a story. The classical three-act structure—introduction–development–denouement—generated from the Pythagorean triad gives way to the ternary form ABC and encourages in it new opportunities for combinatorics.

Plato had fraternised beauty with the ternary:

“...It is not possible for two terms alone to form a beautiful composition, without counting on a third. For it is necessary that, in the midst of them, there should be some bond that relates or binds them both.” [14]

The dual, the *beginning* and the *end* in the art of narration, within the *unlimited* ways of presenting the start and conclusion of a theme, needs a formal configuration that gives it a meaning, a third element in the unity of the story, the *knot* or *development* of the protagonist’s conflict. Otherwise, the meaning is indeterminate. *Aristotle* had observed in the dual that “there are two possibilities, either to compose or to destroy.” The ternary, the structural *triad*, allows in this dialectical coexistence that through its construction the creative prevails over the dissociation, the destructive.

Pythagoras had formulated that “the beginning is half of the whole.” The ternary *formula* meanders through these words: in the *beginning* is contained the *development* and the *denouement*. Contemporary dramaturgy reinforces this enunciation when it recommends that the introduction (beginning-setup) of the play show who the protagonist is, what his conflict is, and the theme of the story. Adapting “the endings to the origins” [15] reiterates in the *beginning–end* duality the artistic effectiveness of the *unity* between the start and the resolution (end) of the main plot. In the magical symbolism of Pythagorean numerology then the three becomes One, as the *quaternary* can be 10 [16], by the unity {1} of the beginning–end {2} in the structure {3}. Thus, the Tetractys narrates.

The structure, similar to the signs of the word whose letters we organise to fix a meaning, influences the content. *Plato* declared that “by changing a single thing, we could show that it would change everything.” [17] The modification of meaning by the variation of the order will be one of the centers of attention of “Poetics”:

“...the parts of the events are ordered in such a way that, if a part is transposed or suppressed, the whole is altered and dislocated...” [18]

The *orphic structure* shuffles and articulates this law. The three, identified with perfection, encourages from the Tetractys the creation of the work of all times.

3.1 The Inspiration of One, Two and Three on the Threshold of the Quaternary

Theon of Smyrna, in “De utilitate mathematicae,” comments on an Aristotelian passage that half-opens the doors of the dream of science to the creative dream:

“...in his work “On the Pythagoreans”, *Aristotle* says that the one participates in the nature of both, [allusion to being odd and even] because if it is added to an even number, it makes it odd, but if it is added to an odd number it makes it even, which would not have been possible if the one had not participated in the nature of both; for this reason he says that the one was called odd-even.” [19]

The arithmetic transcription of this exposition suggests that:

$$\begin{aligned}1 + 2 \text{ (even)} &= 3 \text{ (odd)} \\1 + 3 \text{ (odd)} &= 4 \text{ (even)}\end{aligned}$$

The unit, the One, acts on the numbers of the Tetractys as a point of reference and cohesion. From this mathematical example we deduce a substantial contribution to artistic poetics [20]. The story {the one} requires the existence of a beginning-end {the two}, which develop in the structure {the three}; in turn, the story {the one} and the structure {the three} configure the action and the language in a time and space {the four}.

In ancient Greece, the term *theory* had the meaning of “to contemplate sights”. In *Pythagoras*, the *contemplation* of reality is the source of his discoveries and the support of the wisdom of his school. That is why the number in *Pythagoras* enhances visual thinking. Are not words, in short, an expression of the non-verbal?

The inability of the verbal to communicate the world conceives the Tetractys as a mediator between the physical and the spiritual. The *imago* defines Pythagoreanism:

“...the Pythagoreans say that the infinite is the Even; for the Even, when it is encompassed and delimited by the Odd, confers infinity on things. A sign of this, they say, is what happens with numbers, because when the

‘gnomons’ are placed around the one, and apart, in one case the figure that results is always different and in another always the same.” [21]

The assumption of the odd limited and the even unlimited denotes the value of the *image* in the sensibility of the Pythagoreans, a conception that we consider cardinal for the gymnastics of the imagination and the realisation of the work of art. Is not the image the origin of all creation?

The two, the even, was for the Pythagoreans “susceptible of change in both senses” and they used to identify it with *movement* and *addition* [22]. This notion synthesises the endless creativity of the dual: the *unlimited* play of complementaries (the typology of the characters protagonist-antagonist, principal–secondary, the beginning and end of a work...), the ability to vary the beginning–end causality in the random end–beginning; the effectiveness of *movement* for the construction of the action, the rhythm, the montage; and the *addition* understood as a resource of unfolding—succession and decantation—in the counterpoint of options to choose during the creation process. The even gives rise to the multiple, the diversity present in nature; the odd {the three} limits, structure. The very figure of the Tetractys, bounded by the surface of a triangle, is a structural archetype of the *limit* of form:

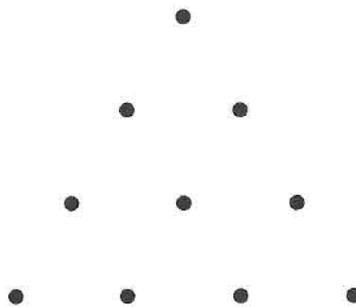


Figure 5

A limit that becomes relative in the *orphic structure* [23]. The two (the duality) transfers to the three (the structure) the ludic, the subjectivity of the complementary, the relativism characteristic of art that converges in the open work. The three imprints on the dual the need to fix an order so that duality can act on the limit of the beginning–middle–end form. The dual, contained in the ternary, guarantees that the *limit-unlimited* border vanishes into the artistic and that culture is not absolute.

The Tetractys hides other secrets. The sum of two and three refers us in the Pythagorean imaginary to the number that represents the circular, the five. The two, symbol of the beginning–ending unity, needs the three in another *order* to fulfill its unlimited character of an open work: the interpretation. That new link that brings the ternary to the duality is the spectator. The triad Author–Work–Public relates in a circular relationship the total creation.

4. The Four

The representation of the quaternary with the geometry of a triad—the triangular—the masking of the four to ten in the Tetractys, the fact that it is ten or a pyramid, a pictorial symbol of the social structure, speaks to us of the transposition of meanings of the Pythagorean *imago*. Here is the mask, the image, superimposing itself on the face of science, so that science may explain, and also form a masked part of the great theatre of life.

The number four in the Tetractys brings together the categories in which the image takes place: action, language, time and place. In them, the three previous ones concur when the story is composed:

- The One: Story
- The Two: Subject–Object
- The Three: Structure
- The Four: Action, Language, Time and Space.

In the story, the subject (character) intervenes with a specific object that acquires meaning in the structuring of his language and action in a time and space.

Within the unity of the parts and the whole that is the *story*, the dyad fosters other complementary pairs: in the *subject* the dialectic protagonist–antagonist with its motivation–objective; in *action*, the succession-simultaneity; in *language*, the verbal and non-verbal; in *time* the duality past–present, present–future; and in *space* because of the possibility of the place being real or imaginary.

The *mythical actantial model* [24] studied by Greimas is due to *Pythagoras* rather than to semiotics. In it operate the same universal codes of narration inscribed in the Tetractys: the Story (the One); the Subject–Object nexus (the Two), the parts of the story introduction–development–denouement (the Three); the Sender–Receiver–Helper–Opponent [25], four necessary elements in the action of the Subject:

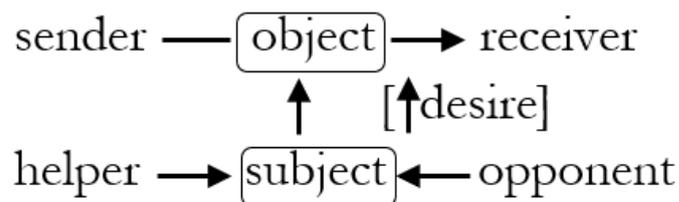


Figure 6

Every myth is a story. The Tetractys symbol of that myth, philosopher's stone of knowledge by the union of science and art. In this way it can engender the *orphic structure*, the form of the content that configures the story.

Chapter Four

Return to the Origin: The Orphic Structure

By using numbers instead of words, *Pythagoras* consecrates in culture the Apollonian tradition of the *imago*. Idea is image. *Heraclitus* immortalised this legacy aphoristically: “The lord, whose oracle is the one at Delphi, neither speaks nor conceals anything, but manifests himself by signs.” [1] The oracular character of the Pythagorean teachings is inserted in this heritage that replaces the dissertation by the symbol. The emblem supplants the verbal artifice, it unites the signified in the signifier. A picture can represent all words. Was not the Tetractys the Delphic? It, like the *signs* of the Oracle, was conceived to be interpreted.

Knowledge brings together in *Pythagoras* the intelligible and the invisible in compromise with which “nature likes to hide itself”. Reality must be covered with silence to *discover* its secret. To *hide* is to reveal. Thus, the Tetractys, art, makes the manifest imperceptible.

Cinema from its origins sought, in the development of the image, the concealment of Pythagoreanism. *Alfred Hitchcock*, in explaining the *ideal montage*, reiterates in his writings and interviews:

“...Technique that draws the public’s attention to itself is a bad technique.
The hallmark of good technique is that it goes unnoticed.” [2]

The *unnoticed* in *Alfred Hitchcock* is partaker with the enigmatic in *Pythagoras*. The numbers in the *quaternary* will sequence the plot of another montage hitherto unperceived.

Among the meanings of *logos* in ancient Greece was that of “formula.” The representation of numbers could thus be a concept, an image, a metaphor. This evidence, the Pythagorean knowledge of the world through mathematics, and the Platonic understanding of numbers as forms and ideas [3], will be vital antecedents to unveil the *orphic structure*.

The modernity of these theories was expressed by *Arthur Schopenhauer*:

“...geometrical figures and numbers which, as general forms of all possible objects of experience and being applicable *a priori* to all of them, are nevertheless not abstract but intuitive and fully determined.” [4]

This representative universality of the mathematical allows the creative synthesis and what *Plato* called the *beauty of forms*. The *orphic structure* works from this poetics the story, the fable of art, by the *analogical unity* existing in life [5]. And it is going to perform the challenge of “a common definition of figure that adapts to all but that will not be specific to any one in particular.” [6] The duality being the first number for the Pythagoreans [7] leads us to the following numerical relationship of the Tetractys:

2 3 4
5 6 7
8 9 10

Here is contained the *orphic structure* [8] of the creation and analysis of the compositional complexity of art. From this numerical series arises the geometry, the following design that we propose of the *orphic structure*:



Figure 7

A theme can participate with it in the figurative, abstract or symbolic by generating dissimilar associations in the identification of its form with a real or imaginary content.

