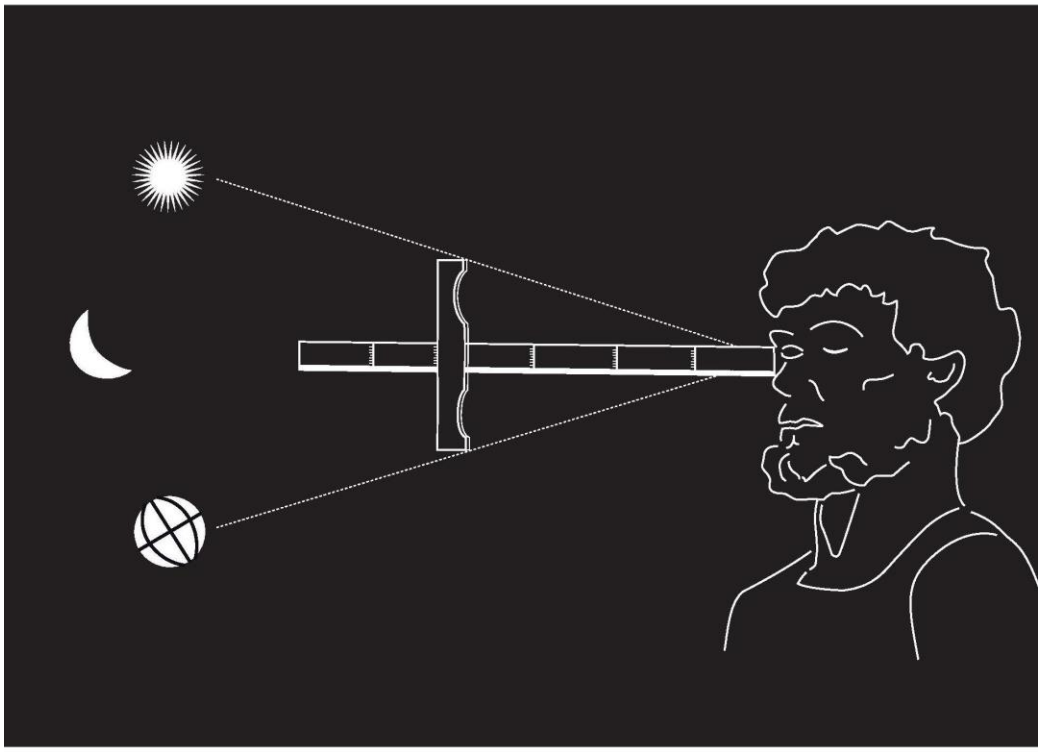
Régis LAURENT

AN INTRODUCTION TO ARISTOTLE'S METAPHYSICS OF TIME

Trad. Trista SELOUS



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Historical research into the mythological and astronomical conceptions that preceded Aristotle's philosophy

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BY

Régis LAURENT

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To Frédéric…

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To seek the truth would be to pursue flying game

Proverb of unknown origin cited in:
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PROLOGUE

This book is the first chapter of my doctoral thesis in philosophy, written between September 2001 and October 2008. I am presenting this part only, as the thesis developed in the other two parts posed problems both to the scholars who were its first readers and to me. When I finished writing it a dichotomy became apparent, the origins and potential effects of which proved very hard to identify. I also remain unconvinced of its heuristic value and faithfulness to Aristotle's thought. This thesis proposes that it is possible to distinguish the *existence* of time from its *being* in qualitative terms, but not to separate them quantitatively. So I have subjected my argument to further examination, involving a review of all the sources, to verify the detail of the reasoning behind this theoretical position, point by point.

The present work refers only to the Greek sources. The mediaeval sources will be considered in the second part, alongside textual analyses of the Aristotelian corpus. This first book presents what seems to constitute the *conditioning* affecting Aristotle's resolution of the question of time. The so-called *historico-sociological* method we shall develop is borrowed from the French philosopher Pierre-Maxime Schuhl[3] and our exegete for Aristotle's texts will be another 1930s scholar, Werner Jaeger. I have returned to this method via my training in linguistics.[4] The work of Ferdinand de Saussure is

3 This methodology is set out in his doctoral thesis, published as *Essai sur la formation de la pensée grecque. Introduction historique à une étude de la philosophie de Platon*. PUF, 1934, pp. 7-12.

4 The first version of Werner Jaeger's book, which is a continuation of his doctoral thesis of 1912, was written in German in 1923 with the title *Aristoteles. Grundlegung einer Geschichte seiner Entwicklung*. The English version was published in 1948. The French translation I used is by Olivier Sedeyn. It is based on both these texts and was published by Éditions de L'Eclat in 1997.

profoundly incompatible with the *historico-comparative* method that was adopted by Jaeger and is still used in the universities. Here, therefore, we shall adopt a *denotative* approach influenced by sociology, rather than a connotative approach, before reversing this relationship in metaphysics. So we shall have little to say here about Aristotle and still less about metaphysics. However, the selection of Greek sources should indicate the theoretical positions that will later be rejected. If *substance* can be defined by all that it is not, Aristotle's position on time can also be established by all that his model rejects in the course of its conceptualisation.

We embarked on the present work with only a summary knowledge of Greek time before Aristotle's period and it seemed impossible to discuss this notion in the Aristotelian corpus without having first undertaken some research. It would have been impossible to undertake such a reconstruction without the remarkable work of Catherine Darbo-Peschanski of the CNRS. Her book *Construction du temps dans le monde grec ancien*[5] provided the foundations upon which, stone by stone, we have sought to construct a historical landscape portraying the notion of time before Aristotle. Hence the subtitle of the present book: *Historical research into the mythological and astronomical conceptions that preceded Aristotle's philosophy*. Next, we should note that the information gathered has not been organised along historical lines. The aim here was not to write a historical study. Indeed such an undertaking would have required an initial concept of time, when the western concept of time used by historians stems largely from Aristotle's model. So we should have found ourselves caught in a circular argument in which the time we were seeking was inscribed in a time that was already implicitly defined. The elements collected have thus been tested against concepts that are unveiled without historical presuppositions. Our successive investigations will examine the distinction between linear and circular time, question the notion of interval and consider that of *télos*, to ensure the terrain is properly prepared for the metaphysical discussions that will follow.

The references to non-Greek philosophies in this study are intended as aids to understanding. This is the sole justification for our compendious discussion of Friedrich Nietzsche, Georg Wilhelm

5 Catherine Darbo-Peschanski (ed.), *Constructions du temps dans le monde grec ancien*, CNRS, 2000.

Friedrich Hegel, Martin Heidegger and Giambattista Vico. The fact that some people are already familiar with the thought of these philosophers means it can be used as a springboard for a more rapid understanding of the theses advanced here. Furthermore, a demonstration without conviction is almost certainly of use only to its author.[6] As for the relationship between Aristotle's thought and that of Plato, it is to be hoped that the present work will reveal as clearly as possible the distinction between *ideology* and true conceptual thought. Let us be clear: there is no support in this quarter for the widely accepted thesis of an obvious kinship between the two systems of thought. The link will be broken by a return to Pythagoreanism. The suggestion that Plato was a great representative of Pythagoreanism is all too readily made when, as we shall see, Aristotle seems to have had far greater mastery of Pythagorean thought. Having not initially been aware of the importance of Pythagoreanism for a discussion of Aristotle's philosophy, the reader may feel we are spending too much time on it. It should be emphasised, however, that the elements identified in this discussion will subsequently determine the relationship between Plato's thought and that of Aristotle. It will also be noted that the place given here to Hesiod as a theologian is not compatible with the view usually advanced by the history of philosophy. To this we would respond by observing that this approach to Hesiod should not be understood in terms of a linear historical model; it is justified only in the light of the particular issue of the nature of time. Lastly, the reader may well be surprised by the discussion of "Phoenician" sources in describing the Ionian vision of the world. We considered abandoning this contentious aspect of our work on several occasions, but once again it will be justified by our understanding of Pythagoreanism.

Our study of Greek time before Aristotle will be introduced by a commentary on one of his first books, the *Protrepticus*.[7] This will reveal two different kinds of time, a circular, initiatory time of Platonic inspiration and a philosophical time advanced by Aristotle. We shall return to poetic conceptions in order to examine this

6 Cf. Fernando Gil, *La conviction*, Flammarion, 2000 (p. 224, focusing on Aristotle's theory of knowledge).

7 It is hard to understand a commentary on a text without having first read the text itself. This letter by Aristotle is available in an English translation by D.S. Hutchinson & M.R. Johnson here: www.protrepticus.info.

dichotomy. The Tragedians will enable us to provide an initial outline of Greek time, after which Homer's epic works will reveal the way that the Greek notion of time is bound up with the religious sphere. Hesiod's work will complete this initiatory vision. We shall then dive into Pythagoreanism. Our understanding of this current will enable us to draw a clear distinction between its vision of the world and that of the Ionians. We shall then return to the early Ionian thinkers Thales and Anaximander, to discover that this Milesian vision of the world seems to have been adopted by Aristotle as the basis for his first model of the concept of time. Our next book will see the return of the thought of the *théologoï*. It is the recognition of this re-emergence of the notions of the "Italian" school that will oblige us to question the division between the *being* and *existence* of time. It will be "supposed" that this division might have its roots within the history of ideas, in the struggle between the Ionian vision of the world and that which is called "Italian". Pythagoreanism offers a fragile synthesis of the two, which must be continually disentangled and made anew in order to understand the tensions inherent in Greek thought.

TIME IN ARISTOTLE'S *PROTREPTICUS*.

INTRODUCTION AND QUESTIONS FOR DISCUSSION

> We have given you, O Adam, no visage proper to yourself, nor any endowment properly your own, in order that whatever place, whatever form, whatever gifts you may, with premeditation, select, these same you may have and possess through your own judgment and decision. The nature of all other creatures is defined and restricted within laws which We have laid down; you, by contrast, impeded by no such restrictions, may, by your own free will, to whose custody We have assigned you, trace for yourself the lineaments of your own nature. I have placed you at the very centre of the world, so that from that vantage point you may with greater ease glance round about you on all that the world contains. We have made you a creature neither of heaven nor of earth, neither mortal nor immortal, in order that you may, as the free and proud shaper of your own being, fashion yourself in the form you may prefer.
> Giovanni Pico della Mirandola, *Oration on the Dignity of Man*[8]

Of the three works of Aristotle's youth discovered or reconstructed from doxographical elements in the late 19th century, the *Eudemian Ethics*, the papyrus *On Philosophy* and the *Protrepticus*, the latter is generally regarded as a crucial text introducing Aristotle's thought.[9] We shall provide a commentary on this text, which can clearly serve as a general illustration of philosophy, since the problems encountered and their resolutions will shape our understanding of this Greek art over later centuries. Detailed analysis of the *Protrepticus* will then give us a strong foundation on which to build our argument in relation to time within the vast Aristotelean corpus.

We should begin by noting that the approach we intend to develop, foregrounding the *Protrepticus* as a basis for a reasoned understanding of Aristotle's work, has nothing arbitrary about it. We are merely returning to an old philosophical tradition for which this text was a "manifesto", as Canadian philosopher D.S. Hutchinson suggests:[10]

> Aristotle's *Invitation to philosophy* was among the most famous and influential books of philosophy in the ancient world. For about a millennium, from the middle of the fourth century BCE, when the Cynic philosopher Crates read it to a shoemaker in his workshop in

8 Giovanni Pico della Mirandola, *Oration on the Dignity of Man*, trans. A. Robert Caponigri (Chicago: Regnery, 1956).
9 Bertrand Dumoulin, *Recherches sur le premier Aristote (Eudème, De la philosophie, Protreptique)*, Vrin, 2000 (1981).
10 D.S. Hutchinson and Monte Ransome Johnson, *Aristotle. Invitation to Philosophy*, Toronto, 2002, p. 2.

> Athens, to the early sixth century CE, when the Neoplatonist philosopher and statesman Boethius, languishing under sentence of death in a prison cell in Ravenna, recalled ideas from it to mind and adapted them in his own *Consolation of Philosophy*, Aristotle's book inspired dozens of generations of readers to appreciate a philosophical approach to life.

From Cicero (1st century BCE) with his *Hortensius*,[11] an exhortation to philosophy written for Roman citizens, to Boethius (6th century CE) and his book *The Consolation of Philosophy*,[12] most other examples of a protrepticus are reworkings of Aristotle's invitation to philosophy. However, to return to a tradition without understanding its underlying reasons is to risk reproducing the errors of history. We have chosen to begin with one of Aristotle's earliest writings primarily because, like the philologist Jaeger, we believe it is possible to find temporal consistency in the changes found in an author's thought. This is not to share the systemic conception of Aristotle scholars such as Octave Hamelin.[13] The existence of a finite corpus of Aristotle's writings does not imply that we must adopt a synchronic approach to its concepts, as Jaeger clearly indicates:[14]

> System will now mean not the outwardly visible façade, the construction of a totality of knowledge, lifeless and dogmatic, out of the multiplicity of particular discoveries and disciplines, but the inner stratification of fundamental conceptions, which Aristotle was the first to bring to light.

If we wish to analyse the growth of a concept within a system of thought, we must first accept that the concepts inherent in this thought do change, in other words that it did not spring into being all of a piece in the Stoic manner. Since our task is to analyse the concept of time, these methodological clarifications will enable us to avoid confusing content with the form that we should like to grasp, in other words to avoid confusing changes in Aristotle's thought over time

11 This work is lost. For a historical reconstruction see Michel Ruch, *L'Hortensius de Cicéron. Histoire et reconstruction*, Paris 1958, and for a discussion of the initiatory dimension of this philosophy, "Cicéron et l'Orphisme", *Revue des Etudes Augustiniennes*, 1960, vol. 6, no. 1, pp. 1-10.

12 Boethius, *The Consolation of Philosophy* trans. Victor Watts, Penguin Classics, 1999.

13 Octave Hamelin, *Le Système d'Aristote*, 1985 (1920). Moreover, Hamelin provides no discussion of time in the Aristotelian corpus, as though the issue were absent from Aristotle's thought.

14 Jaeger, *Aristotle, Fundamentals of the History of his Development*, trans. Richard Robinson, Oxford, Clarendon Press, 1934, pp. 374-5.

with our historical understanding of change within systems of thought in general. It is moreover difficult to consider this philosophy without identifying certain historic layers that have become presuppositions. For example, Raymond Weil observed not so long ago:[15]

> It is ultimately difficult to strip the study of Aristotle from all the Aristotelean sayings that have been extracted from his work.

Aristotle's work as we see it today is overlaid with so many interpretations that has become very hard to tell which interpretation belongs to which current of thought. Yet it seems to me that the major influences were those of the Neoplatonists, to which the teaching of Aristotle's texts still owes a great deal. Furthermore, if we remember that Neoplatonist teaching was merely a continuation of the teaching within the Athens School itself, we cannot disregard its influence. The Athens School, which began its teaching with Plato (4th century BCE) and ended with Damascius (6th century CE), thus remains an important wellspring that still runs through our current understanding of Aristotle's thought.[16] Within this school Aristotle's philosophy was taught before that of Plato, for reasons that have nothing to do with historical chronology, as Marie-Claire Galparine notes:[17]

> There were also stages in the teaching of philosophy, and a compulsory order. It began with Aristotle – the "small mysteries" that Marinus describes in the life of Proclus. These were followed by the "great mysteries" of Plato and the Chaldeans. The study corpus was presented as an initiation and the *epopteia*, the vision of god, was in the deepest reaches of the sanctuary in the aduton of the temple.

The term "sect"[18] indicates that the teaching of philosophy was also a religious initiation. When Diogenes Laertius (3rd century) wrote his history of philosophy, which remains key to classical studies, he naturally entitled it *Lives and Opinions of Eminent Philosophers of*

15 Raymond Weil, "De l'état présent des questions aristotéliciennes", in *L'information littéraire*, 1959, no. 1; see also his book *Aristote et l'histoire,* Klincksieck, 1960.

16 It was Justinian's decree of 529 that ordered the closure of the Athens School in the name of the struggle against "the teachings of the heretics, Jews and pagans" *Cod. Just.* , I, 5, 18,11, 10, in *Corpus juris civilis*, I II, Krueger ed.

17 Marie-Claire Galparine, introduction to her translation of Damascius' *Des premiers principes. Apories et résolutions*, Verdier, 1987, p. 15.

18 The term "sect" here does not have the pejorative meaning bequeathed to it by Roman history. For the Greeks a *hetaireia* was a group of friends and companions, a cooperative structure claimed by all philosophical schools.

Every Sect.[19] It is only in this light that we can understand why the philosophical schools were closed under a Roman Empire that had adopted Christianity. The aim was not to ban pointless knowledge, but to prevent the development of initiatiory practices that were not contained within the rites of the chosen religion.[20]

The teaching of the Athens School went hand in hand with an "initiation" in the form of a progression through a series of aporia intended to lead to a vision of god. My intention in the present work is quite different. In my view such a propaedeutic vision involves a theoretical presupposition of the convergence of Plato's theories with those of Aristotle to a degree that is not supported by historical fact. The desire to portray knowledge as tending towards a union blessed by a theology that seeks to be a synthesis of all knowledge (*symphonia*) has led to the merging of the theses of Plato and Aristotle in which the latter's thought has been reduced to that of the former. It has recently been suggested (Rémi Brague, 2008) that this sacred union of Plato and Aristotle lasted until the work of the Byzantine Georgius Gemistus (known as Pletho, 15th century), who pronounced their divorce at the Council of Florence in 1439. Pletho's work, taking the side of Plato, was translated by Marsilio Ficino in 1484 and gave the Renaissance his historical vision, culminating in the Reformation. It is hard to imagine the scale of subsequent efforts made by the Thomist current of the Catholic Church in France,[21] Italy and Poland[22] to reintroduce Aristotle's work as a standard for knowledge. Analysis of Aristotle's concept of time will give us an opportunity to show that the theoretical kinship between Plato and Aristotle remains problematic.

We shall start therefore with Aristotle's early texts in order to find the roots of his enquiry into time. Rather than going back up the path

19 The title of this work varies from one manuscript to the next. However, according to its French translator Robert Genaille, this is the appropriate title. The initiatory dimension of the term "sect" should therefore be preserved.

20 Cf. Pierre Hadot, *Le problème du néoplatonisme alexandrin, Hiéroclès et Simplicius*, pp. 9-10, Paris, 1978.

21 Cf. Etienne Gilson, *Le Thomisme, introduction au système de Saint Thomas*, 1919, 6th edition.

22 For example the School of Llov, in Poland, was founded after Leo XIII's encyclical of 4 August 1879 *Aeterni Patris*, which advocated a return to the philosophy of Aristotle.

towards the Platonic mysteries, like the teaching of the Athens School, this study will descend into human reality, where we shall meet the Lyceum's greatest pupil Theophrastus. And to descend to the philosophical work of Theophrastus is surely to follow the course of history rather than going back to Plato's thought. Can can we continue to think of Aristotle's work through teaching in the Platonic style? To do so would surely be to deny the realisation of his thought within the Lyceum. Throughout the first part of this book, in following this thesis we shall also seek to remove the initiatory dimension of knowledge, which does not seeem to us to belong to his philosophy. To this end, we propose to start at the beginning with a commentary on the *Protrepticus.*

We shall begin by questioning the status of time in this official letter written by Aristotle. We shall then seek to place the questions we find in their historical context in order to flesh out the concepts we have identified. Clearing away the layers of history, we shall see the figure of Hesiod appearing. While Homer must be regarded as the "prince of tragedy", Hesiod will emerge as the master of the Greek vision of time, until the arrival of the masterful thesis of that most magisterial of philosophers, Aristotle.

The *Protrepticus* is a fairly substantial letter addressed to Themison, a prince of Cyprus.[23] Missives of this kind addressed to a sovereign were one aspect of the civilities required of a school's members in seeking protection and financial support for the institution. Indeed, as Aristotle indicates in this letter, since philosophy cannot and should not bring any economic benefit, its future is largely dependent on

23 According to Rémi Brague, Aristotle was 33 when he wrote this letter dated 350 BCE. In *Aristote et la question du Monde*, (PUF, 1988, p. 58), Brague suggests it was a response to a text by Isocrates entitled *Antidosis*. Aristotle was indeed born in 384 BCE in Stagira (near what is now Stavros in northwestern Chalkidiki), hence his modern epithet "the Stagirite". It would be hard to see why Aristotle would have replied to the *Antidosis* of Isocrates' (436-330 BCE) unless we were aware that his school was in competition with the Academy. Stagira was destroyed and Aristotle died in his mother's family home in Chalcis, now capital of the island of Euboea, in 322 BCE. Nothing would be known of this letter had another philosopher, Iamblichus (250-330), not reproduced lengthy extracts from it in his own *Protrepticus* five hundred years later, cf. Iamblichus, *Protrepticus*, French trans. Edouard des Places, Les Belles Lettres, 1989.

funding from external sources. Here we can cite a fragment from the *Protrepticus*:[24]

> Despite no payment coming from the people to those who do philosophy […].

Aristotle was to find himself in the same situation on leaving the Academy. When, to keep the School in the family,[25] Plato appointed his nephew Speusippus as his successor,[26] Aristotle found a new protector in Hermias before accepting the invitation of the king of Macedonia and becoming tutor to Prince Alexander.[27] We shall use the fragments of the *Protrepticus* that have been preserved to show that Aristotle develops many philosophical conceptions, some of which set forth his early notion of time. We began by seeking to identify a concept of time that had some degree of univocity, but were obliged to note the presence of two very distinct concepts that intersect and overlap, in a manner of which Aristotle seems somewhat unaware. We should say again that this is a piece of juvenilia, which the philologist Jaeger believes can be located chronologically before the *Eudemian Ethics*, and which we are adopting as an introduction to our philosophical work on time in order to develop our argument.

The first conception of time Aristotle uses places eternity before human temporality, a conception whose roots we shall seek in Orphic and Pythagorean beliefs. From this perspective, the series that is

24 Fragment 52, found in the *Protrepticus* of Iamblichus, VI, 40, 15; cf. also Xenophon, *Memorabilia,* I, VI. In a later period the Stoics took up this theme, describing as sophists those philosophers who asked to be paid for their thoughts.

25 Plato's father Ariston was a friend of Pericles and said to be one of the last descendants of Codros's branch of the Athenian royal family. His mother Perictone was said to be from Solon's branch. Plato's failure in poetry (his first three books) and politics (the Socrates affair) naturally led him to protect the Academy as a powerful institution. Appointing a foreigner such as Aristotle as head of the School would clearly have been risky. For not only was Aristotle not Athenian, he was Macedonian.

26 Aristotle paid the princely sum of three talents (18000 gold francs) for the books of Speusippus as reported by Diogenes Laertius *Lives…* I, p. 200, who records the account of Favorinus (*Memoirs*, Book III). This was the price of learning about the theoretical development of the School that he had wished to lead and from which he would be forever separated, *Penser avec Aristote,* Eres, 1991, p. 417. (Speech by Jacques Brunschwig at the UNESCO conference in memory of Aristotle).

27 On this passage, see Chapter V of Jaeger's *Aristotle, Fundamentals of the History of his Development, op. cit.*

human temporality is triggered by an initiation, a revelation.[28] The second approach to time contrasts with the first by making eternity the endpoint of a series, where contemplation of the Good is a quest that demands a long period of learning. We shall discuss the first conception of time in greater depth, since this is the one that Aristotle owes to Plato and which he fairly soon abandons. As we shall see, even in this essay of his youth, another conception is taking shape as he moves towards independence. The *Protrepticus* contains the seed of this second conception, which Aristotle subsequently retained throughout his work. So let us begin by looking at the approach to time inherited from the teaching of Plato, who was Aristotle's teacher for some twenty years.

a. From eternity to temporality: on initiation.

Aristotle's aim in this letter is to introduce Themison to philosophical wisdom, defined in Part XI:[29]

> Thus we take the position that success is either intelligence and a certain wisdom, or virtue, or great enjoyment, or all of these.[30]

Aristotle argues that wisdom is the ultimate happiness. While there may be other sources of happiness, the happiness of contemplation is coextensive with supreme wisdom. His argument is built around an opposition between the arts of imitation from below (of nature) and

28 The first term in a series was called *henad* by Neoplatonists such as Syrianus, Iamblichus and Proclus. The same term appears in the philosophy of Plotinus as a synonym of *monad*, as it is in the thought of Leibniz.

29 We have used the new French translation by Jacques Follon (Mille-et-une-nuits, 283, 2000), which was based on the texts established by Ingemar Düring (Göteborg, 1961), Anton-Hermann Chroust (Notre Dame, 1964) and David Ross (1955). In 1999 Yvan Pelletier also published a French translation of Chroust's English translations (after the fragments of Ross), which we have also used. Unless otherwise stated, the English versions used in this book are from the aforementioned new English translation by Hutchinson and Johnson. We should note that the reference work in philology remains Düring's German language edition, *Aristoteles Protreptikos*, Frankfurt, 1969. Lastly, I have selected fragments from the *Protrepticus* of Iamblichus, the authenticity of which is no longer in doubt. Conversely, remembering that this work by Iamblichus was only the second part of his book *De secta Pythagorica*, we should not forget the initiatory dimension that may not have existed as such in Aristotle's original version.

30 This fragment is from Iamblichus, *Protrepticus* XII 59. 26-60.1.

from above (of Heaven). While arts such as medicine, architecture and gymnastics are content to imitate nature,[31] philosophy is a kind of imitation of Heaven. Aristotle finds the authority for this position in Pythagoras and Anaxagoras. Why did god create us? "To observe the heavens"[32] was Pythagoras' reply:[33]

> This is the thing for the sake of which nature and the god engendered us. So what is this thing? When Pythagoras was asked, he said, "to observe the heavens", and he used to claim that he himself was an observer of nature, and it was for the sake of this that he had passed over into life.

So the philosopher looks to the heavens to validate his words, just as the helmsman steers by the stars, and Anaxagoras observed that there must be a *noûs kubernêtês*,[34] in other words a guiding intellect:[35]

> But it is clear that the philosopher is the only producer to have both laws that are stable and actions that are correct and beautiful. For he is the only one who lives looking toward nature and toward the divine

31 In this text Aristotle does not place poetry among the arts of imitation, as Plato did. Aristotle's thought differs from Plato's ideology in its respect for the poet. Proclus' comparison of Plato to the great Greek poet Homer is historically deceptive: "Plato is another Homer, not only when he is inspired to compose myths, but also when he speaks as a philosopher and orator." *Commentaire sur la République*, French trans. A.-J. Festugière, Vrin, 1970, I, VI, p. 19.

32 Hutchinson and Johnson, p. 48.

33 Iamblichus, *Protrepticus* IX, 51. 11-15; see also the fragment from the same source at IX, 5, 7-10.

34 The history of the character trait covered by the term *philosopher* is far from clear. Herodotus records the words addressed by Croesus to the politician, poet and sage Solon (I, 30): "Athenian stranger, many a tale has reached us about your wisdom and your travels, about how in your search for knowledge you have covered much ground in order to see the world." So here there is a distinction between *sophia*, which is mastery of knowledge, and *philosophia*, which is a desire and quest for knowledge. The *philosophos* may be simply a curious man, whereas the *sophos* has developed this character trait to the point of turning it into a distinct social status within a School. Cicero makes this distinction in relation to Pythagoras, in V, iii, 9 of his *Tusculan Disputations* (English version, trans. Yonge *et al*): "And there are some few who, taking no account of anything else, earnestly look into the nature of things; and these men call themselves studious of wisdom, that is, philosophers: and as there it is the most reputable occupation of all to be a looker-on without making any acquisition, so in life, contemplating things, and acquainting oneself with them, greatly exceeds every other pursuit of life." However, we know from Iamblichus' *Life of Pythagoras* that Pythagoras always presented himself as a philosopher (*philosophos*) and never as a sage (*sophos*).

35 Hutchinson and Johnson. I have linked this fragment with Anaxagoras' "guiding intellect" because it seems appropriate to extend the metaphor of the ship in order to understand that the helm can be guided only by reading the Heavens.

> and, just as if he were some good navigator who hitches the first principles of his life onto things that are eternal and steadfast, he moors his ship and lives life on his own terms.

So the philosopher[36] turns to the heavens because it is only there that eternal, fixed realities exist in the perfect totality sought by the sage. Having contemplated eternity, the philosopher can then embark on life armed with its stable laws, to make fine, straight progress.[37] There are clear echoes of Plato here. The same conception is clearly expressed in the myth of the cave in Book VII of *The Republic*. In Plato's myth an ascent into the intelligible world and contemplation of the sun, representing God, is followed by a descent into the world of the senses. The metaphor is the same in both cases: there is a correlation between Good, the One and the heavens, since it is through the mediation of the sun that Good is placed in human hands. Human beings then pass from hell, night and Tartarus into the light.[38] It is not hard to see this myth as the source of a crucial argument concerning time. Plato indicates that the seasons are first produced by the sun and that human beings are chained and thus immobile from childhood (516b). So it is the relationship to the heavens (and notably the sun) that then brings them into a degree of regulated, harmonious

36 We find the same distinction in Platonic thought, where philosophy is only a character trait, defined as follows in the *Charmides* (155a): "… the man who is ready to savour study of all kinds, whom a joyful impulse drives to study, who is insatiable, this is the man we shall rightly call '*φιλοσοφεων*'". See the commentary on Plato's *Charmides* (155a) by Father Marie-Dominique Philippe, "Une philosophie de l'être est-elle encore possible. 1. Signification de la métaphysique", Tequi, p. 18 note 8. Philosophy is a path leading to wisdom and involves acquiring a knowledge of essences, *epistéme*, as we read in Plato's first protrepticus, the *Euthydemus* (288d). It is also a discipline subject to many influences, notably from mathematics and religion, which we shall discuss briefly, and later becomes the science of Beauty in *The Symposium* (210d). The philosopher is a man who "descries a certain single knowledge connected with a beauty which has yet to be told" (trans. Fowler). In this development, Aristotle reflects the late period of the Platonic conception, in which Beauty and contemplation are once again made central to the acquisition of *sophia*.

37 We refer to the later works of Fr Marie-Dominique Philippe (*op. cit.*), notably *Les Trois Sagesses. Entretiens avec Frédéric Lenoir*, Fayard, 1994. More crucially, the root of this questioning can be seen in his *Une philosophie de l'être est-elle encore possible ? Fascicule I, Signification de la Métaphysique*, Téqui, 1975.

38 On this see Clémence Rammoux, *La Nuit et les enfants de la Nuit dans la tradition grecque*, Flammarion, 1986.

temporality, since it is there that time originates (530a).[39] After this human beings must turn away from their unspeakable existence to contemplate the heavens regularly. I cite the relevant passage (518d):

> The mind as a whole must be turned away from the world of change until its eye can bear to look straight at reality, and at the brightest of all realities which is what we call the Good.

Why turn away from the changing world? Firstly, to contemplate the regular movement of the planets, on which the permanence of human rules is based.[40] But there is more. Plato links change to opinion (533d) and stable rules to the retreat of opinion. The sanctuary of the cave is primarily a retreat from the world of change, a rejection of time and a distancing from the temporal world. The same conception appears in the proem of Parmenides, as will become apparent in our discussion of the more fundamental relationship between thought and time. For now, and by way of introduction, we shall simply refer to a certain notion of time without defining it further and in accordance with Plato's myth. Chained by the neck and feet, human beings are deprived of movement of either soul or body, and consequently derpived of time, until they are allowed to see certain images. After this, it is said, assimilation of this contemplation turns men into philosophers, forever trained for wisdom, masters of themselves and their own sole guides through time. How is this possible? Is it some irrational metamorphosis? Is an ideal transformation of the human condition possible? Or is it simply a myth with a meaning that will always remain hidden from human reason and particularly from the

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[39] Martin Heidegger proposes a reading of the myth of the cave that rules out the sun as the tipping point between the sensory and the intelligible. The same rejection of heliocentrism can be found among all Christian writers, since the notion of the Incarnation implies that the Earth is at the centre of the world, *Questions II*, French trans. A. Préau, Gallimard, p. 133. For this observation and other contemporary commentaries on this myth, see Mattéi, *Platon et le miroir du mythe*, PUF, 2002 (1996), pp. 109-135, p. 126. We should also note Mattéi's acknowledgement that the ideological image of the cave does not conform to the structure of Plato's other myths, cf. pp. 118 and 139. At this analytical level, a reading of the "vision of the chariot" in the Book of Ezekiel would not be out of place.

[40] The Attic calendar featuring all the religious festivals was already in use in Athens at the time of Plato. For example, on 16 *Hekatombaïon* Athenians celebrated the *synoikia*. See Joëlle Bertrand and Michelle Brunet, *Les Athéniens à la recherche de leur destin*, A. Colin, 1993, p. 46. In Aristotle's period the astronomer Callipus, a student of Eudoxus, produced a new calendar that later bore his name, cf. Jaeger, *op. cit.*, p. 354.

reason of the common people?[41] If we return to the myth's beginning we can see that everything was set out from the start. Plato announces this at the start of his narrative (516b):

> Later on he would come to the conclusion that it is the sun that produces the changing seasons and years and controls everything in the visible world, and is in a sense responsible for everything that he and his fellow prisoners used to see.

In this strange passage the philosopher appropriates the constant, regular time of the heavens. His own time will be in the image of the time of the stars, marked out by the sun.[42] From now on, every moment of his life will retain the image of celestial eternity. The arrangement of the stars lodged in his soul will enable him to find his way through the vicissitudes of human life. This is why this entire mythology is perfectly condensed in the image of the helmsman used by Aristotle. But more importantly, the philosopher himself will now produce the seasons and years of the city. So man is not only in the image of heavenly time, he becomes it; in other words, it is up to him to introduce the kosmos into the city, summed up in reasoned order. He is not only master of himself, but also of the world, since henceforth it is he who must make the rain fall and the sun shine.[43] The philsopher king is a master of the arts and of politics, the all-seeing eye, like Apuleius' Golden Ass.[44]

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[41] Françoise Frontisi-Ducroux, "Figure du temps: la métamorphose", in Darbo-Peschanski (ed.), *Constructions du temps dans le monde grec ancien*, CNRS, 2000, pp. 49-63.

[42] We note that the opening of the necropolis of the Macedonian royal family (Philip and his wife Olympias) on 8 November 1977, long after the Celts had been and gone, also provided confirmation that the emblem of Macedonia, to which Athens was subject at the time, was a shining sun.

[43] In non-Athenian places of worship in Ancient Greece, gods were venerated to ensure the best possible results for agriculture. This was why Zeus was simply "the maker of rain and fine weather", François de Polignac, "Changer de lieu, changer de temps, changer la cité: sites et déplacements de la construction du temps dans l'Athènes archaïque", in *Constructions du temps dans le monde grec ancien*, pp. 143-154, p. 151.

[44] While it has been suggested that a philosopher had to be curious, the fact remains that the term "curiosity" has no equivalent in Greek. It was left to Cicero to introduce the Latin noun *curiositas*, which developed into the English "*curious*" and French "*curieux*". According to Alonso Tordesillas, Cicero is reported as saying, "*In curiositate oxypeinos*" ("I am hungry with *curiositas*"). On the history of the term, see Maria Tasinato, translated into French by Jean-Paul Manganaro with a preface by Tordesillas, *La Curiosité. Apulée et Augustin*, Verdier, 1999. Plato was undoubtedly struck by this character trait in his student Aristotle, whom he

It is here that I should like to concur with the harsh political critique of Plato's philosophy advanced by Michel-Pierre Edmond. In throwing this mythological powder into the citizens' eyes, Plato unabashedly grants himself the central place in the functioning of culture. But can any culture, be it Greek, Oriental, French or European, have a centre and, if so, can that centre be embodied by a person? Doubts are surely justified and are expressed by Edmond as follows:[45]

> The philosopher replaces the poet to become the new figure in whom society is invited to seek its own identity and question itself, because he speaks to it of itself in a way that is public and verifiable against these new benchmarks. Politico-philosophical fiction replaces poetic fiction; it becomes a kind of optical medium through which the city passes and in which it acquires an unusual degree of visibility. It sees itself in this fiction as it is and as it should be. Plato was most definitely the first to challenge the celebrated, future "Greek miracle".

In Edmond's view the excessive importance given to the philosopher was a cause of Greek decadence. For a position of such omnipotence necessarily places the philosopher at the centre of the city. The philosopher is thus central to culture and must describe the present time. Of course the same goes for the past, which the new figure is required to reveal, replacing the old bards and rhapsodes, historians such as Thucydides and so on. Meanwhile, the poets, those learned figures who describe the future in the city, are muzzled in order to leave the central role to the philosophers.[46]

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nicknamed *anagnoste* (the reader). Plato's irony is fully apparent in his choice of term, since an *anagnoste* was usually a slave who read aloud to an Athenian aristocrat. Athenians never read books themselves, even if they were philosophers or poets, but listened to them being read. The fact that Aristotle was the first philosopher in the history of thought to read the ancient texts directly clearly shows that he had too great a "thirst for information", as mentioned by Brunschwig (*art. cit.*), to be satisfied with the oral sources to which convention would have confined him. We therefore surmise that, though unrepresented in the Greek lexicon, the character trait of curiosity was fully manifested by Aristotle. How deceptive language can be!

45 Michel-Pierre Edmond, *Le philosophe-roi. Platon et le politique*, Payot, 1991, p. 149.

46 All knowledge preceding the emergence of philosophical thinking is then classed as mythology, with the pejorative sense that this term acquires for Plato. Discourse (*mûthos*) is henceforth split in two: on the one hand there is the true discourse of the philosopher (*épistemè*) and, on the other, the rest, in other words the ancient tradition, relegated to the category of mythology. On this tricky subject our argument draws on the thesis advanced by Luc Brisson in *Platon, Les mots et les mythes*, Maspero, 1982. For our own part, we see here the birth of a particular act of

Plato's conception of philosophy seems to be more a reflection of hubris than of truth. It is a position in relation to power that contrasts sharply with that adopted by Aristotle who, as is well known, preferred to be away from the city and the Lyceum, well away from such Platonic high jinks. We shall see that this split from Plato over the status of the activity of philosophy begins in the *Protrepticus.* Aristotle turns away with some irony from Plato's conception of the philosopher-king and master of the "world". In this regard it becomes more and more difficult to agree with Pierre Aubenque when he argues that Aristotle retained a vision of a time of original revelation:[47]

> Time is thus no longer the site of forgetting, as Plato thought, nor that of revelation, as Aristotle seems to have believed at one time. Forgetting and revelation suppose the existence of an absolute truth, independent of human knowledge, which exists in itself at the start or end of history, in other words outside the field of human history. Aristotle never completely abandoned this conception.

On the contrary, in my view not only did Aristotle abandon this conception of initiatory time in his youth, but he was also the first thinker to place himself within history, through his writing itself. Plato, adopting an initiatory, traditional time, was careful not to write. Aristotle on the other hand was not subject to such sacred obligations; he read the texts himself and took them as a basis for his own thinking. So, if the conception of time developed in these passages is

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speech, the political source of ideological discourse, a field then unknown in cities governed by monarchs, oligarchs and emerging democracy. So it is no surprise to find such ideological remarks in Plato's *Republic.* See for example Edmond's commentary on Plato's republic 382d in *op. cit.* p. 150: "A people resort to mythology when they do not know what really happened in the events of their distant past, and the mythological falsehood must seem as true as possible." Is there a better definition of ideology? Is this not philosophy's first nihilistic act? Such, at least, is the argument advanced by Nietzsche, fulminating on discovering this superimposition of politics in the domain of the arts of thought: "Everything genuinely Hellenic is made responsible for the state of decay (and Plato is just as ungrateful to Pericles, Homer, tragedy, rhetoric, as the prophets were to David and Saul). The decline of Greece is understood as an objection to the foundations of Hellenic culture: basic error of philosophers –. Conclusion: the Greek world perishes." Nietzsche, *The Will to Power*, Walter Kaufmann (ed.), trans. Kaufmann and R.J. Hollingdale, Vintage, 1968, I, pp. 231-2.

47 Pierre Aubenque, *Le problème de l'Etre chez Aristote*, PUF, 1994, p. 91.

indeed initiatory, as I would maintain, how did Aristotle understand the temporal dimension in a strictly philosophical manner?[48]

This question can be approached in the light of another passage from the *Protrepticus*, which mentions the Isles of the Blessed. The place of the knowledge of eternity may be the heavens, as Aristotle suggests in accordance with Plato, but it may also be a new Heaven, another imaginary "world" located in the Isles of the Blessed:[49]

> One might see that what we say is all the more true if someone transported us in thought, as it were, to the Isles of the Blessed, for in that place neither use nor benefit would be produced in anything else, and only thinking, and observation remains, which we say even now is a free way of life. If this is true, then surely any one of us would be rightly ashamed if, when the right was granted to us to settle in the Isles of the Blessed, he was by his own fault unable to do so.

This conception of a place where human beings would be in permanent contact with eternity may be based on the ancient myth of Atlantis,[50] but above all it seeks to use myth to prove that the only happiness possible lies in the contemplation of eternity and that knowledge of eternity can be brought to earth, even if the place on earth to which it is brought is itself imaginary.[51]

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48 The Athenian political regime in which Aristotle was active applied the autocthony principle and afforded no civil rights to aliens. For example, we know that Aristotle did not own the Lyceum, since he had no right to own property. This is confirmed by his will, found in Chalcis, and according to Jaeger (*op. cit*., p. 325) it was Theophrastus who held the deeds.

49 Hutchinson and Johnson, p. 50.

50 This myth is recorded by Plato in the *Timaeus* (17a) and in the *Critias* (27c). Pierre Vidal-Naquet reveals all the irony of this narrative, the sole aim of which is to discredit the ancients. It would seem to be the most fake myth in Greek tradition – a pastiche. See Brisson, *Platon, Les mots et les mythes*, Maspero, 1982, p. 22.

51 This conception of the Isles of the Blessed is linked to Plato's model of time, which we shall consider a little later on. For now we will note what Brague has to say about it: "Greek legend also states that, under the reign of Zeus, the dethroned Chronos was not relegated to an indeterminate place of idleness, but lived in exile in the Isles of the Blessed, over which he ruled*."* Brague, "L'isolation du sage" in *Du temps chez Platon et Aristote*, PUF, 1982, p. 91. This conception is also present in Hesiod, *Works and Days* (169) and in Pindar's *Olympian Odes* (2, 70). For Plato the Isles of the Blessed represented the philosophical life. The Academy represented the Isles in the City, as the place of the blessed. After many vicissitudes, the Platonic school selected the neighbourhood of the gymnasium of *Akadémos* as the site of this philosophical place (the Academy). Meanwhile Aristotle moved to Assos, the Troad coast and Mytilene and spent time in Macedonia before returning to Athens, at the age of 45, to found the peripatetic school, the Lyceum – a study garden, as Jaeger called it.

We should add that, to our knowledge, this is also the only place in the entire Aristotelian corpus in which Aristotle mentions a fault, an element of shame linked to the past, in a rhetorical register generally seen as reflecting a sense of guilt.[52] There is no trace of such an idea of culpability in Aristotle's *Ethics*, which we propose to discuss. So where does it come from? In this text Aristotle refers to these two Platonic myths, but he could equally well have chosen others from the same catalogue, most of which convey the same vision. We could mention, for example, the allegory of the fish in the *Phaedo*,[53] the myth of Glaucos or the allegory of the beasts in *The Republic*.[54] After a long time spent reading all these myths and allegories, Schuhl attributes them all to a single source in the Orphic and Pythagorean tradition which, while perhaps periodically nourished by truly scientific discoveries, remains profoundly religious:[55]

> Similarly in the great myths of the soul, the abstract construct of individual destiny, domined by the idea of a judgement involving a fall and expiation, is illustrated by a growing wealth of images in the *Gorgias*, *Phaedo*, *Republic* and *Phaedrus*, and reappears more quickly in the *Timaeus* and the *Laws.* These images are borrowed from either the Orphic and Pythagorean traditions, whose source can be dated back to the Minoan civilisation, or the most recent scientific notions, as in the *Phaedo* […], while that of the world of the blessed makes use of new geographical research.

The poetic work in these different versions is clear to see, and similar in every way to the work of dreams, which seeks to integrate recent scientific discoveries – the diurnal elements – with the nocturnal elements of the past, in other words the cultural tradition.[56] However, it does seem that this heritage is Pythagorean, as Jaeger also

52 Aristotle does of course include shame (*aiskuné*) in his work, but he does not integrate it into his personal ethics, cf. notably *Rhetoric*, 78b 24, 83b 12-13, 85a 13 and 90a 2.

53 Plato, *Phaedo*, 109-110, French trans. Brisson.

54 Plato, *Republic*, X, 611 for the first myth and IX, 586 for the second.

55 Schuhl, *La fabulation platonicienne*, Vrin, 1968, p. 44.

56 Long before psychoanalysis and its founder Sigmund Freud, the work of mythology was compared to that of dreams by Plotinus, cf. *Enneads*, V, 5, §12.

suggests,[57] and here again we see why the Neoplatonists were later so drawn to this text by Aristotle.[58]

Confirmation is provided by the internal consistency of the text. At the end of the letter Aristotle describes a particular initiatory rite, the origins of which can easily be found in Pythagoreanism. As we have just seen, Aristotle found an underlying authority for his art in Pythagoreanism, and this was the most widely held view in the Athens School:[59]

> So who would consider himself successful and happy, looking at these things for which we have been composed right from the beginning by nature, as if for punishment – all of us – as they say the mysteries relate? For the ancients express this in an inspired way by saying the soul "pays a punishment" and we live for the atonement of certain great failings.

Failings and guilt are key components of a certain Orphic belief.[60] But crucially it is the relationship between this belief and initiation that explains the conception of time that persists in Aristotle's words, still uttered under the influence of his master Plato. Initiatory cults all involve a belief in eternal knowledge that can be acquired through an initiation that brings about revelation.[61] And it is this belief in

57 Jaeger, *Aristotle. Fundamentals of the History of his Development*, p. 61, "The Neoplatonists were attracted by the ascetic and religious character of the book. They considered it evidence of Aristotle's supposed Platonism, or at any rate a means of reconciling the contradictions between Plato and the peripatetic doctrine."

58 According to Schuhl, *op. cit.*, p. 45, Plotinus compares this mythology to that of Empedocles (*Enneads*, IV, 8) while Porphyry compares it to the Cave of the Nymphs in Homer's *Odyssey*. While we have found several references to Empedocles' conception in Homer's *Iliad*, notably in book VII, why this mythology is not accompanied by any sense of guilt in either Homer's conceptions or those of Empedocles has yet to be explained. Moreover when the philologist Nietzsche adopted all this for himself, it was through this "rite", with the coming of Zarathustra, that the Superman strove to bring news of a vision beyond good and evil, a vision that is thus merely a return to Empedocles, and indeed to Homer; it is the vision of a world without guilt, so a vision that is certainly not that of Pythagoreanism or Orphism. *Thus Spoke Zarathustra* III, "On the Vision and the Riddle", trans. Hollingdale, Penguin, 1969.

59 Hutchinson and Johnson, Iamblichus 47.21-48.2.

60 An interesting discussion of Greek initiatory cults and their relationship to time can be found in "La figure de Chronos dans la théogonie orphique et ses antécédents iraniens", *Mythes et représentations du temps*, CNRS, 1985, pp. 37-55.

61 The Greeks gave no credit to these beliefs, which the philosophers adopted to give authority to their words. Nietzsche constantly reminds us of this in his *Genealogy of Morals*: "Throughout the longest period of their history the Greeks used their gods for no other purpose than to keep 'bad conscience' at bay, to be

"revelation" that explains why eternity is placed before temporality. Eternity can be placed before temporality only if it is possible to attain the ultimate revelation of an ideal, perfect whole. After initiation, it becomes easy to steer one's life with discernment, for the unfolding time of human life remains indelibly stamped with this vision.

Following Pythagoras and Plato, Aristotle thus accepts that it is possible to attain a knowledge of eternity that will set philosophy on the path of right conduct. It is in this sense that we can say that eternity precedes temporality, in other words that the time of the soul is not the same as the time of the body, the exclusion of the body being the *sine qua non* of such a view. Indeed Aristotle gives definitive expression to this idea in a blistering comparison at the end of his letter to Themison:[62]

> For the conjunction of the soul with the body looks very much like a thing of this sort; for as they say the Tyrrhenians often torture those they capture by chaining corpses right against their living bodies, face to face, fastening each limb to a limb, similarly the soul seems to be stretched out and stuck onto all the sensitive members of the body.

So Aristotle is comparing the body to the dead and the soul to the living![63] This confirms at least one thing, which is that within the Platonic conception adopted by the young Aristotle, in order for man to become wise and attain the full life of his soul, to share that part of the divine that is within him, he must necessarily abandon the mortal body and with it sensation. It is at this level of reading that we can truly see that Aristotle is still under the influence of Plato.[64] Why? Because throughout the rest of his œuvre we will see the return of the senses as the very foundation of knowledge, through induction. Furthermore, and apparently paradoxically, Aristotle founds the entire

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allowed to enjoy the freedom of their soul: thus, in a sense diametrically opposed to that in which Christianity has made use of its God. […] 'It is a wonder!' he says on one occasion – at issue is the case of Aegisthos, a *very* serious case – 'It is a wonder how much mortals complain about the gods! They allege that evil comes only from us; but they are the authors of their own misery, even contrary to fate, through lack of reason." (Trans. Douglas Smith, Oxford World's Classics, 2008, p. 74). Here Nietzsche is referring to a passage from Homer's *Odyssey*, I, 32-34, which we shall analyse below.

62 Hutchinson and Johnson, p. 42 (Iamblichus, VIII, 48.2-48.9).

63 Cf. Plato, *Phaedo*, 82e 2 sq.

64 For a critique of this approach, see Nietzsche, "What is the meaning of ascetic ideals?" *The Genealogy of Morals* III, p. 77 ff. Incidentally, "The ascetic treats life as a wrong track along which one must retrace one's steps to the point at which it begins; or as a mistake which one rectifies", p. 96.

argument of the *Protrepticus* on the assertion that it is sight that underpins all knowledge, and particularly all contemplation. Throughout his letter he constantly uses analogies with sight and uses the eye as an example. How can we accede to wisdom if we do not use the senses of which sight is one? On this point Aristotle's position has already been strongly established in other parts of the text. Two fragments definitively set out the relationship between sensation and life. To reject sensation is to radically reject life itself:[65]

> Living is distinguished from not living by sensing, and living is defined by its presence and power, and if this is taken out life is not worth living, as if life itself were eliminated along with sensation.

Aristotle quickly disengaged from the Platonic sacred approach by preserving sensation and, in not relegating the body to a lesser rank, he rescues knowledge and respects life itself. Moreover the 3rd book of his treatise *On Philosophy* contains a conclusive essay that returns to the same considerations, once more integrating the body and its sensory capacities, which enable us to contemplate the beauty of the world. As Schuhl suggests, this is a "rehabilitation of the sensory world" in order to give the reader "a taste for beauty":[66]

> Great was the saying of Aristotle: "Suppose there were men who had lived always underground, in good and well-lighted dwellings, adorned with statues and pictures, and furnished with everything in which those who are thought happy abound. Suppose, however, that they had never gone above ground, but had learned by report and hearsay that there is a divine authority and power. Suppose that then, at some time, the jaws of the earth opened, and they were able to escape and make their way from those hidden dwellings into these regions which we inhabit. When they suddenly saw earth and seas and sky, when they learned the grandeur of clouds and the power of winds, when they saw the sun and learned his grandeur and beauty and the power shown in his filling the sky with light and making day; when, again, night darkened the lands and they saw the whole sky picked out and adorned with stars, and the varying lights of the moon as it waxes and wanes, and the risings and settings of all these bodies, and their courses settled and immutable to all eternity ; when they saw those things, most certainly they would have judged both that there are gods and that these great works are the works of gods.".

65 Hutchinson and Johnson, p. 37, Iamblichus**,** VII, 44. 9-13. Another fragment confirms this position (p. 37, Iamblichus, VII, 44, 17-20): "If living is valuable because of sensation, and sensation is a kind of cognition, and we choose it because the soul is capable of recognizing by means of it…"

66 David Ross trans. fragment 12; this passage was found in Cicero's *De natura deorum* (37).

What differences do we find between this development and a myth of Pythagorean obedience such as the myth of the cave? Fundamentally the difference is this: the stage preceding contemplation is no longer described as hell or purgatory – a form of damnation that man must redeem with his own life; there is no reference to original sin, a fault to be compensated for, a debt to the gods that must be repayed by a denial of the body or the sacrifice of a few oxen. On the contrary, in this state men already live a life of opulence and joy. But they are deprived of the contemplation of the heavens and this is why they cannot know that the gods exist and that all the beauty of the world is their doing.

Yet, if we opt for this thesis an obstacle soon appears. For if men already live in opulence and happiness, what need would they have of gods?[67] In reality all this opulence and happiness are artificial; what we find here is just a show of happiness – ostentation at worst. True happiness in life, the supreme happiness that is later the subject of the two *Ethics*, is to try to reach that part of one's soul that engages with the divine. Indeed Aristotle concludes his letter with this argument:[68]

> So nothing divine or happy belongs to humans apart from just that one thing worth taking seriously, as much insight and intelligence as is in us, for, of what's ours, this alone seems to be immortal, and this alone divine.

Having reached the end of our reading of the *Protrepticus*, it is time to summarise what we have learned about Aristotle's early conception of time. If we follow the path it lays down, eternity appears as anterior to

67 We shall see that this relates to a different religious tradition, the Iranian conception that Plato would adopt at the end of his life. The same tradition was followed by Nietzsche, through a return to an old esoteric doctrine arising out of Zoroastrianism. The Zoroastrian texts from the Sassanian period in Iran (and perhaps also older texts, though this would require verification) explain that the world will continue for 9,000 or 12,000 years, depending on whether time unfolds over two or three trimillennia. The second or third trimillennium launches the entire cycle and human beings; the third or fourth sees the end of the overall cycle, with the coming of Zarathustra. On this question Jaeger provides the following information (*op. cit.*, p. 132): "From that time onwards the Academy was keenly interested in Zarathustra and the teaching of the Magi. Plato's pupil Hermodorus discussed astralism in his *Mathematics*, he derived the name Zarathustra from it, declaring that it means 'star-worshipper'." This phase is known to mark the end of the struggle between good and evil, between Ormuzd (the good, who would become Zeus) and Ahriman (the bad, who would become Hades).

68 Hutchinson and Johnson, p. 42; Iamblichus, VIII, 48. 9-13.

human temporality. Knowledge of eternity appears necessary to the government of the soul so that, when it decides to take singular, temporal form, it is guided by the right rules that will lead to the construction of Good within the City. But it is vital to note that there is a time, a moment of transition, a "rite" that enables man to realise that it is he who produces time. Hence we can suggest that the Platonic myths discussed emphasise a crucial moment in which man realises that time is not external to him, as others think, but that on the contrary the appropriation of time turns him into a philosopher capable of governing himself. At this point Aristotle is still within the Pythagorean tradition and influenced by the later thought of Plato – which was that of the entire Academy. So he accepts that it is possible to have access to an immediate or initial form of contemplation that will guide human steps once and for all. This is the contemplation of the heavens, the only place where a temporal constant has always reigned, a permanent cycle of which the philosopher's behaviour is the reflection. But for Aristotle the heavens are also the metaphor most compatible with the nature of the divine. To imitate the heavens is thus to imitate the nature of God; it is to have access to the divine nature within us, which the sage must copy in order to attain the most excellent happiness and the most perfect life.

So here in concise form is what we can say about this early conception of time. In clearing the ground on which to set out the questions we will consider, we should emphasise that this initiatory conception of time describes circular time. We shall seek to locate its historical origin within the world of poetry and myth. We shall then see whether this temporal vision has a precise astronomical source. But first and foremost we need to set out the second conception of time developed in this letter. For several passages lead us to think that there are other conceptions that are not reducible to the initiatory vision mentioned above. We believe that these early considerations show the emerging outline of a singular understanding of time within Aristotle's philosophy. We shall now demonstrate this by commenting on extracts from this letter.

b. From temporality to eternity: on wisdom over the long term.

The second conception of time developed in this text locates eternity at the end of time. Eternity no longer triggers a series, but interrupts it, if we are to maintain the mathematical comparison; to express the same thing without comparisons, eternity is what completes time. So it is located in the final instant that ends all of time past: the death of human beings. Here we have the foundation on which Aristotle will go on to build his entire conception of time, centred on the concept of entelechy.[69] This conception is no longer Platonic, since the soul seems to die at the same time as the body,[70] indicating that the concept of life after death that has been rejected and with it the doctrine of reincarnation. We now propose to demonstrate that all this is radically anti-Platonic.

Firstly, Jaeger tells us:[71]

> Alongside the Platonic view that the soul remembers the other world he sets his thesis that it remembers this one.

So Aristotle puts an end to traditional, cyclical time, the time of metempsychosis, in which souls are caught up in a universal cycle and merely pass through a body. His discussion implies a time that correlates with the time of the body. The soul is subject to the same time as the body. This is why wisdom can only be attained at the end of a biological human life. Aristotle subsequently retained this conception of time until the end of his life. Here we have the first outline of the Aristotelian concept of entelechy, the first attempt to bind soul to body in a coupling later reinforced by his entelechic

69 Entelechy (*εντελεχεια, entelekheia*) relates to the future. To put it simply, in the context of this introduction, the notion of entelechy does not involve a simple relationship between the future and becoming (teleology) and nor does it imply the theological notion of Providence, still less the late Protestant notion of progress. Here we can confine ourselves to the formulation proposed by Sophocles: "Many things shall mortals learn by seeing; but, before he sees, no man may read the future or his fate." *Ajax*, vv. 1418-1420, trans. Richard Claverhouse Jebb.

70 A short article by Thomas More Robinson provides a clear, simple analysis of Platonic dualism: "Caractères constitutifs du dualisme âme-corps dans le corpus platonicum", *kairos kai logos*, 11, 1997, pp. 1-28.

71 Jaeger, *op. cit*., p. 51.

conception in a near perfect philosophical essay.[72] However, if the circle of Heaven gave continuity to Platonic time, as we have seen in the myth of the cave, how does Aristotle reestablish continuity once he has abandoned that analogy? What will provide the continuity that is necessary to the permanence of both the heavens and physical phenomena? How can Aristotle explain the continuous *duration* of human lives and still more of human institutions? We shall provide a more theoretical analysis of these questions in our next book. We shall now begin by describing the general time mentioned by Aristotle in the *Protrepticus*. We shall seek to understand this conception of time in the light of its historical context, before moving into the theoretical field.

First, does Aristotle accept that human beings go through a "process" of improvement? For we observe that human beings develop from the condition of children whose actions are not guided by laws to the wisdom of old age prior to death. Is time the only guarentee of this evolution? Let us see what Aristotle tells us. He suggests that children are devoid of wisdom and cites the common phrase:[73]

"No knife for a child."

In his eyes adults without culture are like slaves[74] who make choices only by imitation. According to Jaeger, he takes an extract from one of the papyri of Oxyrynchus found in Egypt:[75]

72 From the outset Aristotle's concept of entelechy is linked to the relationship between the body and its soul. If, like the body, the soul dies, there is no longer any formal anteriority of the soul in relation to the body, leading to the following synthesis in *On the Soul*: "Now given that there are bodies of such and such a kind, viz. having life, the soul cannot be a body; for the body is the subject or matter, not what is attributed to it. Hence the soul must be a substance in the sense of the form of a natural body having life potentially within it. But substance is actuality, and thus soul is the actuality of a body as above characterized." II, 1 412a 16-22, *The Complete Works of Aristotle*, vols. 1 and 2, ed. Jonathan Barnes, Princeton University Press, 1984.

73 Chroust's translation introduces a paraphrase by Stobaeus (III, 3.25) also noted by Hutchinson and Johnson (p. 6) "The saying 'no knife for a child' means 'don't put power into the hands of the bad.'" To avoid getting involved in philological disagreements, we have cited only the fragments found in the *Protrepticus* of Iamblichus, which is why we think it unnecessary to follow Stobaeus' paraphrase.

74 In Greek as in Latin, the same term refers to both a child and a slave: *pais puer*. This is the same neutral approach to childhood, *Les Athéniens à la recherche d'un destin*, p. 187.

> Just as a man would be a ridiculous figure if he were intellectually and morally inferior to his slaves, in the same way we must believe a man miserable if his possessions are more valuable than himself … Satiety begets wantonness, says the proverb. Vulgarity linked with power and possessions brings forth folly.

We should state that in the *Constitution of the Athenians* Aristotle attributes the citation of this proverb to Solon, linking it more closely to the political sphere, which seems to conform more to the initial meaning conveyed by the original here.[76] But in the *Protrepticus* the literal sense can be retained. Children are indeed the first stage of a development towards wisdom, with layers that should be reflected in the social hierarchy. The wisest will necessarily also be the oldest and consequently should hold the positions of greatest power. Lastly, even in the absence of any real culture, old age seems to give human beings a certain authority. In every case, Aristotle says, when man is close to his end, he is necessarily close to his completion and consequently there must be something of the Good in him. So there is a certain precedence of body over soul in terms of what *results*, which is the complete opposite of the Platonic conception that we discussed earlier. This is how Aristotle conveys his argument:[77]

> Further, if in everything the end is always better (for everthing that comes to be comes to be for the sake of the end result, and what is for the sake of something is better, indeed best of all), and the natural end result is the one that in the order of development is naturally last to be achieved when the development is completed without interruption, surely the first human parts to acquire their end are the bodily ones, and later on the parts of the soul, and somehow the end of the better part always comes later than its coming to be. Surely the soul is posterior to the body, and intelligence is the final stage of the soul, for we see that it is the last thing to come to be by nature in humans, and that is why old age lays claim to this alone of good things.

If we follow the *Protrepticus* to the letter, we must think first that human nature follows a temporal path from birth to death.[78] This

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75 Jaeger, *op. cit*., p. 57 (note 6, p. 435). We have cited the extract cited by Jaeger, (fragment 57 of *Pap. Oxyrh*. Vol. IV, pp. 83 sq.) of which Aristotle provides only a part.

76 Aristotle, *Constitution of Athens*, XII, 2, ed. Barnes.

77 Hutchinson and Johnson, p. 48, Iamblichus, IX 51. 16-52. 5.

78 This precedence is nothing more or less than respect for human life and, more generally in Aristotle's work, for biological life including all non-human species (animals and plants). Life precedes all thought, which is why the study of animals and plants is one of the finest manifestations of this respectful approach to life. See for example Aristotle's *On Length and Shortness of Life* in Barnes vol. 1.

temporality is then split into the two correlative times of the body and soul. It is beause these times are so to speak "homogenous" that the evolution of the one leads to the evolution of the other, in other words it is not possible for wisdom, the end of the time of the soul, to exist at the beginning of the time of the flesh, in childhood. Similarly and reciprocally, it is impossible for the end of the human body not to be accompanied by a degree of wisdom. It is impossible for an old man to have a child's unregulated soul. While the genetic evolution of human beings may be natural, how does cultural wisdom have time to develop? Time may be a necessary criterion, but it is certainly not enough.[79] The soul develops through education, which is, Aristotle tells us here, the minimum condition for the acquisition of happiness. And while animals quickly acquire a degree of independent life, human beings must constantly employ a great many arts to ensure their survival until their biological end:[80]

> For example, to begin with, even with reproduction, some seeds presumably germinate unguarded, whatever kind of land they may fall onto, but others also need the skill of farming; and, in a similar way, some animals also attain their full nature by themselves, but a human needs many skills for his security, both at first in respect of their birth, and again later, in respect of their nurturing.

The young Aristotle divides engendered things into those engendered by nature and those engendered by art, but both move towards a goal (those engendered by chance have no goal). Nature tends towards a goal higher than that of human art, since the arts are content merely to imitate Nature.[81] For this reason, in order to attain wisdom, the ultimate goal of education, human beings must employ many arts to

79 However, if these two temporalities evolve in correlation, what is the point of teaching wisdom to young men whose natural time prevents them acquiring it? Plato would reply that the teaching of wisdom and philosophy is only possible by constructing myths. Proof of this can be found in the passage in which Protagoras ponders this question in the presence of Socrates: "Shall I, as an elder, speak to you as younger men in an apologue or myth, or shall I argue out the question?" and comes up with the answer, "I think that the myth will be more interesting." Plato, *Protagoras*, 320c (trans. Benjamin Jowett). Meanwhile, in accordance with his conception of power, Aristotle maintains that it is better to give them the "capacity to" become wise. Morning classes at the Lyceum were addressed to those members of the School who were likely to become philosophers themselves, Jaeger *op. cit.*, p. 316.

80 Hutchinson and Johnson, p. 46, Iamblichus, IX, 49. 26-50.12.

81 For a good introduction to this, see Michel Crubellier and Pierre Pellegrin, *Aristote. Le philosophe et les savoirs*, Seuil, Essais, 2002, pp. 235-260.

reach the same autonomy as natural things that ensure their own survival.[82] Here we have the reason why philosophy must necessarily be a synthesis of all the other arts. In order to be sure of acquiring the full *autarchy* of his soul, a man must master philosophy, the art of the individual arts. A second reason for this can be seen in the history of philsophy, which was chronologically the last art to emerge in Athens. As the end is also the completion of something, the fact that philosophy emerged after the other arts clearly shows that it is the quintessential art, fully completing all the individual arts.

So we can witness Aristotle's conception of time becoming consolidated and, in so doing, moving further away from Plato. The time of the soul correlates to that of the body. This necessarily leads to the idea that cyclical time is no longer present. This becomes the fundamental idea of Aristotle's ethical edifice. We must understand that this is all made possible solely by the presence of the body, which supports the cultural timespan in which, as we shall see, the habitual (*éthos*: ethical) aspect of human beings can emerge. The whole conception is wrapped in a primary, fundamental respect for human life, which is part of overall biological life including animals and plants.[83] From this, it becomes clear that Aristotle locates the human condition in the interval between birth and death, which is the span of a possible ethics. But more importantly, it is the end that governs the unfolding of the temporal series. This is true of both human time, which relates to the body, and history, as shown by the status of philsophy itself. The greatest degree of perfection necessarily comes at the end, which is why philosophy is indisputably the quintessential art. In sum, the "end" is the completion of all things. From this starting point it is apparent that, while this philosophy is an argument for temporal continuity culminating in Aristotle's concept of *habit* in his *Ethics*, analysis of the "end" that governs all this temporality will

82 This ideal of autarchy, which was conveyed by the primarily Athenian culture, finds perfect expression in a passage from the *Politics*: "Besides, the final cause and end of a thing is the best, and to be self-sufficing is the end and the best", I, 2, 1252b 8, trans. Barnes.

83 In this regard it is noteworthy that when Aristotle analyses the political domain he uses the term *zôon politikon*, the animal of his *Politics*, the man in the city, and so remains anchored in the biological dimension, which human beings share with the other species of Nature, *Nichomachean Ethics*, I, 5, 1097b 11, IX, 9, 1169b 18, VIII, 14, 1162a 17-18, *Eudemian Ethics*, VII, 10, 1242a 22-23; *Politics*, I, 2, 1253a 7-8.

plunge us back into eternity.[84] While, etymologically speaking, the Greek term "entelechy" (*en-tel-echia*) signifies "that which possesses the end", its meaning will still be impossible to determine if we do not know which "end" (*télos*) Aristotle is arguing for here. So analysis of Aristotle's concept of time must necessarily involve a fundamental understanding of the concept of entelechy, and this conception itself will necessarily be dependent on the envisaged end. Given the scope of these questions, we shall try to contain them within the context of a historical analysis. Such is the justification for the present study. Why not begin with an analysis of Aristotle's concepts? Because Aristotle was first and foremost a great witness to his times and a great historian. All his concepts thus have profound historical and social dimensions. To sidestep these aspects would be to view his work only in terms of logic and connotation. But as most commentators have noted, Aristotle is a philosophical realist. So we need to "realise" his concept of time or, as modern linguistics has it, "denote" it within his world.

But let us now return to the questions we have sought to discuss on the basis of the *Protrepticus*. We have identified a conception of time that differs radically from the one we presented in the previous section. The time of the philosopher's soul is no longer set in train by an earlier knowledge; eternity appears at the end of the course of human life. The whole is consubstantial with temporal completion. This is why the vision of a certain totality, the Good that is correlative with happiness and supreme wisdom, can be acquired only after a long journey through human time. True wisdom is thus necessarily consubstantial with old age. However, the following questions remain:

84 The establishment in the *Protrepticus* of the twin terms "capacity" and "activity", which together form the concept of "entelechy", is not a thesis we have projected onto the text for the purposes of argument. It becomes even clearer if we accord the following fragment its proper value: "Thus this is what it is to use anything: if the capacity is for a single thing, when someone is doing this very thing, and if the capacity is for a number of things, when he is doing the best of them; for example, with flutes, one uses them either only when playing the flute, or most of all then, as its other uses are presumably also for the sake of this. Thus one should say that someone who uses a thing correctly is using it more, for the natural objective and mode of use belong to someone who uses a thing in a beautiful and precise way." Hutchinson and Johnson, p 56, Iamblichus XI, 57.23-58.3. See also # 75. "The word 'living' seems to mean two things, one with reference to a capacity and the other with reference to an activity." p. 55.

what is the relationship of this end to the continuous movement of time? How should we understand the concept of entelechy in relation to human lives? Is the human soul engaged in time? Is there a future for human beings in the world they are part of? Can we really speak of an abstract future, as though there were some kind of *world soul*? In other words, how will Aristotle explain time, and notably its continuity, on the basis of the premises set out in his *Protrepticus*?

In the next part we propose to clarify the division we have used in this commentary. On the one hand is an initiatory time for which Plato argues. This time is circular, like the movement of the stars in their sphere. It is the circularity of this time that guarantees its permanence, in other words its continuity. On the other hand Aristotle can be seen as the first philosopher to formulate a strictly philsophical conception of time. This being so, can we identify the sources of his analysis? What notions did Aristotle borrow in order to form this concept of time? Is his intuition philosophical, theological, or poetic? In the first instance we shall seek to flesh out the Greek notion of time through a historico-sociological approach, in order to identify Aristotle's sources. In so doing we shall adopt the methodology proposed by Schuhl, in whose view:[85]

> To give the thought of the philosophers of a particular country and time its full value, we must first be able to relate it to its preceding periods and relocate it in the social milieus within which it developed.

We should note that the *historico-sociological* method as developed by Schuhl should not be confused with the *historico-comparative* method used in philology, the ashes of which provided Saussure with the terrain on which to build modern linguistics. Far from constituting any kind of conceptual determinism, this method simply reveals the conditioning affecting conceptual functioning while also providing the *a priori* conditions if its existence.[86]

We shall start by considering conceptions of time in the work of the epic and tragic poets. We shall then analyse circular time in Hesiod's

85 See the Preface to Schuhl's doctoral thesis, published as *Essai sur la formation de la pensée grecque*…, *op. cit.*, p. XI.

86 However, what these two conceptions have in common is a refusal to use language as the starting point to conceive the concept. Saussure would say: "starting from words in defining things is a bad procedure", *Course in General Linguistics*, Wade Buskin trans., Perry Meisel and Haun Saussy (eds.), Columbia University Press, 1959, p. 14.

mythology and in Orphic theophany. Finally we shall leave circular time behind to discuss the Ionian heritage in Aristotle's thought. We shall also consider Plato's approach to time, to the extent that it can be disentangled from the mythological thinking to which it seems irreversibly bound. We shall then see Aristotelian time gradually emerging from its cultural environment and historical heritage, before analysing it in more detail in our next book. However, we should not be too hasty in separating history from philosophical modeling since, as we shall see, most of the questions posed in the historico-sociological approach will return at the philosophical and metaphyiscal levels. Metaphysics always moves from the conceptual back to the real. This is why, for example, at the ethical level Aristotle is also fascinated by proverbs. More logically, our historico-sociological approach will provide a conceptual framework for our investigation, a set of possibilities that will then be reduced in a scientific manner in order to isolate our key concept of entelechy. Let us repeat, the concept of entelechy is the nub of the conception of time in Aristotle's philosophy; it is the sun, to use a heliocentric metaphor, or the earth if we follow other models.

Having rooted our discussion in the corpus with a commentary on the *Protrepticus*, Aristotle's first text, we can now contextualise it within his sociological and historical environment. In so doing, we will refer to several of Aristotle's minor texts, their historical accounts providing us with milestones on our philosophical journey.

II. TIME IN GREEK TRAGIC POETRY AND IN HOMER'S EPIC POETRY.

UNFINDABLE CIRCULAR TIME

> With Greece we reach one of the points at which a break occurs in the circle to which humanity so often falls prisoner.
> Pierre-Maxime Schuhl[87]

Ancient and classical Greece had a circular conception of time, or so states the *doxa* passed on by all the Germanic philosophers and others. Into our own century and for reasons that remain obscure, these thinkers have all insisted that time in the Greek tradition was circular, basing their view on either Plato or the Pre-Platonics. Immanuel Kant alone escaped this extraordinary mistake in his rigorously argued approach to time, and perhaps also Søren Aabye Kierkegaard, who avoided it by returning to the foundations of Christianity.[88] The same cannot be said of Kant's successors, including Hegel with the circular phases of his *Phenomenology of Mind*,[89] Nietzsche with his myth of the eternal return[90] and Martin Heidegger with the circularity of his concept of *Dasein.*[91] Since the establishment of German ideology,

87 *Essai sur la formation de la pensée grecque. Introduction historique à une étude de la philosophie platonicienne*, PUF, 1949, p. 66.