Curiously, the number 9 was also related to perfection:

“Why is the number nine the most perfect? Because it is the square of the first odd and odd by an odd number of times, for it is divided into three triads, of which each of them, in turn, is divided into three monads.” [9]

The naming of 3 “first odd” alludes to the fact already pointed out in the Pythagoreans of valuing in the 1 the unity, the *monad*, and not just another factor in the numerical series of the Tetractys. However, in the same quaternary [10], we find other concurrent circumstances in the estimation of 9 as the basic number of the *orphic structure* by adding the first four even numbers with the first four odd numbers:

$$\begin{aligned}
 1 + 3 + 5 + 7 &= 16 \\
 2 + 4 + 6 + 8 &= 20 \\
 \hline
 &36 \text{ and } 3 + 6 = 9
 \end{aligned}$$

Bertrand Russell asserted that “wisdom consists in penetrating the underlying formula that is common to all things.” The *orphic structure* constitutes that model that unifies the different formats and narrative systems. The three models its configuration by offering the possibility of generating simple or complex alliances between its parts. Its structure is characterised by the ability of metamorphosis and adaptability according to the needs of the creator. Imagination, talent for engendering analogies are the ones which determine its meaning with the purpose of guaranteeing the unity of the whole in the internal and external of its form. Various structural treatments can be performed simultaneously within their triads—ABC—at a linear or non-linear level:

Linear example

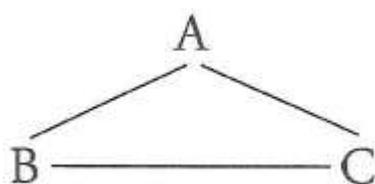


Figure 8

Non-linear example [11]

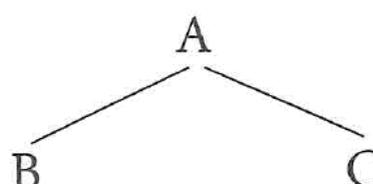


Figure 9

In both cases, the beginning–middle–end can vary or be interchanged depending on the story and the characters. In this way, archetypes open to all times, creations and interpretations follow one another.

The *orphic structure* externalises the unity of the universe through its different expressive manifestations. The combination of its elements [12] shows the significant multiplicity of reality and allegorically reproduces the way in which nature is organized (unity–diversity–structure) within the variety of the singular–general. The compositional randomness that inspires his geometry also evokes the unlimited faculties of intelligence, the glass bead of the imagination. *Aristotle* seemed to portray the *figure* of this creative consciousness when he wrote that “the movement of thought does not take place, like that of things moved, between continuous subjects.” [13] The perception of his image traces in it the paths of the creative subconscious.

Similar to the melodic variants that arise from the sounds of a natural diatonic musical scale, the *orphic structure* achieves with its three triads formal versatility in the story of a painting, a dance, a film, or the story of a novel or a play. The arrangement of his ternary architecture in space also allows us to establish a syllogistic relationship of special importance in the structural field of the work of art. ABC ceases to be, when confronted with its creative applications, a beginning and an ending to become the start of an inexhaustible end.

The Pythagorean conception of beginning-middle-end anticipates in culture the discovery of the syllogism, since the last term is due to the previous two. This causality varies in the *orphic structure* by the formal play that incites its figure. The Sicilian playwright of the 5th century B.C., *Epicharmus*, had to presuppose this as we do when he put into verse “the doctrine of *Pythagoras* under the appearance of a game.” [14] This cognitive divertimento is enlivened in the *orphic structure* by the creative symbolism of the number three used in antiquity “to signify the multiple.” [15] The closed sense is apparent in the ternary [16]. Three lines on paper create a trigram in the “I Ching,” a unit from which the *limit* is blurred with the narration of the hexagrams.

Literature is braided in the fabulous tapestry of Pythagorean science. *Iamblichus* informs us that “geometry was called *histōria* by *Pythagoras*.” Research as story, story as geometry, the polyhedron of thematic options, reveal the artistic vocation of his

sensibility that came to use a scenic resource, the *veil*, to differentiate in his teaching the disciples suitable to participate in his lessons [17]. The veil as a mask, similar to the artist who has to tear the mantle of simulations in society when designing the characters and finding the theme of his work.

To perceive in the geometric space the *story* leads literary to see in each thing the source of a plot. The Pythagorean *imago* exercises us in fabulation based on form. Hence, the *orphic structure* is an incentive for fantasy. One must learn to visualise, in the formal schemes that are obtained from his image, the profile of a protagonist, the trajectory of his tragedy or comedy. The form speaks.

The dual intervenes in the triads of the *orphic structure* with the same inventiveness as in the Tetractys. By relying on it in the composition of the map of the scenes of a work, where the beginning can be bifurcated into the *beginnings* by the flexibility of starting from any of its points, the relativity of the artistic process, the harmony of the singular and general, the finite and indeterminate, is already transparent in the introduction. A paraphrase of the following Aristotelian logic:

”It is also necessary to record the arguments in a universal form, even if they have been discussed as particulars, for thus it will also be possible, from one, to make many.”

This illustrates to us that the search for the universality of the content does not prevent the achievement of the *universal form*, the *orphic structure*, capable of adapting to the unforeseeable demands of the creative act. The ideal of a universal form is real in the *orphic structure*. *Arthur Schopenhauer* had revealed:

“...The fact that the relationship between a composition and an intuitive representation is generally possible is based, as has been said, on the fact that both are nothing more than different expressions of the same intimate being of the world.” [18]

In the apparent heterogeneity of the works of art history there is an underlying homogeneous background where the plural is *one*.

The 36 *dramatic situations* classified by *Carlo Gozzzi* that *Georges Polti* collected, and the 31 *functions* of the characters of *Vladimir Propp*, confirm the unity in diversity, the probability of concentrating in some basic general typologies and plots the specificity of different conjunctures in creation. *Plato* had predicted much earlier:

“...everything that can be said to exist is made up of the one and the multiple, and contains in itself, originally associated, the limit and infinity.” [19]

In the proposals of *Gozzzi* and *Propp*, the characteristics of the Tetractys that are coupled in the *orphic structure* are fulfilled: the unity {1}, the duality {2}, the triad {3}

beginning–middle–end. *Propp* even makes the dual visible in the actions that the characters perform:

prohibition	violation
interrogation	information
deception	complicity
deception	punishment
misdeed	reparation
hero's departure	return
combat	victory
pursuit	rescue
difficult task	task resolved

The plasticity of the *orphic structure* of adapting to the countless artistic trends and styles also corresponds to its faculty of fixity or transformation. *Pythagoras* glimpsed this capacity in the environment of nature:

“...the forms, the magnitudes, the qualities, the relations, and others which, contemplated by themselves, are immutable; together, on the other hand, to the bodies they are completely transmuted, and by reason of their kinship with a mutable thing they become multiform variations.” [20]

These *multiform variations* mark the spirit of art, of the *orphic structure*. What artist has not experienced, in the journey of conceiving a story, the metamorphosis of the face of a character, the division of a plot into themes and subplots? A painting is not just itself, but the set of sketches that made it possible. What spectator has not seen in a work the reflection of his existence—or that of others—in a succession of memories and works that it inspires? The abstract image, unmoved, is modified, transfigured into emotion, in contact with art and life.

From the *imago* of the *orphic structure*, the writer, the artist, project the construction and evolution of the characters within the story:



Figure 10

Its form allows the diversity of possible relationships, an attitude of openness, due to the internal links in the work or external links with the spectator, regardless of whether the author wanted to make an *open work*.

The plot is impregnated with meanings by the dissimilar associative levels:

Oblique or Tangential



Figure 11

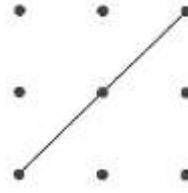


Figure 12

Parallel, Vertical or Horizontal

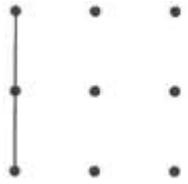


Figure 13

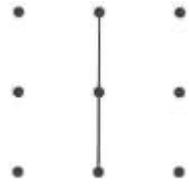


Figure 14



Figure 15

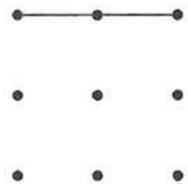


Figure 16

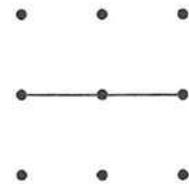


Figure 17

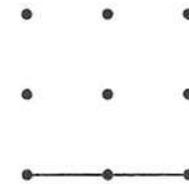


Figure 18

These forms can be alternated, if the main plot requires it, to bring complexity to a scene or to establish reciprocities between sequences. In the study of the character, these designs represent or explain a stable, regressive or progression behaviour—the latter graphically personified in the oscillations of the dramatic curve by the parabolas of tension (rising action) and inflection point (falling action)—while in the development of the action towards the climax:

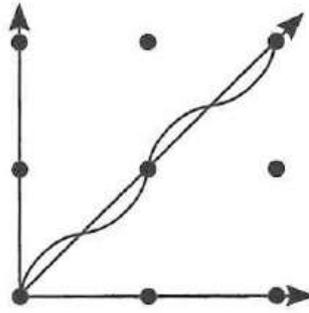


Figure 19

A classic nexus of interdependence or experimental can be maintained with the secondary plots. The central theme could then be brought up with a concentric approach from a thematic nucleus, or promote a causal rupture of dissociation or concealment of the message, to enhance a process of analogies. In this way, the *orphic structure* contributes to arouse at the base of the story a deep and open meaning promoted by the significant association between the parts, where the form is defined not only by the linearity of the discourse, but by the eventuality of redefining its content in a transversal, random or inverted sense. The beginning–middle–end can change position or modify the perspective of the events, either by the sequential intentionality set by the author, or by the possibility of the text itself to generate its own symbols, inviting the reader to get involved and discover innumerable interpretations—thanks to the structural play—that the story radiates, far from a formal conditioning. The prefixed is replaced by contrast, juxtaposition, when shuffling the components of the *orphic structure*. Thus, the beginning–middle–end, linked by the turning points, make up the five elements of the external structure of the work:

Act I	Act II	Act III [21]
	Turning point	Turning point

Likewise, in the beginning-middle-end are found, as in the Tetractys, the 10 explicit or implicit components of the dramatic internal structure:

- Act I
- 1–Introduction
- 2–Trigger
- 3–Motivation
- 4–Object
- 5–Emergence of the conflict
- Act II
- 6–Conflictual tension
- 7–Crisis
- Act III
- 8–Solution of the conflict

9–Denouement

10–Climax

With them, the *orphic structure*, a structural mother that refers us to the Apollonian-Pythagorean, gives an order to the creative passion, the *Dionysian*, and can be applied objectively in different artistic manifestations. Metaphor of the door that opens onto the prodigal paths of creation, with each action renews the work of art and is reborn.