88 The philosophy of Søren Aabye Kierkegaard is free of ideology, which is why no circular time is to be found in his thought, any more than the ideology of a return to the Greek ideal.

89 Having read with great interest Christophe Bouton's *Temps et Esprit dans la philosophie de Hegel de Francfort à Ièna*, published in 2000 by Vrin, it seems to us that Hegel's theory of time owes more to Judeo-Christian eschatology than to an Ionian theory of time. However, this view is tempered when we recall that the young Hegel wrote his doctoral thesis on astronomy (*Philosophical Dissertation on the Orbits of the Planets*, Pierre Adler trans., *Graduate Faculty Philosophy Journal* vol. 12, 1/2 1987). Before drawing hasty conclusions about Hegel's ideas, we should determine whether the astronomical models he studied offered him a temporal model that could enable him to leave behind the Christian eschatology to which he was so devastatingly bound.

90 We shall return to this model in the course of the present work.

91 On Martin Heidegger, see paragraph 63 of *Being and Time* in which he asserts and indeed confesses, "To deny the circle, to make a secret of it, or even to wish to overcome it means to anchor this misunderstanding once and for all. Rather, our attempt must aim at leaping into this "circle" primordially and completely, so that even at the beginning of our analysis of Dasein we make sure that we have a complete view of the circular being of Dasein." Joan Stambaugh trans., revised by Dennis J. Schmidt, State University of New York Press, 2010, pp. 301-302. The circularity of *Dasein* underpins Heidegger's theology. In his book *Heidegger, Aristote, Luther. Les sources aristotéliciennes et néo-testamentaires d'Etre et temps* (Vrin, 2005) Christian Sommer offers a perfect analysis of the meaning of this position: "Between the starting point (sin) and endpoint (perfection), only the three

there has been an underlying thesis suggesting that Greek time was circular. And it is through this return to the Greek ideal that the proof of circularity is provided. Under cover of conceptual innovation, these philosophies in fact envelop time in a mythology of the Platonic type. As the present work is not a study of German philosophy, we shall simply note that this circular conception of time, said to have its origins in the Greek tradition, or projected onto this tradition for religious or ideological reasons, is really the starting point for a conception that cannot be reconciled with reason, since reason always makes room for succession, as Kant so clearly shows in his *Critique of Pure Reason.*[92]

Kant's rationality runs counter to the Germanic ideology. We need to return to the Greek sources in order to permanently distance ourselves from the Germanic ideology inherent in Hegel, Nietzsche and, above all, Heidegger.

So we shall ask the following question: was Greek time circular? We shall not claim to give a definitive answer. However, if the discussions that follow can shed a little light and provide a few rational outlines of the notion itself, we shall feel the right groundwork has been done for something we shall not touch on at all

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terms *fiera* (justification) /*esse* (justice) /*agere* (good works) properly constitute progression, a circular movement, a sempiternal circuit (*currunt semper*). The Christian moves from sin to justice, from spiritual non-being (*non esse in spiritu*) to spiritual being (*esse in spiritu*), through justification, and this justification is his spiritual destiny (*fiera spiritu*)" p. 58. The end of this work even suggests an exit worthy of this philosophy. How are "sin", "anxiety" and "worry" to be escaped? Simply by reading St Augustine: "Let us look more closely with St Augustine 1 at John IV, 18, 'There is no fear in love', and the continuation of this verse, which Heidegger did not cite, 'But perfect love casteth out fear.' Fear is an introduction to love: 'Fear prepares a place for charity. But when once charity has begun to inhabit, the fear which prepared the place for it is cast out', p. 270. It is by charity that we free ourselves from fear and this also means that time seems to open up before us, in what we call the future. Cf. also André Comte-Sponville, *L'être-temps*, PUF, 1999, p. 98: "Here we must lift Heidegger's prohibition, free ourselves of fear and anxiety and return to the Greeks, to *ousia* as presence and to the parousia of the world: being is being present and there is nothing else."

92 It is precisely this succession that entails the notion of numerical series in Kant's reasoning: "Time is in itself a series (and the formal condition of all series), and hence, in relation to a given present, we must distinguish a priori in it the antecedentia as conditions (time past) from the consequentia (time future)", *The Critique of Pure Reason,* trans. J.M.D. Meiklejohn, http://www.gutenberg.org/files/4280/4280-h/4280-h.htm.

in the rest of our work, which is the religious conception of the circularity of time. We shall, moreover, provide the rational proof of this illusion only in the theoretical section, in the context of a commentary on Aristotle's *Physics*. We shall seek to follow Aristotle's argument that while a conception of the heavens may be circular insofar as the heavens have no awareness, such a conception cannot be applied to human time, since human awareness cannot accept that a future moment passes through the present into the past (or conversely), thereby forming a circle or cycle; otherwise we would be obliged to accept the co-existence of two present moments, which is impossible.[93] Analogy with the time of the heavens (*Ouranos*) to describe the movement of the time of the soul is thus a dangerous illusion for an understanding of human lives. But we shall leave theory and this Parmenidian argument aside for now and review the philosophical tradition. Was the time of the Greek tradition circular, or are we in the presence of a *transcendental illusion* fostered by religions through doctrines of *emanation*? Let us start by considering the poetic register with a brief discussion of the tragic authors and the work of Homer.

a. On fate, or tragic poetry as a technique for veiling time.

The first suspicion in this regard appears in the work of the Hellenist Jacqueline de Romilly, who, in her important *Le temps dans la tragédie grecque*, suggests the need for circumspection in relation to this old chestnut of academic philosophy:[94]

> It is generally agreed that the Ancient Greeks favoured that which remains over that which changes, permanence over evolution. They have readily been attributed with doctrines such as those of cyclical

93 In a lecture given at the École Polytechnique on 11 May 2006, the physicist Etienne Klein used the same argument to account for this impossibility. He backed up his thesis with the following demonstration: for there to be a second circle that remains the first, the *sine qua non* of the notion of return, the system in question would have to have forgotten the first circle in order to undertake a new curve. This argument is pertinent, as we shall see that the question of forgetting is an important aspect of Pythagoreanism, which also maintains that time is circular. The issue of *forgetting* is to universal time what *privation* (*steresis*) is to physical time.

94 Jacqueline de Romilly, *Le temps dans la tragédie grecque*, Vrin, 1995, (1971), pp. 26-27.

> time and the eternal return. This aspect has been greatly exaggerated. However, it is true that they liked the idea of an orderly cosmos or universe, in which time presided over regular alternation, rather than open-ended progress or perpetual transformation. For them time was something of a threat. It was not an evolution they wanted to be part of.

In support of her thesis Romilly revisits the works of the tragic poets (Aeschylus, Euripides, Sophocles), leading rapidly to a strange observation: time seems to be completely absent from the work of the poets. Neither divine nor objective, and still les sacred, time seems to be a floating notion, to which each poet strives to give form. Observing this, Romilly suggests:[95]

> Time did not exist in the Greek tradition. The Orphic poets may have been the first to give it a place. But in the literary works that have survived to this day, we can see that, as the importance of time is discovered and grows, each poet is led to give it ever more personal, living features.

We shall shortly undertake an analysis in greater depth to see whether there was indeed an Orphic influence on the Greek model of time. On the other hand, we should like to add a few details to the idea that all the tragic poets developed a subjective, singular conception of time. From the works that have been preserved[96] it does seem that none of these bards developed an objective, let alone circular conception of time, or took for themselves *the lion's share.*[97] Let us begin with a few

95 Romilly, *Le temps dans la tragédie grecque*, p. 41.

96 We should note that out of almost a thousand literary works composed by the tragic poets, only 32 have been preserved. For example, Sophocles wrote 123 works, but is known through only seven of his tragedies. This led Goethe to say, in his writings on art, "How little of what has happened has been written [and] how little of what has been written has been saved!" So we need to be cautious in attributing any one conception to any particular bard or rhapsode.

97 There is a priori no relationship between time and the figure of the lion in the Greek world other than that influenced by later Mithraism. However, time does appear in the form of a lion in many representations, which seem to have Mithraic and Iranian sources. Brisson suggests: "Following Jørgen Zoega, Franz Cumont saw a personification of Time in the lion-headed divinity who may even have been called Aïon ("*Saeculum*"), a name frequently given to him by modern specialists. Then, going back from Mithraism to its Iranian sources, he also adopted the hypothesis that this Mithraic divinity was a replica of the Iranian Zurvan Akarana ("boundless time")." in "La figure de chronos dans la théogonie orphique et ses antécédents iraniens", *art. cit.*, p. 47.

pieces of the remarkable intersubjective mosaic that is time as told by the tragic bards. Sophocles, in his play *Electra*, observes:[98]

> Time is god who makes rough ways smooth.

And in his *Ajax*:[99]

> All things the long and countless elapse of time / Brings forth, displays, then hides once more in gloom […] From her weary round doth Night withdraw / That Day's white steeds may kindle heaven with light […] Sleep that masters all, / Binds life awhile, yet loosens soon the bond.

A little later in *Ajax* we find:[100]

> Mighty is time to dwindle all things.

Meanwhile Euripides, said to be the most tragic poet, says in his play *Bellerophon*[101] that Time "from no Father springs", personifies it as "Father Time" in his *Suppliants*[102] and, in *Heracles*, speaks of its "onward roll". But this fragment also suggests that for Euripides: [103]

> Time recks little of preserving our hopes; and when he has busied himself on his own business, away he flies.

Lastly the following fragment is also attributed to him:[104]

> In an unbroken movement Time tirelessly pursues its eternal course, engendering itself.

Meanwhile Pindar accepts that time is "father of all"[105] and crucially attributes it with the important function of being,[106]

> ...alone in truly testing Truth.

Solon, who was also a great poet, similarly counts on time to "reveal truth". Lastly, and in the same way, Theognis declares that time is:[107]

> ...made of light

What does this mean? Simply that each poet looks at time in his own way and seeks to give it a definition that fits the situation in his narrative. Time appears *in situ*, adapted to the characters and at the

98 Sophocles, *Electra*, l. 179, trans. R.C. Jebb.
99 Sophocles, *Ajax*, ll. 646-647, trans. R.C. Trevelyan.
100 *id*, 668-673.
101 Euripides, *Bellerophon*, l. 303.
102 Euripides, *The Suppliants*, l. 787.
103 Euripides, *Heracles*, ll. 670, trans. E.P. Coleridge.
104 Fragment of Pirithous attributed to Euripides and cited by Reynal Sorel, *Orphée et l'orphisme*, PUF, 1995, p. 49. See also the fragment attributed to Heraclitus, DK B1: "Time in his endless course Gives birth to endless days and nights", Sophocles, *Oedipus at Colonus*, trans. F. Storr.
105 Pindar, *Olympian*, II, ll. 17-19.
106 Pindar *Olympian*, X, ll. 53-54.
107 See also the fragments of Simonides of Ceos and Simonides of Amorgos cited by Schuhl, *op. cit*., p. 160.

right time (*kairos*). To use a Latin term, we can say that this time is the *tempus* of human beings, it is a singular time. Marcel Conche describes this very well in his discussion of Greek time:[108]

> For those who are "inside" time, it means having only a limited lifespan, a share of time. It is here too that, for the Greeks, the notion of "fate" *μοιρα* (from a word meaning "share", "lot", and *μειρομαι*, be allotted), originally meant that everyone has only a limited share of life, a share of time.

In sum, it seems that it is impossible to theorise or objectify time[109] and, furthermore, that the objective, circular conception is unknown to Greek tragedy, or to the epic and, by extension, to the Greek *doxa*. Time seems consigned to subjectivity, or at least remains bound to the action of a subject *in situ*; it is a singular *tempus*.

We can also return to Aristotle's *Poetics* for a satisfying confirmation of this position. It is truly surprising to note that Aristotle does not discuss time at all in this work. It contains nothing that bears any relationship whatsoever to the notion. Here is a semantic analysis that gives no time whatever to time. If we accept, with Aristotle, that the purpose of poetry is pleasure, it is easy to understand that time has nothing to do with it.[110] Pleasure is never deferred, it is instant and arranged in space, the spatiality of theatre that denies the temporality of the book.[111] Indeed this is why a tragedy must remain within the frame of a single "circuit of the sun"[112] in order to be staged. We should state that this single occurrence of time in the *Poetics* does not in fact separate the tragic genre from the epic, which does not have the same constraints of space and hence of time, as Victor Goldschmidt indicates:[113]

> The well known instruction (ignored throughout the rest of the treatise) concerning the revolution of the sun does not seek to describe the time of tragedy, which has its own measures that depend on the

108 Marcel Conche *Temps et destin*, De Mégare, 1980, p. 1.

109 We know this was the view taken by Michel de Montaigne, a great reader of the Greek poets. Conche adds: "Montaigne perhaps follows Epicurus, who did not want time to be defined, saying, 'We need not adopt any fresh terms as preferable' (*Letter to Herodotus* §72); for the starting point for thought should be time itself, as it immediately and obviously appears (*energia*)". Ibid., p. 9.

110 Victor Goldschmidt, *Temps physique et temps tragique chez Aristote*, p. 220.

111 Indeed Aristotle said, "It is with good reason, then, that they aim at pleasure too, since for everyone it completes life, which is desirable". *Nicomachean Ethics*, X, 5, 1175a 16-17, trans. Barnes.

112 Aristotle, *Poetics*, 1449b, trans. Barnes.

113 Goldschmidt, *Temps physique et temps tragique chez Aristote*, p. 346.

> unity of action […] it simply serves to distinguish the 'scope' of tragedy from that of the epic poem.

So in the *Poetics*, time seems constantly to be linked to space through the intermediary of action, which Aristotle regards as the driving force of the poetic genre. We could also suggest that in his discussion Aristotle misunderstands poetic activity, noticing only its technical aspect and so ignoring its true internal dimension.[114] However, this would be to forget that he himself wrote a number of poems[115] and that he devoted at least five books to the genre: the dialogue *On Poets*, *Homeric Problems*, *Victories at the Dionysia*, *Didascaliae* and the collection *On Tragedies.*[116] More theoretically, we shall draw on the authoritative judgement of Goldschmidt, who devoted a particularly fine book to this subject. What Aristotle observed was that objective time is absent from the narrative structure of the poetic act, be it epic, tragic or comic, and this is how Goldschmidt communicates this surprising fact to us:[117]

> From here we could end by questioning the role of time in the *Poetics*. It has rightly been said that[118] Aristotle gives no metaphysical foundation for time in poetry, while his treatment of time in the *Physics* (IV, 10-14) has no identifiable relationship to this question. So it must be accepted that this treatise can provide only elements of a response to a question which it never poses as such.

We base the authority of our judgement on this work which, itself, finds authority in the work of Else, indicating that conviction always seems to arise out of collegiate agreement. There is a unanimous acknowledgement that time is absent from this text and this unanimity will serve as proof – at least we believe that this is enough for a particular belief to carry the day.[119] Moreover, when dealing with the

114 In this passage we are responding to what seems to us a highly partial attack by Florence Dupont who, in her pamphlet *Aristote ou le vampire du théâtre occidental* (Aubier, 2007), suggests that Aristotle disembodied tragedy.

115 The *Hymn to Hermias* shows that Aristotle was no novice as a poet. Cf. Jaeger, *Aristotle…*, pp. 116-117. It was this hymn that led to Aristotle's condemnation at the end of his life.

116 Goldschmidt, *Temps physique et temps tragique chez Aristote*, p. 400.

117 *Id.* p. 407.

118 Gerald F. Else, *Aristotle's poetics…*, 1957, p. 575, n. 15, cited by Goldschmidt.

119 Indeed in *On the Soul* III, 3, 428a 20-24, p. 681, Aristotle says, "But opinion involves belief (for without belief in what we opine we cannot have an opinion), and in the brutes though we often find imagination we never find belief. Further, every opinion is accompanied by belief, belief by conviction, and conviction by discourse

poetic register, we have decided not to use demonstration, in order to respect the material on which we are working. This said, we should add that at the end of his remarkable book on physical and poetic time in Aristotle's work, Goldschmidt is brought up short by the following question: how is it possible that the category of time, which is so important to Aristotle, notably for an understanding of his *Physics*, is absent from literature? How can poetry, a genre so intimately linked to being, in which being writes of itself, neglect this dimension? So it comes as no surprise that Goldschmidt makes the same observation as Romilly concerning time in general and circular time in particular. There is no objective time in Greek thought, and no circular time either, to judge from the tragic genre:[120]

> Lastly, we can see that there is nothing here to support the commonplace view that the Ancients knew only "cyclical time". Similarly, it is not the circle that conflicts with physical time, but the whole that Aristotle locates outside of time, which he has not explicitly linked to the infinite duration enjoyed by eternal beings, but which Plotinus calls eternity. That Hegel used this term in his own theory of time may attest to the fact that this is not an archaeological undertaking.

What more is there to say? Except perhaps that this statement clearly sets out the investigation that we seek to pursue in the present discussion. Firstly, let us accept that there is no conception in Greek tragic poetry that supports the idea that time is circular. Secondly, let us note that, if we wish to consider time in Greek culture, this is not, as Goldschmidt so well says, "an archaeological undertaking". It will be readily understood that the maintenance of the subjectivity of time within the poetic genre enabled each person to take his or her *alotted time*. So time can be seen as *subjective,* precisely in accord with the wish, always manifested by the poets, not to steal the other's speech, not to strip others of their own time, but to give individuals their own *alotted time*. We can say that there is no theoretical model of time in Greek poetry since this would be part of the Greek cultural environment itself. And there does not seem to have been any objective time in this period, at least not as we understand it today.

So it is important to stress that, if we accept that some kind of time does exist in Greek poetry, this is merely due to the projection of

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of reason, while there are some of the brutes in which we find imagination, without discourse of reason."

120 Goldschmidt, *Temps physique et temps tragique chez Aristote*, p. 418.

our current conceptions onto that poetry; the greatest mistake remains the confusion of western monotheism with Greek polytheism. In the polytheist Greek religious conception, all individuals had their own time marked out by the cycle of nature; so everyone was free to have their own conception of time which, however summary, was appropriate to their individual lives. Conversely, monotheism implies that all individual *tempera* are subject to an objective time, a divine *Chronos*.[121] Olivier Boulnois, introducing the famous canonic *Sentences* of Peter Lombard, repeats the mediaeval monk's statement dating from the end of his noviciate, describing the coupling of the Christian God with objective time. God is presented as bound to time, emasculating all its attributes and blocking any development:[122]

> In his wisdom he locks up, fixes and perpetually holds back all time, past, present and future, undergoing neither the coming of anything new nor the passing of anything past.

So the divine *kronos* of Christianity requires all individual human *tempera* to be subject to it and the construction of an objective time to represent it (clocks, calendars of the saints, the ringing of bells) becomes inevitable. In order to mask Greek polytheism, Hegel based his Christian God on the figure of Cronos, repeating the attempt at the fusion of monotheism and polytheism made by the Neoplatonists.[123] This process of unification seems to have started with Cicero (106–43 BCE), with his research on Saturn related to Hesiod's Cronos and the

121 Olivier Boulnois, *La puissance et son ombre de Pierre Lombard à Luther*, Aubier, 1994, p. 27: "Becoming is external to God". This is why St Thomas Aquinas created a new median time, the *aevum*, which measures that which never changes in a being. Aquinas said, "The aevum differs from both time and eternity, as something existing in between the other two". This conception explains what is permanent in creatures – what is *sub specie aeternatis*, as Baruch Spinoza later put it. *Summa Theologiae* I, q. 10, art.5, see also art. 4.

122 Peter Lombard, *Sentences*, distinction 42, 618 D, cited by Boulnois, *op. cit.* p. 27. From the 13th century throughout the Middle Ages, these sentences served as an introduction to theology for all monks in all orders. St Bonaventure (Franciscan) and St Thomas Aquinas (Dominican) were obliged to submit to them, William of Ockham was labelled a heretic on the basis of his commentary the *Ordinatio*, and then there was Luther… The objective nature of time had to be admitted, on pain of excommunication – a lesson not forgotten by Hegel and his friends from the Tübingen seminary. See also Giambattista Vico, *The New Science*, trans. Dave Marsh, Penguin, 2000; French ed. *La Science Nouvelle*, trans. Christina Trivulzio, Gallimard, 1993, p. 73.

123 Brague, *Du temps chez Platon et Aristote*…, p. 86.

temporal Chronos.[124] We should also note that the term polytheism itself seems to have been invented by Philo of Alexandria (13 BCE–54 CE) and that the Latin authors do not seem to have believed that the Greeks were polytheists. Seneca (55 BCE–39 CE), for example, claims this was all *twaddle*.[125] Yet, if that were true, how could they have read and understood the work of Homer and, more specifically for us, tragic poetry? These initial points remind us not to project onto this study our own conception of time, which is totally incompatible with the Greek vision. There is nothing in Greek tragedy to support the hypothesis of objective time, comparable to that later adopted by Christianity, still less that time might be circular in nature.

The one notion to shed light on our investigation is that of *moïra* or fate, which seems to maintain a tenuous relationship with the tragic genre. For if the notion of time seems absent from tragedy, this is because it has not yet been disentangled from that of fate, out of which it later emerged. At least so Aeschylus says in his *Prometheus Bound*:[126]

Chorus: For I am of good hope that from these bonds escaped,
Thou shalt one day be mightier than Zeus.
Prometheus: Fate, that brings all things to an end, not thus
Apportioneth my lot: ten thousand pangs
Must bow, ten thousand miseries afflict me
Ere from these bonds I freedom find, for Art
Is by much weaker than Necessity.
Chorus: Who is the pilot of Necessity?
Prometheus: The Fates triform, and the unforgetting Furies.

At the political level, not taking another person's *alotted* time is the first act of sharing that enables people to live together – the *isonomia* underpinning Athenian democracy. It seems time can unfold only once human beings have accepted their own *lot* and linked it to the lot of others in trying to live together. However, this approach still seems to lack coherence. If time is hidden from human beings, veiled by the Gods, how a common fate can be shared? Some kind of time must be

124 Cicero, *De la nature des dieux*, II, XXIII, XXVIII & II, XXIV-XXV, French trans. E. Bréhier, in *Les Stoïciens*, La Pléiade, 1962, notably pp. 431-432.
125 Seneca, *De beneficiis*, IV, 7.
126 Aeschylus, *Prometheus Bound*, ll. 510-520, trans. G.M. Cookson. See also Jean Frere's article "Avenir et moïra: d'Homère à Platon", in *L'avenir, actes du congrès de l'association des Sociétés de philosophie en langue française,* Vrin, 1987, pp. 181-185, p.184. Frere cites a passage from the *Eumenides*, "For all-seeing Zeus and Fate herself have worked together for this ending", vv. 1045-1047, p. 184.

manifested somewhere in a tragedy so that the fate of the actors can be shared. There are twists and turns that unveil time's existence, but it seems characteristic of tragedy always to mask it. In describing these secret twists and turns, Françoise Létoublon finds a possible time in the tragedies of Aeschylus. She describes this hidden, secret time in her analysis of *Prometheus Bound*:[127]

> These twists and turns, implying Prometheus's control of future time in the play's dramatic economy, highlight the depth of this theme in the play. It is a reference to the secret that Prometheus holds, the name of the person who may dethrone Zeus in the future, the action of another that may one day end his power. The revelation of this other's name may give Zeus the means to avoid such an outcome and Prometheus's weapon, which gives him the power of time, is this hidden name, the silence that holds the future in reserve (515-525).

Time is hidden because a part of it, the future, cannot be revealed to human beings. As the future belongs to the gods, time must remain hidden. Fate can exist only if time belongs to a different sphere from that of human beings – the sphere of the gods. But are silence and witholding speech the only ways to conceal time? Not quite. There is a time that goes to ground in tragedy and does not manage to dominate the space of human lives. However, modes of veiling are also modes of unveiling and nominalism cannot be the only access to the time revealed to human beings. It was only after reading Jules Vuillemin's book *Eléments de poétique* that we were able to glimpse a possible access to tragic time.[128] If the conceptions of tragic time are embryonic, they must necessarily be present in the infinitely small, in the analysis of signs. Without returning to the mediaeval doctrine of *signatures* dear to Michel Foucault, Vuillemin proposes, notably on the basis of a passage from Euripides's *Electra* ("What sign have you seen, she asks the Old Man, that I can believe in?"), that the sign, in its three forms (natural, agreed and arbitrary),[129] allows human beings to recognise each other and, we would also add, to understand that they belong to a community of fate. If a natural sign (such as a scar) enables physical recognition, agreed, arbitrary signs enable cultural

127 Françoise Létoublon, "Les paradoxes du Prométhée", Sileno (Jan-Dec 1986), 1987, p. 21; cited by Vuillemin, *op. cit.*, following page, p. 51.
128 Jules Vuillemin, *Eléments de Poétique*, Vrin, 1991, chap. 1, part 1, "La reconnaissance dans l'épopée et dans la tragédie (Aristote, *Poétique*, chap. XVI)", pp. 29-40.
129 *ibid*., p. 33.

recognition.[130] The gods address human beings in signs and it is by reading those signs that human beings can agree on a common time, a community of fate. Singular times can then be projected into the future on the basis of the collegiate time of the community. In Greek tragedy the future and time are always understood through the category of the Other. The presence of the other indicates that I am unquestionably in some kind of time.

Lastly, to seek to characterise the time of tragedy would be to usurp the knowledge of the gods. As the gods alone have mastery of time, it is impossible to know whether it was linear or circular. This does not mean that time and the future cannot be conceptualised. Aristotle even secretly sought to make doing so into a science – at least this is what is revealed by a passage in his *Of Memory and Recollection*:[131]

> Now to remember what is future is not possible – that is an object of opinion or expectation (and indeed there might be actually a science of expectation, like that of divination, in which some believe).

This simply means that Greek tragedy uses technique to conceal time from human beings. The tragic poets may have lacked a science of expectation, but they were masters of the technique of expectation, made possible only by an initial veiling of time. "The seeds of all the elements of a complex tragedy are there" as Vuillemin repeated.[132] So this is not a genre in which any rational conception of time will be found. It is even less likely that we will uncover a circular time within it, since the role of tragedy is, once again, to veil time. Only the gods know what is going to happen and it is on the basis of this initial knowledge that they then rearrange the course of human lives, usually through the intercession of the chorus. In the tragic context, we certainly do not agree with Xenophanes that,[133]

> The gods have not revealed to mortals all things from the beginning; but mortals by long seeking discover what is better.

We shall now turn to the epic poetry of Homer to analyse the circular time that we have noted as absent from tragedy.

130 Cf. Saussure, *op. cit*., p. 67, "I call the combination of a concept and a sound-image a sign".
131 Aristotle, *On Memory* 449b 10-11, trans. Barnes, p. 714.
132 Jules Vuillemin, *Eléments de poétique*, *op. cit.*, p. 53.
133 Xenophanes, fragment B 18, trans. Kathleen Freeman.

b. On the hero, or epic poetry as a technique for unveiling time.

Where Homer's epic poetry is concerned it must be noted at the outset that an objective, analytical conception of time is completely absent from both the *Iliad* and *Odyssey*. Myth is set *in illo tempore* and does without time, following with the schema posited by Mircéa Eliade:[134]

> As Moses Finley, with his great knowledge of the society of Ithaca and the Homeric world, observed in his day, there is nothing in the poems that has a historical dimension. Everything is timeless, as in fables where everything happens "once upon a time". Even when the characters meet again after twenty years, Ulysses and Penelope are the same, physically and in their feelings.

We should note that the *Odyssey* is an epic narrative generally attributed to Homer. However, there is a problem here. We now know that the expedition of the Achaeans and the Aeolians against Troy really happened and can be situated in the period 1193–1184 BCE.[135] We also know that Homer was a bard who really existed and lived in the 8th century BCE. So almost five centuries had elapsed between the real expedition and Homer's account of it. It can thus be hypothesised that, for nearly five hundred years, this story was handed on orally by many different bards, in very different versions, before Homer gave it its finest oral form. After this the Homeric version became dominant and continued to be passed on orally, since Homer did not commit either the *Iliad* or the *Odyssey* to writing. The first edition of Homer's poems was commissioned by the tyrant Peisistratus (600–528). We know that with the help of his son Hipparchus, Peisistratus set up a commission with the task of recording Homer's lines in written form. A first edition was put together and held in the first public library in Athens. Other, fairly disparate versions were later found in papyrus form in the great library of Alexandria, where the Greek poets were exiled in Aristotle's day, after being driven from Athens by Plato the

134 Mircea Eliade, *Le mythe de l'éternel retour*, Gallimard, 1969, p. 139. See also Moses L. Finley, *The use and abuse of history*. London, 1975, pp. 14-16, cited by Eva Cantarella, "Introduction à l'*Odyssée*", in *Odyssée*, Les belles lettres, I, 2001, p. XVIII. For a more in-depth exploration of this issue, see Vidal-Naquet, "Temps des dieux et temps des hommes", *Revue d'histoire des religions*, 1960, p. 55 ff.

135 Gilbert Bouchard, *L'Odyssée d'Homère*, Introduction, Société des Ecrivains, 2001.

ideologue.[136] The Homeric narratives were prescribed reading for all young Athenians and later for all Greeks, leading Hegel to say, very rightly, after Thucydides:[137]

> Homer is the element in which the Greek world lives, as man does in the air.

Which is a poetic return to Plato's famous words:[138]

> Homer must be regarded as the Prince of tragedy.

These things provide the justification for our focus on Homer's poetry in seeking to understand Greek time. At the end of the present development we shall see that this legacy is later assimilated by Aristotle into his theory of time.

Let us begin by considering narrative structure. The myth of the Odyssey (which begins with Odysseus's departure from Ithaca for Troy), narrated in the *Iliad* and the *Odyssey*, in fact describes only Odysseus's return to his home country. There is no account of the outward journey made by the formidable band of men who set off from the Peloponnese peninsula for the shore where Troy stood, just a few snatches of stories that appear in the narrative of the return. Why did Homer omit, or regard as undeserving of song, the outward journey to Troy? Here is an indication that the story of Odysseus is a mythical narrative of the eternal return, a *nostos (νόστος)* in the ancient form identified by Eliade. And once again, the eternal return is not circular in form since – like that of the Argonauts[139] and imaginary though it may be – the voyage of Odysseus' ship in the Mediterranean basin in no way ressembles a circular ripple in the water. So this myth of eternal return is a founding myth – the first of a culture seeking awareness of its own foundation. And, *de facto*, we shall see that the time we find in it is in no way specific to Greek culture. So what kind

136 The text was probably later reworked to create yet more different versions. Grammarians such as Zenodotus of Ephesus (320–240 BCE), Aristophanes of Byzantium and Aristarchus of Samothrace (220–143 BCE) worked on this text in order to standardise it. Lastly, it is likely that the most stable version is the work of Aristarchus.

137 Hegel, *The Philosophy of History*, trans. J. Sibree, 1900.
https://www.marxists.org/reference/archive/hegel/works/hi/lectures2.htm
For Thucydides, see Vuillemin *op. cit*., p. 83.

138 Plato, *The Republic*, X, 598d 9.

139 Cf. Apollonius of Rhodes, *Argonautica*, trans. R.C. Seaton, Simon & Brown 2013, and *The Orphic Argonautica*, trans. Jason Colavito, Jason Colavito, 2011.

of time are we dealing with in the Odyssey as related in Homer's *Iliad* and *Odyssey*? Piétro Pucci suggests:[140]

> The time of the return, though it has the rhythms of conventional human temporality, is overlaid with divine temporality, set in an almost immemorial past. In almost all the places visted by Odysseus during his voyage, his arrival has been previously announced by the divine oracle […] But, aside from these particularities, the return of Odysseus himself is announced many times and predicted by Tiresias and Theoclymenus and is ratified by Zeus himself.

Homer's narratives stage a continual struggle between heroic figures and divine will. Every event is subject to divine will, to the *boulê* (deliberation) of Zeus, who has made it possible and to whom every outcome is known in advance. As Achilles says in the *Iliad*:[141]

> The will of Zeus was moving towards its end.

So Zeus controls what could be called "history" from beginning to end; there is a plan, and that plan is unavoidable. It is undoubtedly present in Homer's work. Next, while the signified of the narrative is timeless (the characters Odysseus and Penelope do not age in a narrative spanning twenty years), the signifier is organised by Zeus's plan into an equally timeless chain, punctuated by the interventions of the gods, which alternate with human actions to form a pattern. In both cases, time in the form of temporal continuity handed to human beings is absent. Human beings, notably the hero, merely slow down events that will happen anyway – not *necessarily*, since reason is not involved here, but *inevitably*.

However, there is nothing circular about this conception. To make it so would be to confuse Greek *fate*, which is subject to the will of Zeus, with the circular *destiny* of the Stoics. It is often difficult to grasp the difference between these two visions of divinely fixed, sacred time. We shall follow the interpretation proposed by Conche:[142]

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140 Pietro Pucci, "Le cadre temporel de la volonté divine chez Homère", in *Constructions du temps dans le monde grec ancien*, pp. 33-48, p. 45.

141 Homer, *Iliad*, I, 5, cited by Pietro Pucci, in "*Le cadre temporel de la volonté divine chez Homère*", *art. cit*., p. 33, this English trans. Robert Fagles, Penguin, 1992, p. 77.

142 Conche, (*op. cit.*, p. 34.) repeats the view expressed by Paul Mazon in "Introduction à l'Iliade", *Iliade*, les Belles Lettres, p. 299. He finds the same distinction in Emile Brehier's *Histoire de la Philosophie* I, p. 298, which he mentions "the Semitic idea of an omnipotent God governing the destiny of human beings and things, so different from the Hellenic conception" (cf. p. 32). For further discussion of these questions, see Barnes, "La doctrine de l'éternel retour", in *Les stoïciens et leur logique*, Brunschwig (ed.), Paris, 1978, pp. 10-11.

> The Stoics see things very differently. Their conception is more reminiscent of the fatalism of certain peoples in the Orient, which runs counter to every movement of Hellenic thought […]. The Greeks understood fate as a matter of fact rather than necessity.

So how did that the fact that the Greeks were subject to Zeus's plan – unable to escape it, as Homer's work clearly illustrates – differ from the fatalistic destiny of the Orientals? It must be said that Conche hesitates several times to provide tangible proof, unless this is an interpretative resistance in his writing. He succumbs to a dualist reading of will, which is an attribute of both human beings and the gods. The dualism of this struggle then gives the Greeks a degree of freedom. For our part we do not believe that Zeus's plan can have anything of the more or less about it; we do not believe that Zeus can or wants to delay his plan so that human plans can be fulfilled:[143]

> Floating above everything else is that which must be played out. But fate can wait. Zeus has the freedom to introduce delays and postpone completion. And in the fulfilment of Zeus's plans human beings also have some freedom to introduce delays.

In the first place, this thesis of René Schaerer's adopted by Conche substitutes the one God of monotheism for the supreme God of polytheism. Secondly, it does not recognise the fact that heroes alone are given some latitude within which to act. Lastly, Conche speaks of "freedom" in somewhat Kantian terms, judging by his use of this concept coupled with that of will. Kantian freedom contrasts with necessity, but with what might freedom contrast in Homer's work? The *inevitable* does not have to be *necessary* (*ananké*); again in our view to say it does is to adopt a Stoic position. In Homer's framework, *inevitability* is unrelated to reason; that comes later when the notion was overlaid by that of justice, in Hesiod or even in the work of Heraclitus.[144] Furthermore, since the supreme God (Zeus) is outside time, he cannot suspend his plans and set them in motion again. So we need to try to understand the fundamental difference that makes freedom possible within the framework of Greek polytheism, as

143 *Ibid*., p. 33. Cf. René Schaerer, *L'homme antique et la structure du monde intérieur d'Homère à Socrate*, from which he takes the following passage: "Man is free within divine frameworks, and the gods are free within the frameworks of fate". But how could human freedom "delay the will of Zeus"?

144 Jean Frere, "Avenir et moïra: d'Homère à Platon", in *L'avenir*, actes du congrès de l'association des Sociétés de philosophie en langue française, Vrin, 1987, pp. 181-185, p. 183.

opposed to monotheism.[145] Let us also accept this initial conceptual clarification, which is possible only if we regard heuristics itself as possible (the future of knowledge for heuristics, the future of human beings for the content sought through heuristics).[146]

We shall start by making the following observation. In both the *Iliad* and the *Odyssey* of the divine Homer, Zeus's plan seems to shape the temporality of human lives in a variable manner. Why is this? Precisely because the gods do not always agree amongst themselves. In both *Iliad* and *Odyssey*, Poseidon does not always agree with Zeus (the son of Cronos) and Athena (daughter of Zeus) is often required to use diplomacy with Zeus the supreme God with regard to the fate of the Achaeans or Odysseus *of the thousand ruses*.[147] It is this original polytheistic disagreement that underpins the unfolding of the narrative and the vicissitudes of the Achaeans in the *Iliad* and those of Odysseus in the *Odyssey*.[148] Whereas, for monotheism, God decrees that his *will be done on Earth as it is in Heaven*, polytheism has the major advantage – for human beings – that the multiple (gods) require time to reach the one (the supreme God). So where does this time come from? It is simply the time that the gods take to agree. After this, like the one God of monotheism, the supreme God immediately implements his decree on the human stage. In practice, as this God is outside time, any decision implies action *ipso facto*; for the Olympian god it seems that something is no sooner said than done. Human beings meanwhile are subject to many different constraints, with the consequence that thought and action are

145 It is for these reasons that St Thomas Aquinas adopts the traditional angelology that had held pagan polytheism together, cf. Louis Rougier, "Le polythéisme païen et l'angélologie chrétienne", appendix to his French translation of Celsus's *The True Word, Celse Contre les chrétiens*, Copernic, 1977, p. 245. Aquinas was called *the angelic doctor* precisely because study of the angels finally and definitively silenced the problem of pagan polytheism in Greek thought.

146 Cf. Plato *Meno*, 80d and 80e**.** Aristotle proposes the following analysis of this apparent aporia: "The puzzle in the *Meno* will result; for you will learn either nothing, or what you know." *Posterior Analytics* A, 1, 71a 29-30, trans. Barnes, p. 114.

147 We should note that the Athenians did not take part in the Trojan War. The Athenian compilers cited cheated on this point, by adding their names to the list of combatants.

148 In the *Odyssey*, Homer reveals the etymology of the Greek name *Odusseus*, cf. I, 67; V, 340, 423; XIX, 275. Apparently it is derived from *odussomai*, meaning "to get angry".

never entirely at one. This distance between thought and action is properly human. It is an interval that gives space to reason in action. It is because there is time between reason and action that action can be reasonable, and indeed quite simply human. However, to remain within the framework of Homeric thinking, the possibility of disagreement between the gods gives human beings a possible interval of time, a gap in which the hero can use *a thousand ruses*. While all the hero's actions are inevitably limited, the interval left by the gods as they negotiate obliges him to act as quickly as possible, *at lightning speed*, to use a metaphor for the *tota simul* of Zeus's Acts of God. In sum, between the idea of a decree to be issued concerning a mortal and its implementation by the various gods, the hero knows that he has a small interval of time that his life will embody. In our view the notion of *kairos* is rooted in this context of Greek polytheism, and the coming of monotheism would sound its death knell.[149]

Many have wondered about the disappearance of the concept of *kairos* from the history of philosophy.[150] It has been seen as a consequence of the semantic shift of the term *aîon* from the Greek sense of "age", "man's life", "posterity" to that of "eternity" for the Neoplatonists and Plotinus.[151] This has been seen as an improper reversal of theological analysis[152] when, according to the philosopher and member of the Athens Academy Evanghélos Moutsopoulos, the term αιων already had the meaning of "eternity" for the Pythagoreans.[153] In short, we are saying that the time during which the gods are deliberating opens a temporal gap in which human time can

149 Evanghélos Moutsopoulos has also analysed time on the basis of the notion of interval, suggesting that in Aristotle's work *kairos* is simply "goodness in time" in *Variations sur le thème du kairos de Socrate à Denys*, Vrin, 2002, p. 66 As an introduction to this notion, see *Nichomachean Ethics*, A4, 1096a 26 and *Eudemian Ethics*, A8, 1217b 32, 37, 38.

150 André Mercier, "Discours de synthèse de l'entretien d'Athènes, 1986", *Chronos et kairos*, Vrin, Institut international de philosophie, 1988, pp. 66-74.

151 Brague, *Du temps chez Platon et Aristote*, PUF, 1982, p. 29.

152 Lambros Couloubaritsis, "Le temps hénologique", in *Les figures du temps*, PUF, pp. 89-107, p. 95.

153 Moutsopoulos observes, "So it is absurd to claim that, as time plays no part in the One, the One is time itself. Here the commentator (Proclus) raises a contradiction with regard to the One that dates back to the Pythagoreans and Orphics: supposing that the One is the first cause, the Pythagoreans attributed him with the name kairos, cause of what is opportune, necessary and useful, in other words good", *ibid.*, p. 140.

unfold. However, Homer gives this possibility only to heroes, leaving other people to a fate that is in fact ignorance of the deliberations of which they are the object. This perfectly explains the myth of Penelope spinning in her Ithaca house. This image of circular time, the time of waiting, which seems totally unsuited to the conception of time we have just described, does describe the human condition. The time of waiting has nothing feminine about it (except in the Oriental model); it is time that is set apart from the action, without contemplation. This conception of time adopted by Homer is that of the Lady with a Spindle and seems to be Oriental in origin, or at least so we are told by Charles Picard, whose words Schuhl records:[154]

> Where the goddess with the spindle is concerned, I am increasingly convinced that she was for a while the great Asian goddess, present along the entire Asian coast. And there was a period in which almost every hypostasis of Mother Earth was a goddess with a spindle. Aside from Homer's Artemis, may I point out that the very old Delian hymn by Olen was called Eileithya, often translated as "the good spinner".

Penelope's spindle is the perfect image of the time of tradition, the circular time of traditional societies, a passive, fate-bound time, and also the perfect image of a time that holds the greatest sacred truth. This conception is moreover found in the Greco-Roman mythology of the three Fates, Clotho, Lachesis and Atropos. The three Fates were said to govern human destinies (life, death and thus the lifetimes of mortals). It was said that Clotho ("to spin" in Greek) held the spindle that dangled from the heavens to Earth, Lachesis ("Fate" in Greek) put the thread on the spindle and Atropos ("inflexible" in Greek) determined the length of the thread that would correspond to a human life. Oddly, the thread of fate is circular – truth lies in circular time. This is a truth that has lasted for generations and explains why people try far too hard not to discover it until they are on the verge of death. Nietzsche, armed with this philological knowledge, would peddle it in a different way:[155]

> "Everything straight lies," murmured the dwarf disdainfully.[156] "All truth is crooked, time itself is a circle."

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154 Schuhl, *La Fabulation platonicienne*, p. 77. The model of the spindle seems to be a technical metaphor for the mechanism of heaven. The truth involved here is thus that of the *harmony* of the heavenly model and the circle would stem from the revolutions of the planets. Did Penelope ask the stars when Odysseus would return?

155 Nietzsche, "Of the Vision and the Riddle", in *Thus Spoke Zarathustra*, III, 2, p. 178.

156 A dwarf is a little man, in other words, a child.

However, the fact that Penelope has a spindle does not mean she has the measure of time. On the contrary, she seems to use the spindle only as a ruse to fend off the advances of her suitors.[157] So Ananké's spindle seems to have lost its sacred meaning; Penelope is not Artemis,[158] Odysseus still less Apollo. Yet it remains true that this circular time of Oriental origin involving waiting does describe the non-heroic time which Homer's texts must organise through the character of Odysseus. So the hero seems to carry an unfolding time, a temporality whose measure young Athenians must copy. We still need to provide a definitive explanation of this.

While we have accepted that the design of the supreme god Zeus is implacable, like that of a sole god, unlike that of a sole god it is limited by lesser gods. And while everything has been set out in advance, the relationships between these gods, focused on Odysseus, is dramatised in Book 1 of the *Odyssey*:[159]

> All the gods pitied him except Poseidon, who pursued the heroic Odysseus with relentless malice until the day when he reached his own country.
>
> Poseidon, however, was now gone on a visit to the distant Ethiopians, in the most remote part of the world, half of whom live where the Sun goes down, and half where he rises. He had gone to accept a sacrifice of bulls and rams, and there he sat and enjoyed the pleasures of the feast. Meanwhile the rest of the gods had assembled in the palace of Olympian Zeus, and the Father of men and gods opened a discussion among them. […]
>
> "What a lamentable thing it is that men should blame the gods and regard *us* as the source of their troubles, when it is their own transgressions which bring them suffering that was not their destiny."

In our view this passage, also cited by Nietzsche, is the symbolic matrix of the entire narrative. It is to poetry what the postulate is to mathematics. We note that Poseidon does not even take the trouble to

157 In these conceptions astronomy meets astrology, rendering the conceptual understanding of these theories more complex. However, in every case it must be accepted that while the heavens do not change, the configuration of the stars does. From there two diametrically opposed theories can be advanced. Either modifications in the constellations inevitably lead to changes, which is why our world is completely erratic, or the grandeur of the heavens is compatible with the human scale, in which case knowledge of the constellations can provide the world with a degree permanence, the latter being the thesis of the Chaldean culture, adopted by Plato.

158 Homer, *Iliad*, Book XXI, ll. 470-510. Artemis is Apollo's twin sister who became a lioness among women.

159 Homer, *The Odyssey*, trans. E.V. Rieu, Penguin, 1991, I, pp. 5-7.

go to Zeus's banquet, choosing instead to visit the Ethiopians. In such circumstances, the narrative is probably going to go on for some time since, firstly, Poseidon will have to submit to the injunctions of Zeus, before granting the release of Odysseus from the nymphs' lair as requested by Athena. It is clear that the spatial distance separating Zeus and Poseidon will provide the interval of time that makes the actions of Odysseus possible.[160] Because Poseidon has gone to visit the Ethiopians, Zeus can still wait or at least hope.[161] We would suggest that the hero Odysseus owes his existence to this original disagreement between Poseidon and Zeus. But, crucially, all this is possible only in the particular framework of polytheism. Only polytheism, with this possibility of disagreement between gods, can make plausible room for human time. Of course a man is limited by the divine injunction that decides his life and death, but within those limits the heroic model can serve as a pattern for his evolution in time. This is perfectly described by Agamemnon in the *Iliad:*[162]

> ...obliged by Zeus to see wars through to their bitter end, from cradle to grave, till one by one we drop.

So human beings seem indeed to be limited by the divine will, as the great Agamemnon reflects in this passage. It is within the interval created by the gods in the context of polytheism that the hero alone can manifest his temporality. This notion of interval, which seems apt in describing time, converges with the *kairological* analysis of Moutsopoulos. Indeed it was Moutsopoulos who proposed that time should no longer be understood through the deceptive metaphors of

160 It takes Poseidon four strides to reach his intended goal, his *tekmôr*, *Iliad*, XIII, 20.

161 We should add that, like Zeus and Hades, Poseidon is the son of Cronos and Rhea. The three drew lots for shares of the Olympian World, with the result that Zeus took the kingdom of Heaven, Poseidon the kingdom of the Sea and, as Hades could not demand the kingdom of Earth, which was occupied by human beings, he inherited the kingdom of the Underworld. This distribution makes clear that this is not a cosmogony, since the Earth is left to human beings (and also high Olympus, according to Homer, *Iliad* XV, l. 185). Secondly, as Heaven covers both Earth and Sea, Zeus becomes the supreme God. Lastly Poseidon and Zeus have equal power because they are brothers of equal strength, which is why Poseidon can take his time standing up to Zeus.

162 Homer, *The Iliad*, XIV, 85 ff.

the line or mathematical series. Introducing the notion of interval into the notion of time gave him the following definition:[163]

> Conversely, there is no situation in which theoretical or practical awareness does not engage with the reality it observes and on which it ceaselessly seeks to act in order to apprehend and control it better. This attitude leads to the adoption of two new categories, which in fact precede the three categories of time initially mentioned: "not yet" or "too soon" (*Ουπω*) and "never again" or "too late" (*ουκετι*). These categories represent a kind of original binary reduction of the three categories of time and define the minimum zone containing the kairos or right moment, which is in principle unreapeatable. During this moment consciousness can act on the course of events.

At the right moment, we shall see if this understanding of time is specific to the notion of *kairos*, as Moutsopoulos suggests here. Surely Aristotle is saying the same of the instant that explains time (*chronos*) in his *Physics*. Surely the instant is what separates "not yet" from "never again". Does the move from the category of quantity to the category of the relative justify the distinction and separation of the concept of *kairos* from that of *chronos*? It remains the case that the notion of interval seems most appropriate to provide an initial framework for time. So we now need to contrast circular time with the interval of time. But is the notion of the circle not itself included in the concept of the interval?

Let us return to poetic time and see how far semantics corroborates our conceptual analysis. When Homer considers the *bounds* fixed by Zeus, whether in terms of the final bound of death or that of the spinning top of the plan of the supreme God, which turns an episode one way or the other, he always uses the Greek word *tekmôr*. This word, the epic form of *tekmar*, appears at least four times to express "the term fixed for the destinies of Troy".[164] The polysemy of *tekmôr* is as follows: "assigned", "fixed", "sign", "term", "end", "goal",[165] a semantic field of covariation that could be closed (limited) by the following periphrase tending towards univocity: the assigned limit of the possible. This term could ultimately thus replace that of

163 Moutsopoulos, *Variations sur le thème du kairos de Socrate à Denys*, Vrin, 2002, p. 66.

164 Homer, *The Iliad*, VII, 30; IX, 48; IX, 418; IX, 685; XIII, 20.

165 The translation by *télos* seems to be found only in Pindar's *Pythian Odes* II, 90.

limit.[166] Marcel Détienne notes that *tekmôr* is the seat of a semantic turntable which, in a centrifugal movement, condenses notions grounded in navigation, astronomy and divination.[167] Contrasting with the Greek term *skotos* (darkness, obscurity), which covers the eyes of the dying, the signified of *tekmôr* (reference point) then operates in the following semantic space:[168]

> In a primordial state governed by a power of the marine depths […] *tekmôr* and *poros* seem to have the function of dispelling the darkness personnified by *Skotos* and opening up ways along which the sun will travel to bring daylight, while the luminous paths of the constellations spread across the vault of the sky.

That the sun makes light, a property reserved for time by the poet Theognis, is the first indication that time seems to come from the heavens, from the procession of the stars. That this progress leads to light reveals all the optimism of the conception. That *tekmôr* is bounded by s*kotos* allows us to see that this path is not without hazards – human vicissitudes that already reflect the impossibility of linear time. Lastly, it is easy to see that this notion of "bound" definitively excludes the metaphor of the mathematical line, which has none. An interval is bounded, a straight line is boundless.

But where form is concerned, above all this passage shows that a notion's semantic field is always rooted in the surrounding culture, from which it is often hard to extract it. And here it must be understood that the conceptual work of the philosopher enables notions to be abstracted from their historical context and thus provides them with a permanence and a possible use beyond any particular cultural inflections. In practice the concept of *péras* (limit) used by Aristotle replaces the notion of *tekmôr* (bound), making it independent of its construction *in situ*. All this is played out in his *Rhetoric* when he discusses the signs we have considered earlier in relation to tragic poetry, and which provide the bases for syllogisms. We are reminded here that these two terms (*tekmar* and *peras*) were synonyms in Greek:[169]

166 We should note that the term "term" also indicates this *bound*, the impossibility for a notion to have a boundless polysemy without *de facto* disappearing. On the semantic problem of conceptualisation, see Aristotle, *Metaphysics*, Γ, 106b.
167 Marcel Detienne and Jean-Pierre Vernant, *Le cercle des liens et les ruses de l'intelligence, Champs*, Flammarion, 1974, p. 145.
168 Detienne and Vernant, *Le cercle des liens et les ruses de l'intelligence*, p. 271.
169 Aristotle, *Rhetoric*, I, 2, 1357b 1-10, trans. Barnes.

> Of signs, one kind bears the same relation as the particular bears to the universal, the other the same as the universal bears to the particular. A necessary sign is an evidence, a non-necessary sign has no specific name. By necessary signs I mean those on which deductions may be based; and this shows us why this kind of sign is called an evidence: when people think that what they have said cannot be refuted, they then think that they are bringing forward an evidence, meaning that the matter has now been demonstrated and completed; for the word *peras* has the same meaning as the word *tekmar* in the ancient tongue.

So while Aristotle's concept of time, which relies on the notion of *péras*, may be conceptually independent of the historical tradition, it still seems that the semantic median term *tekmar*, taken from the epic genre, provides its traditional foundation. "That which possesses the end" (entelechy) is that which possesses the limit "*peras*", the bound "*tekmôr*", but not yet the end "*télos*". The concept of "*télos*" adds a vectorial dimension to the notions of "*peras*" and "*tekmôr*", which we shall consider in the next part.

However, remaining for now with Homer's poetry, we need to understand the model that he proposes for human beings, which Aristotle, Plato and all the Athenians knew through the poetry they had learned by heart and which remained the paradigm of Greek time.[170] Human beings are limited by the will of Zeus, who decides their *fate*, their birth and death. For the Greeks human life was thus irremediably finite and not infinite, as Conche says in a slightly different way at the end of his investigation of Greek time:[171]

> The life force (*aiôn*) is fundamentally finite.

This eschatological finitude introduces the notion of interval. Zeus also decides human destiny, something human beings seem unaware of. On the other hand, as the vector of a temporality to be copied, the heroic model integrates singular, human time into the dimension of the action. The figures of the heroes, of which Odysseus is the perfect model, are vectors for the evolving life of all citizens. Within this model the future does exist; it is not denied to human beings, but is linked to heroic figures, whose memory Greek statues seek to preserve. This is why, after the religious unification, the list of Greek heroes was preserved within the sacred site of Delphi.

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170 Aristotle's lost treatise *On Poets* seems to have been written for the education of Alexander the Great. Homer's place at the heart of this treatise clearly shows that his work was the foundation of all education.

171 Conche, *Temps et destin*, Editions de Mégare, 1980, p. 83.

In the poetic context objective time is ultimately not necessary and a theory of time is pointless, since the figure of the hero is the bearer and guarantor of this notional, synthetic temporality that all must copy. This is why the early philosophers fought against the poets to impose analytic conceptions of time based on philosophical concepts rather than poetic *mimesis*. Their battle brought us history's two earliest invectives, the first from Heraclitus:[172]

> Homer deserves to be flung out of the contests and given a beating; and also Archilochus.

And under Plato's auspices, there is a shift from the beating that does not kill to the death-dealing knife, which explains why the poets eventually went into exile outside Athens:[173]

> The dialectician's ambition was to put language to the test "by fire and the sword*"* (*Gorgias*), to slip a knife along its joints to seek out the root of the ruses that make the poets so ingenious.

If the hero is the bearer of time, the philosopher with his basketful of concepts is unnecessary. The poet is the city's timekeeper and the first Athenian philosophers, such as Socrates, can only tremble at the foot of the clocktower.[174] This perfectly explains why no concept of time is to be found in the epic literature. Furthermore, we have seen, with support from Romilly's work, that the same was true in tragic poetry. This leaves dormant the question of whether it is possible to speak of a unified Greek time, and then to boast of being its representative. Here we must understand that Aristotle's conception of time seems to be connected to such a vast cultural heritage that our mountain can bring forth only a mouse.

Lastly, the circularity of time was a conception certainly not shared by the Homeric element of Greek culture. On the other hand, a reading of Homer suggests a notion of time that is linked to that of interval. Whether this interval is the site of quarrels between gods with

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172 Heraclitus, Fragments, DK B42, Freeman trans., *op. cit*., p. 156.

173 Michel-Pierre Edmond, "Le problème d'Homère", in *Le philosophe-roi. Platon et le politique*, chap. VIII, p. 145. Xenophanes of Colophon also said that these were fables (*plasmata*) and, crucially, *barbarian* narratives, and thus incompatible with the Athenian culture of his time (530 BCE), (Fr. XIV-XVI).

174 The tower of Kronos is mentioned in Pindar's description of the Isles of the Blessed (*Olympian Odes, 2, 70*) cited by Brague, *Du temps chez Platon et Aristote*, p. 94. If we follow Vico, this was the tower of the magi, who climbed the *Tower of the Augurers* to consult the heavens before speaking. Vico, *Origine de la poésie et du droit (De constantia jurisprudentis)*, French trans. C. Henri and A. Henry, Café, Clima éditeur, 1983, p. 50.

whom the hero must contend, as in polytheism, or the sole god's field of action, as in monotheism, in both cases it opens up conceptual possibilities for philosophical analysis. The field of possibility covered by this notion also invalidates the deceptive analogy of time with a geometrical line or mathematical sequence.

III. TIME IN HESIOD'S MYTHOLOGY AND PYTHAGOREAN THEOPHANY

THE SACRED SOURCES OF CIRCULAR TIME IN CLASSICAL GREECE

> Naked truth, drawn out of the inmost sources, is the object of the epic poet: he depicts to us merely the tranquil existence and working of things according to their natures; his object lies already in each point of his movement; therefore we hasten not impatiently to an aim, but linger with affection at every step.
> Letter from Schiller to Goethe, 21 April 1797 [175]

Let us now turn our attention to time in Hesiod's cosmogony and Orphic or, more modestly, Pythagorean theophany. It seems highly likely that we shall find here the source of a circular conception of time which, by contrast, will make manifest the load that Aristotle's theory of time had to carry on its journey towards the light.

a. On the myth of Cronos or the structuring of universal time in "ages of the world"

On Hesiod and Pythagoras, whose content of conceptual time we now propose to asses, we shall be guided by Heraclitus, who observes:[176]

> Much learning does not teach one to have intelligence; for it would have taught Hesiod and Pythagoras, and again, Xenophanes and Hecataeus.

We seem to be looking at a single tradition, which enables Heraclitus to put Hesiod and Pythagoras together and reject them both at once, having already done the same with Homer. What of circular time in the thought of Hesiod the mythologist? Remembering that it is in this mythology that we find the clearest appearance of the name of the god *Κρονος* (starting with a kappa), Kronos the Greek god of time, it is clear that this mythological influence cannot be ignored. So how will Hesiod and Pythagoras enrich our understanding of Aristotelian time? Let us begin by stating that it is in this current of thought that we shall find circular time serving a particular conception of the divine. It is by

175 In his next letter of 25 April, Schiller continues: "The tragic poet must stride forwards more rapidly and directly, while the epic finds his account more in a loitering gait. It follows also from this, as it seems to me, that the epic does well to abstain from such subjects as powerfully rouse for themselves the feelings, whether of curiosity or of sympathy, in which case, then, the action interests too much an end to keep itself within the bounds of a mere means."
https://archive.org/stream/correspondencebe01schi/correspondencebe01schi_djvu.txt
176 Heraclitus, *Fragments*, DK, B40, trans. Freeman, *op. cit.*

understanding Pythagorean theophany that we shall see how this circular conception continued to dominate the philosophical tradition right through to Germanic ideology. We shall then see that Aristotle's concept of time is defined by the negation of this conception, since his philosophical model does not retain the end (*télos*) proposed by this sacred vision of the world. We shall then obtain a initial definition in the negative, to be filled in by Aristotle's thought.[177]

We do not know exactly whether Hesiod predates Homer. Both Porphyry and Cicero maintain that Hesiod is older than Homer, but as the source is Neoplatonist we may choose to doubt it:[178]

> In the 4th century the Orphic genealogy of Homer and Hesiod was found by the historian Ephorus of Cyme, making Hesiod older than Homer.

Philostratus and Xenophanes, and later Varro and Erasmus, regarded them as contemporaries. To fuel the legend, Plutarch records that Hesiod surpassed Homer in a poetry competition in the city of Chalcis in Euboea, based on lines 654-657 of *Works and Days*.[179] In short, we shall leave the historians to their histories and locate Hesiod between the *Illiad* and *Odyssey*, paying little heed to the person of Homer and regarding him as simply the best singer of narratives that had, in any case, been sung before him. Indeed Reynal Sorel makes a startling statistical observation. We have already noted that the notion of destiny meant "share of life" by combining *μοιρα*, "share" with *μειρομαι*, "be alotted"; this notion will now have a more precise meaning in the epic context. Sorel begins by confirming this common meaning:[180]

177 Ours is a *structural* approach, in the Saussurian sense of the word. According to Saussure's notion of *value*, every term takes its meaning from what it is not. The notion of *value* supports the *void* of the *Concept*, *Cours de linguistique générale*, Tulio de Mauro (ed.), Payot, 1972, chap. IV, 224-245, pp. 155-169. Similarly, the *value* of a culture is all that it is not; in short, its value will be all the greater if it is able to *receive* other cultures.

178 Pseudo-Plutarch, *De Homero*, § 2, cited by Alain Ballabriga, "Hérodote et l'histoire de l'épopée", in *op. cit.*, pp. 325-339, p. 328.

179 The source of this legend is thought to be a text by Alcidamas, a disciple of Gorgias, entitled "*The Contest of Homer and Hesiod*", cited by Ballabriga, "Hérodote et l'histoire de l'épopée" in *Constructions du temps dans le monde grec ancien*, pp. 325-339.

180 Reynal Sorel, *Critique de la raison mythologique. Fragments de discursivité mythique. Hésiode, Orphée, Eleusis*, PUF, 2000, p. 68, note 1.

> *Moïra* assigns, subjects every person to the lot that falls to them by inexorably fixing the rules of sharing.

For, as we have noted, Greek fate is indeed:[181]

> The limit assigned to each person's rightful share.

Having clarified and confirmed this, we need to take this process of definition further. In the epic context fate seems linked to more specific, singular notions. Sorel then gives us the following valuable indications:[182]

> It is in its association with the idea of death that *moïra* finds its most frequent use in the *Iliad* (27 associations in 45 occurrences). Homer's phrase about a man struck a lethal blow is "red death (*thanatos*) and imperious fate (*moïra*) closed his eyes." However this meaning disappears in the *Odyssey* (8 uses compared to 60) in favour of the idea of custom, rights and natural order.

What does this mean? Simply that, while in the *Iliad moïra* remains divine and cannot be judged by human beings, in the *Odyssey*, human beings have clearly acquired some grasp of fate. The notion of *moïra* then becomes coupled with those of rights and natural order, in short with the *kosmos*, which is of a different order from that of the Olympian gods. Frère explains that this semantic shift arises in part out of a comparison between fate and necessity (*Anankè*).[183] Fate as a single entity is replaced by an attempt to understand time by means of rationality. *Anankè* looks at human beings, and now time also "looks at" human beings. It is easy to see that if rationality is integrated into the notion of fate, this will naturally introduce *discontinuity*. It is the discontinuity of rationality that provides the notion of interval that we have mentioned. Within this interval, it then becomes necessary to organise all the parts and it is at this analytical level that the notion of *kosmos* becomes necessary.[184] We can see it becoming established in Hesiod's work.

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181 Sorel, *Critique de la raison mythologique…*, p. 68.

182 Sorel, *Critique de la raison mythologique*…, p. 68.

183 Frere, "Avenir et moïra: d'Homère à Platon", in *L'avenir*, actes du congrès de l'association des Sociétés de philosophie en langue française, Vrin, 1987, pp. 181-185, p.182.

184 The term *κοσμος* is used by most Presocratic thinkers, starting with the poets: Hesiod, *Theogony*, v. 738; Homer, *The Iliad* 4, 145 and 14, 187. For the philosophers, see Heraclitus (DK 22B1), Empedocles (DK 31B and 134, 5), Anaxagoras (DK 59B8), Diogenes (DK 64B2), etc. Whereas, for the poets, the term means "good order" and is manifested in "finery", from Plato onwards it tends to be coupled with the notion of *taxis* in a physical space that is stable and *bounded*, as Solon put it, in other words it describes the order of a city. However, the notion

The myth of races adopted in *Works and Days* confirms the shift from a fateful, divine justice to which human beings must submit to a justice placed in human hands. The transmission of justice (*dikaïosunè*) to human beings is correlatively the moment when they must become the bearers of time. Hesiod binds justice and time together around the notion of fate (*moïra*). So exchange becomes the medium of time and justice (*dikè*), as we shall seek to show by discussing the well-known myth of races.[185] In Hesiod time is linked to the notion of justice solely through the mediation of humanity. Human beings bring justice to humanity (*dikè*) and, if this justice is integrated into a world that already posesses time and a certain notion of justice (*Thémis*), it is because Pandora has already done her work. For in Hesiod the notion of justice is not linked to time from the outset, but arrives only when Pandora (the first woman) introduces sexuality and thus human temporality (*tempus*). Moroever this is in accordance with the *Cosmogony*, which gives justice (*dikaïosunè/ Dikè*) a secondary place.[186] Here is Darbo-Peschanski's analysis:[187]

> In the works, when the moment comes to dress the first woman, it is often forgotten that the Hours officiate alongside Athena, the Graces, Persuasion and Hermes, arranging garlands of spring flowers around Pandora. The Hours are the three daughters of Zeus and Themis (Fairness): Eunomia (Right sharing), Eirênê (Peace) and Dikè (Justice), whose theogony describes the emergence – following mention of its resolution by force *(biêphi)* – of the conflict between the Olympians and Titans and the division (*diedassato*) of honours among the Immortals undertaken by Zeus immediately afterwards.

Justice (*Dikè*), Peace (*Eirênê*) and Fair distribution (*Eunomia*) are merely the three daughters of Zeus, who has long sought to make

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retains its link with that of aesthetics (main source: Brague, *La Sagesse du Monde. Histoire de l'expérience humaine de l'univers,* Fayard, L'esprit de la Cité, 1999, p. 31, notes p. 265.).

185 We have already noted that Aristotle's *Protrepticus* was a response to the *Antidosis* of Isocrates. There is an early dialogue entitled *On Justice* in the Aristotelian corpus, but it deals with justice only in the political sphere and so cannot shed much light on the relationship between justice, fate and time; see Paul Moraux, *A la recherche de l'Aristote perdu. Le dialogue "Sur la justice"*, Louvain-Paris, Publications universitaires de Louvain-Nauwelaerts, 1957.

186 Briefly we can say that justice is *done* in exchanges between human beings (*dikè*), that *justice* resides within human beings, as a virtue (*dikaïosunè*), and that these two forms of justice are subject to an objective *Justice* (*Thémis*), understood as a harmony between humanity and the time of the heavens (Zeus).

187 Darbo-Peschanski, "Historia et historiographie grecque: Le temps des hommes", in *Constructions du temps dans le monde grec ancien*, pp. 89-114, p. 98.

human time possible. Furthermore the presence of the Hours (*Hôrai*) – the seasons – long before the birth of Pandora clearly shows that time predates the first woman. However, this time is not yet human time, but the time of the heavens (*Ouranos*). The order of the world (*kosmos*) is fixed before Pandora's intervention, which is why it is hard to agree with Sophocles' assertion, showing a clear Oriental influence:[188]

> Silence is the grace of woman.

It is important to respect the time it takes to give birth to temporality, whose many-layered mythological conception Hesiod records. Firstly, we need to describe time, which is still a long way from appearing in this story. Spring does not come in winter, the blossom is still in bud on the tree of the world. Let us first seek the origins of this mythology.

We know that Greeks learned their ancestral history from the Egyptian priests,[189] and it would require enormous credulity to maintain that this founding myth of Greece is actually Greek, still more that it emerged from Hesiod's head, like the city of Athens from the head of Athena.[190] This myth must emanate from a tradition preceding the foundation of Athens, propagated by a nobility seeking retrospectively to be its founder. Eliade tells us, firstly, that several studies indicate that the myth is Oriental in origin:[191]

> Notable studies, by both Cumont and H. S. Nybert, have suceeded in illuminating some of the obscurity that surrounds Iranian eschatology and in defining the influences responsible for the Judaeo-Christian apocalypse. Like India (and, in a certain sense, Greece), Iran knew the myth of the four cosmic ages. A lost Mazdean text, the *Sudkar-nask* (whose content is preserved in the *Dênkart*, IX, 8), referred to the four

188 Sophocles, *Ajax*, l. 293, cited by Barbara Cassin, "Aristote avec ou contre Kant", in *Penser avec Aristote*, p. 365, note 15, this English translation R.C. Trevelyan.

189 Brisson, *Les mots et les mythes*, p. 44; once again this is the myth of the war of Atlantis. For an analysis of this myth, see Mattéi, *Platon et le miroir du mythe*, chap. IX, pp. 251-281. (The island of Atlantis was the first son of Poseidon).

190 We recall the words of an Egyptian priest to Solon: "Oh Solon, Solon, you Greeks are all children, and there's no such thing as an old Greek" Plato, *Timaeus*, 21, 22. Plutarch confirms: "All that lying Greece has dared to record", cited by Vico, *Origine de poésie et du droit. De Constantia jusrisprudentis*, Café, Clima éditeur, 1983, p. 77. Vico himself wonders, "How could it be regretted that the Greeks did not know the history of foreign peoples, when they had such little knowledge of the more distant events of their own history?"

191 Eliade, *The Myth of the Eternal Return: Or Cosmos and History*, trans. Willard R. Trask, Princeton University Press, 1954, pp. 124-125.

> ages: gold, silver, steel, and "mixed with iron". The same metals are mentioned at the beginning of the *Bahman-Yašt* (I,3), which, however, somewhat further on (II, 14), describes a cosmic tree with seven branches (gold, silver, bronze, copper, tin, steel, and a "mixture of iron"), corresponding to the sevenfold mythical history of the Persians.

The Persian origins of this mythology are now well established, as attested by other contemporary work, such as that of Schuhl and Paul Mazon.[192] It also seems that the members of Plato's Academy were aware of this influence, through Hermodorus' work on Zarathustra.[193] The myth bears the stigmata of traditional mythology, principally a nostalgia for origins.[194] It is said that there was a golden age, long long ago, at the start of a Great Year whose length of 18,000 solar years[195] prevents any possible return.[196] After an unfortunate and inoportune (*a-kairos*) fall, human beings went through phases of decline (the four materials) until they were no longer able to control their lives and constantly longed to return to their original state without any possibility of doing so, as shown in the myth of Sysyphus, son of Aeolus. As cosmic time is not on the human scale, the circular

192 Schuhl acknowledges this source: "Ionian inspiration is present, but recognisable in Chronos Ageraos is Zeruvan Akaran, the Immortal Time of Iranian religions, whose form is adopted by an image of Phanès in the Modena and is also manifested in the form of cosmic Necessity" in *Essai..*, p. 233. Paul Mazon finds a simple reason for this influence in Hesiod's father's origins in Cyme in Asia Minor: "Similarly the myth of races, in which we might be tempted to see a vague, idealistic memory of the golden age of the Minoan peace, seems not to be not only a philosophy of history, as has been thought, […] but a very clear borrowing from Oriental apocalypses by Hesiod (*Works*, ll. 633-640), whose father was from Cyme in Asia Minor – the myth of ages was present in Persia and even in India", *ibid.*, p. 235.

193 Jaeger, *op. cit.*, p. 132. This is also confirmed by Diogenes Laertius: **"**Dinon tells us that the name Zoroaster, literally interpreted, means "star-worshipper"; and Hermodorus agrees with him, in *Lives of Eminent Philosophers*, I, introduction, trans. Robert Drew Hicks.

194 Cf. Eliade, *La Nostalgie des origines*, 1971, (1969).

195 Pseudo-Plutarch attributes this doctrine to Heraclitus: "According to Heraclitus, it lasts eighteen thousand solar years" (*Opinions of the Philosophers* II, 892c5). We doubt that Heraclitus did espouse this view, which is incompatible with his other opinions, see Heraclitus *Fragments*, *op. cit.*, p. 139. The 18,000 years became the 18,000 worlds (*'olam*) of Talmudic cosmology rooted in Jewish mysticism**,** cf. *Babylonian Talmmud*, *Avodah Zarah*, 3b or *Sanhedrin*, 97b.

196 Mazdaism gives a cycle of 9000 years and Zervanism a cycle of 12000 years. The Greeks tend to refer to throwing the same number with the dice 10,000 times, Aristotle, *Traité du Ciel*, II, 1, 292a, note 5, French trans. J. Tricot, Vrin, 1949.

progress of human beings expresses the impossibility of their return to the first age.

Hesiod's version has the same characteristics as those of the prototype of the mythical tradition revealed by Eliade. This is confirmed by Annalisa Paradiso:[197]

> The idea of original perfection, this *arkhê/akmê* followed by decadence and longing for an original state, recalls the idea of time underpinning Hesiod's *Works and Days* and more precisely the myth of races, which is a myth of gradual fall, from the golden race of the light-filled *arkhê* to the race of iron.

Before describing Hesiod's myth, we should make clear that the adoption of this mythology implies an acceptance of circular time. In this Greek mythology, the doctrine of the eternal return is clearly coupled with circular time. The following four-stage decline entails human attempts to return to the original, first phase. The lost paradise must be restored and the golden age brought back to earth in a fifth phase, that of Zarathustra in flesh and blood.[198] However, as a Great Year is on a different scale from human time, human beings endlessly mope around in their smallness. It is a mortal, pointless, absurd fate. Nietzsche clearly illustrates this with his portrayal of Zarathustra in Paradise, on the Blissful Islands in the age of Cronos. Zarathustra's cry of:[199]

> It is time! It is high time!

meets the following response:[200]

> "Just look!" said the old steersman, "there is Zarathustra going to Hell!"