Chapter Five

End of the Beginning

Ancient men, who did not have the wisdom of men today, agreed in their candor to listen to an holm oak or a stone, as long as the holm oak or stone told the truth.

Plato

Oedipus sowed anguish in the face of the night of the expiration of things. Death was not a beginning, but an end:

“...Time, which can do everything, sweeps away all other things. The vigor of the earth is consumed, that of the body is consumed, confidence perishes, distrust originates, and the same spirit does not remain either between friendly men or between one city and another.” [1]

Faced with the devastating pessimism of *Oedipus*, the Greeks had the myth, the invention of reinvention. *Demeter*, goddess of agriculture, transmits the hope that in the cycle of the seasons to die is to live in the vital circle of existence. The West and the East renew an enthusiasm with their cultures, everything is coming back, nothing is lost. *Orpheus* resurrects the dead with his art. The phoenix always returns to Egypt every five hundred years.

The circular in Pythagoreanism is interspersed in an artistic and scientific poetics where music acquires a therapeutic benefit:

“[Pythagoras] also considered that music contributed in a decisive way to health, if it was used in a suitable way. Indeed, he used to make conscientious use of such purification, because he also spoke of healing through music.” [2]

Pythagoras' conviction that “what had happened on some occasion, in certain temporal areas, happened again” [3] will have a notable impact. This idea is the basis of the imaginary of circularity in culture. *Heraclitus* reveals in one of his precepts the cause of the suggestion by this figure: “in the periphery of the circle beginning and end are one.” Equated with perfection, eternity is reached in it by the confluence in time and space of the beginning and the end. *Parmenides* seems to want to demonstrate the Heraclitan axiom when he refers in his “Poem” not to care “where I begin, / since again and again / I must arrive at the same thing.” For him, truth is circular, a notion that in its apparent sublimation of the truthful, transcends the nature of the artistic fact in the author-work-public relationship. *Anaxagoras* reinforces this feeling by universalizing it in “the circular movement of the Whole of all things.” Its orbit not only encompasses art and science as parts of life, but also makes it possible to understand the art of science and the science of art by being all connected circularly.

Diogenes of Apollonia persuades us that “existing things differ from themselves and are, at the same time, the same thing.” [4] The similarity of the different, the eternal return.

These reflections are recognisable in the *content* of creation through the theme of life and death, and in the *form* by circularity in the structural. In “Phaedo or of the Soul,” it is stated that “it is true that there is a return to life; that the living are born from the dead; that the souls of the dead exist.” [5] Art recreates the unfathomable world that these facts pose by dealing, with the testimony of fantasy, the unknowns that science cannot satisfy. Are we inhabitants of parallel universes, does everything imagined exist, are our lives the proof of immemorial reincarnations? *Aristotle* evokes in “Metaphysics” the conception of history as a stage of destruction and reconstruction of civilisation where humanity lives a cyclical process [6]. He will admit the circular in the species, but not in the number [7]. In this way, being individuals, according to *Aristotle*, we cannot be eternal but we are eternal through the species. And he grants to the latter the finality of the imperishable, the circularity of life. In taking an interest in this subject in “On the Soul,” he says that the “final cause” is to be understood in two senses: objective and subjective. In the field of art, its application will lead us to the *final cause* of the creative: the *subjective* attempt of the artist to survive *objectively* through the work. This substratum of the circular in creation encourages the eternal return in culture.

Likewise, the spirit of the circular is immersed in the name of the Tetractys. Alluded to by the Pythagoreans as *quaternary*, it expresses the figurative, the superposition of one plane of reality on another. Hidden in the number four is another deeper meaning that transcends it. The sum of the first four numbers $1 + 2 + 3 + 4$ results in 10, and $10, 1 + 0 = 1$, the return to unity. Is not this the meaning of the Tetractys as the source of nature, the origin and root of things that exist? It synthesises a structure of return that allows a circular movement in two directions, from the One to the diverse, and from the plural to the singular. For this reason it was considered to have the *perfect number*, the ten, “since when we reach it we return to unity again and restart the numeration.” [8]

Geometrically the circularity contains the Tetractys. If we start from the circular as a whole we have the *One*, the unity:

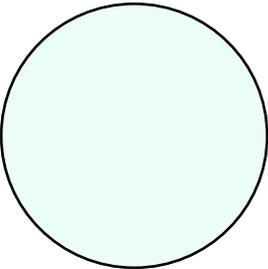


Figure 20

The half of the circumference represents the *dual*:

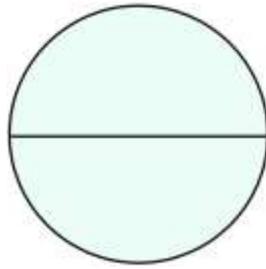


Figure 21

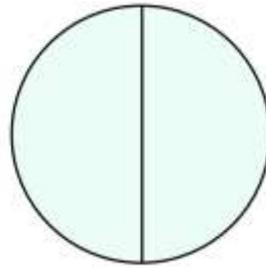


Figure 22

The two straight lines, with the orbit of the circle, constitute the *triad* that structures the *four* divided spaces:

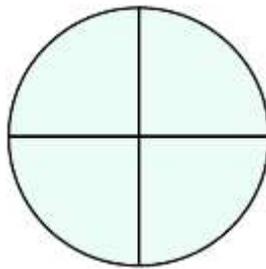


Figure 23

In Pythagoreanism, circularity was identified with the number five. In the circumference the center and the points of intersection give rise to that number:

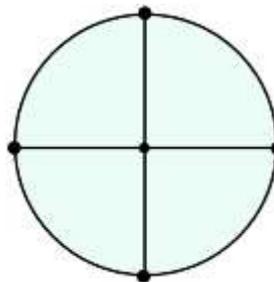


Figure 24

This vision is inserted in a tradition where numbers participate in existence, showing the unity of things. The sum of three (masculine) and two (feminine), gives rise to five, the generation [9], which embodies the circular in the cycle of life and death. As part of procreation, the five is related to time, which brings us back to its fusion with the quaternary in the Tetractys: the four refers to space, to the four seasons of the year that act in the temporal. Thus, the five—the circular—and the four numbers that shape the Tetractys ($1 + 2 + 3 + 4 = 10$, $1 + 0 = 1$) tend to reaffirm the integrity and the idea of the circle. In the *quaternary* its central location (1234 – 5 – 6789) suggests an equidistant character as occurs between the points of the sphere, judged “the most perfect of all figures.” [10] The fact that multiplied by itself, its desinence continues

to be five guaranteed its circular property. It will inspire the five-pointed star used by the Pythagoreans to secretly recognise each other [11].

The Aristotelian parable asked:

“...—Is every circle a figure? (If it is drawn, it clearly is). —But, then, are epic verses a figure? It is evident that they are not.” [12].

However, in this reasoning circularity in creation is implicit, not by geometry, but because of interpretation, which exceeds the knowledge of the geometric alone.

Art and literature reflect a circular movement. The themes of myths reveal that our concerns are basically the same as those of antiquity. *Fellini* had stated:

“My impression is that things have not changed much inside us, that deep down we still have dreams identical to those that men had three or four thousand years ago, and that in the face of life, we have the same fears as always.” [13]

Pyramus and *Thisbe*, personification of love that faces all impediments and triumphs over death; *Icarus*, the attempt of an impossible; *Saturn*, the despotism of power that devours its own children; *Prometheus*, the challenge of freedom... they return, they live in the current human conflicts. The study of the myth of *Antigone* made *George Steiner* see this gravitation of the past in the modern world:

“...One of the defining features of Western culture after Jerusalem and after Athens is the fact that men and women once again, more or less consciously, perform the great gestures and exemplary symbolic movements configured before by the formulations and images of the ancients.” [14]

The five, the circularity of the Tetractys, symbolise that *eternal return*, the transcendence of the work beyond the author and his time.

The structure in three acts—beginning—middle—end—promotes the concept of open work. The circular and it seem irreconcilable, but this is an apparent contradiction. In the return of a theme are the keys to the understanding of circularity, given by the link between the elements that intervene in its structural development. Is not the open work propitiated in the construction of the beginning and the end based on the way in which the author decides to organize it? [15] The circular movement arises as a result of the composition of the plot-character through the structure:

- 1 – Act I
- 2 – Turning point
- 3 – Act II
- 4 – Turning Point
- 5 – Act III

Five components that refer us to the pentad, the circular in Pythagorean symbology, which assimilated as an *art of the turn* [16] in teaching, expresses culture as the great open work of circularity.

The Aristotelian dilemma that “having a circular movement is not the same as moving in a circle” [17] is solved by art by conceiving circularity in both directions in the elaboration of the beginning and the ending. These are interpenetrated in the work. *Alcmaeon* had stated that “men perish because they are incapable of uniting the beginning with their end.” [18] Applied to the writing of story, this insightful phrase becomes a metaphor for dramatic unity. The lack of relational circularity can be equivalent to the death of verisimilitude.

The Tetractys, as a structural symbol of the artwork, shows a reciprocal influence between the parts:

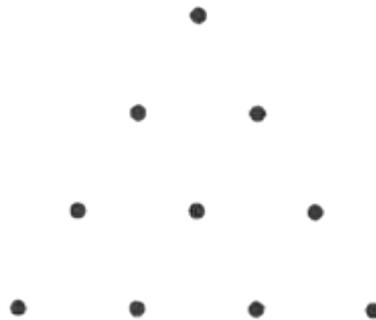


Figure 25

The subdivision of its structure contains other *tetractys* that allude to the possibility of fragmenting a work. Artistically this fact illustrates the link between the plot and the subplots, the sequence-scene division in the scope of the story:

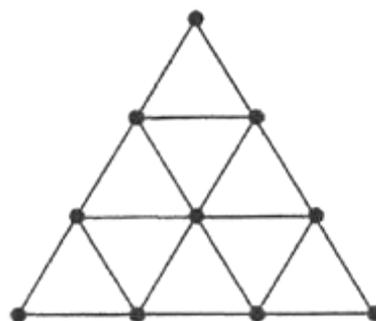


Figure 26

Anaxagoras had already declared that “in the small there is no minimum; there is always, on the contrary, a lesser” and “each thing is, in relation to itself, great and small.” [19] The *jo-ha-kyū* rule of a Japanese master of the No Theatre coincided with this criterion by proposing the “division into three movements not only of the whole work, but of each scene of this work, of each phrase of the scene and, sometimes, even of each word.” [20] The split is a means of studying a structure, but the work is

a unit, and although its treatment is experimental, or plays with the form, the result is a whole in which the circular emerges in the connection of the internal structure:

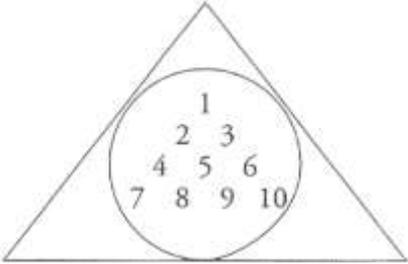


Figure 27

And the external one:

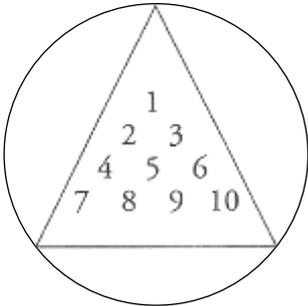


Figure 28

In the development of the action, the *turning points* vary the direction of the plot, represented in the following graph by the changes of direction in the Tetractys [27]:

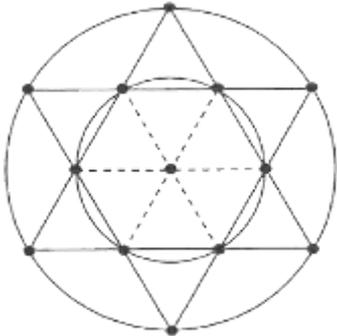


Figure 29

The character makes transparent the new trajectory of his conflict in a work that cannot exhibit his entire life, but a part of it through the ellipsis. This *elliptical* nature of his predisposes the story to be structurally open. It is not possible to tell the century of an existence in two hours without a synthesis. It would take another 100 years to recount its experiences that would remind us in some way of the vicissitudes of a certain myth. However, we have seen that the circular movement also appears in the work-public nexus, and in culture, which evidences the need to return to the origin in order to investigate, with renewed perspectives, the contributions of an artistic event.

The concept of *open work* and the *circular* come about symbols that, assumed according to the particularity and context of each experience, keep creation alive through the dialectic of knowledge. An open ending does not prevent circular movement, either because of the significant value of the work that returns in time, or because the circular can be open depending on the point of view we adopt in the analysis. The fact that geometrically the circle is “closed” is not an obstacle to understanding that there are aspects in its circularity that are not closed, not concluded, always exposed to be redefined according to the position of what is observed. Is not fixing a before and an after, a beginning or an end, also relative in the circle? The circumference shows that our imagination, rather than its orbit, is the one that is “closed” or “open.” Knowledge acts as concentric circles that widen in the learning of science and art. If this circularity disappears, if intelligence and sensitivity lose their origin, the capacity to rethink itself or return, to attend to the past in its projection of the future, development would be paralyzed and therefore there would be no progress.

Proclus claimed that “*Pythagoras* transformed geometrical philosophy into a form of liberal education.” [22] That is why the geometry of the triangle can invite invention, the transgression of the circle, because the theoretical-creative thought of *Pythagoras*, the Tetractys, teaches us to face life creatively.

Some assure that it was *King Solomon* who said:

“... What was, that same is what will be, and what was done, that is what will be done; there is nothing new under the sun. If there is one thing about which they say: ‘Look, this is new’, that thing already existed in the centuries that preceded us.” [23]

The art of the *orphic structure*, with *Euripides* in the circular continuity of history that repeats itself, would provide another viewpoint, that of rupture and freedom:

“...the things born of the earth return again to the earth, and those that spring from an ethereal germ return to the celestial pole, but none of the things that are generated perish, but some separate in one direction and others in another, and thus reveal their own form.” [24]

In the orbit of the imagination everything is incessantly renewed. The circle cannot be understood without its transcendence, the sphere.

The knowledge and application of the *orphic structure* does not limit the progress of creation. It, like art, is born from the changing situations of life. *Heraclitus*, one of the most brilliant creators in the history of culture, wrote that “the sun is new every day.” The challenge is not to invent the unreal, that is already reality. Greatness consists in discovering the unknown in the known.

References

Chapter One

- [1] Pythagoreanism had in common with Orphism the performance of purification rituals, the belief in the preexistence, immortality and transmigration of the soul (metempsychosis-palingenesis). *Herodotus*, in dealing with some *Egyptian customs*, pointed out: "...In this they coincide with the rites that are called Orphic and Bacchic—which are of Egyptian origin—and with the Pythagoreans, since whoever participates in these mystery cults is not allowed, out of sacred respect, to be buried in woolen clothes either," in "History," by *Herodotus*, introduction by *Francisco R. Adrados*, translation and notes by *Carlos Schrader*, Madrid, Gredos Publishing House, 1992, see Book II, p. 369.
- [2] "Pythagorean Life," by *Iamblichus*, introductions, translation and notes by *Miguel Periago Lorente*, Madrid, Gredos Publishing House, 2008, pp. 108–109. For his part, *Diogenes Laertius* had published: "...*Jon de Quío* says, in his 'Triagmas', that *Pythagoras* wrote a poem and supposed it to *Orpheus*," in "Lives of the Most Illustrious Greek Philosophers," by *Diogenes Laertius*, translation, prologue and notes by *José Ortiz y Sainz*, Barcelona, Folio Editions, vol. II, 2002, p. 103. See also *Clement of Alexandria*, "Stromata I, 131," in "The Pre-Socratic Philosophers," by *G.S. Kirk, J.E. Raven, M. Schofield*, Spanish version by *Jesús García Fernández*, Madrid, Gredos Publishing House, 2008, p. 297.
- [3] "Against the Professors" by *Sextus Empiricus*, introduction, translation and notes by *Jorge Bergua Cervero*, Madrid, Gredos Publishing House, 1997, p. 91. About *Cicero's* judgment, see "On the Nature of the Gods," in "Fragments" by *Aristotle*, introduction, translation and notes by *Álvaro Vallejo Campos*, Madrid, Gredos Publishing House, 2005, p. 270. In this sense, *Philoponus* argued: "*Aristotle* says 'so-called', because the poems do not seem to be the work of *Orpheus*, as he himself says in his books 'On Philosophy'. In fact, the doctrines are *Orpheus'*, but they say that *Onomacritus* developed them by putting them into verse," op. cit., p. 270. *Aristotle* in his writings referred to *Orpheus* with an allusive viewpoint. Thus, in "On the Soul," he will quote "the so-called 'Orphic Poems'" and in "Reproduction of Animals" he evokes it with uncertainty: "Well, how is the rest formed? Of course, either all the parts are formed at the same time, for example heart, lung, liver, eye and each of the others, or they are formed one after the other, as in the verses attributed to *Orpheus*, where he states that the animal is formed in a similar way to the lattice of a net. Of course, not everything is formed at the same time..." in "Reproduction of Animals" by *Aristotle*, introduction, translation and notes by *Ester Sánchez*, Madrid, Gredos Publishing House, 1994. See in Book II the epigraph dedicated to the "Formation of the Embryo," pp.

131–132; and “On the Soul” by *Aristotle*, introduction, translation and notes by *Tomás Calvo Martínez*, Madrid, Gredos Publishing House, 2008, p. 162.

- [4] Pythagoreanism has come to be considered a final stage of Orphism with evidence of archaic Dionysian cults.
- [5] *Apollo*, god of the sun, according to some traditions, begot *Orpheus* with *Urania*; *Dionysus*—devoured by the Titans would be born again—was the god of mystical delirium, he descended into the Hells to search for his mother *Semele*. The mythical life of *Orpheus* is testimony to this duality: he reformed the seven-stringed lyre that *Apollo* obtained from *Hermes*, went down to the Hells to find his beloved *Eurydice*, and rose from the dead as *Dionysus*. *Plutarch*, in researching the communicating vessels between Egypt and Greece, presented *Apollo* as the son of *Isis* and *Osiris*, and *Dionysus* associated with *Osiris*, in “*Isis and Osiris*” by *Plutarch*, introductory note and translation by *Francesc Gutiérrez*, Palma de Mallorca, José J. de Olañeta (ed.), 2007, pp. 28, 29, 43, 49-51, 70.
- [6] “Life of Apollonius of Tyana” by *Philostratus*, translation, introduction and notes by *Alberto Bernabé Pajares*, Madrid, Gredos Publishing House, 1992, p. 237.
- [7] *Pythagoras*, according to *Diogenes Laertius*, affirmed that “after two hundred and seven years he had returned men from hell,” in “Lives of the Most Illustrious Greek Philosophers” (II), ed. cit., pp. 105, 112.

Chapter Two

- [1] “Pythagorean Life,” ed. cit., pp. 105–106.
- [2] “Golden Verses of *Pythagoras*,” Spanish version by *Esteve Serra*, Palma de Mallorca, José J. de Olañeta (ed.), 2004, p. 20. The Tetractys is composed of the numbers $1 + 2 + 3 + 4$ whose resulting sum, 10, is equivalent to the quaternary number.
- [3] “Studies on Pythagorean Literature” by *Armand Delatte*, Genève, Slatkine Reprints, 1999, p. 150, and “*Isis and Osiris*,” ed. cit., p. 26. *Macrobius* also gave *Apollo* a primordial position as a god who “presides over the Muses,” in “*Saturnalia*” by *Macrobius*, introduction, translation and notes by *Fernando Navarro Antolín*, Madrid, Gredos Publishing House, 2010. See Book I, p. 232.
- [4] “Pythagorean Life,” ed. cit., pp. 71, 110, 114.
- [5] This phrase has a visible reference in the Pythagorean *Philolaus* who said that “without number there would be no way to understand or know anything,” in “The Pre-Socratics,” translation and notes by *Juan David García Bacca*, Mexico,

Economic Culture Fund, 1984, p. 299. For “Epinomis or the Philosopher,” a text attributed to *Plato*, see “Complete Works” by *Plato*, introduction by *José Antonio Miguez*, Madrid, Aguilar Publishing House, 1990, p. 1529. *Aristotle* defined that “a number is either the numbered or the numerable,” in “Physics” by *Aristotle*, introduction, translation and notes by *Guillermo R. de Echandía*, Madrid, Gredos Publishing House, 2008, p. 287. This question is meditated in the “Metaphysics” from the legacy of *Pythagoras*: “the Pythagoreans affirm that there is only one type of number, the mathematical one, although it does not exist separately, but that sensible entities are composed of it: they construct, in fact, the entire Universe with numbers, although not simple, but they think that the units have magnitude...” *Aristotle*, avoiding quoting *Pythagoras* directly, makes a valuable analytical compendium of the subject that helps to understand the evolution of the Pythagorean theses: “the so-called Pythagoreans, the first of them dedicating themselves to mathematics, advanced it, and nourishing themselves on it, they came to consider that their principles are principles of all things that are.” Number will be erected as the nucleus from which the cognitive logic of Pythagoreanism will start: “they [the Pythagoreans] also seem to think that number is a principle that constitutes not only the matter of things that are, but also their properties and dispositions,” hence what exists is “by imitation of numbers,” in “Metaphysics” by *Aristotle*, introduction, translation and notes by *Tomás Calvo Martínez*, Madrid, Gredos Publishing House, 2008, pp. 89, 90, 95, 522, 523.