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197 Annalisa Paradiso, "Lycurgue spartiate: analogie, anachronisme et achronie dans la construction historiographique du passé", in *Constructions du temps dans le monde grec ancien*, CNRS, 2000, p. 388.

198 Nietzsche locates his Zarathustra beyond the pillars of Hercules, outside the known Greek world on the Blissful Islands (the Isles of the Blessed) known today as the Canary Islands, *Thus Spoke Zarathustra* pp. 109-112. Vernant has observed that the Isles of the Blessed (the Elysian Fields) enjoy an eternal spring equinox, cf. *The Odyssey*, IV, ll, 563-568.

199 Nietzsche, *Thus Spoke Zarathustra*, p. 155**.** We should add that, in a letter to Peter Gast of 20 May 1883, Nietzsche offers the following etymology: "Today I learned by chance the meaning of Zarathustra, which is gold star. I am delighted by this coincidence", cited by Gilles Deleuze, *Nietzsche et la philosophie*, PUF, 1970, p. 35. As we have seen, this is a more precise etymology than that given by Plato's student Hermodorus. It also has the merit of attesting that Zarathustra has returned to the golden age. Lastly, "gold", the primary material of the cosmic tree, also means "light" in Hebrew, as did *phanès* to the Greek Orphics.

200 Nietzsche, *Thus Spoke Zarathustra*, p. 152.

Accepting this myth means accepting oriental time, a time of fate quite different from the Greek tradition found in both Homer's founding narrative and so-called tragic poetry. This oriental time is circular. Yet Hesiod's presentation of the myth gives no room to notions of return, or a circular conception of time. The five races follow each other in a linear succession, the concatenation of which remains truly obscure. Sorel notes this linearity in Hesiod, asserting that the mythology of races is not circular, nor in any sense a decline:[201]

> The logos of the five races is not the account of a decline. It describes no increasing moral degradation of humanity, unless it be not wanting to understand what Hesiod says. The fifth race, that of "now", is not explained in its relations with those that precede it, because its representation plays with and frustrates diachronic forms and synchronic divisions.

This seems precisely to misunderstand the circular form of this myth. The fifth (fourth) race can only come into being through a return to the first, thus closing the circle of time that makes possible the coming of Zarathustra. The fifth term becomes the first only after the great conflagration (*palingenesis*) that will see the coming of the Messiah Zarathustra.[202] Some human beings will then be invited to the Isles of the Blessed (Paradise), while the rest will return to take another turn around the cycle of reincarnations. However, if Zarathustra does not come, there will be no fifth race and no hope of any possible return to the reign of Cronos and Paradise on Earth. Moreover, in the figure of the circle, there is clearly no place for the Saussurian pair diachrony and synchrony. It will be for Zarathustra to form the circle and accompany human beings to Paradise, a mythology that would continue to underpin the soul's peregrinations in many cultures.

So is the myth of races circular or linear? Does this fundamental conception of the world allow oriental time in, or is there a Greek time that can stand up to it? Why are there five races when, in those texts that have been preserved, the circular time of the Persians unfolds in four stages? This is a fundamental problem, which we shall consider first in the work of Nietzsche, in order to grasp his conception of the eternal, and then in that of Hegel, in order to understand his vision of history. In the first place, we have found a good synthesis of

201 Sorel, *Critique de la raison mythologique. Fragments de discursivité mythique. Hésiode, Orphée, Eleusis*, PUF, 2000, p. 47.
202 Cf. Mattéi, *Pythagore et les pythagoriciens*, PUF, 1993, Chapter 6.

Nietzsche's perspective in his book *The Will to Power*, in a passage we shall quote here:[203]

> This, my Dionysiac world which eternally creates itself, eternally destroys itself, this mystery-world of doubled desires, this my "Beyond good and evil", without goal, unless a goal lies in the pleasure of the circle, without will, unless a ring is full of will to turn on its own old course for ever around itself and only around itself: this my world – who is clear enough to look at it without wishing himself blindness? Strong enough, to hold his soul up to this mirror? His own mirror to the mirror of Dionysus? His own solution to the riddle of Dionysus? And he who should be able to do this, would he not then have to do still more? Betroth himself to the "Ring of Rings"?[204] With the vow of his own recurrence? With the ring of eternal self-blessing, self-asseveration? With the will to will it all again and yet again? To will back all things which have ever been? To will forwards to everything which must ever be? Know ye now, what the world is for me? And what I desire, when I – desire this world?

We can see that, while Nietzsche's myth of the eternal return was influenced by the Iranians, its underlying source remains Greek Pythagoreanism, which promotes the figure of Dionysus. It is vital to grasp the profound meaning of Dionysus in order to understand the myth of races. So Nietzsche believes this mythology is circular and consequently that there can be no future in the world (*kosmos*) other than the illustory future advocated by religions. Hegel's thesis on this matter is completely different. For him the world is temporal and

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203 Nietzsche, *The Will to Power*, II, 385. Cited in *Some Aspects of the Life and Work of Nietzsche, and Particularly of his Connection with Greek Literature and Thought*, trans. Arthur Harold John Knight, Cambridge University Press, 1933: http://tinyurl.com/oknm8xl. A little earlier Nietzsche provided the axiom underpinning this argument: "If the motion of the world aimed at a final state, that state would have been reached. The sole fundamental fact, however, is that it does not aim at a final state; and every philosophy and scientific hypothesis (e.g. mechanistic theory) which necessitates such a final state is refuted by this fundamental fact", trans. Kaufman, p. 371.

204 This theory of the rings can be linked to the character of Nathan the Wise, devised by Gotthold Ephraim Lessing (1729-1781) in an attempt to reconcile the three monotheistic religions. Lessing tells the story of an Oriental who had a very valuable ring, which he wanted to bequeath to his three children, the three monotheisms. As he could not cut it in three, he decided to have two copies made, so that he could give the same to each of his children. Quarrels broke out over who had the original ring, before it was realised that the real ring lies in the heart, the religion of the heart. Nathan concludes, "If only I had found in you one more, a man worthy of the name!" Lessing, *Nathan le sage*, French translation R. Pitrou, II, V, 1993, p. 171.

engaged in a process of becoming; it progresses through time. Thus there is an existential way out of the concentric circles in his *Phenomenology of Mind*, evidenced by the figure of the sage. But what sage might there be at the end of the historical process if not the first, Zarathustra?[205] Does the concept of *parousia* imply that when the Messiah returns, he will be in possession of all the knowledge that has gone before him (sage), like the Magusean Magi in the Scriptures?[206] Bouton offers a perfect synthesis of this most difficult set of questions, the umbilicus of German ideology, which tends to connect with the most fundamental conceptions of Ancient Greece:[207]

> Whereas Greek ethical order is subject to a cyclical history governed by "the certain, unwritten law of the gods, which lives eternally and the time of whose first appearance no one knows", Christianity enables the emergence of temporal progress, the starting point for which is the event of the incarnation. The emergence of the Christian religion is accompanied by the birth of eschatological time, rooted in historicity – the life and death of Christ – and directed towards the fixed future of Parousia and the Last Judgement. The Ressurrection of Christ in the community of memory is also a ressurrection of the past, a victory over death and time.

This conception of time and history would be the *summum* of philosophy and *The Phenomenology of Mind* the *punctum remotum* of the truly conceptual approach, were it not for the fact that this vision of the world and this kenotic dialectical logic, which claims to escape circles, never escaped anything, not even language. And, moreover, both express the vision and logic of Christianity through and through. In reality this vision of the world is the definition of the *Incarnation*

205 Jean-Marie Lardic, considering the endless chain of circles at the end of the march of the mind in Hegel's *Phenomenology of Mind*, suggests, following Feuerbach, that "If the infinite is the negation of a stage every time, this may seem to contradict its affirmative nature, mentioned many times by Hegel. We seem to be engaged in a kind of infinite progress, representing the wrong infinity." *L'infini et sa logique. Etude sur Hegel.* L'Harmattan, 1995, p. 103. And indeed, why should the progress of the mind culminate in the spiritual figure of the sage? Why should the concrete universal not end in *concrete materialism*? This was how it was read by Karl Marx in a historical reading that was in tune with Hesiod's myth in a way that Hegel's conception of history, rooted in Christian spirituality, was not.

206 It was the Maguseans who introduced Iranian eschatological conceptions to the Greeks, as we shall see at the end of this section.

207 Bouton, *Temps et Esprit dans la philosophie de Hegel de Francfort à Iéna*, p. 269.

repeated in the eucharistic context. We shall cite this synthesis by Catherine Pickstock:[208]

> These words and events only occur in the Church. And we only accept real presence and transubstantiation because the giving of Body and Blood in the Eucharist gives also the Body of the Church. The Eucharist both occurs within the Church and gives rise to the Church in a circular fashion. In consequence, a trust in the Eucharistic event inevitably involves trusting also the past and future of the Church. In receiving the Eucharist, we are in fact receiving an entire historical transmission which comprises the traditions of the Church and then those of Greece and Israel. This tradition includes the Bible in which it is declared that God is in some fashion manifest to all traditions and in the physical world as such.

Our approach will undoubtedly seem cavalier insofar as the link between Hegel's conception and Hesiod, and notably the myth of races, is not very clear.[209] But it is in fact quite natural if we note that Hesiod moulds time around the figure of Cronos, and this mythological mould was the motor of the young Hegel's historical vision.[210] When Hegel considers time, he always refers to the mythical figure of Cronos, on which his concept of time is based. We can see this in his *Reason in History*, from which we will cite the following passage:[211]

> In this way, the Greeks speak of the rule of Chronos or Time, who devours his own children (ie. the deeds he has himself produced); this was the Golden age, which produced no ethical works. Only Zeus, the

208 Cf. questions 73-80 solved by Thomas Aquinas in *Summa Theologica op. cit.*. The synthesis of these questions is taken from Catherine Pickstock, "Thomas Aquinas and the Quest for the Eucharist", *Modern Theology* 15, 2, April 1999, pp. 159-180.

209 However, we should be clear that the concept of *faith* remains attached to Christianity in Hegel's philosophy. This is where the analogy between Greek and Germanic culture ends: "The very word faith is reserved for the Christian religion; we do not speak of the faith of the Greeks or Egyptians, or of faith in Zeus or Apis. Faith expresses the internality of the most profound, concentrated certainty." We should also note that the term "religion" enters history following the Protestant separation of "reason" and "faith". In this sense Hegel's philosophy must clearly be placed within the direct line of this religious ideology. See also Bernard Bourgeois, *L'idéalisme allemand, alternatives et progrès*, Vrin, 2000, pp. 79-94. (The preceding quotation from Hegel is taken from page 85.)

210 Bouton, *Temps et esprit dans la philosophie de Hegel*, Vrin, 2000, pp. 168-169.

211 Hegel, *Reason in History*, trans. H. B. Nisbet, Cambridge University Press, 1975. The French translator of the same text (10/18, 1965) Kostas Papaioannou, observes that here, as elsewhere, Hegel confuses *Cronos* with *Kronos*, cf. French edition, note, p. 215.

> political god from whose head Pallas Athena sprang and to whose circle Apollo and the Muses belong, was able to check the power of time; he did so by creating a conscious ethical institution, i.e. by producing the state.

The same is true in *The Philosophy of Nature* in his *Encyclopaedia*:[212]

> But it is not *in* time that everything comes to be and passes away, rather time itself is the *becoming*, this coming-to-be and passing away, the *actually existent abstraction*, Chronos, from whom everything is born and by whom its offspring is destroyed.

In Hegel's work Greek time is always linked to the figure of Cronos as revealed in Hesiod's myth of races. For Nietzsche the myth of races simply confirms his conception of the *eternal return*, whereas Hegel's thought reveals that, on the contrary, this myth allows time to unfold. How is this possible?

To understand what is happening behind the scenes in this myth, let us start by returning to Plato. For we cannot be sure that Hegel read Hesiod directly; he may simply have used Plato's theories relating to him. At any rate, Hegel's version is highly Platonic. Firstly, Plato's conception of the heavens is far from simple and, while it may be circular, it is important to grasp how he understands the spherical nature of time. In his *Timaeus*,[213] Plato starts by describing the movement of the soul in two different circles: the circle of the same (intelligence and science) and the circle of the different, the place of opinion. These circles are in opposition, since the circle of the same manifests the indivisible (continuity), whereas the circle of the different manifests the divisible (discontinuity). Both the circles within the soul and the conceptions that gravitate around their differences are based on conceptions of the heavens. Plato applies conceptions of the heavens to conceptions of the soul; the heavens cannot be understood without the soul and vice-versa. So what is Plato's conception of the heavens? Mattéi provides some initial information:[214]

> The heavenly sphere turns towards the right of the universe, while the planets move leftwards. Plato in his turn teaches that the circle of the same turns horizontally towards the right, while the circle of the different turns obliquely leftwards (*Timaeus*, 36c).

212 Hegel, *Philosophy of Nature: Encyclopaedia of the Philosophical Sciences*, Part II, §§ 257-259, trans. A. V. Miller, Oxford University Press, 2004, p. 35.
213 Plato, *Timaeus*, 37 a-c.
214 Mattéi, *Pythagore et les pythagoriciens*, PUF, 1983, p. 70.

So the heavenly sphere turns to the right, implying that it introduces the return of the same. This is in tune with the doctrine of the *eternal return.* But the planets turn to the left, thus introducing otherness and rendering impossible the return of identical sameness. So in the circularity of the time of the heavens the same perpetually rubs against the different, as long as the world remains connected to the heavenly sphere. Should the world separate from the heavenly sphere, clearly it will be caught in a leftward movement towards permanent difference and perpetual flux. This perpetual flux later becomes the illusory future of Heraclitus, whose thesis Plato adopts.[215] The phrases "everything is in movement" (*panta kineîtai*), "everything flows" (*panta rheî*), "everything passes and nothing remains" (*panta khoreî…*), all forged of a piece, describe this mythology.[216] However, this perpetual flux is also the time of the decline described by Hesiod's myth, after the castration of Ouranos by Cronos – an act with serious consequences. Ouranos's end also ends the balance of the heavenly sphere of the same and brings in the oblique difference of the world. So this act fatally brings the future with it, in the form of the decadence described in the myth of races. In a passage known to refer to this myth,[217] Plato advances the same idea in his *Statesman*:[218]

> Eventually, this whole set-up had lasted as long as it was meant to and there had to be a change; the whole earth-born race had been used up, since every soul had fulfilled its quota of incarnations and had fallen

215 Aristotle attests to the influence of Cratylus on Plato: "For, having in his youth first become familiar with Cratylus and with the Heraclitan doctrines (that all sensible things are ever in a state of flux and there is no knowledge about them), these views he held even in later years", *Metaphysics*, A, 6, 987a 29-b7, trans. Barnes.

216 Aristotle criticises the thesis that "*panta kai aei*" in his *Physics*, VIII, 253b 10-11, trans. Barnes, "The view is actually held by some that not merely some things but all things in the world are in motion and always in motion, though we cannot apprehend the fact by sense-perception. Although the supporters of this theory do not state clearly what kind of motion they mean, or whether they mean all kinds, it is no hard matter to reply to them." See also *Topics*, I, 11, 104b 21 and *On the Soul*, I, 2, 405a 25-28. According to Jean-François Pradeau in *Héraclite, Fragments*, since the work of Kirk these fragments have no longer been recognised as authentic by contemporary translators Diels and Marcovich. Pradeau says, "This opinion is foreign to Heraclitus in such an indeterminate, simplistic form", p. 51.

217 Brague, *Du temps chez Platon et Aristote*, p. 86: "The myth of *The Statesman* can be read as a Platonic reworking of Hesiod's narrative."

218 Plato, *The Statesman*, 272e, trans. Robin Waterfield, Cambridge University Press, 1995, p. 26.

> to earth as seed as often as had been ordained for it. Then the helmsman of the universe released the tiller, so to speak, and withdrew to his vantage-point, and both fate and its innate longing made the universe start to move backwards.

Plato presents this myth in two parts. The first part describes the golden age and the first race, the second part describes all the stages of decadence. After the golden race, the world separated from the heavenly sphere and went into reverse. This was also the moment of divine withdrawal, which left human beings at the helm.[219] But the withdrawal was not complete; an observation post remained, seeming to indicate that the divine might slip out from the wings and back onto the world stage.[220] Hegel seems to have put his faith in Plato and used this account as the basis for his new conception of history. But does Plato's intepretation of Hesiod's myth conform to the text itself? The contemporary Hegelian Bouton suggests:[221]

> Plato modified Hesiod's account of the theogony, turning the simple succession from Chronos to Zeus into an endless cycle. As a result, the myth of the statesman lays the foundations of a cyclical conception of time, which Hegel uses precisely to understand the history of ethical life: the oscillation between birth and destruction no longer refers to two major periods of the universe, but forms the very rhythm of the temporal life of peoples.

That Plato destroyed much of Greek heritage (Democritus), modified a number of conceptions (Heraclitus) and transformed many philosophies (Pythagoreanism) has already been demonstrated. However, we are not yet persuaded that Plato's reading of Hesiod is too partial in every sense.[222] In his discussion Plato peddles several

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219 This myth of divine withdrawal (contraction) can be found in the kabbalist conception of *tzimtzum* (tradition). We can see this in Chaim Vital (1543-1620) and the Lurianic Kabbalah. In Vital**,** *Ohr Ein Sof* ("the light of the Lord") is linked to the world by a straight line that also breathes in the Four Worlds of *emanation*, *creation*, *formation* and *action*.

220 Nietzsche speaks of the *Captain* in the Blessed Isles, Anaxagoras mentions the *helmsman* and Plato mentions the presence of the *pilot*. Here we are in the metaphorical register of the representation of Zarathustra, who seems to have come, or to be coming, by sea, like the Persians on their malevolent ships. In the world of Ancient Greece there was a mythology of the macabre ferry, described by Moutsopoulos in his article, "Un instrument divin, la navette, de Platon à Proclus", *Kernos*, 10, 1997, pp. 241-247.

221 Bouton, *Temps et esprit dans la philosophie de Hegel*, p. 86.

222 Here Bouton is perhaps following the interpretation of Brague, who suggests: "Plato transforms a simple succession into a cycle: sometimes Cronos governs the

ideas that should give us pause. In the first place, the universe is described as naturally ("innate longing") moving "backwards" – in short, "bad". Moreover, the universe itself is said to have a "fate". Crucially, the relationship of all this to the soul indicates that this conception of circular time serves the doctrine of metempsychosis. Plato shows that souls constantly fall into bodies and are reborn, in other words that they return to the cycle of metempsychoses. Plato's passage, more coloured by Pythagoreanism than it seems, also tells us that there is no salvation possible for souls. Sorel suggests, however, that souls may be able to save themselves through regular visits to places of worship where they can top up their life force – their *thûmos* (vital energy):[223]

> Conversely, Orphic ceremonies were bound to recall the birth of the world, the theogonic struggles and the myth of the tearing apart of Dionysus. They retraced the loop linking Dionysus to Phanes, evoking the golden age (immortality), its fragmentation (wheel of births) and reunification (return to the golden age).

We shall discuss the relationship between Dionysus and Zarathustra a little later on. Here we can note that the presence of Dionysus shows that we are in the Orphic register, which will indeed be that of Plato's interpretation. In sum, let us say that the circularity of Hesiod's myth of races is not only possible, in order to retain its Persian origins and internal consistency with the cosmic ages, but, crucially, attested by Plato's version, perhaps produced under the influence of Orphism. Moreover, we shall find this circular understanding of the myth of races in the Neoplatonist Proclus, the last great teacher of Plato's Athens School.[224] At least this is what Sorel tells us:[225]

> A passage from Proclus states that there were two generations (*geneai*) before the race that emerged from the dismembering of Dionyus: a golden age under Phanes and a silver age under the dominion of Kronos. This succession of ages loses its diachronic, contradictory nature when it is associated with the cycle in which the end is the beginning. Dionysus is Phanes: the follower of Orpheus returns to the golden age at the end of his purification, the silver age when he forgets himself in murder, violence always being associated

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entire world, sometimes he only reigns over some places, 'as is the case now'" *ibid*., p. 86.

223 Sorel, *Orphée et l'orphisme*, PUF, 1995, p. 107.

224 Proclus (412, 485) was the last *divine* of the Athenian School. After him the School split into the Aristotelian tendency of Marinus and the Platonic tendency of Isidore.

225 Sorel, *Critique de la raison mythologique*, p. 114.

> with Kronos. These ages are not anterior to the "current" age. They exist solely from the point of view of the purity or impurity of the soul presented to Persephone. Temporal linearity is merely a shrinking of the mind resulting from ignorance which, in the Greek understanding, remains merged with forgetting.

This all remains obscure. However, Sorel ultimately accepts that it is possible to understand this myth as circular and furthermore that such an interpretation seems most in tune with the original. Its conformity with the myth's Persian origins indicates that this is the best interpretation. So we shall retain the view that there are two possible readings of this text, one linear, the other circular, and go on to seek a tipping point or fork that might explain this interpretative "biphony". Our focus will be the relationship between justice and time, an association of divinity with temporality that must be understood in all its subtlety.[226]

We shall now discuss the well-known myth of ages, which seems to have had a monumental impact on both religious and philosophical visions of the world, and notably on German ideology. We shall then go on to show that Aristotle's conception of time is entirely independent of this mythological tradition. Although *De Mundo*, which uses its conceptions, was formerly attributed to Aristotle, it has been clear since the Renaissance that it is totally incompatible with his vision of the world.[227]

The Golden Age is the first and last age of this circular myth. It is the age of Cronos, who is not subject to time. Its men are without *psukhè* and do not engage in sexual reproduction, so this world contains no women. Consequently there are no human generations, no descendants; the men do not age, but are always young and ultimately disappear into a great sleep without even dying. This is the age that most corresponds to life *in illo tempore*. As we have seen in Pindar and Plato, this age is also spatially located in the Isles of the Blessed.

226 Sorel, *Critique de la raison mythologique*…, p. 114, pp. 52-53.

227 This treatise is attached to the French translation of Aristotle's *On the Heavens*: *Traité du Ciel*, trans. J. Tricot, Vrin, pp. 179-204. In addition to the ideas developed in 401b, we find the strange conception at 401a 15, in which God is "called the son of Kronos and of Time, for he endures from eternal age to age." (*De Mundo*, trans. E. S. Forster, Clarendon, 1914). A circular conception of the World is required in order to suggest that one could move from one eternity to the next. Tricot thinks this treatise offers a good view of the world as it was understood in the 1st century (p. IX).

These men seem to have complete divine protection; nothing bad happens to them, so there are no events, indeed no history, because they are in the hands of the highest god. As Brisson suggests:[228]

> In the reign of Cronos the world as a whole was governed directly by the highest god, while its parts were run by his aides.

Untouched by genital sexuality or death, the two fundamental functions of human life, this "Paradise"[229] looks like Hell! Not entirely though, to the extent that divine protection enables men to enjoy great wealth. Like gods, they are free and do not work or suffer. And with such riches these peers cannot but be friends. Why bother stealing when everything is in everyone's reach? What need is there for laws? Life, sex and material goods are not subject to penury. This myth became so important in Athens that, according to Aristotle, it even crops up in a proverb describing the tyranny of Peisistratus:[230]

> Men were often to be heard saying that the tyranny of Peisistratus was the Golden Age of Cronos.

We cannot overemphasise the materialism of this vision of ecstatic happiness under divine control. These men have no souls. They do not read or philosophise,[231] and what is the point of culture when you already live in a perfect land of absolute beauty, which no human representation could improve? Clearly this is the reign of total idleness, since as we know that the closer we get to the divine, the less movement there is. However, these men cannot be described as animals, since at the start of his narrative Hesiod clearly states that they have language. So these are fully men – supermen in the Nietzschean sense. But, stripped as they are of *Erôs* and *Thanatos*, it seems clear that art and culture *de facto* no longer have any reason to exist. So what is left? There is only thought and contemplation. But thinking about what? Contemplation of what? There is only thought without culture, in other words mathematics and contemplation of the

228 Cited by Brague, *Du temps chez Platon et Aristote*, p. 90, note 40. Luc Brisson also compares these men to a "human flock".

229 The English "Paradise" comes from the Latin *paradisus*, itself derived from the Greek *paradéisos*. This term is thought to come from the Avestan *pairi-daeza*, meaning "enclosure". This would explain the quest for an enclosed land, the conception of Paradise as an island or archipelago. See also Jean Delumeau, *Une histoire du Paradis*, I, Fayard, 1992.

230 Aristotle, *Constitution of Athens* XVI, 7, trans. H. Rackham, Heineman and Harvard University Press, 1935.

231 Aristotle, *Politics*, VII, 15, 1334a 31 and ff., and the *Protrepticus*, *fragment 12*, as we have seen.

starry sky. In our view this is why Zarathustra is said to be the adorer of the stars. And it is this conception that is discussed in Aristotle's *Protrepticus*, from the opening part of which we take the following passage:[232]

> This is the thing for the sake of which nature and the god engendered us. So what is this thing? When Pythagoras was asked, he said, "to observe the heavens," and he used to claim that he himself was an observer of nature, and it was for the sake of this that he had passed over into life. And they say that when somebody asked Anaxagoras for what reason anyone might choose to come to be and be alive, he replied to the question by saying, "To observe the heavens and the stars in it, as well as moon and sun," since everything else at any rate is worth nothing.

The total materialism proposed by this vision of the golden age reflects the fact that the finished man is surrounded by perfection *in re*. For this reason thought, culture and, still more, philosophy and spirituality are all unnecessary. All these things are already in the thing *in itself*, in the full sense that Kant gave it,[233] *in re*, if we are to follow Leibniz. In the Iranian conception, the universe is perfect, it is fundamentally good. However, remaining in the garden of Cronos which is the concrete, manifest vision of this state, it is easy to understand that it has no room for thought. What is the point of a little universe in one's head (spirituality)? What is the point of a philosophy or theory of the world that is merely that world's pale reflection? It is a lack of understanding of this resolutely materialist dimension of the oriental Paradise – in this case the Persian vision of the world – differing so greatly from the later vision of the Christian Church, that apparently leads Vidal-Naquet to say, with a rare lack of finesse:[234]

> The Paradise of the golden age is ultimately an animal Paradise. Humanity, including that of the philosophers, is on the other side, that of the cycle of Zeus.

This conception is followed by Brague, whose work we have cited.[235] Did Hesiod get it wrong? No, as everything is entirely "in actuality"

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232 Aristotle, *Protrepticus*, trans. Hutchinson and Johnson, p. 48.

233 This is the *positive noumena* of the *Critique of Pure Reason*. While man is unable to have a *vision in God* and, *a fortiori*, cannot have the world *in itself*, Kant as a reader of Leibniz nevertheless defines the contexts of this impossibility.

234 Cited by Brague, *Du temps chez Platon et Aristote*, p. 92, note 50; see also Perceval Frutiger, *Les mythes de Platon*, 1930, p. 188. Is it not the worst injustice to suggest that these men are "animals", particularly in a commentary on Hesiod?

235 *Ibid*, p. 92. The interpretation we contest is as follows: "He is as yet just another animal. Man accedes to his humanity through philosophy, and everything suggests

or *pure* to use the concept Aristotle uses to describe the divine, there are no more spiritual and intellectual journeys to be made. More radically, it can be said that there is no longer any need for the western vision of the world. So why on earth do Plato and Aristotle place philosophy within this realm? To understand this we must first present the heroic age. More precisely, what is the significance of Cronos, the guardian of this strangest of ages? Sorel takes up the commentary of Heraclitus the rhetorican:[236]

> Kronos scythes: his epithet *anklulomêtês* "of the twisted thinking", or "of the curved thinking", a description attested in Homer, precisely gives his cast of mind the curved shape of the castrating sickle. Kronos scythes the unhindered fertility of his progenitor, this excess of vitality (*thaleros*) that is paradoxically at once necessary to begetting and incompatible with the orderly cycle of life

The root of the name *Κρονος* (with an initial kappa) is said to be *ker* (to cut), which would be consistent with his epithet *anklulomêtês.*[237] However, it is generally accepted that Cronos was never said to be the god of time *Χρονος (khronos ou Chronos*, with an initial capital letter) by the Greeks, notably Homer,[238] and that he is thus unconnected to the notion of time *χρονος* (*chronos*, all lower case).[239] However, Sorel notes that while the fusion of the two is not clearly made by the poets, it is explained by an examination of the theologians. Between the 4th and 5th centuries BCE the term *chronos* has many different meanings, as we have seen in presenting our mosaic of poetry. But as soon as we link Cronos with the Orphic god Phanes, all suddenly becomes

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that philosophy is absent from the life of plenty of the time of Cronos, when it would have been supremely necessary."

236 Sorel, *Critique de la raison mythologique*, p. 53.

237 Sorel, *Les Cosmogonies grecques*, p. 42. The Greek root *ker* is also thought to be the root of the term *kairos*.

238 Homer, *The Iliad*, IV, 59.

239 Sorel initially thought that this confusion in Hegel's philosophy between *Cronos* and *Chronos* came from the Neoplatonists, as suggested by Romilly (*op. cit.*, p. 36), see *Les Cosmogonies grecques*, p. 83: "It seems a confusion was introduced after the event by the Neoplatonist philosophers between the word *chronos* (with an initial *khi*) and the name of the Titan *Kronos* (with a kappa), who had in fact never signified time. It is certainly the case that the word *chronos* is never found as the subject of a clause in Homer. On the other hand, if we place the expansion of Orphism between the 6th and 4th centuries BCE, we are bound to observe that this period corresponds to the rise of many conceptions concerning time."

clear.[240] Cronos is the guardian of non-temporality, of eternity and Tradition.[241] This is why his temporal reign is always associated with the spatial realm of the Isles of the Blessed.[242] To preserve this tradition through time and to maintain his role, Cronos swallows everything "whole". He gulps down all his children: Hestia, Demeter, Hera, Hades, Poseidon and Zeus. But the castration of his father Ouranos ends this golden age and heralds in the silver age and the unfurling of time and space. If, as Plato says,[243] the name Ouranos signifies "contemplation of the higher world, since it is seeing what is on high, *horôsa ta anô*", then his castration leads to the separation of the heavens from the world (or Earth). As we have seen, it is also the reason Plato uses to assert that the world henceforth follows an oblique, backward course. How did this actually come about? First of all, Gaia created steel to make a large billhook, which she gave to Cronos the *hoplotatos* (the youngest). Then, together, they lay in wait:[244]

> But the hidden boy / Stretched forth his left hand; in his right he took / The great long jagged sickle; eagerly / He harvested his father's genitals / And threw them off behind.

Laterality is important here because it seems to reflect the conception of the world advanced by Plato. Cronos unfurls his left side and takes up the billhook with his right hand, before striking the fatal blow with both hands. Time seems to open up and simultaneiously close down, as though temporality necessarily engendered a sense of guilt linked to the deed to be done. Chronos, engendered by Cronos, appears and disappears at the same time. It is at this point, it seems, that Cronos becomes Chronos, bearer of time. We must understand that Cronos undergoes a metamorphosis to become the opposite of what he was (Chronos). From the "devourer of time" who prevents time from unfolding (Cronos), through this cruel deed he becomes the bearer of time for the world (Chronos). Sorel puts it very well:[245]

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240 Sorel, *Orphée et l'orphisme*, PUF., 1995, p. 49. The god Phanes is derived from the Greek *phainô*, meaning "to make shine", "to reveal", "to appear".
241 Sorel, *Orphée et l'orphisme*, PUF, 1995, p. 53. He carries the billhook *skêpron* of sacred individuals, according to the etymology given by Emile Benveniste.
242 Pindar, *Olympian Odes*, II, 77.
243 Plato, *Cratylus* 396c, cited by Sorel, *Les cosmogonies grecques*, p. 35. Hesiod always gives *Ouranos* the epithet *asteroesis*, meaning "starry".
244 Hesiod, *Cosmogony*, ll. 178-182, trans. Dorothea Wender, Penguin, 1976.
245 Sorel, *Les Cosmogonies grecques*, p. 42.

> The castration of Ouranos unleashes an irreversible process: by enabling space and time to unfold, it makes the representation of the world possible.

From this moment on, Cronos has two faces: one turned towards the heavens and celestial eternity, the other towards human beings and temporality. On the one hand he destroys, endlessly re-establishing the initial state of things, while on the other he constructs, integrating human beings into time and change (Chronos).[246] Later the Latin authors represent Janus as the two-faced guardian of a door.[247] According to Aubenque, the two faces also appear in Aristotle's synthetic model of time:[248]

> Time has two faces: as the destroyer of nature, which he erodes and undermines through the combined action of heat and cold (*Meteorology*, I, 14, 351a 26 and *Physics* IV, 13, 222b 19) he is the benevolent auxiliary of human action; and while he is not a creator, he is at least an inventor, enabling technological progress. (*Nicomachean Ethics*, I, 7, 1098a 24)

For our own part, we remain cautious on this subject. For while the future remains illusory in this mythological model, Aristotle conversely suggests that change is no longer an illusion, but that it is fundamental to being, at the theoretical level as much as at the ethical and political level. It is here that the comparison has to end. On this subject Jean Brun rightly suggests:[249]

> While, for Plato, coming to be is that which turns things and people away from the eternal Idea, for Aristotle, conversely, it is through coming to be and movement that individuals strive to reach the Being that moves them.

This said, let us return to this conception of the world which, having been cut off from Ouranos, moves into a decline in several stages. Hesiod relates that as men could no longer use the time of the heavens to guide their lives, they became mortal and, crucially, having realised they were now freed from the cycles of the higher sphere, full of excess (*hybris*). This is the start of the decline, the second, silver age; in short, "the time of men".

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246 The positivity of what is to come ('à venir' in French**)** in the religious context is, in fact, its negation ('a-venir' in French, with a privative "a"), precisely because time is understood as circular.

247 *Chronos* is associated not with the Roman *Saturn* but with *Janus*, who left the memory of the golden age, celebrated in the Saturnalia. The two faces of the door are found on Janus' own face in Ovid's *Metamorphoses*.

248 Aubenque, *Le problème de l'Etre chez Aristote*, pp. 73-74.

249 Jean Brun, *Aristote et le Lycée*, PUF, 1961, p. 26.

The Silver Age. Hesiod tells us that this is an inferior race (*polu kheiroteron*), attesting to the state of decline. Cut off from the circular time of Ouranos, the men of the silver age seem to lack direction. They are completely caught up in an *a-kairatic* time; they are still the children of their own time, whose measure they do not yet have. Chronos is a young adult and his world seems wobbly, like a toddler's gait. Hesiod describes men as not living much past their adolescence and remaining children for a very long time ("at his good mother's side a hundred years"[250]), before dying as aged youths. Unlike the men of the golden age they suffer many misfortunes, for they do not want to adore the gods, nor even to make sacrifices on the holy altars, when, Hesiod says, this would seem to be a human duty. They scorn the law, which explains their hubris. Thus they are bound to disappear. Chronos suffers the same fate at the hands of Jupiter as that he meted out to Ouranos. So all in all the silver age is the time of *a-kairos* and *hybris* that leads to the bronze age. Hesiod then introduces the *Bronze Age*, with the first race of men forged by Zeus himself.

These men are presented as exaggeratedly bellicose. Benefitting from a robust physique that gives them indefatigable power and strength, they are frenzied and violent with hearts as hard as bronze. These men seem to have become aware of their bodies or, rather, seem to have regressed to the point where they can no longer control even their own bodies. As for thought and justice, both are out of the question in this age. Here we see the full extent of the decline they represent. The men of bronze truly are animals and it is in relation to them and them alone that we might ask whether they have any humanity left. Hesiod states that they are almost men no longer, as they "ate no bread".[251] However, Sorel tries to rescue the human nature of this race, suggesting that they are the first who truly know death:[252]

> The bronze race open the way to the post-mortem fate reserved for almost all the humans to come: falling into the mouldy realm of Hades, where they disappear "leaving no names".

One thing is certain, the souls of these men do not migrate elsewhere after death. They are mortal, in the manner of the animals to whose

250 Hesiod, *Works and Days* l. 137, trans. Hugh G. Evelyn-White, http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.01.0132
251 *Id.* l. 148.
252 Sorel, *Critique de la raison mythologique*…, p. 57.

stage they have regressed. Furthermore, being masters of bronze, they are armed to the teeth and think only of war, constantly working this metal, which they use even to decorate their houses and for all their activities. This is because they are under the control of Ares (Mars), son of Zeus, whom Homer described as knowing nothing of justice (Themis),[253] just like the men of the Silver Age. So they end up killing each other and this race dies out all by itself, though mutual murder of the entire community. There is something barbarian about them, since they slit each other's throats in a manner typical of way death is administered in the oriental world. We might wonder what stages could follow, so terminal does this appear. Yet this point marks the advent of the race of heroes.