- [6] “Life of Pythagoras” by *Porphyry*, introduction, translation and notes by *Miguel Periago Lorente*, Madrid, Gredos Publishing House, 2002, p. 52.
- [7] *Porphyry* declares that “...they called ‘one’ the reason of unity, of identity, of equality, and the cause of the agreement and sympathy of the universe and of the preservation of what is maintained in an immutable identity.” Op. cit., pp. 35, 52.
- [8] “The Pre-Socratics,” ed. cit., pp. 27, 41, 67, 301, 312–314.
- [9] “The Origin of the Tragedy” by *Friedrich Nietzsche*, translated by *Eduardo Ovejero Mauri*, Madrid, Espasa-Calpe, 1964, p. 101. On *Plato*, see “The Republic,” introduction by *Manuel Fernández-Galiano*, Madrid, Publishing Alliance, 2006, pp. 231, 263, 333; and “Complete Works” by *Plato*, ed. cit., pp. 530, 957, 964, 1024, 1221, 1321. In “Epinomis or the Philosopher” he defended that through knowledge man is “converted into a unity of multiplicity that he was.” Op. cit., p. 1540.
- [10] “On the Life and Poetry of Homer” by *Pseudo-Plutarch*, introduction, translation and notes by *Enrique Ángel Ramos Jurado*, Madrid, Gredos Publishing House, 2008, pp. 133–134, and “Life of Pythagoras”, ed. cit., p. 53.

- [11] “The Pre-Socratics,” ed. cit., pp. 68, 244, 326, 362; and “Lives of Eminent Philosophers” (II), ed. cit., p. 128.
- [12] See, e.g., “Poem” by *Parmenides*; “Theaetetus or of Science” and “The Sophist or of Being” by *Plato*.
- [13] “Metaphysics,” ed. cit., p. 90. *Aristotle*, in publishing the “Table of Opposites,” noted that “the elements of number are the Odd and Even, the former limited and the latter unlimited, and that the One is composed of both (in fact, it is odd and even), and that Number is derived from the One, and that numbers, as has been said, constitute the entire firmament.” He will later refer to the “Table of Opposites” under the title of “Division of Opposites,” specifying that “to the One belong the Same, the Similar, and the Equal, while the Diverse, the Dissimilar, and the Unequal belong to the Plurality.” Op. cit., p. 402. The judgments of the Pythagorean *Philolaus* animate *Aristotle’s* evaluations of number: “Number has two eidetic species of its own: odd and even, and a third mixture of both: the odd-even,” in “The Pre-Socratics,” ed. cit., p. 299. On the Pythagorean dual, see “Lives of the Most Illustrious Greek Philosophers” (II), ed. cit., p. 107; on the odd and even, see “Epinomis or the Philosopher” in *Plato’s* “Complete Works,” ed. cit., p. 1539; “Life of Pythagoras,” ed. cit., p. 46; “Pythagorean Life,” ed. cit., p. 111; “Isis and Osiris,” ed. cit., p. 41. This book by *Plutarch* introduces us to the tradition of identifying Good and Evil with different attributes. Op. cit., p. 64. On the masculine and feminine in Pythagoreanism, see “Life of Apollonius of Tyana”, ed. cit., p. 207; and “Against the Professors,” ed. cit., p. 201.
- [14] In the same way, “he advised staying worried on two occasions: at the time of going to sleep and when waking up from sleep. For in each of them it was necessary to examine the facts already accomplished and the future, taking for oneself a balance of the first ones and elaborating a forecast of the second ones. Indeed, before the dream each one had to sing these verses: ‘Do not welcome sleep in your delicate eyes / until you make, three times, a tour of your actions of the day: / in what have I committed a crime?, what act have I done?, what obligation have I not fulfilled?’ And before getting up, the following: ‘In the first place, when you wake up from a sweet sleep, / examine very well the acts you are going to perform in the day’,” in “Life of Pythagoras,” ed. cit., pp. 46–47, 53. The fragments cited by *Porphyry* belong to the “Golden Verses.” See “Golden Verses of Pythagoras,” ed. cit., pp. 19–20.
- [15] The disciples of *Pythagoras* were divided into *mathematicians* and *acousmatics*: “...The ‘mathematicians’ learned argumentation in a high tone and developed in a thorough way with all rigor; the ‘acousmatics’ received as lessons only the elementary principles of their writings without too rigorous exposition,” in “Life of Pythagoras,” ed. cit., p. 45 and “Pythagorean Life,” ed. cit., pp. 70–71.

- [16] This same image is found in “Gorgias or of Rhetoric”: “...they say that it is not decorous to leave even stories halfway, but that we must put a head on them so that they do not go around without it,” in *Plato’s “Complete Works,”* ed. cit., pp. 398, 971, 1362. Order is also a virtue in “Hippias Major or of the Beautiful.” Op. cit., p. 120.
- [17] See “Sequence 6. Structuring the facts,” in “The Lost Book of Aristotle (Study of *Poetics*)” by *Iván González Cruz*, Valencia, Polytechnic University of Valencia Press, 2009, pp. 53–62. In the “Poetics,” *Aristotle* had established that “tragedy is the imitation of a complete and whole action, of a certain magnitude; for a thing can be whole and have no magnitude. That which has a beginning, middle and end is entire,” in “Poetics” by *Aristotle*, Introduction, translation and notes by *Valentín García Yebra*, Madrid, Gredos Publishing House, 1974, p. 152.
- [18] “On the Heavens” by *Aristotle*, introduction, translation and notes by *Miguel Candel*, Madrid, Gredos Publishing House, 1996, p. 42.
- [19] “Against the Professors,” ed. cit., p. 190.
- [20] See “Life of Pythagoras,” ed. cit., p. 54; and “Against the Professors,” ed. cit., p. 190. *Philolaus* exhorted: “We must judge of the works and of the essence of the number by the power that is found in the number ten; for ten is great, well finished, universal agent, principle of life for the divine, the celestial and the human,” in “The Pre-Socratics,” ed. cit., p. 301. *Aristotle* wrote that “on the ground that the number ten seems to be perfect and to embrace the whole nature of numbers, they also affirm that there are ten bodies that move in the firmament,” in “Metaphysics,” ed. cit., p. 90.
- [21] The point was equivalent to 1, the line to 2, the triangle and the plane to 3, the pyramid, the tetrahedron and the volume to 4.
- [22] “Problems” by *Aristotle*, introduction, translation and notes by *Ester Sánchez Millán*, Madrid, Gredos Publishing House, 2004, pp. 226–227. The Egyptians, like the ancient Greeks, employed the decimal numbering system. In *Philostratus* one can read a criticism of an absolutist, closed conception of numerology, in “Life of Apollonius of Tyana”, ed. cit., pp. 201–202.
- [23] In their oaths, the Pythagoreans made use of the quaternary number in which they recognised the living image of their master *Pythagoras*, in “Life of Pythagoras,” ed. cit., p. 36; “Pythagorean Life,” ed. cit., pp. 108, 115; “Isis and Osiris,” ed. cit., p. 91; and “Against the Professors,” ed. cit., pp. 189–190.
- [24] “Against the Professors,” ed. cit., pp. 190–191. *Aristides Quintilianus* had pointed out that “the ancients considered unity as the principle of the consonance of the Whole and its agent cause, for everything comes into being by remaining united in one by means of harmony. They assigned the dyad to matter, as it was the first

- to express opposition. They called the triad ‘totality’, having been completed by opposition and mediation. They called the tetrad ‘solid’...,” in “On Music” by *Aristides Quintilianus*, introduction, translation and notes by *Luis Colomer* and *Begoña Gil*, Madrid, Gredos Publishing House, 1996, see Book III, p. 182.
- [25] “Lives of the Most Illustrious Greek Philosophers” (II), ed. cit., p. 107.
- [26] The one was the intellect because they “called the soul intellect”; four or nine justice because being four “the first square number, it is divided into equal parts and is equal (since it is twice two),” in the case of nine “because it is the first square number that is generated from an odd number—three—multiplied by itself”; the opportunity is seven “for natural entities seem to have periods of fullness, in their generation and realisation, according to cycles of seven, as is the case with man. The latter, in fact, is begotten in seven months and his teeth grow in the same months, reaches adolescence around the second period of seven years and begins to have a beard in the third,” in “Fragments,” ed. cit., pp. 449–452. *Aristotle* commented: “since in them [things] numbers come first, and they thought they saw in them—more, of course, than in fire, earth and water—multiple similarities with the things that are and those that are generated, for example, that this property of numbers is Justice, and another is Soul and Understanding, and such another the Opportunity,” in “Metaphysics,” ed. cit., p. 89. See also, on the meaning of number in *Pythagoras*, “On the Life and Poetry of Homer,” ed. cit., pp. 133–138.
- [27] “The Republic,” ed. cit., pp. 418–440; and “Pythagorean Life,” ed. cit., p. 112.
- [28] *Boethius*, with a marked Pythagorean influence, used the *triad* to establish three genres of music: *Mundane* (that which takes place in the universe), *human* (that which influences our spirit and reason) and *instrumental* (produced by musical instruments). See in *Mundane Music* its relationship with the four elements and the seasons, in “Fundamentals of Music” by *Boethius*, introduction, translation and notes by *Jesús Luque*, *Francisco Fuentes*, *Carlos López*, *Pedro R. Díaz* and *Mariano Madrid*, Madrid, Gredos Publishing House, 2009, pp. 61, 76–77, 80–81, 83, 117. See Book II for other allusions applied to the *quadrivium*, pp. 158–160.
- [29] “Studies on Pythagorean Literature,” ed. cit., p. 195.
- [30] *Diogenes Laertius* explained that the ages were “commensurate with the seasons of the year, namely: childhood with spring, adolescence with summer, youth with autumn, and senescence with winter,” in “Lives of the Most Illustrious Greek Philosophers” (II), ed. cit., p. 103. See also “Studies on Pythagorean Literature,” ed. cit., p. 255.
- [31] *Porphyry* distinguishes three types of alphabets in the Egyptian language: the epistolographic, hieroglyphic and symbolic, in “Life of Pythagoras,” ed. cit., p. 31. See, in this regard, “Pythagorean Life,” ed. cit., pp. 83–84; and “Protrecticus”

by *Iamblichus*, introduction, translation and notes by *Miguel Periago Lorente*, Madrid, Gredos Publishing House, 2008, p. 283.

- [32] Science that studies matter as a source of sound and its ability to shape and transform it.
- [33] Her descendants were recorded a few pages later: “With Cadmus, Harmony, daughter of the golden Aphrodite, she had Ino, Semele, Agave with beautiful cheeks, Autonoe, whom Aristaeus married with thick hair, and Polydorus in the well-crowned Thebes,” in “Theogony” by *Hesiod*, presentation of *Albin Lesky*, translation and notes by *Aurelio Pérez Jiménez*, Madrid, Gredos Publishing House, 2010, pp. 87, 89.
- [34] “Lives of the Most Illustrious Greek Philosophers” (II), ed. cit., p. 109; “Life of Pythagoras,” ed. cit., pp. 41–42; and “Pythagorean Life,” ed. cit., p. 39.
- [35] “Fragments,” ed. cit., pp. 456–457. Aetius, II 7,7 reveals that *Philolaus* was the author of this theory, which is linked to the Tetractys: “*Philolaus* places fire around the center of the universe and calls it ‘home of the world’, the ‘house of Zeus’, ‘mother of the gods’, ‘altar, bond and measure of nature’. There is also another fire that envelops the universe on its periphery. However, he says that the center is by nature primary and that around it dance ten divine bodies...,” in “The Pre-Socratic Philosophers,” ed. cit., p. 446.
- [36] *Empedocles* had endorsed the mythical-literary orb of the harmonic: “The earth received kindly, in its wide furnaces, the two eighths of resplendent Nestis and four of Hephaestus; and white bones emerged wonderfully assembled by the bonds of Harmony”. Even *Philolaus* will grant him, on the stage of existence, a leading role: “...Beings similar and of the same kind do not need harmony, but harmony must have brought together the dissimilar, of different kinds and of unequal order, if they are to be maintained in an ordered universe,” in “On the Cave of the Nymphs in the Odyssey” by *Porphyry*, introduction, translation and notes by *Enrique Ángel Ramos Jurado*, Madrid, Gredos Publishing House, 2008, pp. 226, 241. See “The Pre-Socratics,” ed. cit., pp. 80, 300; and “The Pre-Socratic Philosophers,” ed. cit., pp. 258, 396, 428.
- [37] See Canto XII, in “The Odyssey” by *Homer*, edition by *José Luis Calvo*, Madrid, Cátedra Editions, 1991, p. 226.
- [38] “The Republic,” ed. cit., pp. 597–598; and “Complete Works” by *Plato*, ed. cit., p. 1137. *Aristotle* was critical of this theory: “There are those, in fact, who say that the soul is a harmony, since—they add—harmony is a mixture and combination of opposites, and the body results from the combination of opposites,” in “On the Soul,” ed. cit., p. 152. *Boethius* was among those who opposed *Aristotle’s* view: “How can it be, indeed, that so swift a machinery of heaven moves in a quiet and silent race? Although this sound does not reach our ears, which necessarily

happens for multiple reasons; however, such a very rapid movement of such large bodies cannot not at all arouse any sounds,” in “Fundamentals of Music,” ed. cit., pp. 78–79.

- [39] The unfolding of this extensive speech shows us that *Cicero*, unlike *Aristotle*, supported the harmony of the spheres: “Cultured men, by imitating all this with their stringed instruments and with their songs, managed to open the door to return to this place, as well as those others who with their portentous intelligences cultivated during their human life the divine studies. When human ears were filled with this sound, they became deafening... the sound of which we are speaking, the one coming from the very rapid revolution of the whole Universe, is so great that human ears cannot perceive it, in the same way that you cannot gaze fixedly at the sun from the front, because the intensity of its rays exceeds your capacity of perception,” in “The Republic and The Laws” by *Marco Tulio Cicero*, edited by *Juan María Núñez González*, Madrid, Akal Editions, 1989, pp. 144, 180, 181.
- [40] *Macrobius* affirmed that “*Pythagoras* was the first of all the Greeks to conceive this idea” proposing “the need for a musical harmony, which, being innate in the soul from the beginning, the soul itself intermingled with the movement caused by itself” hence it was “normal, then, that music captivates every living being, since the celestial soul that animates the universe originated from music” in “Commentary on *Cicero’s* Dream of *Scipio*” by *Macrobius*, introduction, translation and notes by *Fernando Navarro Antolín*, Madrid, Gredos Publishing House, 2006, see Book II, pp. 324, 336, 342. *Quintilianus*, in addressing the relation of the voice, the species of number in music and oratory, had agreed that “as far as the philosophers are concerned, there is no doubt that they cultivated it, *Pythagoras* and his disciples having published an opinion, doubtless from time immemorial; namely, that the world had been made to the sound of music, which later imitated the lyre. And not content with that concord of dissimilar things, which they call *harmony*, they came to put consonance even in the movements of heaven,” in “Oratorical Institutions” by *M. Fabius Quintilian*, direct translation from Latin by the Fathers of the Pious schools *Ignacio Rodríguez* and *Pedro Sandier*, Madrid, Hernando Bookstore and Publishing House, volume I, 1942. See Book I “On Music and its Praises,” pp. 67–68.
- [41] “Complete Works” by *Plato*, ed. cit., pp. 1145–1146. Just as in “Phaedo or of the Soul,” *Plato* analyses the belief that “...harmony is something composite, and the soul a harmony constituted by the elements that are in tension in the body...,” in “The Republic” he discusses the application of the discoveries of Pythagorean harmony in society and its constitution. Op. cit., p. 635; and “The Republic,” ed. cit., pp. 461–465.
- [42] “Tusculan Disputations” by *Cicero*, introduction, translation and notes by *Alberto Medina González*, Madrid, Gredos Publishing House, 2005, pp. 122–123.

- [43] “On the Life and Poetry of Homer,” ed. cit., p. 137.
- [44] “Harmonics” by *Claudius Ptolemy*, translation and notes *Demetrio Santos Santos*, Málaga, edition of *Miguel Gómez Peña*, 1999. See Book III, Chapter 4, p. 151. See also “Against the Professors,” ed. cit., p. 191.
- [45] “Protrepticus,” ed. cit., p. 215; “Fundamentals of Music,” ed. cit., p. 75. *Aristides Quintilianus* will be emphatic: “Truly, there is no action among men that takes place without music,” in “On Music,” ed. cit., p. 119.
- [46] “The World as Will and Representation” (I) by *Arthur Schopenhauer*, translation, introduction and notes by *Pilar López de Santa María*, Madrid, Trotta Publishing House, 2004, p. 319. On *Friedrich Nietzsche* see: “The Origin of the Tragedy,” ed. cit., pp. 127, 142.
- [47] “The Republic,” ed. cit., p. 436. We find the same discernment in “On Music” by *Pseudo Plutarch*: “In addition, of the sensations that are produced in our body through harmony, some, sight and hearing, are heavenly and divine, because with the help of the divinity they give birth to sensation in men and show harmony with sound and light; the others, which accompany them, as sensations, are constituted according to harmony. Nor can the latter fulfill their entire task without harmony, and although they are inferior to the former, they are not different from them, since the former, appearing in our bodies with the presence of the divinity, logically have a powerful and noble nature,” in “On Music” by *Pseudo Plutarch*, introductions, translations and notes by *José García López* and *Alicia Morales Ortiz*, Madrid, Gredos Publishing House, 2004, pp. 96–97.
- [48] “Harmonics,” ed. cit., p. 16. Harmonic designates “the faculty that weighs by means of sense and reason the differences between high and low sounds,” in “Fundamentals of Music,” ed. cit., p. 345.
- [49] “On Abstinence” by *Porphyry*, translation, introduction and notes by *Miguel Periago Lorente*, Madrid, Gredos Publishing House, 1984, p. 70.
- [50] “Fundamentals of Music,” ed. cit., pp. 95–96. *Boethius*, in the field of the Pythagoreans, refers that “meaning, in fact, gives in a certain way a kind of seeds of knowledge, reason, on the other hand, brings them to completion.” Op. cit., p. 349.
- [51] See “Epinomis or the Philosopher,” in “Complete Works” by *Plato*, ed. cit., pp. 1530, 1540.
- [52] “Metaphysics,” ed. cit., p. 89. On the motion of the heavenly bodies, see Book XII, p. 489.
- [53] “Fragments,” ed. cit., p. 452. This reference reappears in the work of *Sextus Empiricus*, “Against the Professors,” ed. cit., pp. 191–192. On the experiments that led *Pythagoras* to the discovery of the octave, the fifth, and the fourth, see

- “Pythagorean Life,” ed. cit., pp. 90–92; and “Fundamentals of Music,” ed. cit., pp. 97–98.
- [54] “Fundamentals of Music,” ed. cit., p. 73. The growing interest in this subject, and its influence on art and science, can be seen in the volume “The Harmony of the Spheres” (1992) by *Joscelyn Godwin*.
- [55] “The Zohar” uses in many passages a terminology characteristic of the musical: “...For when The Holy One, Blessed be He, examines to judge, at first he examines the degree of the High to see if it has been damaged, and then the degree of the low,” in “The Zohar,” translation Amós Project, Barcelona, Obelisk Editions, volume III, 2007, p. 110. Obviously “the High” and “the low” have different meanings here, but it is inevitable not to think metaphorically of the harmonic referent. *Boethius*, in treating of sound in *mundane music*, indicates: “...Indeed, some slide higher; others, lower, and all turn with such equal impulse, that through their disparate inequalities a regulated order of the routes is traced,” in “Fundamentals of Music,” ed. cit., p. 79. See, for example, in addition to Book I, the epigraph “What voices are apt for ‘harmony’” in Book V, op. cit., p. 352.
- [56] Kabbalistic mysticism states: “...The Holy One, Blessed be He, and His Name are One, as it is written, ‘The Eternal shall be One, and His Name One’ (Zechariah 14:9). That is, The Name and He are One,” in “The Zohar,” translation Amós Project, Barcelona, Obelisk Editions, volume IV, 2008, p. 253.
- [57] These ten emanations “latent in the *En-sof* (Infinite),” according to the *Sefer Yetzirah*, are: the 1, Crown; the 2, Wisdom; the 3, Intelligence; the 4, Love (also Grace, or Clemency); the 5, Justice (also Judgment, or Rigor); the 6, Beauty (or Mercy); the 7, Triumph (or Victory); the 8, Splendor (or Glory); the 9, Foundation (or Fundamentals); and the 10, Kingdom (or Royalty).
- [58] The masculine and feminine are visible metaphors for the unity of opposites in the Kabbalah: “...‘who walked—*mithalej*—in the garden toward nightfall’ (Genesis 3:8), which alludes to the fact that the lower masculine aspect walks and dresses in the Maljut, the lower feminine aspect, called the Great Eden, and also associated in the Tree of the Knowledge of Good and Evil, and this is the Tree from which the First Man ate,” in “The Zohar,” ed. cit., volume III, p. 114.
- [59] “The Zohar,” ed. cit., volume IV, p. 252.
- [60] Other Kabbalistic names for the *Celestial Man* are the “primeval man” or “archetypal man.”
- [61] *Sefar* is, in addition to number, “the basis of harmony and the higher order of things.”
- [62] See in this book chapter IV “Return to the Origin: the Orphic Structure.”