The Heroic Age. Hesiod's poem is a most delicate undertaking. He must now introduce the Greek founding narrative, integrating Homer and the Trojan War, without which this myth would not bear the colours of the Hellenes. The transition is made by warriors of the bronze race, who become masters of arms. Crucially, they also become more just and virtuous, which means that at the least they will not kill each other, like the men of the Bronze Age. It is these new men who must get history back on course. Armed with their extra humanity, they set off to fight and are all defeated before either Thebes or Troy. Theirs is still a lethal fate, which is simply manifested through war. All this seems to mean that death is the lot of this race, the lot of human beings, a fact that should never be forgotten. Man is a mortal, mortal is man, the mortal man is dead, dies and will die.

But, crucially, what sets the hero apart from other men is the strength to live life in the face of death – a worthy death on the battlefield in the epic genre. This is why in the end a few heroes become more than demi-gods; they become "blessed", with a different fate from the rest. Sorel explains:[254]

> Such a cycle, however extraordinary, still requires time to pass and hence a negation of the actuality of death. These blessed are not subject to the law of Thanatos but, at Zeus' whim, leave life without dying.

Zeus asks Hermes to take them to the Elysian Fields in the Isles of the Blessed, where their souls can enjoy a sweet life of well-earned rest, something that seems completely unknown to mortals. However, Sorel

253 Homer, *The Iliad*, l. 341.
254 Sorel, *Critique de la raison mythologique*, p. 58.

notes that none of Homer's heroes actually has his soul transported to the Isles of the Blessed, apart from Menelaus, who brings back Helen. This idea seems absurd, poetic, a somewhat featherbrained conception we might say today, reflecting the pejorative aspect with which poetic activity has been lumbered since being undermined by Plato's ideology. Yet, if this mythology is circular, it is hardly surprising that it involves a return to the first phase, in other words the golden age. The golden age is the place where the Greeks deploy the heroes, which obliges us to accept that even the Greek version proposed by Hesiod shows that we are dealing here with circular time. But this is not said explicitly. Hesiod seems to be hiding this circular dimension, just as he hides from mortals the real destiny of the heroes going to the Elysian Fields. We should also note that this vision of heroism makes it possible to understand why Plato and Aristotle think that the philosopher should be located here. Philosophers are heroes and as such it will be up to them to attain the new golden age. It is here that we find the fork where the myth's circularity and linearity separate. Linearity says there must be a direct transition from the silver age to the iron age, as the fall of man follows a line all the way down, if that is where we are going. This means there are only four ages, in accordance with the Persian tradition, with the heroic age reduced to an intermediate age, a divider separating what goes on into the iron age (evil, the iron earth), from all that goes back to the Isles of the Blessed (good). Circularity then becomes good, while linearity is evil, as Hegel also said. This is the traditional thesis of the negation of linear unfolding time, which this myth contrasts with the circularity of tradition. However, the irreversible descent towards the iron age is not obligatory, heroism makes it possible to close the circle, to avoid entering the iron age and thus to return to the golden age.

b. On the Pythagorean mysteries, or the structuring of human time in stages of life independent of bodily unity.

Our approach would be hard to understand if we did not say a little about the Pythagorean dimension that appears between the lines of the version proposed by Hesiod. We do not know whether Hesiod drew on an ancient Orphism, perhaps dating back to Cretan culture, or

whether he settled for using the Pythagorean conceptions of his own time. Moreover, Herodotus (II, 81) regards the Orphics and Pythagoreans as equal[255] and Aristotle said that the lines of Orpheus were not original, as we shall see.[256] In short, the Pythagoreans said that Zeus coupled with his own daughter, called Persephone or Koré, resulting in the birth of Dionysus. This was the start of a new era, a reworking of the Iranian doctrine of cyclical time, as Sorel clearly states: [257]

> The Orphic Dionysus was not a rural divinity but a child-god whose initiation coincided with the start of a new cosmic end.

Indeed it was said that Dionysus would be "the very last king of the gods". The manner in which he is presented, the words with which he is surrounded and the ideological charge he carries make him the equal of Zarathustra, although he did not have this image for the Greeks. A Pythagorean fragment announces:[258]

> Listen, gods! Here is the man I give you as King!

The cosmic end he represents is the coming of Zarathustra, the last god, the new king, the last of the last for men, but not for the gods. However, Dionysus is dismembered by the Titans and his body scattered in as many souls as there are human souls. So each soul contains a dismembered piece of divine eternity. The memory of this event sets each soul on a path (metempsycosis)[259] to regain the primal

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255 "Pythagoreanism is one of the many mystical sects that developed in Southern Italy throughout the 6th century; it had close links to Orphism" adds Schuhl in *Essai…*, p. 242.

256 What is certain is that Orphism cannot be Egyptian in origin, as there are no notions within it that are comparable to that of "metempsychosis". The source of this confusion is a misunderstanding by Herodotus, as stated in a note below.

257 Sorel, *Orphée et l'orphisme*, p. 75.

258 Orphic fragment no. 208. All these fragments were collected in the *Orphicurum fragmenta* edited by Otto Kern, Berlin, 1922, Weidmann, 1972.

259 Reincarnation is a belief adopted by Plato, Plutarch, Plotinus and Proclus. It is rejected, as we shall see, by Aristotle, the Stoics, Epicurus and St Augustine. On the basis of two accounts by Diogenes Laertius, it was long thought that the belief "that the soul survives death and passes into other bodies" **(**I, *Prologue*, trans. Hicks) was of Egyptian origin, while Herodotus says: "The Egyptians were the first who maintained the following doctrine, too, that the human soul is immortal, and at the death of the body enters into some other living thing then coming to birth", *The Histories*, Book II, chapter 123, trans. A. D. Godley. However, as Sorel rightly notes, it was not present in the Egyptian theological conception: "The Egyptian initiate mentally performed mutations (*kheperou*, passage from one form of being to another) to get closer to Atum: he was not embodied in any manifest form", *Orphée et l'orphisme*, p. 81, note 1. However, Xenophanes of Colophon (DK 21b7) and

Unity (the philosophical concept of the One), thus endlessly striving to leave its weighty body behind:[260]

> The soul, a separate piece of the original puzzle, is imprisoned in a body (*sôma*) as in a tomb (*sêma*) due to a superhuman event. This imprisonment sanctions a stage in the cycle of metempsychoses

Escape from this cycle can take several years, or may even never happen. It is always up to Zeus to decide the outcome of this infernal cycle – or so Simplicius tells us in the following passage:[261]

> The soul is chained to the wheel of necessity and birth, from which escape is impossible, according to Orpheus, other than by pleasing the gods whom Zeus has empowered to free souls from this cycle.

While waiting for this event, the soul constantly changes bodies, entering and leaving them again.[262] So we might wonder about the endpoint of the series of reincarnations. In every case it implies that human beings must behave in the most just manner possible. This was stressed by Plato, who wrote at least six dialogues on the subject:[263]

> They say that a person's soul can never die; that sometimes it comes to an end – most people call it "dying" – and sometimes it comes back into being, but that it's never destroyed. And that's why we've got to live the whole of our lives as religiously as we possibly can.

So we can see that as long as souls have not escaped the cycle, they continue to change bodies, over a long cosmic period. But how can

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Empedocles adopted it (DK 31b117) from the tradition of Orpheus, Pherecydes of Syros and crucially Pythagoras, the greatest Greek representative of this conception. The belief's origins remain highly obscure to this day.

260 Sorel, *Critique de la raison mythologique*…, p. 111.

261 Sorel, *op. cit.*, p. 93; see also Proclus *Hymnes et prières*, French trans. H.D. Saffrey, Arfugen, 1994, notably chapter IV.

262 Not every transmigration is metempsycosis, for transmigration can occur from a body to some other entity, whereas the term *métempsykhosis* refers to the passage (*meta*) of the soul (*psykhosis*) from one body to another, human or animal, but not a plant. There can be no transmigration to nothing or another kind of entity except, precisely, in the case that concerns us here, in the form of transportation to a place or non-place that receives the heroes. So it is the escape from the cycle of reincarnation that poses a problem. This notion has been overlaid by that of *palingenesis,* which has often been applied exclusively to the heavens, since being cut in two by the Stoics, who rejected its bodily aspect and retained only its cosmic dimension. Formed from the prefix *palin* (return, renewal) and *genesis* (generation) it signifies a real Dionysian rebirth.

263 Plato, *Meno*, 81b, trans. Adam Beresford. These six dialogues are the *Meno*, 81b-c, which refers to the poet Pindar and his ideal of total knowledge; the *Phaedo* 81e-82b; the *Republic* 615a-621b, which records the myth of Er; the *Phaedrus* 248d-e which mentions reincarnation as an animal; the *Timaeus* 90e, which gives man a choice, noted Y by the Pythagoreans, and the *Laws* 870d-e, 872d-e, 904d.

souls escape reincarnation? This is undoubtedly a matter for Zeus rather than human beings, though not entirely, at least not in the conception adopted by Plato:[264]

> Now, as the soul combining first with one body and then with another undergoes all sorts of changes, either of herself, or through the influence of another soul, all that remains to the player of the game is that he should shift the pieces; sending the better nature to the better place, and the worse to the worse, and so assigning to them their proper portion.

Divine judgement seems to be exerted only in relation to the character of human beings, clearly showing that individuals are not subject to a divine lottery. Their characters must possess features on which the divinity's judgement can be based. And here the ideal of the Greek heroes provides a founding model and mythological precedent that requires detailed description. For how should we understand the Orphic dimension and with it what Hesiod tells us of the fate of the souls of the heroes, which seem able to return to the golden age and escape these infernal cycles?

In the first place, we would suggest that the end of this circularity lies in the Isles of the Blessed and eternal spring. This is confirmed by the philosopher Iamblichus:[265]

> What are the islands of the Blessed? The Sun and Moon.

So there is an end to the infernal cycle and this end seems to have some links to the Median mythology of the Persians, whether or not it came out of Orphism. There is a mythological montage to be grasped here, which still remains obscure. We would then suggest that escape from the cycle of reincarnation is well attested within the strict confines of Orphism. Escaping the cycle of reincarnation means freeing oneself from circular time, "which liberates [the soul] from the circle of generation", as Proclus put it.[266] It is also clear that it relates

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264 Plato, *Laws*, 904b6-c1, trans. Benjamin Jowett, 1892: http://classics.mit.edu/Plato/laws.html

265 Iamblichus, *Life of Pythagoras*, § 82, trans. Thomas Taylor, Inner Traditions International, 1986, p. 43. Iamblichus adds that the *tetracktys* is "the oracle at Delphi" and that *harmony* is "that in which the sirens subsist". Another fragment translated by Schuhl confirms this hypothesis: "Now I come as a supplicant to the noble Persephone, so that her grace will send me to the residence that is the seat of the blessed", in *Essai*…, p. 240.

266 Proclus, *Commentary on the Timaeus of Plato*, 42 c., trans. Thomas Taylor, Martin Euser (ed.), 2010: http://meuser.awardspace.com/NeoPlatonics/33700322-Proclus-Commentary-on-the-Timaeus-of-Plato-all-five-books.pdf

to the idea of the blessed life in the golden age in the reign of Cronos. This mythological relationship seems again attested by the following Orphic fragment:[267]

> This is what those who are initiated by Orpheus to Dionysus and Kore pray that they may attain**,** "To cease from the wheel and breathe again from ill".

We should moreover note that it is on the Pythagorean tablets that we find the greatest number of reflections of this conception. These tablets were found on the bodies of the dead, either inside or beside their tumuli. Most of these texts, for the most part inscribed on bronze, begin with a statement of thirst,[268] a call for the spring, and then the following statement:[269]

> I am the son of the Earth and the starry Heavens.

It is only in some of them that we read what we are looking for here, an account of exit from the cycles of reincarnation:[270]

> I flew out of the circle of terrible, crushing suffering, nimble-footed, I reached the longed-for crown, I sank into the bosom of the queen of the underworld, I descended nimble-footed to the longed-for crown.

The end of the cycle, the escape from the circle, these are effective conceptions that describe the singular change undergone by the singular souls of the heroes, which initiates seek to copy as best they can to ensure the same destiny for themselves. However, we have yet to understand the theoretical model that explains the destiny of these heroic souls. On this point the poet Pindar sheds his own light, in a

267 Orphic fragment no. 230, cited by Sorel, *Orphée et l'Orphisme*, p. 89.

268 See Schuhl, *Essai…*, p. 241: "I am dried out with thirst and I am dying, but quick, give me the cool water that flows from the lake of "Memory". And of themselves they will let you drink from the divine spring and after that you will be in command among the heroes"; is there also a hierarchy of heroes?

269 Anne Lebris, *La mort et les conceptions de l'au-delà en Grèce ancienne à travers les épigrammes funéraires. Etude d'épigrammes d'Asie mineure de l'époque hellénistique et romaine*, Chapter V, "Les séjours de l'immortalité bienheureuse", pp. 61-80, l'Harmattan, 2001.

270 Giovanni Pugliese Carratelli, *Les lamelles orphiques. Instructions pour le voyage d'outre-tombe des initiés grecs*, Les Belles Lettres, 2003, p. 106; French translation of this lamella by Bernadette Leclercq-Neveu. Schuhl's translation replaces "the queen of the underworld" with "Our Lady": "I flew out of the terrible cycle of profound pain, my nimble feet reached the longed-for circle and I nestled beneath the breast of Our Lady, queen of here below." (Kern, II, C, Diels, 66B, 18).", in *Essai…*, p. 240.

poetic mission that should be understood in the strict sense of the term:[271]

> "Because only those who've paid Persephone the price, for the pain, for the grief, of long ago - theirs are the souls that she sends, when the ninth year comes, back to the sun-lit world above. And from those souls, proud-hearted kings will rise, and the swift and strong, and the wisest of the wise."

As the register here is initiatory, this statement should not be understood conceptually. We find notions characteristic of mystery cults – kings, crowns and men without tasks to perform – all of which litter Judeo-Christian writings.[272] Escape from the cycles is marked by freedom from tasks and attested by the wearing of a crown. This became the conception of the Messiah-King, whose royalty lies outside the political demain, which is merely one of its manifestations.

But, has the escape from phases of reincarnation ever been identified outside the initiatory sphere that is the vector of its mystery? In the work of Diogenes Laertius we find two highly eloquent accounts relating to this. The first records words attributed to the Ionian philosopher Anaxagoras. The account of Timon seems comparatively important for its explicit pairing of hero and *Mind*.[273] The souls of the heroes, whose ultimate journey we should like to discover, seem to form the notion of *mind.* While this passage refers only to a single hero, rather than a plurality, it remains crucial for understanding this most obscure of matters:[274]

> They say too that wise Anaxagoras, / Deserves immortal fame; they call him Mind, / Because, as he doth teach, Mind came in season, / Arranging all which was confus'd before.

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271 Pindar, *Threnodies*, fragment 133, preserved in Plato's *Meno*, trans. Beresford. A threnody is a song of mourning.

272 All these conceptions seem to have been retained by the Jewish tradition. The tree of the sephirot has a crown (*Kéter*) and the ten terms of the Tetracktys also appear. See Salomon Ibn Gabirol, *Kether Malcouth (la couronne royale)*, French translation from the Hebrew by Paul Vuillaud, Dervy-Livres, 1984 (1953).

273 On Timon see Diogenes Laertius, *Lives of Eminent Philosophers*, I1, 9.

274 Diogenes Laertius, trans. C.D. Yonge, *The Lives and Opinions of Eminent Philosophers* I, 2., available at:
https://archive.org/stream/livesandopinions00diogiala/livesandopinions00diogiala_djvu.txt
In Diogenes we also find the fragment of Aristotle's *Protrepticus*: "When somebody asked Anaxagoras for what reason anyone might choose to come to be and be alive, he replied to the question by saying, 'To observe the heavens and the stars in it, as well as moon and sun' p. 48.

So we can see that the gathering of all souls to remake the mutilated body of Dionysus goes hand in hand with a quest for order. All acknowledge that the notion of *kosmos* comes from the Orphic source and notably from Pythagoreanism.[275] But it is less historical to recognise that this notion, in the sense of organisation, is radically esoteric.[276] These souls will become the *Mind* that wanders through the air, so we must assume that they are still looking for the way to the Isles of the Blessed. But let us go a little further. We seem to be close to the root of our questioning. Let us pose one last question: who is the hero, also called *Mind*, who will take on the name *Soul of the World* in Plato and who will later be found in the philosophy of Plotinus and others until the philosophy of Hegel? We would suggest that in Plotinus' philosophy, the *Soul of the World* is paired with the notion of *Providence* via the notion of *Mind*, with its *organising intelligence*, as promoted by Orphism. Henri Crouzel, an expert on the philosophy of Plotinus, offers the following interesting synthesis:[277]

> The Soul of the World governs the stars, through the intermediary of the souls of the individual stars, as we shall see. According to Plato it guides everything with reason. It is this soul that produces the succession of events, relations of cause and effect, foreseeing and knowing what will follow.

Furthermore, in his *Enneads* Plotinus gives this *Soul of the World* the name "*universal reason*".[278] So this linkage of future (*Providence*), reason (*noûs kubernétès*) and mind (*objective time stemming from the heavens*) cannot be understood independently of its Orphic source.

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275 According to Aristotle, this idea comes from Anaxagoras (*Metaphysics* A, 3, 984b 15-20 and 985a, 18-19). Simplicius (DK Fragment B12) conveys the idea as follows: "Nous has power over all things, both greater and smaller, that have <soul>", trans. J. Burnet, text in < > trans. Elpenor, available at: http://www.ellopos.net/elpenor/greek-texts/ancient-greece/anaxagoras-nous.asp

276 Pierre Chantraine's *Dictionnaire étymologique de la langue grecque* (Klincksieck, 1968, pp. 570-571) states that this word shifts from a notion of *decoration* to acquire the meanings of "organisation" and "constitution" in Herodotus, before signifying "world" in Pythagoras, Parmenides and Plato, in contrast to the world of the elect. Ultimately this gives us the following synthesis by Aristotle, who compares the *kosmos* to an army: "We must consider also in which of two ways the nature of the universe contains the good or the highest good, whether as something separate and by itself, or as the order of the parts. Probably in both ways, as an army does." Aristotle, *Metaphysics*, Λ, 10, 1075a, 11-13, trans. Barnes.

277 Henri Crouzel, *Origène et Plotin. Comparaisons doctrinales*, Téqui, 1991, pp. 187-195.

278 Plotinus**,** *Enneads*, III, 3, § 48.

The notion of *Providence* is locked away in an esotericism from which it will no longer emerge. We should, however, state that this rational providence is good, since it is theoretically established that the reign of Zeus is that of intelligence and Good and is the domain closest to Ouranos. It is to this esoteric conception that Hegel pays tribute in his concept of *mind* coupled with the notion of a *divine plan* in order to describe historic time.[279] However, we are not yet done with this mythology that has travelled down the ages. Diogenes Laertius gives us a final piece of information on Pythagoras:[280]

> When [the soul] is strong and settled down into itself, reasonings and deeds become its bonds. When cast out upon the earth, it wanders in the air like the body. Hermes is the steward of souls, and for that reason is called Hermes the Escorter, Hermes the Keeper of the Gate, and Hermes of the Underworld, since it is he who brings in the souls from their bodies both by land and sea; and the pure are taken into the uppermost region, but the impure are not permitted to approach the pure or each other, but are bound by the furies in bonds unbreakable. The whole air is full of souls which are called genii or heroes.

Souls are now multiple and split into two kinds, according to the fate allotted to them by Zeus. Pure souls go to a beyond that is very high, to form the good *soul of the world*, while the non-heroic souls stay in the depths of Tartarus forever, in order to form the bad *soul of the world*. It is quite impossible to describe the notion of the *soul of the world* without stating whether it is good or bad, as that would drain all the meaning from this Iranian doctrine. The notion of *soul of the world* is dual – dualist as it would later be said.[281] Pure souls wander through the Greek heavens, which is why the world is ruled by Good.

Lastly, it is said that this is explained by the Pythagoreans as follows: as Zeus has missed the Bronze Age, he allies himself with Metis to obtain her virtues and ensure the advent of Good at the end of a worthy titanesque struggle, which leads to the unconditional victory of Good in the world, to which the virtues within human beings bear witness:[282]

> Phanes is also Metis, a word meaning the practical or technical intelligence (*polymêtis*) that is indispensable to anyone governing the

279 Hegel, *The Philosophy of History*, p. 36, trans. J. Sibree and particularly the Hegelian slogan: "This plan philosophy strives to comprehend."
280 Diogenes Laertius, *Lives of Eminent Philosophers*, VIII, 31, trans. Hicks.
281 So it comes as no surprise to note St Augustine finds a way out of this dualism after reading Aristotle's *Protrepticus*, in the version in Cicero's *Hortensius*, since Aristotle leaves this conception behind from the outset in his philosophical work.
282 Sorel, *Orphée et l'orphisme*, p. 54.

> cosmos. As a proper noun, the goddess, unknown to Homer, is an Oceanid in Hesiod, who makes her the first wife of Zeus. Metis has the power to change her form (the gift of metamorphosis proper to the water gods) the gift of omniscient cunning and shrewd prudence. Following the victorious outcome of his struggle to win definitive sovereignty, Hesiod's Zeus swallows his ally to assimilate her virtues.

Meanwhile the impure souls are bound by the furies in chains so unbreakable that they can never return. However, no Greek author mentions a hero who has managed to return to the Golden Age, other than Menelaus, who brings back Helen. So this mythology raises many questions concerning its effectiveness and spread. In any case, failing get to the end of this initiatory journey means not ending the cycles of reincarnation, and thus falling inexorably back into the Iron Age. So, in the absence of the "miracle", the Iron Age continues to receive human beings, in other words non-heroes. Until souls can become detached, fulfilling the promise of escape from the cycle of reincarnations and closing the circle, they continue to be buried in bodies as though in a tomb. This is the terrible inevitability of human misery, the weight of the worldy envelope that is in itself damnation. The Iron Age is "now" says Hesiod, to make us better understand the terrible fate to which we are bound – by the Persians anyway.

The Iron Age. Sappho will open the door to us. The Iron Age is the world here below, as the Christian vulgate would say. It is hell on earth. Whether the origins of all this are Median or simply Orphic, the proselytic message always culminates in a powerful call to belief that plays on human weakness. This is how Sappho ends the life of a poor Greek woman who lacks religious cultivation:[283]

> When you are dead you will lie forever unremembered and no one will miss you, for you have not touched the roses of the Pierian Muses. Invisible even in the house of Hades, you will wander among the dim dead, a flitting thing.

Ordinary mortals, prudent as they should be, are better advised to do their duty and take themselves off to a place of worship – those places where hope is sold cheap, or at least at a better price than the classes at the philosophy schools, which were reserved for the elite, in both the Orphic cults and the public Eleusinian cults. So we need to understand that Hesiod's myth gives a framework to religious conceptions that were key to the Greek cults and to Pythagoreanism. Hesiod's myth

283 Sappho, Fragment 63, in *Poems and Fragments*, trans. Stanley Lombardo, Hackett Publishing Company, 2002.

was not influenced by Pythagoreanism, he gave it the same architecture while stripping it of its mystery. The myth of races indicates all the successive stages of Pythagorean initiation.[284] This is why Aristotle regards this mythology with the greatest irony, as reflected in this passage from the *Metaphysics*:[285]

> The School of Hesiod and all the mythologists thought only of what was plausible to themselves, and had not regard to us. For asserting the first principles to be gods and born of gods, they say that the beings which did not taste of nectar and ambrosia became mortal; and clearly they are using words which are familiar to themselves, yet what they have said, even about the very application of these causes is above our comprehension.

Aristotle categorically states that we must distinguish two types of human beings: initiates, who are immortal in the sense that they have tasted the ambrosia nectar, and the rest, mortals, of whom he is one ("us").[286] The former base their theory of the world on irrational mysteries while Aristotle seeks out rational principles, which is why he has to reject these conceptions as a whole. It seems to us that this passage from his *Metaphysics* is an irrefutable illustration of the fact that Aristotle was not an initiate. And from this flow all the consequences, notably in relation to his conceptions of the *final goals* (eschato-logy). Aristotle's "télos" cannot be the same as Plato's; the former is not an initiate, the latter always prides himself on being so. It is at this level of analysis that we should understand that Aristotle's temporal conception remains independent of the world of the initiated, of any strictly religious eschatology, and of any sacred type of time – in short that his conception of time cannot in any way support a circular view of human temporality. As for Aristotle's study of Hesiod, we know nothing of it. In Book A of the *Metaphysics* he says:[287]

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284 Schuhl observes, "But after Pausanias (VIII, 37, 5), it is only Onomacritus – the chresmologist who lived at the court of Pisistratus and was caught in the act of falsifying the prophecies of Musaeus (Herodotus, VII, 6) – who made the Titans, whose name he took from Homer, authors of the passion of Dionysos." *op. cit.*, p. 230.

285 Aristotle, *Metaphysics*, B, 4, 1000a 8-14, trans. Barnes.

286 For Syrianus ambrosia symbolises the separation of the created world and nectar the fact of not being fascinated by things here below, 41.30-42.12.

287 *Metaphysics* A, 4, 984b 31-32, trans. Barnes. According to Syrianus, the use of obscure language by Hesiod and the theologians can be explained by the fact that they are not trying to pass on teaching, but to speak of an inspired path, 42.12-16.

> How these thinkers should be arranged with regard to priority of discovery let us be allowed to decide later.

But it must be admitted that this argument does not appear in the discussion of Hesiod in the preserved Aristotelian corpus.[288]

In short, the Iron Age, said to be the age in which human beings currently live out their lives ("For now truly is a race of iron"),[289]is horrible. In the service of the cults Hesiod the mythologist paints it as black as possible, masking reality in a veil of shadow cast over the world of the present (ideological *nûn*). In this last stage of decadence and humanity's fall, linear time excludes return, circularity is wrecked on the shores of atheism and human beings are condemned with no possibility of appeal. Hesiod describes these people as endlessly working and shrouded in suffering day and night, at the opposite extreme from the golden age they have failed to reach because they failed to believe in the gods. Filial relationships, friendship and exchange are things of the past. Worse, young people scorn their parents and elders, while adults respect neither justice nor law and are without virtue. Worse still, honour is paid to vice, rapine, odious tricks and calomnies – in sum to Evil. And the wicked do all this without any sense of guilt. Darbo-Peschanski offers the following insightful interpretation:[290]

> These people do not die from being suddenly struck by death. They die from having no time left. If their children are born old and their lineages, stripped of ressemblance, are shattered by disparity and produce more continuity, this is because they have lost the impulse to change, which enabled them to stretch out the time from their birth to their death: not only has the mechanism for the exchange of gifts that underpins hospitality, other social relations and those between gods and men ceased to operate but justice has become confused with force.

No salvation without initiation! Without initiation human beings are unable to take on their own time, acquire continuity in the world and think of the future. All these things are given to them by the cults, without which they will fall back into animality, replacing justice with force. This is the traditional message of the theologians. However, there is an admission of failure on the part of the divinity in Hesiod,

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288 Hesiod appears in the following passages of the *Metaphysics*: A, 4, 984b 23; A, 8, 989a 10; B, 4, 100a 9.

289 Hesiod, *Works and Days*, l. 176, trans. H. G. Evelyn-White.

290 Darbo-Peschanski, "Historia et historiographie grecque: le temps des hommes", *art. cit*., pp. 89-114, p. 105.

since, like the others, this race will disappear. In bringing justice to humankind, at every stage of his creation Zeus seems to get it wrong. Once again, he will be obliged to destroy this race that is unaware of the functions of his three daughters Justice (*Dikè*), Peace (*Eirènê*) and Fairness (*Eunomia*). But is it time that these people lack, or justice? In the *Cosmogony* of Hesiod our mythologist, time precedes justice by a long way, since Zeus created the world long before he engendered his three daughters, who are precisely a product of this world.[291] Besides, have any of these four races taken responsibility for justice? Absolutely not. The worst of them, the race of the Silver Age, does seem to have been the first to concern itself with justice, but this concern was rooted in an impossibility that ultimately led to its downfall. Can we follow Darbo-Peschanski's tragic observation?[292]

> So, in giving human beings Justice, Zeus does not offer them an entirely positive gift; instead he renders them endlessly out of step with the divine order, while they must seek to reduce this gap on pain of death, without the moment of that death being clearly determined. So he gives them their own chaotic time, which goes from just to unjust deeds and which, because justice cannot be universally eliminated, leads to the uncertainty of the hour of death. The human future is linked to human actions, it is moved by the impossibility of controlling the dyssymetry of justice. So it appears – and this is a constant in Greek thought – as a devaluation, not only of divine eternity, but also of cosmic regularity.

Indeed it seems that all these stages are ultimately subject to the same observation of divine impotence. The castration of Cronos triggers a string of castrations, yet divine law still does not turn human beings towards justice, peace and fraternity. They have been granted time in the hope that it would have that effect, but seemingly to no avail. For Hesiod time is circular and the development of humanity must be kept within the framework of the future of the religion he promotes. This is also the view of the poet Aeschylus, writing, with very Greek irony:[293]

> Prometheus: I took from man expectancy of death.
> Chrorus: What remedy (*pharmakon*) found'st thou for this malady?

291 Sorel suggests that "The Iron Age was the first to be plunged into the meanders of coming-to-be", in *Critique…*, p. 63.

292 Darbo-Peschanksi, "Historia et historiographie grecque: 'le temps des hommes'", *art. cit.*, pp. 89-114, p. 103.

293 Aeschylus, *Prometheus Bound*, ll. 248-251, trans. G. M. Cookson, Oxford, Blackwell, 1922.

Prometheus: I planted blind hope (*tuphlas…elpidas*) in the heart of him.
Chorus: A mighty boon thou gavest there to man.

For the castration of Cronos tore human beings from our world's starry sky. It cut us off from the heavens and this is why time is no longer possible and no longer brings any justice. Plato would say that the world has regressed to a more backward age, as it is no longer connected to the good of a universe spinning towards the right. Indeed, if we place the myth of races in the context of the narrative as a whole, we notice that the story is buried by a magisterial return to the correspondence of human and heavenly time. When should we plant or harvest? asks Hesiod – we should follow the time of the heavens. When should we set sail? The heavens will determine the right moment. To each season its own work – spring, summer, autumn, winter and even particular days. Aware that humans are too limited to follow divine orders, Hesiod urges them to submit to heavenly time. *Works and Days* is an exhortation to tailor human time to the divine time of the heavens, so that every action becomes measured and human beings are not "all excess". A break with the heavens would destroy the species; it would make justice impossible, inevitably leading to a gradual but certain human decline into animality. Such is the ultimate lesson that Hesiod would like to leave to his brother Perses in *Works and Days.* This remarkable hymn to the adaptation of human time to the divine time of the heavens enable us to seize the right moment.[294] It is here that the concept of *kairos*, understood as the fruitful adaptation of man to the heavens, becomes more solid.[295] Every action will be *fruitful* as long as it is conducted in accord with the time of the heavens.

294 The notion of *kairos* is often replaced by the ideal life of the peasant farmer, which is found only as an example in Hesiod's *Works and Days.* This might be amusing, were the same naïve view of time not also inscribed on the headquarters of the UN, in a maxim taken from the philosophy of Marcus Aurelius and translated as "Convert the steel of your arms into ploughshares." To which we might reply, all right, but when? The notion of *kairos* has been debased since the time of the Stoics at least, and that is what makes the work of Moutsopoulos so exemplary.

295 On this see the most recent book by Moutsopoulos, *Variations sur le thème du kairos de Socrate à Denys*, Vrin, 2002. Poseidippus, c. 330 BCE, gave the following description of the statue of kairos by Lysippos: "Who and whence was the sculptor? From Sikyon. / And his name? Lysippos. / And who are you? Time who subdues all things. / Why do you stand on tip-toe? I am ever running. / And why you have a pair of wings on your feet? I fly with the wind. / And why do you hold a razor in your

We shall conclude our discussion of Hesiod's mythology by noting that circular time is clearly found within it. What this interpretation seems to reveal is that this circular time is an invitation to return to tradition and the matching of human time to that of the heavens. After this, the mythology of the cycles of reincarnation that (heroic) souls must seek to close by travelling to the Isles of the Blessed indicates that this circular time of the stars can theoretically be a model applicable to the movement of the soul. It follows from all this that while the circularity of time is advanced, this initiatory or traditional thesis places linear time within the framework of a fall, of human decline manifested in the five ages and races. It is an unavoidable destiny from which human beings can escape only through belief and faith. While a Greek circular time did exist, this is not a time of Greek *doxa*; it is not a time that contained the lives of Greek individuals; it is the sacred time within which they seem to have had a citizen's duty to place themselves. Ultimately, however, this sacred time had to give way to a more analytical, philosophical time.

If Aristotelian time does not adopt this idea of a religious end (*télos*), the resulting questions seem to form an inextricable knot. What time could be independent of these sacred notions? With what conceptions of the "end" could they counter the religious approach? On what source could Aristotle have drawn for his own model of time? Before rushing to the corpus to find the various descriptions of time, let us note once again that, in every case, time is always dependent on its "motor", which seems *a priori* to be located at its term, in other words in conceptions of the "end", the *télos*. This is why we do not think Aristotle's time can be discussed without a consideration of the concept of entelechy. Are all sacred dimensions truly absent from this concept, as we provisionally assert in the present study? This is far from certain. Indeed it may be that Aristotle's public discourse on the end is not entirely in tune with his underlying beliefs. This is another

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right hand? As a sign to men that I am sharper than any sharp edge. / And why does your hair hang over your face? For him who meets me to take me by the forelock. / And why, in Heaven's name, is the back of your head bald? Because none whom I have once raced by on my winged feet will now, though he wishes it sore, take hold of me from behind. / Why did the artist fashion you? For your sake, stranger, and he set me up in the porch as a lesson." English trans. W.R. Paton, *Love Epigrams*, Loeb Classical Library, 1898. See *Chronos et kairos. Entretiens d'Athènes*, 1986, introduction by Moutsopoulos, p. 14.

important dimension of the constitution of knowledge which we shall seek to consider. While a sophist speaks always for the public, the various models of real thinkers necessarily have a personal dimension, which does not remain private, but reveals the humanity lurking deep within the thinking being.

Lastly, it may seem surprising that we have adopted an achronological order, considering time in tragedy before turning our attention to the epic. However, we have shown that the notion of time is more present in epic poetry, which is fuelled by religious conceptions stemming from Orphism and Pythagoreanism. This view is strongly supported by analysis of Hesiod's mythology. Moreover, the relationship between tragedy and the epic is not explicit in Aristotle's *Poetics.*[296] Time should also be analysed in the arts more closely related to it, such as music, dance and mime, but we shall leave that to the specialists.[297] We shall now consider a different source from that of the religious tradition described here and adopted by Plato, before turning to time as developed in the thought of Aristotle.

296 Aristotle, *Poetics*, XIII, 1453a 23-39.

297 Vuillemin lists the time-based arts as music, dance and mime, *op. cit.*, p. 71. However, we should treat with caution his suggestion that "epic narrative is purely temporal", p. 81.

IV. FROM PLATONIC MYTHIC TIME TO IONIAN SCIENCTIFIC TIME

THE ROOTS OF ARISTOTLE'S PHILOSOPHY OF TIME

> In the whole range of time past, so far as our inherited records reach, no change appears to have taken place either in the whole scheme of the outermost heaven or in any of its proper parts. The name, too, of that body seems to have been handed down right to our own day from our distant ancestors who conceived of it in the fashion which we have been expressing. The same ideas, one must believe, recur in men's minds not once or twice but again and again.
> Aristotle, *On the Heavens*, trans. Barnes, I, 270b 14-19.

While dichotomy may be comfortable enough as a means of categorisation, it remains very distant here from the things it is supposed to describe.[298] It covers the world in an Apollonian veil whose obvious beauty must be resisted.[299] For reasons of argument, in the first part we sought to show, on the basis of Aristotle's *Protrepticus*, that there were two kinds of time. The first is initiatory and circular in form. A consideration of Greek conceptions of time enabled us to link this vision of the world to Pythagoreanism. The second kind of time, which the religions describe as illusory and contingent, is the linear form, which represents philosophical time. The first conception regards the future as illusory, in accordance with the model of the circular fall from the religious sphere, whereas the second, as we shall show in the present section, seeks to consider future time in a positive light. It would be easy to engrave this stone[300] with Homer's poetry and the names of all the Greek tragic poets. Hesiod's thought has provided us with a pivot between the two conceptions. In proposing two readings of the myth of races, one circular, the other linear, we have brought these two conceptions

298 Aristotle criticises the dichotomy stemming from division (*diairein*: diviser) in many passages of his work; he even proposes, condescendingly where Plato is concerned, that it is an "impotent syllogism". So it is no surprise that the terms Aristotle employs in criticising Plato's dichotomy are the same as those Nietzsche later used to demolish Hegel's kenotic dialectic, cf. *Prior Analytics*, I, 31, 46a 31, *Posterior Analytics*, II, 5, 91b 16, *Metaphysics*, Z, 12 1036b 27 and *Parts of Animals*, I, 2, "Against the dichotomy".