[63] See in this book chapter V “End of the Beginning.” This point of view that we establish is reaffirmed if we add the number of the “32 paths”: $3 + 2 = 5$.

Chapter Three

[1] “Physics,” ed. cit., p. 169 and “Metaphysics,” ed. cit., p. 514.

[2] *Proclus* in “A Commentary on the First Book of *Euclid*’s ‘Elements’” stated: “A sign that mathematical science is desirable in itself for those who cultivate it, as *Aristotle* also says somewhere, is that, although no reward is assigned to its scholars, in a short time they achieve a great advance in the science of mathematics. This is also proved by the fact that all those who have experienced, even a little, its usefulness linger gladly on them and wish to devote their attention to it by abandoning their other tasks. Thus those who despise the knowledge of mathematics are left without tasting the pleasures that are in them,” in “Fragments,” ed. cit., p. 154.

[3] These concepts were also part of music. *Aristoxenus* had explained: “It is necessary, at this point, not to be mistaken by not knowing in what sense the terms ‘rational’ and ‘irrational’ are used in rhythmic theory. In the same way that when dealing with the intervallic elements it was considered, on the one hand, ‘melodically rational’ that which is, first of all, melodic, and possesses an understandable extension—be it as the consonances and the tone, or as the intervals commensurable with these,—and, on the other hand, that which is ‘only rational’ because it is expressed in numerical reasons but is alien to the melody, also in rhythm one can expect the rational and the irrational to be so,” in “Rhythmic” by *Aristoxenus*, introductions, translations and notes *Josefa Urrea Méndez*, *Francisco Javier Pérez Cartagena* and *Pedro Redondo Reyes*, Madrid, Gredos Publishing House, 2009, pp. 349–350.

[4] “The Origin of the Tragedy,” ed. cit., p. 89.

[5] “Protrepticus,” ed. cit., p. 209.

[6] *Aristotle* had deliberated how “in some way the universal is present in the particular” and why “even if the parts exist, nothing prevents the whole from existing,” in “Physics,” ed. cit., p. 405; and in “Logical Treatises” (I) by *Aristotle*, introduction, translation and notes by *Miguel Candel Sanmartín*, Madrid, Gredos Publishing House, 2010, p. 257. See the unity he establishes between microcosm and macrocosm, in “Physics,” ed. cit., p. 431.

[7] “The Pre-Socratics,” ed. cit., pp. 333, 354.

- [8] “To know oneself” was a phrase attributed to *Chilon of Sparta*, one of the Seven Wise Men.
- [9] See in this book Chapter II “Tradition and Inspiration: The Tetractys.”
- [10] “Actor’s Dictionary (Konstantin S. Stanislavski System)” by *Iván González Cruz*, Valencia, Polytechnic University of Valencia Press, volume I, 2009, p. 969. See the concept of “Scenic Action,” p. 19. See also on this subject “Self-control,” op. cit., pp. 491–493; and “Tempo–rhythm–states of being,” in “Actor’s Dictionary (Konstantin S. Stanislavski System)” by *Iván González Cruz*, Valencia, Polytechnic University of Valencia Press, volume III, 2010, p. 1751.
- [11] “Lives of the Most Illustrious Greek Philosophers” (II), ed. cit., p. 110.
- [12] “Actor’s Dictionary (Konstantin S. Stanislavski System)” by *Iván González Cruz*, Valencia, Polytechnic University of Valencia Press, volume II, 2009, p. 969. See the “Performance-bad-good” concept, p. 969. See on this topic “Creative Circle” in “Actor’s Dictionary (Konstantin S. Stanislavski System)” (I), ed. cit., pp. 303–307; and “Villain-Goodness” in “Actor’s Dictionary (Konstantin S. Stanislavski System)” (III), ed. cit., p. 1862. This aspect was studied in detail by Stanislavski during his career as a director and theorist of the scene: “The way of interpreting human psychology is in the cases mentioned unilateral and naive. Love is interpreted only with love, as jealousy only with jealousy, hatred with hatred, sorrows with sorrows, and joys only with joys. There are no contrasts or reciprocal relations of nuances; everything is flat and dull, monotonous; everything is painted with a colour; black is presented as black on black and white as white on white. The villains are only black and the virtuous are only white,” in “Actor’s Dictionary (Konstantin S. Stanislavski System)” (II), ed. cit. See the concept “Passion-Unilateral Psychology,” pp. 1338–1339.
- [13] “Pythagorean Life,” ed. cit., p. 97.
- [14] “Complete Works” by *Plato*, ed. cit. See “Timaeus or of Nature,” p. 1135. From the relation of the “Same” and the “Other” *Plato* derives a “third substance.” Here is the Pythagorean One and the diversity that emanates from it. Taken to the artistic world, this *third substance* that originates is committed to creation, the work of art. Op. cit., pp. 1137–1138.
- [15] “Pythagorean Life,” ed. cit., p. 114 and “Protrepicus,” ed. cit., p. 207.
- [16] See in this book chapter II “Tradition and Inspiration: The Tetractys.”
- [17] “The Republic,” ed. cit., p. 333. See in “Gorgias or of Rhetoric” order better than disorder, in “Complete Works” by *Plato*, ed. cit., p. 399. *Plato* specifies in the structure the requirement of proportion and measure: “deprived of measure and proportion, every mixture, whatever it may be and in whatever manner it has been composed, destroys its components” hence why, according to him, “measure and

proportion everywhere realise beauty and virtue,” in op. cit., see “Philebus or of Pleasure,” pp. 1261–1262. Ugliness is “the absence of measure,” in “The Sophist or of Being,” op. cit., p. 1010. And in “Timaeus or of Nature,” beauty and the good are associated with proportion: “everything that is good is beautiful, and beauty does not exist without regular relations or proportions,” op. cit., p. 1175.

- [18] “Poetics,” ed. cit., p. 157. *Aristotle* had said in another of his works: “When the extremes are inverted, the middle will necessarily also be inverted with respect to both,” in “Logical Treatises” (II) by *Aristotle*, introductions, translations and notes by *Miguel Candel Sanmartín*, Madrid, Gredos Publishing House, 2008, p. 285. See the study of this subject in the chapter “Structuring of the Actions,” in “The Lost Book of *Aristotle* (Study of *Poetics*),” ed. cit., pp. 53–62. On perfection and the number three, see “On the Heavens,” ed. cit., p. 45; and “Isis and Osiris,” ed. cit., p. 71.
- [19] “Fragments,” ed. cit., p. 447. See *Alexander of Aphrodisias*, op. cit., p. 454; and “Metaphysics,” ed. cit., p. 90.
- [20] *Poetics* in its original meaning of “process of doing things.”
- [21] “Physics,” ed. cit., pp. 188–189.
- [22] “Fragments,” ed. cit., p. 452.
- [23] See in this book chapter IV “Return to the Origin: the Orphic Structure.”
- [24] “Structural Semantics” by *A. J. Greimas*, Spanish version by *Alfredo de la Fuente*, Madrid, Gredos Publishing House, 1987, p. 276.
- [25] *Greimas*, in the section “Reflections on Actantial Models,” will include, in addition to the Subject–Object, the Sender–Receiver, and the Helper–Opponent, in op. cit., pp. 270–275. For a definition of these concepts, see “Semiotics. Reasoned Dictionary of the Theory of Language” by *A. J. Greimas* and *J. Courtés*, Spanish version by *Enrique Ballón Aguirre* and *Hermis Campodónico Carrión*, Madrid, Gredos Publishing House, volume I, 1990, pp. 23, 24, 30, 292.

Chapter Four

- [1] “The Pre-Socratic Philosophers,” ed. cit., p. 281; and “The Pre-Socratics,” ed. cit., p. 247. For the study of the oracular style in the Pythagorean expression, see its symbols, in “Lives of the Most Illustrious Greek Philosophers” (II), ed. cit., pp. 105–110; “Life of Pythagoras,” ed. cit., pp. 45–54; and “Protrecticus,” ed. cit., pp. 282–301.

- [2] “Hitchcock by Hitchcock”, edition by *Sidney Gottlieb*, translation by *Marta Heras*, Madrid, Plot Editions, 2000. See “Comparison of Production Methods,” p. 204, and “On Film Music,” p. 240. Regarding the film “The Rope,” *Alfred Hitchcock* insisted that technique is “nothing more than a means to an end. The public must never realize this. If the audience realises that the camera is working miracles, our objective would have been lost.” Op. cit., see “My Most Exciting Film,” pp. 273, 280.
- [3] *Aristotle* investigates this fact in his “Metaphysics”: “...those who affirm the Ideas say, certainly, that the Ideas are numbers...”, in “Metaphysics,” ed. cit., p. 490. See also the reduction of ideas to numbers in Platonic theory by the influence of Pythagoreanism, in *Alexander of Aphrodisias*: “And since the Forms and the Ideas,—the existence of which he tried to prove in various ways,—are prior to the things which, according to him [*Plato*], exist in correspondence with them and derive their being from them, he said that the Forms were numbers. For if that which is unique in its form is prior to the things that exist in correspondence with it, and nothing is prior to number, the Forms are numbers,” in “Fragments,” ed. cit., p. 381.
- [4]] That is why “the world of individual things supplies the intuitive, the special and individual, the particular case... to the universality of concepts,” in “The World as Will and Representation” (I), ed. cit., pp. 318–319.
- [5] “Complete Works” by *Plato*, ed. cit. See “Philebus or of Pleasure,” p. 1251. *Aristotle* observed that “all things correspond to each other and have analogical unity; indeed, the analogous occurs in all the categories of what is,” in “Metaphysics,” ed. cit., p. 579.
- [6] “On the Soul,” ed. cit., p. 177.
- [7] *Aristotle* explains that the “one” in Greek antiquity was not considered a number, but a “measure” and a “principle,” in “Metaphysics,” ed. cit., p. 556. See also the “Commentary on the ‘Metaphysics’ of Aristotle” by *Alexander of Aphrodisias*, in “Fragments,” ed. cit., p. 384.
- [8] It is an expression of the unity between what exists, the need in the knowledge of the content-form duality, and the importance of a structure to signify what is.
- [9] “On the Life and Poetry of Homer,” ed. cit., p. 136.
- [10] With respect to the quaternary as number 36, see “Isis and Osiris,” ed. cit., p. 91; and “Studies on Pythagorean Literature,” ed. cit., p. 257.
- [11] See in this book—in chapter III “The Tetractys in Art and Literature,” epigraph The Two,—other non-linear examples.