299 According to Plato, using dichotomy means leaving harmony behind forever. Cf. Mattéi, *L'Etranger et le Simulacre, Essai sur la fondation de l'ontologie platonicienne*, PUF, 1983, p. 204.

300 A stone is a "sign for the future", a conception also found in Hesiod's *Theogony*, ll. 147-210; "vomiting up the stone" means permitting generation in *op. cit.*, pp. 172-173.

together around the central point of the Heroic Age. We are bound to note that the figure of the hero appears in both perspectives. In epic and tragic poetry, it is the hero's task to be a vector of the future for the citizens (as Achilles and Odysseus are). Similarly, within religious thought the end of the fall[301] that is common to all the cults requires the intervention of a hero who must go back through the concentric circles in order to attain the crown of being himself, with initiates seeking to follow Dionysus or Zarathustra down this heroic path.[302]

This knot typical of poetico-philosophical intellectual activity must now be loosened by the intervention of an external element, a *peripeteia* as the poets would say; the provision of proof takes rational philosophy forward and out of a theoretical impasse. To this end we shall briefly consider the Platonic synthesis of Greek ideas before describing a current of thought whose remoteness from specifically Greek questions we hope to show. By way of transition, we shall suggest that, as Plato continues to side with the "Sicilian Muses" without giving the "Ionian Muses" their rightful place – to borrow the terms of his dialogue *The Sophist* (242 d) – his thought cannot offer a way out of the problem and enable us to engage with the work of Aristotle. His work will enable us to bring the religious current to a close before considering the Ionian thinking to which Aristotle is closer – at least at first sight. However, as we shall see and in line with most of the preceding sections, while the religious philosophical position is not adopted, ideas from it will be included in Aristotle's model of time. It is for this reason that, once again, a historical detour seems necessary.

301 This is also the concept of *fallenness* in Heidegger's philosophy: "This 'movement' of *Dasein* in its own Being, we call its 'downward plunge' [*Absturz*]", *Being and Time* § 38, trans. John Macquarrie and Edward Robinson, Blackwell, 1962.

302 This myth is of Cretan origin, as Nietzsche knew, waiting for his *Ariadne* in tears. Ariadne had torn the constellation of the crown from the sky (*Corona borealis*) and placed it on Dionysos' head, an end of initiation, a way out of the Aegaean labyrinth that introduced human time, Dionysos, a God become man… (Giorgio Colli, *La Sagesse Grecque* II French translation from the Italian by Pascal Gabellone and Myriam Lorimy, l'Eclat, 1991, p. 270).

a. On Platonic ideology, or mythic time as an attempt to veil initiatory time

If we come to the view that our dichotomy is no longer relevant since all the Greek conceptions of the day culminate in the figure of the hero, we are unlikely to be able to grasp Aristotle's conception of time. It is important to realise that Greek thought is fatally rooted in a religious tradition in which most of its philosophical conceptions have their source. This is why the concept of time is first conceptualised by the guardians of cults, before being taken up by the poets and philosophers in sketches of a few heroes and "screen concepts",[303] which citizens then imitate to obtain a model of time that explains their destiny. This view is compatible with Heidegger's thesis of the forgetting of being in the Greek world, where *mimesis* renders all conceptualisation impossible.[304] This leads the contemporary philosopher Catherine Collobert to say that archaic and classical Greek time is of similarly obscure:[305]

> In archaic and classical Greece time was recognised as the principle of forgetting. Pindar, who acknowledged time as the father of all things, wrote: "Would that all of time may, in this way, keep his prosperity and the gift of wealth on a straight course, and bring forgetfulness of troubles".[306]

It seems that everything is hidden in this obscure time of myth, as we have seen in relation to the notion of fate which veiled time itself. The Greek world seems to have been covered in an opaque veil that plunched its inhabitants into a degree of darkness, as Collobert suggests:[307]

> Time covers them in a veil, it ties them to veiling. Beings are fated to be veiled by time. Veiling is their fate.

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303 The notion of a *screen concept* has its source in the work of Sigmund Freud and describes the work of the imagination when the mind is in the grip of a deep resistance.

304 According to Heidegger, the Greeks interpreted *ousia* (substance) as *parousia* (pure presence). As we shall see, this thesis undermines the foundations of Aristotelianism, according to which substance is engaged in time by an entelechic movement, Aubenque, *Le problème de l'être chez Aristote*, p. 466, note 1.

305 Catherine Collobert *L'être de Parménide ou le refus du temps*, Kimé, 1993, p. 266.

306 Pindar, *Pythian Odes*, I, 46, trans. Diane Arnson Svarlien, 1990: http://www.perseus.tufts.edu/hopper/text?doc=Perseus:abo:tlg,0033,002:1

307 Collobert, *L'être de Parménide ou le refus du temps*, p. 267.

This conception of time that plunges individuals into forgetfulness is an idea arising out of Orphism and Pythagoreanism, as clearly shown by a passage of Aristotle's *Physics*:[308]

> In time all things come into being and pass away; for which reason some called it the wisest of all things, but the Pythagorean Paron called it the most stupid, because in it we also forget.

The Pythagorean circular conception of time enfolds human beings in a kind of veiling of their own existence and in the concatenation of cycles of metempsychosis there is no place for individual, subjective time that is historical and singular. The initiatory rites push conceptual knowledge into the background in favour of iconic visions that lead citizens to suspend their judgements in favour of revelations that need no explanation. Aristotle confirms this in the rediscovered fragment 15 of his treatise *On Philosophy*:[309]

> Eleusinian rites (for in these he who was initiated into the mysteries was being moulded, not being taught).

Many have compared the projected images of Plato's myth of the Cave with the painted, framed images brought in and displayed as part of the Greek cults, particularly that of Eleusis.[310] As we have seen in Plato, the rejection of reality goes hand in hand with a rejection of change and the future, which is relegated to the category of opinion, of the body, the dimension that the initiate seeks to reject. So initiation was accompanied by a veiling of time itself in favour of a subjective time stripped of reason, while the body withdraws to make way for the notion of metempsychosis by which it is endlessly extended. A short comic episode described by Aristotle in his *Nicomachean Ethics* reveals this initiatory conception of Greek time. Aristotle tells us that the poet Aeschylus profaned the mysteries of Greece in several of his plays:[311]

> But of what he is doing a man might be ignorant, as for instance people say "it slipped out of their mouths as they were speaking," or "they did not know it was a secret," as Aeschylus said of the mysteries, or a man might say he "let it go off when he merely wanted to show its working", as the man did with the catapult.

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308 Aristotle, *Physics*, trans. Barnes, 222b 17-20.

309 Aristotle, Ross's fragment 15, from his translation *On Philosophy*, in French translation in Jeanne Croissant, *Aristote et les mystères*, 67, 2, 1932, p. 146, quoted by Schuhl, *Essai…,* p. 205 and also by Colli, *SG I*, p. 109.

310 Schuhl, *La fabulation platonicienne*, pp. 46-47.

311 Aristotle, *Nichomachean Ethics*, III, 2, 1111a 8-12, trans. Barnes; see also Plato, *The Republic*, VIII, 563c.

These words relayed here by Aristotle describe a slip attributed to Aeschylus, who was born in the city of Eleusis,[312] and which led him to be tried and sentenced by the Areopagus. Why? It was said the poet had repeatedly let slip elements of the mysteries in his tragedies. The commentator Jules Tricot tells us:[313]

> Aeschylus was brought before the Areopagus charged with having divulged the secret of the Mysteries in several of his tragedies. He defended himself by pleading ignorance (which, in the eyes of Clement of Alexandria, *Stromata, II, 60, 3*, shows that he was not an initiate).

This comic episode in a world of tragedy clearly shows that the poetico-philosophical mission was merely to water down conceptions that lay at the heart of a religion raised to the status of official cult by the political regime.[314] This is why any conceptualisation of time is pointless, as it is simply a circular return to the cult. Whether or not the poet is an initiate, the mysteries must remain locked away in the holy places and are not to be scattered around the amphitheatres. But – and this is of primary importance for us – if conceptions of time were necessarily linked to the gods, as shown, for example, by the work of Hesiod, how can human time be spoken of without a simultaneous revelation of these mysteries? This would seem a very thorny question and perhaps explains the absence of any fundamental conceptions of time in the Greek thought of the 6th and 5th centuries BCE.[315] In sum, the more a people's culture examines its citizens, the more this knowledge is stripped of its mystery content and, *a fortiori*, the more its conceptions of time are simplified, hidden and transformed. In the end it all culminates in a great forgetting, in darkness. The equilibrium of the established social structure depends on this, as shown by the intervention of the sages of the Athens Areopagus. It was the philosopher Proclus who made us aware of this fundamental aspect of

312 Edouard Des Places, *Etudes platoniciennes*, 1929-1979, Brill, 1981, pp. 83-98 (lecture delivered in Aix-Marseille entitled *Platon et la langue des Mystères*), p. 84. See also p. 83: "Of all the Greek mysteries whose secrets were so jealously guarded, those of Eleusis had the most profound influence. They were maintained until the end of paganism and were already established in the 7th or 6th century BCE."

313 Aristotle, *Ethique à Nicomaque*, note 4 by Tricot.

314 On the relationship between the Areopagus and the cults, see three passages from Aristotle's *Constitution of Athens* III, 5; XXIII, 1; LVII, 1.

315 Where the epic texts are concerned, it is equally clear that while Orpheus guides the Argonauts, it completely disappears from Homer's *Odyssey* to make way for the *grey-eyed goddess.*

the treatment of knowledge. Proclus conceptualises this view as follows:[316]

> The Fathers of these myths produced the visible covering of the myths and their figurative aspect as an analogue for the lowest classes, for those who preside over the most extreme states of life that are the most embedded in physical substance, but to those who aspire to contemplate beings they delivered the hidden core, unknowable to the common people, as a revelation of the transcendent essence of the gods, hidden in unbreakable secret.

There is no room for manoeuvre here, and no possibility of a philosophy of time. The religious elite kept its conceptions close to its chest and would divulge them only under cover of mysterious revelations. The result was the exclusion of conceptualisation.[317] However, this "hierarchisation" of knowledge is not really confined to the Greek world. Generally speaking, what is truly philosophical in, for example, Heidegger's conception of time, if not a pale copy of protestant theological conceptions?[318] And we know that Luther's theology, to which Heidegger's thought is linked, only came to prominence by ransacking Aristotelian philosophy.[319] We could also turn this critique against Aristotle's thought itself: what is there that is truly philosophical in his ideas about time? What is the source of the borrowings synthesised in his conception? Do they come from unknown religions, sects that have remained hidden, or philosophies forever sunk in oblivion? Furthermore, theorising about time, conceiving of the future and understanding the *télos* would inevitably

316 Proclus, *Commentaire sur la République*, dissertation VI, p. 95**.** Judaism makes a distinction between the *Ma'aseh Bereshit* (account of the creation) and the *Ma'aseh merkabah* (account of the chariot). Moses Maimonides in his *Book of Knowledge* asks, "What is the difference between the action of the chariot and the Work of Creation? The works of the chariot were not even taught to an individual unless he was a wise man gifted with intelligence. […] Why were they not taught to the multitude? Because every man has not the wide understanding to grasp and clarify and explain the matters perfectly", trans. H.M. Russell and Rabbi J. Weinberg, Ktav Publishing House, Inc., 1983, p. 11.

317 Since Tertullian the Greek term *mystêria* has been translated by the Latin *initia*, which gave us the English "initiation", and the Greek term *mystêrion* by the Latin *sacramentum*, sacrament in English.

318 See Christian Sommer's book, *Heidegger, Aristote, Luther. Les sources aristotéliciennes et néo-testamentaires d'*Être et temps.

319 We shall cite only the following choice passage from Luther: "In this regard my advice would be that Aristotle's *Physics*, *Metaphysics*, *On the Soul*, *Ethics*, which have hitherto been thought his best books, should be altogether discarded", cf. previous note, p. 27, note 5.

require going through initiation, which is why philosophy remained the poor relation of religon, tradition and the true wisdom of nations.[320] So we must retrace our steps, or rather *change course* and steer towards the theologians rather than the philosophers in order to get closer to the sources in which time is conceptualised.

It is not doing violence to Plato's work to adopt this perspective. We believe that this would be Plato's own philosophical position with regard to time. Refusing to model time (*chronos*), Plato gives the people a religious idea full of hope (ελπις). We could even speak of a "religion of hope" in the context of Plato's work.[321] Etymology is usually used to underpin this thesis. The Greek term *télos* (*τελος*: goal, end),[322] which guides the individual fate (*to mellon*), is a term taken from the field of initiation, Marie-Laurence Desclos tells us:[323]

> We should not forget that the verb *τελεω–ω* means to initiate and that many derivations of *τελος* belong to the vocabulary of initiation. […] This meaning is attested in Plato, for example *αρτιτελης (Phaedrus, 251a 2)* and *νεοτελης* (*Phaedrus*, 250e 1): "newly initiated"; *τελεστικος* (*Phaedrus*, 248e 1, 265b 4): "linked to mystery rites"; *τελετη* (*Phaedrus*, 244e 2; *The Republic*, II, 365a 1): "initiation into the mysteries, celebration of the mysteries"; and of course the verb *τελεω–ω* itself (*Euthydemus*, 277d 7; *Phaedrus*, 249c 8; *The Republic*, VIII, 560e 1; *Phaedo*, 69c 2). Lastly, in *Phaedrus*, 249c 7-9, the philosopher is a man (*ανηρ*) who, "being continually initiated in perfect rites", "alone achieves real perfection".

As future time is the preserve of the cults, there is no salvation for Greek citizens outside initiation and it seems the same might be true in the philosophical genre, which simply reproduces the same vision. To

320 Need we repeat that in Nietzsche, for example, the conception of the future is developed in the chapter "Of the vision and the riddle" of his *Zarathustra*, from which we have cited many extracts? Better still, Nietzsche wanted to found "an order of aristocrats, a kind of Templar Order", see, *La naissance de la philosophie à l'époque de tragédie grecque*, French trans. Geneviève Blanquis, Gallimard, 1969, p. 18.

321 André Motte, "Platon et l'idée d'espérance", in *L'Avenir*, Congrès des sociétés de philosophie en langue française, Vrin, 1987, pp. 295-298, p. 297. Motte states that, when he wants to talk about the future, in overlaying this notion with that of hope, Plato prefers to place the words in the mouth of Socrates.

322 Pierre Chantraine, *Dictionnaire étymologique de la langue grecque. Histoire des mots*, pp. 1101-1103.

323 Marie-Laurence Desclos, "Instituer la philosophie: le temps de la succession dans le Parménide de Platon", in Darbo-Peschanski (ed.), *Constructions du temps dans le monde grec ancien*, pp. 223-252, p. 245, note 76.

finish with this initatory aspect that anihilates any possible philosophical understanding of the concept of time, let us throw in one last piece of the initiatory puzzle.[324] Sorel gives us these ultimate details that explain what initiation truly involved:[325]

> The modern translation of télétê as "initiation" is not quite right: the grammatical complement of *télétê* is always *tôn theôn* or equivalent gods, and not *tôn andrôn* (of men), implying that the term does not refer to rites of passage performed on human beings (such as the "initiation" of adolescents), but rites fundamentally intended to constrain the god by the use of effective formulae. These are delivered following a strict observance of the ascetic precepts of the "Orphic life". The *télétai* of Orpheus are the memory of these incantations that put pressure on the god rather than acting on the soul of the believer. When uttered perfectly, they lead to victory, symbolised by the crown Niké (Victory) placed on the head of the lyre player in the Apulian imagery of Orpheus's descent into the Underworld. This is the quintessential Orphic moment. Victory has flown from the open hand of Hades.

We can see that this initiatory approach to time and the future leads to the ordeal, with its magical oaths[326] and divinatory practices.[327] Pindar was very clear about this: the cults were the source of all knowledge concerning the *télos*, "which is the end of our life".[328] It is also partly following Pindar that the term *télos* is wrongly thought to signify "end" or "goal" in English. Thinking that the goal comes at the end is the end of the philosophical goal. While Plato recognised the importance of incantation (ordeal) in the life of the Hellenes,[329] without prior study of the liturgical time to which this practice was attached, it remains hard to determine its consequences on the

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324 We also remember what Kant said about doctrines of emanation: "Now the person who broods on this will fall into *mysticism* (for reason, because it is not easily satisfied with its immanent, i.e. practical use, but gladly ventures into the transcendent, also has its mysteries), where reason does not understand either itself or what it wants, but prefers to indulge in enthusiasm rather than - as seems fitting for an intellectual inhabitant of a sensible world - to limit itself within the bounds of the latter." *The End of All things*, trans. Allen Wood, Cambridge University Press, 2001, p 228.

325 Sorel, *Orphée et l'orphisme*, pp. 25-26.

326 Cf. Plato's *Critias*.

327 Both Circe in *The Odyssey* and Hermes the psychopomp had a magic stick which, as Vico has shown us, referred to astral divination.

328 Pindar, *Threnody* 6, cited by Sorel, *Critique de la raison mythologique*…, p. 152.

329 Plato, *Euthydemus*, 290c; *Theaetetus*, 149c, *Charmides*, 157 and 176b, *The Banquet*, 202e, *Laws*, X, 933a, 908d, 909d.

temporal aspect and notably on its term (*télos)*. Nevertheless, we cannot follow Plato when he suggests in his *Phaedrus* that the philsopher is a man who "being continually initiated in perfect rites", "alone achieves real perfection". This is why Aristotle's philosophy remains the model of western knowledge that seeks to remain independent of this initiatory dimension.

However, while Plato's thought was clearly initiatory, it was nevertheless the vehicle for many notions concerning time. So we cannot leave out an analysis of time in Plato in order to decide whether this heritage had an influence on the singular Greek temporality developed by Aristotle. In order to understand why we are not going to undertake a long discussion of time in Plato's work, we should like to start by quoting this synthesis by the contemporary academic philospher and Plato specialist Jean-François Mattéi, who states without demur:[330]

> None of Plato's dialogues are explicitly devoted to the time in which, before Bergson and Heidegger, Schelling nevertheless saw the origin of the journey of philosophy. More precisely, if by "philosophy" we understand the rational, critical and argued study of a question whose problems are set out in a rigorously conceptual fashion, there is no philosophy of time in Plato.

There is no philosophy of time in Plato, at least not as it would be understood following the magisterial work of Aristotle. This is why Platonism admits a *practical* comparison with the religious domain, which is not the case with Aristotelianism. Platonic time is mythical and not yet philosophical in kind. Mattéi would say that it comes into the category of the *eikos muthos* (likely story).[331] However, it is possible to consider Platonic time through two different aspects, corresponding to the two faces of *Cronos*, whose establishment we witnessed in the mythology of Hesiod. While Platonic time is indeed mythical, it can only be an extension of the history of myths for which Hesiod's versions are the *touchstone*.[332] We have seen that Plato incoporates Hesiod's myth of ages into his *Statesman.*[333] On the one hand time is seen as constructive, providing a framework for the

330 Jean-François Mattéi, "Les figures du temps chez Platon", *Les Figures du temps*, PUS, 1997, pp. 29-47, p. 30.
331 Mattéi, "Les figures du temps chez Platon", *Les Figures du temps*, p. 31.
332 We shall not speak of mythological *arché* in describing Hesiod's work since, for the theologian poet, the concept was temporal. Hesiod is not Parmenides.
333 Plato, *The Statesman*, 272 e.

world, on the other it places human beings in incertainty and erratic flux. This two-faced character of Platonic time can also be seen in *The Republic*, as shown by Karel Thein of the University of Prague.[334] Hesiod's twin aspects are overlaid by the Platonic dichotomy between "the complex time of Ouranos" and "the immense time of the *anthrôpoï*". The time of Ouranos, which is the time of the heavens, is total time (*pan chronos*), of which the time of human beings contains only a part (*moïra*). From the outset this dichotomy warns us against the illusion of a temporal totality given to mortals;[335] only the reign of the gods can embrace all of time. In order to study the structure of this still mythical Platonic time, we might turn to his *Parmenides*, as it is in this work that we find the most plentiful occurrences of the word *chronos*: thirty-nine, to be precise.[336] Yet this dialogue describes time in relation to Being and the One, without ever defining the notion itself – which, moreover, is the mark of a mythical discourse from which definitions are always absent. For example, it is posited in this dialogue that the One is in time, without either Being or time receiving even the sketchiest definition. We shall cite a passage from this dialogue that is remarkable in this regard, in which the young Aristotle joins in the dialectical game with Parmenides:[337]

> Being belongs to it somehow, if indeed the one is. – Yes. – And is 'being' anything else than participation in being, togegher with time present, just as 'was' is communion with being together with time past, and, again, 'will be' together with time future? – So it is. – And so, it participates in time, if indeed it participates also in being.

This development asks, why is the One in time? Because being is included in the One, so Being possesses time, since being and existence are the same thing. The predicate "time" can define the One if (and only if) being and existence are merged. Why? Because it is from existence, which is caught up in time, that being takes its temporality, which is turn attributed to the One. This raises the following question: what kind of time is Parmenides proposing here? It is perfectly clear that in not defining any of the terms in his development, time can be everywhere and in everything, even within

334 Cf. Karel Thein, *Le lien intraitable. Enquête sur le temps dans la République et le Timée de Platon*, Vrin, 2001.

335 The term *totalitas temporis* has been used since Thomas Aquinas.

336 Desclos, *Instituer la philosophie: le temps de la succession dans le Parménide de Platon*, *art. cit*., p. 224, note 4.

337 Plato, *Parmenides*, 151 e-152b, trans. Samuel Scolnicov.

the One. Furthermore, if we say there are two types of time, *the complex time of Ouranos* and *the immense time of the anthrôpoi*, the time of human beings and the time of the gods, does this division not undo the equivalence of being and existence in Parmenides' development? We know this would be the thesis of Plotinus, on which we do not need to spend time here.[338] Furthermore, our second book will reveal the need to investigate the reciprocity of this proposition: if time can split being from existence, can being and existence not reciprocally split time? But such mediaeval considerations can wait. Lastly, the *Parmenides* crucially stresses the notion of the moment, as Brague notes.[339] These issues are discussed by Aristotle in his *Physics*, as we shall see. At that point we shall also investigate whether the view that time was created at the same time as the world really is a Platonic thesis and how the two notions fit together.[340] In every case, this thinking about time is not Platonic, but Parmenidian, and was subsequently taken up by Aristotle and the entire philosophical tradition.

It remains the case that while time is not subjected to any process of definition in the *Parmenides*, the same does not seem to be true of the *Timaeus*, a text that sees the emergence of the canonic Platonic view that time "is a moving image of eternity". In this well known passage from the *Timaeus*, Plato uses the term *aïon*, translated since Plotinus as "eternity". Brague refines the usual translations in order to give it a quite different definition. This term, he tells us, can be understood as referring to "the world of divine ideas", "the Verb", "Wisdom".[341] He then proposes the following definitive interpretation:[342]

> When Timaeus says of the heavens, the moving image of the *aïôn*, that it moves according to a number that is *aïônios*, Plato gives us to understand that the mobility of the sky stems from its nature as an image and, reciprocally, because both aspects, images and mobility, stem from number. The phrase means first that the heavens perpetually follow their path and, crucially, that the number by which

338 Cf. Henri Crouzel, *Origène et Plotin. Comparaisons doctrinales*, Téqui, pp. 332-341.

339 Brague, *Du temps chez Platon et Aristote*, 1ère étude, p. 11.

340 At this stage of conceptual development see the article by Walter Mesch, "Etre et temps dans le Parménide de Platon", *Revue philosophique de la France et de l'étranger*, 2002/2, Vol. 127, no. 2, pp. 159-175.

341 Brague, *Du temps chez Platon et Aristote*, 1ère étude, p. 19.

342 Brague, *art. cit.*, p. 67.

> they are ruled is of the nature of the *aïôn*, in other words the soul of the world whose numerical structure has precisely just been described.

According to Denis O'Brien, the term *aidios* could refer to "the visible gods", in other words the heavenly bodies, the stars.[343] But is this the register Plato draws on in order to think about time and the structure of the world that is its matrix? Brague has no doubt that this Platonic proposition cannot be understood without recourse to the number mentioned in this passage. If time relates to number this is because the world was constructed using mysterious numbers in the *Timaeus*; the world continues its progress according to this numerical matrix. Analysing the time of the Platonic world thus necessarily means determining the nature of the number from which it stems. This is why Brague goes on to identify possible numbers: the number of constellations, spheres, or heavenly movements, the decade, and so on. His article ends here, without settling the question of which number it is. We might ask, is it not simply tautological to say, as Plato does, that time is in the image of eternal time? Can time be defined by time? We can only escape this tautology if we say that there are two kinds of time that are qualitatively very different but perhaps not quantitatively separate: *the complex time of Ouranos* and *the immense time of the anthrôpoi*. The time of human beings is in the image of the time of the heavens. So it will be for number to tell us more about the time developed by Plato and most importantly about this dichotomy.

Human beings cannot acccess the complex time of *Ouranos*, since it is the time of the demiurge and the gods. Through the intercession of the Italian Muses, in *The Republic*[344] Plato suggests that knowledge of this time is however possible by means of numbers. The Muses know "what has been, what is and what will be"; they are the guardians of time. The Pythagorean Muses guarded the secrets of numbers since if they were to divulge them, the structure of the world itself would be revealed to human beings. However, this passage in *The Republic* enables us to conceive of these numbers, since they are explicitly described. Jean-Luc Périllié, who works on the Pythagorean heritage in Plato's philosophy, has found in *The Republic* the

343 Denis O'Brien, "Temps et éternité dans la philosophie grecque", in *Mythe et représentations du temps*, CNRS, 1985, pp. 59-85, p. 63.
344 Plato, *The Republic*, VIII, 546a 3.

mathematical dichotomy underpinning this conceptual division that splits Platonic time:[345]

> There is a period for divine generation on the one hand, embraced by a perfect number, and, on the other there is a prime <number> for human <generation>.

In *The Republic* the perfect number (*teleios*) is attributed to the gods, the prime numbers to human beings. But what kind of number are we dealing with in the Platonic universe? Platonic numbers are not primarily natural integers, they are integers based on geometry and derived in a particular way from geometrical figures. While geometrical numbers are quantitative, Platonic numbers, rooted in the Pythagorean tradition, are qualitative, as Plato constantly repeats:[346]

> When I speak of the other section of the intelligible part of the line you will understand that I mean that which reason apprehends directly by the power of pure thought.

Plato was trained in mathematics by Archytas and the discipline was still broadly based on Pythagorean theories, of which Archytas was a great advocate. So it would seem difficult to understand Plato's theories fully without reading Archytas, a mathematician on whom Aristotle wrote no fewer than three books, making him the most important commentator on Archytas after Plato.[347] Given the nature of our research, we shall say only a few words on the qualitative numbers that give access to the time of the heavens and the gods according to the Italian Muses. We know there are two different kinds of numbers, which do not, however, seem to have separate natures: nuptial number and geometrical number. On this point we follow Mattéi, who suggests that the perfect number is linked to geometrical number and that they cannot be separated if we are to understand the Platonic approach.[348] Nuptial number relates to the divine sphere

345 Jean-Luc Périllié, "Summetria des Nombres de la République", *Revue philosophique de Louvain*, Institut supérieur de Philosophie, 2005, pp. 35-58, p. 43.
346 Plato, *The Republic*, 511a, trans. H.D.P. Lee.
347 Carl A. Huffman, *Archytas of Tarentum: Pythagorean, Philosopher, and Mathematician King*, Cambridge University Press, 2005, p. 45. The catalogue of Diogenes Laertius refers to three books, to which we should perhaps add the complementary treatises such as *On the Pythagoreans* and *On the Monad*, cf. I, p. 237.
348 Mattéi, *Platon et le miroir du mythe*, *op. cit*., p. 91.

while geometrical number is part of the human world. This thesis was confirmed by Thein:[349]

> The Muses then describe two "nuptial numbers", although they calculate only the second. The first, perfect number (*teleios,* 546 b5) coincides with the period of divine generation. The Muses are silent on "divine begetting" (546, b4), nor do they spend any time on calculating the number that presides over it. The second number is conversely presented in detail. This is the "geometrical number" (*arithmos geômetrikos,* 546c 6-7) which governs the good and bad birth of human beings.

There is a nuptial number that relates to the divine sphere and a multitude of geometrical numbers for an understanding of the sphere of human beings. This is also confirmed by the work of Nicomachus of Gerasa, author of a book entitled *Introductio Arithmeticae*, translated into Latin by Boethius in the 6th century and, in the 20th, into both English and French.[350] This mathematician also identifies the *intelligible number* of the domain of the demiurge, and the *epistemonic number* studied by mathematicians. But how might these numbers describe time? Might there be an eternal number, the nuptial or intelligible number, and a temporal number, the geometric or epistemonic number? This number, as described by Nicomachus, is not a discontinuous unit in a numerical series or a segment of natural or geometrical space. It is[351] "a flow of quantities made up of units". It would not be absurd to say that it is through the notion of "flow" that number can acquire its temporal attribute. Michel Crubellier gives us his commentary on this surprising form of number (the parentheses indicate that this is a conjecture):[352]

> (In the neo-Pythagorean literature on numbers we find descriptions of arithmetical number as a flow, in other words a process in which original unity emerges by itself and constantly becomes something

349 Thein, "Mettre la Kallipolis en acte: l'équivoque temporelle dans la République de Platon", in *Constructions du temps dans le monde grec ancien*, *op. cit*., pp. 253-265, p. 259.

350 Alain Petit, "Nicomaque de Gérase", article in the Encyclopédie philosophique universelle, *Les Œuvres philosophiques*, dictionnaire 1, 1992, pp. 233-234. Nicomachus's book was translated into English as *Introduction to Arithmetic* by Martin Luther d'Ooge, Macmillan, 1926, and into French by Janine Bertier as *Introduction arithmétique*, Vrin, 1978.

351 Nicomachus of Gerasa, *op. cit.*, I, VII, 1.

352 Michel Crubellier, "En quel sens le temps est-il un nombre?" in *Aristote et la pensée du temps*, *Le Temps philosophique* 11, Université de Nanterre, 2005, pp. 39-55, p. 52.

> other than itself – thereby tending, symmetrically, to bring number back to continuity.)

Through the notion of "process" that transposes that of "flow" into the theoretical sphere, Crubellier hypothesises that number is a construction and thus that the principle of number must be sought in its construction itself and not in the product of this construction, which is number as it is manifested in space by geometry and in time by following series (the *constructivist* hypothesis in contemporary mathematics). Of course, if geometrical number is seen in this light it no longer corresponds to the definition provided by Euclid in his *Elements*. For Euclid, number (*arithmos*) is a multiplicity (*plêthos*) also consisting of units, but this multiplicity is incapable of both moving (flow) and alterity by coming out of itself.[353] Briefly, we can say that while the Greek term *arithmos* (Greek number) has connotations of "structure" and "assembly", as Brague rightly says,[354] this numerical assembly or structure can be harmonious (*ho monadikos*) and thus eternal, being always in balance, or disharmonious and thus temporal. In this light the movement of "flow" is simply an attempt by the structure to return to a state of balance, to the initial harmony, while geometrical number is unable to return to a state of balance because it was not initially harmonised. Here we return to the play on words developed by Plato in his *Cratylus*, saying that *Cronos* is *koros*, in other words a "plenitude", a harmonious, unmixed envelope (Aristotle would have described it as formed of homeomers).[355] *Koros* means both "son" and "child", showing the relationship between Zeus and Cronos and the fact that aging is impossible for time, which has been, is and will be, as the Italian Muses have it. The harmonious assembly corresponds to the

353 The only common point of these two conceptions is the postulate of a "being" produced by discontinuity, which is spatially manifested "as" a unit that is simply a geometrical segment. Cf. Ioannis M. Vandoulakis, "Was Euclid's approach to arithmetic axiomatic?" *Oriens-Occidens*, 2, pp. 141-181, p. 143.

354 Brague, *Du temps chez Platon et Aristote*, 3ème étude, p. 137.

355 Plato, *Cratylus*, 396b cited by Jérôme Laurent, *L'homme et le monde selon Plotin*, *op. cit*., p. 142. Plotinus repeated Plato's word play on six occasions. Here is Plato's text as translated by Jowett: "Kronos quasi Koros (*Choreo*, to sweep), not in the sense of a youth, but signifying *to chatharon chai acheraton tou nou*, the pure and garnished mind (*sc. apo tou chore in*)." Mattéi is also right to insist on the non-separation between the nuptial and geometric numbers, without which thought would become caught in the *Catharon*, the name given to the historical movement of Catharism (καθαρός: *katharós*) by a Dominican whose name remains unknown.

time of the generation of the Gods, while the other figures (*schema*) reflect the multiplicity of human beings. So there is no point opening Aristotle's *Physics* and going to the part dealing with time without having first understood this historical set of concepts.

In short, if it were possible to reconstruct the perfect geometrical number from geometrical number, it would be necessary to examine the notion of harmony that seems to make a qualitative distinction between the two. The enigma can clearly be moved from the analysis of number itself to that of the harmony attributed to it. And this means that the notion of harmony should enable us to connect divine eternity, rooted in the nuptial number, to the temporality of the world, rooted in geometrical number.

Carl A. Huffman of the University of Cambridge[356] finds this Pythagorean view that harmony necessarily comes from disharmony in a passage from Aristotle's *Physics*. Here is Aristotle's Pythagorean thought:[357]

> For what is in tune must come from what is not in tune, and vice versa; the tuned passes into untunedness – and not into any undtunedness, but into the corresponding opposite.

So we should investigate the harmony that Aristotle mentions here in order to understand the Pythagorean model adopted by Plato. To what model is he referring? Does it stem from a particular field of knowledge? Does it denote the world of music, physics or perhaps astronomy? To enable us to describe this harmony we have only Rose's fragment 47:[358]

> Harmony is heavenly, by nature divine, beautiful and inspired; having by nature four parts.

We shall not dwell on the elementary material constitution of the supra-lunary world in Aristotle (the four parts are the four elements, to which must be added the fifth); we simply wish to note that formal harmony is taken from a model of the heavens, which seems to come from the Pythagorean heritage. More light may be shed on this fragement by comparison with a passage of Aristotle's *Metaphysics*

356 Carl A. Huffman, *Philolus of Croton: Pythagorean and Presocratic. A commentary on the Fragments and Testimonia with Interpretative Essays*, Cambridge University Press, 1993, pp. 139-140.

357 Aristotle, *Physics*, I, 5, 188b 12-15, trans. Barnes.

358 Fragment 47 of Aristotle collected by Rose**,** trans. Barnes, cited par Jean-Luc Périllié, *Symmetria et rationalité. Origine pythagoricienne de la notion grecque de symétrie*, L'Harmattan, 2005, p. 103 and p. 245.

that explicitly sets out the fundamental postulate of Pythagoreanism as follows:[359]

> They supposed the elements of numbers to be the elements of all things, and the whole heaven to be a musical scale and a number.

The idea that harmony is taken from an analogy with the heavens as a whole seems to be the true Pythagorean heritage adopted by Plato, at least if we are to believe Aristotle. The heavens are the model of harmony. Later, still in Book A (990a) of his *Metaphysics* on the Pythagoreans, Aristotle states:[360]

> They observe the phenomena [of the heavens], and use up the principles and the causes in explaining these.

The Pythagoreans spent their time consulting the heavens, observing their different parts, noting their obvious changes and determining the functions of all their parts. This work is not unlike that of the neurologists of today, who seek to define the different parts of the brain and to find the bodily parts and functions attached to them.[361] Plato himself, in his *Laws* (XII, 967e 2) and *The Republic* (VII, 530d 8), says that at the time of Archytas, astronomy and harmony were "kindred sciences", offering reliable corroboration of the coherence of the present argument. So the Pythagoreans drew consequences for the configuration of human beings from the morophology of the movements of the heavens. Once again it is an account by Aristotle, rather than the writings of Plato, that enables us to understand the Platonic conception, which falls entirely within the Pythagorean tradition:[362]

> In one particular region [of the heavens] they place opinion and opportunity, and, a little above or below, injustice and sifting or mixture, and allege as proof of this that each one of these is a number, [and that] there happens to be already in each place a plurality of the extended bodies composed of numbers, because these modifications of number attach to the various groups of places.