- [12] Defined by the ABC triad, but without ignoring the plurality of the dual-complementary that it contains (AB-BC-AC...) together with the interrelation with the other ternary parts of the *orphic structure*.
- [13] “On Indivisible Lines” by *Aristotle*, introductions, translation and notes by *Paloma Ortíz García*, Madrid, Gredos Publishing House, 2000, p. 38.
- [14] “Pythagorean Life,” ed. cit., p. 165.
- [15] “Isis and Osiris,” ed. cit., pp. 50–51.
- [16] See in this book chapter III “The Tetractys in Art and Literature.”
- [17] *Iamblichus* had detailed: “Well, this is the information we have received about the difference between each of the teachings and between each of the disciples of *Pythagoras*. Indeed, it is worth clarifying that it is a question of those who hear *Pythagoras* inside and outside the veil, or those who hear him at the same time as they see him, or those who hear him without seeing him, and those who are defined as ‘inside’ and ‘outside,’” in “Pythagorean Life,” ed. cit., p. 76. *Porphyry* divulged how the disciples of *Pythagoras* were divided into *mathematicians* and *acousmatics*. See footnote 15, p. 72.
- [18] “Logical Treatises” (I), ed. cit., p. 304; and “The World as Will and Representation” (I), ed. cit., p. 320.
- [19] “Complete Works” by *Plato*, ed. cit. See “Philebus or of Pleasure,” p. 1222. See also “Morphology of the Folktale” by *Vladimir Propp*. First Edition Translated by *Laurence Scott* with an Introduction by *Svatava Pirkova-Jakobson*, Austin, University of Texas Press, 1968.
- [20] “Fundamentals of Music,” ed. cit., p. 158. *Iamblichus* in his biography of *Pythagoras* transcribes that “existing things are not unique, nor singular nor simple, but at the moment they are varied and multiform,” in “Pythagorean Life,” ed. cit., p. 113.
- [21] Act I (Beginning) [Setup/Introduction]; Act II (Middle) [Knot/Development]; Act III (End) [Resolution/Ending].

Chapter Five

- [1] “Tragedies” by *Sophocles*, introduction by *José S. Lasso de la Vega*, translation and notes by *Assela Alamillo*, Madrid, Gredos Publishing House, 1998. See “Oedipus at Colonus,” p. 535.

- [2] *Pythagoras* created a series of melodies for the treatment of passions. *Iamblichus* describes that the one who “played the lyre and, in a circle, sat those who could interpret the melody,” was placed in the musical performance in the center in “Pythagorean Life,” ed. cit., pp. 87–88.
- [3] “Life of Pythagoras,” ed. cit., p. 35.
- [4] *Empedocles* assured that “one leaning on what he leans on, / everything will always walk within / what is in the sphere,” in “The Pre-Socratics,” ed. cit., pp. 36, 39, 71, 247, 314. See “The Pre-Socratic Philosophers,” ed. cit., p. 564.
- [5] “Dialogues” by *Plato*, version by *Juan Garriga*, Barcelona, Omega Editions, 2003, p. 59. *Plato* in the “Timaeus or of Nature” gives reasons why the world is constituted “in a spherical and circular form”: “From water earth and stones are born again, in such a way that these bodies, it seems, give birth to each other in a circular way” and later he insists: “The periodic rotation of the Whole or universe, which has enveloped the elements in itself, being circular, always tends to return naturally upon itself,” in “Complete Works” by *Plato*, ed. cit., pp. 1136, 1147, 1153.
- [6] There he notes that “after having many times discovered the other arts and philosophy as far as possible, and having been lost again, these beliefs of his have been preserved until now as relics,” in “Metaphysics,” ed. cit., pp. 494–495. The circular attracts his attention in different works of his: “...It is said that human affairs are a circle, and that there is a circle in all other things that have a natural motion and are subject to generation and destruction. And this is said because all these things are judged by time, and because they have an end and a beginning as if it were a cycle, for time itself is thought to be a circle...,” in “Physics,” ed. cit., pp. 289-290. *Aristotle* returns to this aspect in “Problems”: “it is also affirmed that human things are a circle”, in “Problems,” ed. cit., p. 248. Intelligence will be related to the circular: “...the intellect must necessarily be the circle: the movement of the intellect is, in fact, the intellection...,” in “On the Soul,” ed. cit., p. 150.
- [7] In the “Reproduction of Animals” he justifies: “...what is born is eternal to the extent that it can be eternal. Now in number it is impossible (for the entity of beings is in the particular; if it were so, it would be eternal; in species, on the other hand, it is possible,” in “Reproduction of Animals,” ed. cit., p. 124.
- [8] “Against the Professors,” ed. cit., p. 190.
- [9] The treatises on arithmology had asseverated that “the 1 corresponds to the point, the 2 to the line, the 3 to the surface, the 4 to the solid, the 5 to generation, the 6 to life, the 7 to intelligence, the 8 to love, the 9 to the limit, the 10 to perfection,” in “Studies on Pythagorean Literature,” ed. cit., p. 201.

- [10] *Plato* was of this opinion because “distances are everywhere equal, from the center to the extremes,” in “Complete Works” by *Plato*, ed. cit. See “Timaeus or of Nature,” p. 1136. *Diogenes Laertius* subscribes that “of the solid figures the sphere is the most beautiful; of the flat ones, the circle,” in “Lives of the Most Illustrious Greek Philosophers” (II), ed. cit., p. 110.
- [11] In turn, the 5 was considered the principle of the gods, the origin of the origins, in “Life of Apollonius of Tyana,” ed. cit., p. 207. *Aristides Quintilianus* tells us that the ancients “called the pentad ‘sensation’...,” in “On Music,” ed. cit. See Book III, pp. 182–183.
- [12] “Logical Treatises” (II), ed. cit., p. 344.
- [13] “Someday I’ll make a beautiful love story. Conversations with Federico Fellini,” by *Giovanni Grazzini*, translation by *Beatriz Anastasi de Lonné*, Barcelona, Gedisa Publishing House, 1985, p. 12.
- [14] “Antigones. A Poetics and a Philosophy of Reading” by *George Steiner*, translation by *Alberto L. Bixio*, Barcelona, Gedisa Publishing House, 1991, p. 92.
- [15] Without ignoring in the sense of an open work the subsequent process of interpretation by the public. In this context, see Chapter III “The Tetractys in Art and Literature”; and Chapter IV “Return to the Origin: The Orphic Structure.”
- [16] “Protrepticus,” ed. cit., p. 262.
- [17] “Physics,” ed. cit., p. 469. *Aristotle* distinguishes *circular motion* as that which occurs in a single direction, and “in a circle” that which can be effected in one direction and in reverse.
- [18] “The Pre-Socratics,” ed. cit., p. 277, and “Problems,” ed. cit., p. 248.
- [19] “The Pre-Socratics,” ed. cit., p. 311.
- [20] “Practice of film scriptwriting” by *Jean-Claude Carrière* and *Pascal Bonitzer*, translation by *Antonio López Ruiz*, Barcelona, Paidós Editions, 1998, p. 34.
- [21] We use the term “direction” here to indicate the course of events in the story and the appearance of a new meaning with the turning points in the plot.
- [22] “The Pre-Socratic Philosophers” by *G.S. Kirk* and *J.E. Raven*, Spanish version by *Jesús García Fernández*, Madrid, Gredos Publishing House, 1979, p. 322.
- [23] “The Holy Bible,” Madrid, Paulinas Editions, 1964. See “Ecclesiastes,” p. 778.
- [24] “Fragments,” ed. cit., pp. 299–300.

Index

Alcmaeon, 19, 63
 Alexander of Aphrodisias, 31
 Anaxagoras, 18, 59, 63
 Anaximander, 19
 Antigone, 62
 Apollo, 13, 14, 17, 37, 38, 49, 56
 Ares, 26
 Aristotle, 13, 21, 22, 27, 28, 31, 41, 42, 51, 60
 Aristoxenus, 28

 Bacchus, 14
 Boethius, 25, 28, 30

 Cadmus, 26
 Cicero, Marcus Tullius, 13, 27, 28, 29
 Cytherea, 26

 Demeter, 59
 Democritus, 19, 38
 Diogenes Laertius, 14, 24, 40
 Diogenes of Apollonia, 38, 60
 Dionysus, 13, 14, 17, 37, 56

 Eliezer, 32
 Empedocles, 18, 19
 Epicharmus, 51
 Euclid, 37
 Euripides, 40, 65

 Fellini, Federico, 62
 Frege, Gottlieb, 23

 Gozzi, Carlo, 52
 Greimas, Algirdas Julius, 44

 Hades, 14
 Harmonia, 26
 Heraclitus, 19, 26, 39, 49, 59, 65
 Hermippus, 14
 Hesiod, 24, 26

 Hitchcock, Alfred, 49
 Homer, 13, 27

 Iamblichus, 17, 24, 25, 28, 38, 51
 Icarus, 62

 Kadmon, Adam, 32

 Macrobius, 27
 Muses, 28

 Nicomachus, 17, 25
 Nietzsche, Friedrich, 13, 19, 29, 38

 Oedipus, 59
 Orpheus, 13, 14, 17, 59

 Parmenides, 18, 19, 21, 59
 Philolaus, 17, 18, 26
 Plato, 17, 19, 21, 23, 25, 27, 28, 29, 37, 39, 41, 49, 52, 59
 Plutarch, 17
 Polti, Georges, 52
 Porphyry, 17, 20, 29
 Proclus, 37, 65
 Prometheus, 62
 Propp, Vladimir Yakovlevich, 52, 53
 Pseudo-Plutarch, 19, 28
 Ptolemy, Claudius, 28, 29, 30
 Pyramus, 62
 Pythagoras, 9, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 31, 32, 39, 40, 41, 42, 43, 44, 49, 51, 52, 53, 56, 59, 61, 63, 65

 Quintilianus, Marcus Fabius, 27

 Russell, Bertrand, 50

 Saturn, 62
 Schopenhauer, Arthur, 29, 49, 52

Sextus Empiricus, 13, 22, 28

Simplicius, 26

Socrates, 23, 29

Solomon, 65

Stanislavski, Konstantin Sergeevich,

40

Steiner, George, 62

Theon of Smyrna, 42

Thisbe, 62

Turing, Alan Mathison, 26

Whitehead, Alfred North, 23

Xenophanes, 18

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