From this account we learn that there are many different regions in the heavens, arranged in a hierarchy. In each region there are many diffferent extended bodies already established which, when they come together, form heavenly harmony *in itself.* The configuration of these bodies, their form, as the Epicureans would say, results in – visibly –

359 Aristotle *Metaphysics*, A, 5, 986a, 2-4, trans. Barnes.
360 Aristotle, *Metaphysics*, A, 5, 986a, 21-30, trans. Barnes.
361 The *Phaedo* also includes the analogy between rivers of fire and the human *thûmos*, which is later housed in the volcanic activity of the Aeolian islands.
362 Aristotle, *Metaphysics*, A, 8, 990a, 19-27.

different numbers. These regions of the heavens determine aspects of human existence. Aristotle lists the human elements that can be understood by means of astronomy. In the passage mentioned we find a group of them: first *opinion*, followed by *kairos*, *injustice* and then *sifting* and *mixture.* As most commentators have observed, this passage seems either corrupted or trunctated.[363] However, it seems to echo another passage in Book A, 4, 985b 29, which lists *justice*, *soul* and *reason*, and *opportunity*. *Justice* and *opportunity* appear in both lists. Time is here, manifested in the notion of *opportunity* (*kairos*). So the Pythagoreans seem to have thought that human time could be understood in the light of astral configurations. Let us recall, first, that *kairos* was the youngest daughter of Zeus, according to the poet Ion of Chios. Périllié, in both his doctoral thesis[364] and another article cited above, has clearly shown that:[365]

> In tragic culture, *kairos* was semantically equivalent to *summetron.*

And *summetron* was the basis of Greek harmony. Furthermore, in a note by Tricot we learn that *kairos* was linked to the particular heavenly region of the Pleiades.[366] So time as a determining factor in human lives could be explained by the heavenly region of the Pleiades. If we look up to the heavens we soon see five stars in that group, but the Greeks knew of seven, which is why the Pythagoreans attached the number seven to *kairos*. However, this does not yet explain why there was an analogy between the Pleiades and the notion of *kairos* in Pythagoreanism. Let us try to understand it. David Bouvier, in his commentary on Hippocrates' *On Diet and Hygiene* dating from the late 5th century BCE, suggests that the Pythagoreans[367] used the Pleiades to divide time into the seasons:[368]

> I divide the year into four parts, the division the most widely accepted by people in general: winter, spring, summer, autumn. Winter runs from the setting of the Pleiades to the spring equinox, spring from that

363 Cf. Tricot, note 1.

364 Périllié, *Symmetria et rationalité. Origine pythagoricienne de la notion grecque de symétrie*, L'Harmattan, 2005.

365 Périllié, "Summetria des Nombres de la République", *Revue philosophique de Louvain*, Institut supérieur de Philosophie, 2005, pp. 35-58, p. 54.

366 Tricot, note 2, p. 77 in our edition.

367 David Bouvier, "Temps chronique et temps météorologique chez les premiers historiens grecs", *art. cit.*, in *op. cit.* p. 128, note 46: "The division of the year into four seasons comes from the Pythagorean school; Euripides may be one of the first to have accepted it."

368 Cited by Joly.

> equinox to the rising of the Pleiades, summer from the Pleiades to the rising of Actarus and autumn from the rising of Actaurus to the setting of the Pleiades.

We shall discuss the notion of equinox later. So we can assume that, as the Pleiades made it possible to separate the seasons (time) and the notion of *kairos* had the same common meaning in relation to time (its root *ker* in fact meaning *to cut*), it was quite natural that the number seven, from the seven stars, should act as an analogical shuttle between heaven and earth. Whatever the case, we now know that this group comprises 1400 stars, which relativises the value of such a method, as Aristotle would also observe in his *Metaphysics*.[369]

> And the Pleias we count as seven, as we count the Bear as twelve, while other peoples count more stars in both.

Yet it remains the case that the year is divided into four seasons, which are in turn subdivided by three in order to give twelve months, while the cycle of the moon is divided into four to give weeks of seven days. This division is also found in Plato, based on the dodecahedron, and in Aristotle's thought at the constitutional level.[370] So while heavenly harmony was the prime model of harmony and the numbered stars gave the numbers, these qualitiative numbers remained different from quantative numbers. Aristotle makes this very clear when discussing Pythagorean thought in Book A of his *Metaphysics*:[371]

> For the objects of mathematics, except those of astronomy, are of the class of things without movement.

So here we are given a new criterion to use in distinguishing geometrical number from the harmonised nuptial number. Geometrical number has no movement, so it can easily be compared to Euclidian number. However, the same cannot be said of numbers taken from astronomy. Firstly, if these numbers are an assembly of parts, they have acquired this property primarily by analogy with constellations, as we have seen in relation to the Pleiades. And the constellations are harmonious because each is a subset of the set of

369 Aristotle, *Metaphysics*, N, 6 1093a 18-19.

370 We should like to discuss Rose's fragment 385, which mentions a whimsical attempt at an Athenian constitution recorded by Aristotle: **"**They were divided into four *phulai*, in imitation of the seasons of the year. Each of the *phulai* was divided in three, forming a set of twelve parts, like the months of the year. They called these parts *trittues* and *phratriai*. Thirty *genê* made a *phratria*, just as thirty days make a month."

371 Aristotle, *Metaphysics*, A, 8, 989b 32-34, trans. Barnes.

"the heavens", which provides the model of harmony. As for the question of the movement itself (*per se*) of these numbers and the problem of their relationship to time, we can assume, in the absence of any contemporary accounts, that their movement was derived from the perpetual movement of the astral spheres, which seemed to make the stars appear and disappear endlessly in the sky. For example, the appearance of the Pleiades marked the start of summer and their disappearance that of winter.[372] So if Pythagorean number possessed time, in other words if this assembly were composed of moving parts, these properties were taken from the heavenly time and movements.

However, although the Platonic conception had its origins in the Pythagorean tradition, it was far from faithful to it. Aristotle criticises Plato on this point, suggesting that he suppressed these fundamental qualities of Pythagorean qualitative number by considering numbers as separate entities:[373]

> [Peculiar to him] is his view that the numbers exist apart from sensible things, while *they* say that the things themselves are numbers, and do not place the objects of mathematics between Forms and sensible things. His divergence from the Pythagoreans in making the One and the numbers separate from things, and his introduction of the Forms, wer due to his inquiries in the region of definitory formulae (for the earlier thinkiers had no tincture of dialectic).

Judging from this passage of Aristotle's *Metaphysics*, it was by seeking to introduce dialectics into the heart of his enquiries into Nature that Plato stripped number of its properties. We have seen that Pythagorean number is a natural entity insofar as its properties are identical to those of the constitution of the heavens. By introducing dialectics, says Aristotle, Plato modifies the Pythagorean model and makes it into an intermediary between sensible things and Forms. So we may wonder where the true place of this number is. The place of Platonic number is not an ideality, as it is precisely the link between Forms and sensible things. Neither sensible, nor ideal, the status of Platonic number poses a problem, the source of which seems to be the introduction of a notional dialectic. Shortly before the passage cited above, Aristotle has also pondered the need for the dyad that introduces a dialectical interval:[374]

372 Cf. Jesper Svenbro, "L'égalité des saisons. Notes sur le calendrier hippocratique (Du régime, III, 68)" in *Construction du temps dans le monde grec ancien*, *op. cit.*, pp. 341-350.
373 Aristotle, *Metaphysics*, A, 6, 987b, 26-31, trans. Barnes.
374 Aristotle *Metaphysics*, A, 6, 987b, 25-26, trans. Barnes.

> But positing a dyad and constructing the infinite out of great and small, instead of treating the infinite as one, is peculiar to him.

Aristotle seems to be saying that, instead of bringing intelligibility to both number and the understanding of natural phenomena, the introduction of dialectics merely makes the issues more complex. For the Pythagoreans the infinite was a simple notion constantly related to the heavens, whereas the introduction of the dyad seems to push it to a level of abstraction which Aristotle visibly does not see as useful to the theory. Why oppose great and small, leaving the dichotomy endlessly moving and so opening the way to an infinite that seems purely illusory?[375] Aristotle's critique seems to offer no concessions. In order to grasp this fully, let us turn to the *Philebus*, in which Plato discusses the notion of harmony. This dialogue allows us to note how far Plato has moved away from the Pythagorean approach. For instead of starting with an analogical model (the heavens, music) to describe harmony, Plato begins with the dialectic between the limit and the infinite. This tension between the limit (*péras*) and the unlimited (*apeiron*) creates a mixture (*summixis*). It is only then that number and measure are applied to this mixed entity, an operation which:[376]

> puts an end to difference and opposition, and by introducing number creates harmony and proportion among the different elements.

Firstly, by introducing the dialectic Plato removes the "physiological" dimensions of number, as the Pythagoreans would say, which were its specific properties. So it no longer has any properties and becomes a pure abstraction. Next he gives number a subordinate status in relation to dialectics.[377] This is why number is no longer linked to nature, but applied to a mixture (*summixis*) arising out of dialectics. The pair of dissonant opposites ends when a number can be applied to them that turns them into a harmonious mixture that is geometrically commensurate. At this point Anne-Gabrièle Wersinger rightly wonders about the place of the tension between the great and small.

375 We might think of Feuerbach's critique of the limitless dialectic of Hegel's philosophy.

376 Plato, *Philebus*, 25d11= 24C6, trans. Jowett.
http://classics.mit.edu/Plato/philebus.html

377 The opposite positions of Plato and Aristotle on the status of the dialectic has been fairly well analysed by Michel Narcy in his article "La dialectique entre Platon et Aristote", *Kairos kai logos*, 8, 1997, pp. 1-24.

What is the site of this dialectic? What is the true site of the mixture obtained in this way?[378]

> We are bound to ask, what can provide a home or site, sometimes for the *apeiron* and sometimes for the quantitative limit?

Although Wersinger comes up against the same question as that posed by our discussion here, our solutions will be very different. Her answer draws on the musical model, centred on the notion of interval. We cannot fault her analysis which, moreover, seems to accord with Plato's approach. We thus refer the reader to her book, to which we have nothing relevant to add.[379] However, from a purely theoretical point of view, we do not think that this model is entirely appropriate to the question posed. While the musical interval may be one of the models describing the functioning of the dialectic, intervals are so many and so diverse, that it seems unlikely that the musical interval can contain them all. What does a geometrical interval have in common with a physical interval, and what does the latter have in common with a cosmological interval? In the first place we should need to define the space that contains this interval, if there is one. For it is generally agreed that within an interval there is space. But here to advance a thesis so charged with consequences, we need a proof. Moreover, Aristotle is known, as we shall see, for his refusal to accept that there is a space between the bounds of an interval and it is this gap, this void, that drives him to seek to define movement itself. For Plato the space that is the receptacle of the interval is not the world itself (nature) – in other words it is not a physical space, it is mixture (*summixis*). This mixture is invisible and theoretical. Lastly it must be understood that Plato's work on harmonies, which sought to penetrate the mystery of music within the cults, led to the dissolution of the concept itself. These Platonic analyses diverted fundamental work in the field of physics. It remains the case that the mixture, to which number and measure are applied, shows that that nature (*materia*) cannot be *signata quantitate*, as many Mediaeval commentators recognised. The mixture itself is the "sign of quantity" and this is why, symmetry aside, it is hard to see what could be a *sign* for number.

To stay with our investigation, there was a Pythagorean dialectics that described physical phenomena, but it was of a physical

378 Anne-Gabrièle Wersinger, *La sphère et l'intervalle. Le schème de l'harmonie dans la pensée des anciens Grecs d'Homère à Platon*, Jérôme Millon, 2008, p. 253.
379 Wersinger, *La sphère et l'intervalle. Le schème de l'harmonie dans la pensée des anciens Grecs d'Homère à Platon*, pp. 254-270, pp. 296-309.

order rather than that of Forms. Plato's approach to dialectic is similar to his approach to number. He literally stripped the dialectic of its physiological sense, although this had been the subject of a great deal of research within Pythagoreanism. The physiological dialectic of the Pythagoreans related to the tension of curves, a model that underpinned analogy itself, as Wersinger has rightly noted.[380] This model is no longer found in Platonic thought. If the Italian Muses could still speak, they would still have many secrets to tell us about numbers and time, but Plato cut their heads off. Who still knows the nature of the *dialectic of the Italian Muses*? Suprising as it may seem, it was Aristotle who brought back this Pythagorean exploration in order to describe time, as we shall see when we follow his modeling of the concept of entelechy using the analogy of the nose and the motor limb. Where the question of the interval is concerned, Aristotle is one of the finest heirs of Pythagoreanism, or at least offers a more satisfying solution than that of Plato. It was the general incomprehension of the musical model, which sought to clarify the notion of interval to which number was supposed to apply, that enabled the emergence of a suspicion of "idealism" concerning number itself. Even after the research into musical intervals, number retained this intermediate status between the sensible and intelligible, so the thesis of the ideality of Platonic number is unsustainable. Platonic number is neither idea nor Form, it is simply the product of an abstraction whose place within Platonic thought is impossible to determine. So Plato "absolutised" both number and the dialectic, two concepts that are necessary in order to grasp time. We can see why, in doing this, Plato was no longer able to describe this fundamental concept.

Now, if Plato "absolutised" the Pythagorean model, perhaps in order not to reveal what he believed to be mysteries, was his conception of the One corresponding to the entirety of the heavens also different? We must consider this question in order to determine the perfect, nuptial number, the only qualitative number that can describe the One. There are two logical approaches to defining the entirety of the heavens, one intensive, the other extensive. In the intensive approach, the entirety of the heavens is obtained by considering an extensive part that can describe the totality. A part of the heavens is taken as a zone that can define the quality of the whole.

380 *Ibid.*, p. 279.

A fairly reliable account by Stobaeus describes this approach among the Pythagoreans. There is said to be a "hearth" in the centre of the heavens that makes it possible to grasp the quality of the harmony found there:[381]

> The first composite (entity), the One, which is in the centre of the Sphere, is called Hearth.

This fragment, attributed to Philolaus, seeks to describe a kind of "seed" that explains the genesis of the heavens and continues to define their real or manifest constitution. Said to provide the matrix of harmony itself, this expressive part of the heavens is the One. According to the model used by the Pythagoreans, this hearth at the centre of the Universe is either the sun, according to the heliocentric model, or the Earth in the geocentric model. However, whether the centre is the heavens or the Earth, it is crucial to understand how the model functions. The model of the hearth of the universe is provided by Anaxagoras in his book on Physics, which Socrates described at his trial as available to all in the public square.[382] Plato made good use of the work of this ancient Giordano Bruno,[383] modifying its content to suit his own purposes, which earned him several accusations of plagiarism at the time.[384] So we shall pay no attention to the theses of the School of Athens, according to which this knowledge was inherited from ancient mysteries that the *divine* Plato collected and had been sought in Egypt by the most eminent commentators. The astronomical model is condensed in the following authentic fragment:[385]

> Mind took command of the universal revolution, so as to make (*things*) revolve at the outset. And at first things began to revolve from some small point, but now the revolution extends over a greater area, and will spread even further. And the things which were mixed together, and separated off, and divided, were all understood by Mind. And whatever they were going to be, and whatever things were then in existence that are not now, and all things that now exist and whatever shall exist – all were arranged by Mind, as also the revolution now

381 Stobaeus, I, XXI, 8, trans. Freeman.

382 Lucio Pepe, "Le livre D'Anaxagore lu par Platon", in Monique Dixsaut and Aldo Brancacci, *Platon. Source pré-socratique. Exploration*, Vrin, pp. 107-128.

383 This model is explicitly or implicitly discussed by Plato in his *Laws*, 966d sq., the *Cratylus*, 413c, the *Phaedo*, 95c sq. and 96 ab and the *Philebus*, 28 e.

384 Lucio Pepe, "Le livre D'Anaxagore lu par Platon", p. 109.

385 Anaxagoras, Fragment D./K. B12, which we cite here as evidence of a Pythagorean approach which is not specific to Plato but reflects his roots in this movement, as we shall see in the third subsection, which follows.

> followed by the stars, the sun and moon, and the Air and Aether which were separated off. It was this revolution which caused the separation off.

At the centre of the world there is a turning, whirling movement – this is the model of *perichoresis*. This whirling led to the separation of what are here called stars – the sun, moon and the regions of the heavens such as the ether. Mind (*noûs kubernêtês*) makes it possible to know the heavens thus formed by turning. Mind knows both the separations that created its regions and the stars of which it is constituted.

Clearly, Mind can rule the universe because it knows how it was formed. Clearly also, Mind is able to rule the universe because it was present at its formation. "Mind took command of the universal revolution, so as to make (*things*) revolve at the outset", says Anaxagoras. So the beginning was inert. It is Mind that gave movement to the heavens by propelling them into a particular temporality. This is not linear time, since it is constituted by a turning movement. Turning is a spatial metaphor that contains the model of the temporality of the heavens and thus of the One. Why? Because the heavens were inanimate until they were set in motion, and movement brought them animation of a primarily temporal nature. This specific temporality is not a circular movement because Anaxagoras clearly states that "at first things began to revolve from some small point". So the One is not a totality encompassing all its elements, it is the infinitely small that spreads intensively in the infinitely large. This mode of propagation (to put it in physical terms) or participation (in philosophical terms) is still always subject to the model of endless turning. So the heavens are understood as infinitely large and this is why the Pythagoreans also called them *Aîon*. Consequently, Mind necessarily knows the past, since it was present at the formation of the heavens, and the present, since it rules its constitution and the future. Lastly it knows the end (the term of the future) of the heavens in formal terms, without knowing their material end, since it seems to have worked on a material that was already present. For, crucially, when Anaxagoras suggests that it began with a very small point, this implies, through the notion of size, that this dimension can be related to other, larger units already present. So we cannot support the interpetation proposed by Wersinger:[386]

386 Wersinger, *op. cit.*, p. 326.

> As we have seen, this Mind, *noûs*, is characterised by the "turning" of time in such a way that the beginning coincides with the end. This means that the *noûs* knows everything in advance, and remembers everything. As the omniscient viewpoint of the *noûs* is that of the infinite, it is able to determine all viewpoints on a thing. This means that instead of abolishing time like Socrates, who absolutised the relationship of quantities, Anaxagoras infinitely multiplies this relationship according to times. The *noûs* alone is master of meter.

While we have already seen that Archytas's model of harmony was the heavens, it goes without saying that the *noûs* "alone is master of meter". Similarly, if we think that Plato absolutised both number and the dialectic, it is hardly suprising to find in Socrates this kind of absolutisation of time as a simple consequence. Nor is it a problem that the *noûs* can be described as omniscient, since it is master of the meter of the before, after and now. The model of turning alone prevents us suggesting that the end coincides with the beginning, since that would imply a circle, whereas the whirling model has an additional parameter, which is time itself. This implies a primary awareness of limits (*péras*). Quantitatively, whirling can have a spatial term, which is the limit of its extension – movement can meet an external obstacle; qualitatively, the material that is set in motion can become exhausted, resulting in empty spinning. In sum, both the material that is set in motion and the external limit of its movement might render the extensional return of the same impossible (n + 1). So the curve of the whirling model does not *necessairily* imply circularity, as has been rather hastily suggested. It is entirely legitimate to suggest that, according to this model, the world is engaged in an extensional temporality, in which time ceaselessly grows. As for the initial question of what qualitative number can be attached to this conception of *perichoresis*, clearly it is the number 1, the One that would give rise to henological studies. For Mattéi, as for Plato and the Pythagoreans, this eternal number is called *aïon* and can be understood in terms of duration:[387]

> The eternal Number or Aïon is not the suspension of the progress of time, but sets in motion the duration of the ages and soul of the world.

This confirms that the Platonic eternal number, describing the *panta chronos*, enables the establishment of the Pythagorean *kosmos* and in so doing unleashes movement and duration. This duration can be measured or marked out by the number of curves in the whirling

387 Mattéi, "Les figures du temps chez Platon", in *Les Figures du temps*, PUS, 1997, pp. 29-47, p. 37.

model, each curve representing an "age of the world", something like the strata of ages (years) that can be measured on the cross section of a tree-trunk. In setting out this theoretical time, Mattéi also explains that in Plato's *Timaeus* the world is constructed through the prism of the dodecahedron, since all periods of time mentioned in the *Phaedo*, the *Phaedrus*, the *Laws* and of course the *Timaeus*, always consist of a totality with twelve parts.[388] Plato seems to have understood time geometrically, in terms of this twelve-sided figure. This model preserves temporal continuity because the *noûs* does not introduce any principle of discretion. For Plato, equally, the *noûs* does not introduce the notion of organisation, which Anaxagoras said it did, as we shall see. Armed with this way of understanding Platonic temporality the mediaeval monk Joachim of Fiore applied it to historical continuity.[389] This approach seems legitimate if we consider that this model is not linear and all its phases,[390] which are historical periods, are slotted together until the initial event, the birth of Christ.[391] Lastly we need to examine the source of the model proposed by Anaxagoras and adopted by Plato in describing time. While this model has some similarities to the Iranian vision of the world, as also described by Hesiod, we cannot provide a definitive answer to this question. To do so would require us first to analyse the Magusean influence on Greek culture, possibly via the Biblical texts.

388 Mattéi, "Les figures du temps chez Platon", in *Les Figures du temps*, p. 36, see also "La généalogie du nombre nuptiale chez Platon", *Les études philosophiques*, 1982, no. 3, pp. 281-303.

389 Joachim of Fiore's thesis on time can be presented as follows: "This eternity that was in God before all time is entirely unfathomable to we who come to be in time. And the wisdom of men is dulled, sense and intelligence fail where, in his hidden design, he has tried to create time, which was not for all eternity", *Psalterium decem chordarum* I, 5, 238 r, this translation from the French translation by Jean Devriendt, doctoral thesis, Université de Strasbourg 2, 2001.

390 We use the term "age" of the World to refer to Hesiod's model, which had five ages according to the circular movement and four according to the linear movement, as we have seen. Raising the trinitarian (3) question at this point seems to us highly pertinent to an understanding of the history of the Christian church.

391 If this model were linear there would be a confusion between this and Hesiod's model of the "ages" of the world, so that the Iranian question of evil would *ipso facto* have to be included. We would then have the answer to the question of the external limit to the heavens, which would be Evil.

In relation to the entirety obtained by extension, it was by working on the notion of extensional limit that the Pythagoreans came to grasp the nuptial number of concern to us here. This number could be logically obtained in two ways: composition and discretion (division). Aristotle ponders this in his *Metaphysics*, following the aforementioned discussion of the regions of the heavens, each of which has its own qualitative number:[392]

> Is this number, which we must suppose each of these abstractions to be, the same number which is exhibited in the material universe, or is it another than this? Plato says it is different.

Since each region of the heavens has its own number, as we have seen, the number of the heavens as a whole could be obtained by bringing all these regions together and thus by adding together the numbers of all the regions. Aristotle suggests that, for Plato, the nuptial number cannot be obtained in this way, that would be a different number – the number ten – which has been given a little earlier:[393]

> E.g. as the number 10 is thought to be perfect and to comprise the whole nature of numbers, they say that the bodies which move through the heavens are ten, but as the visible bodies are only nine, to meet this they invent a tenth – the 'counter-earth'.

In this passage Aristotle seems to overturn the causal relationship between the numbers and the heavens. For the Pythagoreans it was the heavens that provided the measure of numbers and not the other way round. So it is possible that we are again dealing here with a Platonic version of Pythagorean theories. However, Aristotle clearly states that the number ten is the extensive limit of the heavens. This number includes the nine visible bodies to which must be added the *counter-earth* (*antichthôn*). Brought into the Platonic dialectic, this limit is seen in terms of the "many":[394]

> 10 is many (if there is no number which is greater than 10), or 10,000.

Here we see the theoretical gain provided by the introduction of the Platonic dyad. In relation to our question, it must be understood that the tenth term of the number 10 is indeterminate: it is the *antichthôn*. This means that the limit of the universe has not been identified at all, because it is dependent on the limit of the number 10 itself, in other words on what the *antichthôn* is. Once the *antichthôn* has been

392 Aristotle, *Metaphysics* A, 8, 990a 27-30.
393 Aristotle, *Metaphysics* A, 5, 986a 10-11.
394 Aristotle, *Metaphysics* N, 2, 1088b 10.

identified, we will know the limit of the number ten and hence the limit of the universe as glimpsed by the Pythagorean model adopted by Plato. In his treatise *On the Heavens* Aristotle mentions this Pythagorean conception, again referring to the *antichthôn.* We shall cite the entire passage in order to avoid any accusations of distorting either the thought of Plato and the Pythagoreans or Aristotle's reading of it:[395]

> But the Italian philosophers known as Pythagoreans take the contrary view. At the centre, they say, is fire, and the earth is one of the stars, creating night and day by its circular motion about the centre. They further construct another earth in opposition to ours to which they give the name counter-earth. In all this they are not seeking for theories and causes to account for the phenomena, but rather forcing the phenomena and trying to accommodate them to certain theories and opinions of their own. But there are many others who would agree that it is wrong to give the earth the central position, looking for confirmation rather to theory than to the phenomena. Their view is that the most precious place befits the most precious thing; but fire, they say, is more precious than earth, and the limit than the intermediate, and the circumference and the centre are limits. Reasoning on this basis they take the view that it is not earth that lies at the centre of the sphere, but rather fire. The Pythagoreans have a further reason. They hold that the most important part of the world, which is the centre, should be most strictly guarded, and name the fire which occupies that place the "Guard-house of Zeus."

The postulate of Aristotle's argument is as follows: the extremity and centre are both limits, in other words quantity (extension) is dependent on quality. For if we have no parts, it is impossible to unify them or to posit a set. So a qualitative part can play the role of a quantitative extensive limit. Following the Pythagorean model, this *expressive* part is necessarily located in the heavens. So we need to find a region that corresponds to this "noble" part of the heavens. This region is igneous and called *antichthôn* by the Pythagoreans. The fire that is at the centre of the universe is the "Guard-house of Zeus". Are there other igneous regions in the heavens that are not the sun? The answer must be no, only the sun is this igneous region of the heavens. So the sun is at the centre of the heavens and the centre of the universe.[396] As we

395 Aristotle, *On the Heavens*, II, 13, 293a.

396 For a more detailed discussion of this cosmological question, see two books by Michel-Pierre Lerner, *Le Monde des sphères, I (Genèse et triomphe d'une représentation cosmique* and *II (la fin du cosmos classique)*, Les belles Lettres, 1996 & 1997.

shall see, Aristotle refutes this argument, suggesting that the Earth is at the centre. So the *antichthôn* is the sun; quantitiatively it is the tenth term, but qualitatively the first, since it is an expressive part – the "noble" part, as the Pythagoreans would say. So in our view the term *antichthôn* made it possible to conceal the heliocentrism implicit in the Pythagorean model. It would also be possible to express this conception in geometrical form if and only if the tenth term were not a point but a straight line intersecting a three-dimensional form. So Pythagoras' *tétracktys* can be understood only if we say that there are two interlocking three-dimensionsal forms, as the mathematician Hamilton has shown (graph theory), the first formed of the three tips of the triangles which together form a new summit which is that of a tetrahedron.

To sum up this part, we can thus suggest that there is no philosophy of time specific to Plato's thought. Platonic time remains mythical, stemming from the *eikos muthos*. This is why Plato's approach continually returns to its source in Hesiod's mythology. Furthermore, Plato's continued support for an initiatory vision of philosophical activity inevitably rules out any possibility of a new, rational interpretation of time, since the initiatory dimension diverts thought away from reason through the use of images. Lastly, if we say that Plato "absolutises" both number and the dialectic, it becomes clear that even concepts that can describe time are rendered inoperable. Time can then become an "ideality", a summary conception adopted by the Stoics. As for the nuptial number, the marriage number,[397] as we have seen, there are two of them, the One and Ten. If only one is needed[398] it is midway between the two ("the middlemost midle" as Plato would say), in other words the number five ("the fundamental

397 Aristotle attests to the existence of a number corresponding to marriage in *Metaphysics* M 4, 1078b 23: "The Pythagoreans had before [Democritus] treated of a few things whose formulae they connected with numbers – e.g. opportunity, justice, or marriage".

398 There is a theoretical problem here. For while Plato states that only the Muses know number and that there are Muses on the Italian side and on the Ionian side, then, logically, there should be two nuptial numbers. The fact that the nuptial number retained by both Plato and the cults (for example at Delphi) is that of the Italian sphere clearly shows how far Greek culture leaned to the left from a geographical point of view. And if a moving thing continuously leans to the left, it will necessarily move in a circle.

division"), "that governs the regions of the cosmos" the epsilon at Delphi ("Know thyself"), the number of introspection, of the soul's consideration of itself, as Proclus confirms, of man,[399] *tat tvam asi*, in other words human beings on a human scale, who are anything but eternal, temporal human beings with a time that is personal to them, *sui generis*.

In order to stay on our philosophical course, from this initiatory conception of time and the future adopted by Plato, we shall retain only the following etymology: the term *télos* (τελος) can be compared to the notion of death by homophony with the verb *teleutân* meaning to die. This is the traditional *méléthè thanatou* translated into French by Pierre Hadot as *l'exercice de la mort*, "the exercise of death". So it would seem that it is possible to access time philosophically without entering the domain of initiation, or waiting for the cults or Muses to dispense their own vision of the world to us. This access is provided by another concept reflecting the truly universal reality of death. Death is what all *common mortals* have in common, as the historian Vico showed, making it the primary constituent aspect of our humanity. This conception implies that the *télos* does not naturally and necessarily move towards its own end, but that human beings are the site of this understanding. The conceptualisation of the *télos* involves an initial understanding of the fundamental aspect of human life that is death. So the *télos* cannot be located at the end of human lives, since death brings it into the present. It is here that Aristotelian temporality comes into its own and the concept of entelechy takes flight. If death can be brought into the present, the concept of entelechy becomes possible. As for the mystical path itself, let us simply note how Pindar sang of it, with a hint of irony:[400] "Blessed are all those released from suffering by the sorcery of rites." It will undoubtedly be suggested that our approach is too reductive, since Plato adopted many other systems of thought and notably the Ionian heritage of Heraclitus. So let us take a look at this Ionian thought that Plato sought to erase from history and which Aristotle used as the foundation for his truly philosophical argument on time. Clearly Ionian thought can set the seal on the divorce between Platonic thought and that developed by Aristotle.

399 Mattéi, *Platon et le miroir du mythe*, *op. cit.*, pp. 95-97.

400 Colli, *La Sagesse Grecque, I*, French trans. M.-J. Tramuta, L'Éclat, 1990, fragment 131a, p. 127.

b. On Ionian astronomy, or the emergence of conceptual time, opening the world to future time

This section will consider Ionian philosophy. This is the last discussion we shall devote to the heritage preceeding Aristotle on the concept of time. After this, having collected enough historical information, we shall tackle Aristotle's model directly. But it is impossible to discuss Aristotelian time without considering the so-called "Ionian" current of thought, since it is here that we hope to find the fundamental issues of time adopted in Aristotle's thought. We shall begin by seeking to define the Ionian *vision of the world* before discussing the thinkers who are its greatest representatives. This final historical section will enable us to approach Aristotle's work by an unusual route: the physical theories opposing generation and corruption.

Diogenes Laertius begins his history of philosophical sects with what seems to be a very strange statement, echoing a theory that philosophy was not born in Greece. He mentions many cultures as sources for part of the mosaic of knowledge that has been called "philosophy" since Pythagoras:[401]

> There are some who say that the study of philosophy had its beginning among the barbarians. They urge that the Persians have had their Magi, the Babylonians or Assyrians their Chaldeans, and the Indians their Gymnosophists; and among the Celts and Gauls there are the people called Druids or Holy Ones, for which they cite as authorities the Magicus of Aristotle and Sotion in the twenty-third book of his Succession of Philosophers.

This rhetorical *contra* argument then allows Diogenes Laertius to better use *pro* arguments to set out the thesis of his investigation, which is that philosophy was, of course, born in Greece and those who say otherwise are sinning through ignorance. However, this method of academic exposition has the merit of giving us information about all the cultures that he left out of his philosophical essay. The first to be mentioned is the Persian culture, followed by the Chaldean, Hindu and lastly the Celtic. The history of philosophy as related by Diogenes Laertius, which remained the model for all studies in antiquity, is not

401 Diogenes Laertius, *Lives of the Eminent Philosophers* I, trans. Hicks.

the entire history of philosophy. The historical version he presents settles for repeating that of Plato presented in *The Sophist.* In sections 242d 6-243a 2 of this dialogue Plato divides its historic content in two, separating the Muses of Ionia from those of Sicily in order to place it in a dialectic that will serve as its motor. Hegel clearly had no objection to this. The historical version of Diogenes Laertius is as follows:[402]

> Philosophy, the pursuit of wisdom, has had a twofold origin; it started with Anaximander on the one hand, with Pythagoras on the other. The former was a pupil of Thales, Pythagoras was taught by Pherecydes.

Diogenes Laertius may have taken this vision from Sotion's history, or perhaps from Alexander Polyhistor. However, this Platonic division is not supported by any argument in Plato's work. Besides, is it not necessary to have a conception of time before adopting a historical position? As Périllié so rightly notes: [403]

> In Plato this opposition of the Muses remained evasive and metaphoric at the very least; in the doxographic schema of Diogenes it becomes an opposition between two clearly defined traditions.

However, it is easy to raise the dialectical veil cast by Plato over the history of philosophy if we consider the version given by Diogenes Laertius. For while Thales was Anaximander's teacher, Pythagoras was taught by Pherecydes of Syros, and both Pherecydes of Syros and Thales of Miletus were thinkers from Ionia. The fact that Pythagoras settled in Italy – in the city of Croton which was an Ionian colony, as we shall see – is at best a matter of geographical rather than historical interest. We could ignore this problem were it not that this division later served as a generic demarcation between Plato and Aristotle on the one hand and the Ionian school on the other. For Diogenes Laertius goes on to attach Plato and Aristotle to the Italian tradition, while the Ionian ends in sophism and the Stoic school.[404] After this it was reasonable for the Aristotelian interpretative traditions to seek the roots of his philosophy in the Italian school, completely ignoring the Ionian influence by trying to fuse his thought with that developed by Plato, notably in the approach of the Neoplatonist current described in the introduction to this section.

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402 Diogenes Laertius, *Lives of the Eminent Philosophers*, I.

403 Périllié, *Symmetria et rationalité. Origine pythagoricienne de la notion grecque de symétrie*, *op. cit*., p. 45, note 5.

404 Ibid. p. 44, see the traditional presentation of ancient philosophy.

But let us start with the first overview provided by Diogenes Laertius, which we have just cited. While the quantitative plurality is also generic, we should note that his *judgement by authority* begins with a reference to Aristotle and notably to a book whose title is given as *Magicus*. If we take the catalogue of Aristotle's works provided by Diogenes Laertius himself, the work cited in his introduction is not mentioned.[405] Next, we have already shown that it was necessary to go back to the Magi in the tradition of Zarathustra to fully understand the work of Hesiod. Moreover, this was already known in the Athens school, as confirmed by Aristotle himself in a preserved fragment from his treatise *On Philosophy*, cited by Diogenes Laertius[406] and Pliny:[407]

> Eudoxus, who wished it to be thought that the most famous and most beneficial of the philosophical sects was that of the Magi, tells us that this Zoroaster lived 6000 years before the death of Plato. Aristotle says the same.

A little later this historian records that in his treatise *On Philosophy* Aristotle maintained that the Magi were more ancient than the Egyptians and that they believed in the existence of the two principles of Good (Zeus) and Evil (Oromades), as we have already noted in our commentary on the *Protrepticus.* The compiler Rose placed this fragment within the work *Μαγιχος (On Magic)*, as does Abdurrahman Badawi,[408] while the philologist Jaeger included it in *On Philosophy*, on the grounds that this treatise already contained fragments on the Magi and that there was no work *On Magic* in the Aristotelian corpus.[409] So we shall follow Jaeger in suggesting that this work cited by Diogenes Laertius is apocryphal. However, by this we understand that the historical version of the philosophical schools proposed by Aristotle in his *On Philosophy* cannot be that proposed by Plato and subsequently approved by Diogenes Laertius. Here is the judgement of the philologist Jaeger:[410]

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405 Diogenes Laertius, *Lives of the Eminent Philosophers*, I, pp. 236-237.
406 Diogenes Laertius, *Lives of the Eminent Philosophers*, introduction, p. 41.
407 Pliny, *Natural History*, 30.3. We have used Jaeger's translation from the Latin, *op. cit*., pp. 134-135. The fragment given on p. 449 is Rose's fragment 34, *Aristoteles Pseudepigraphus*, p. 50.
408 Abdurrahman Badawi, *La transmission de la philosophie grecque au monde arabe*, Vrin, 2nd ed. 2000, p. 104.
409 Jaeger, *op. cit*., pp. 135-136 and note 25, p. 449.
410 *Ibid*. p. 128.

> He began with the historical development of philosophy. He did not confine himself to the Greek philosophers from Thales onward […] Contrary to his procedure in the *Metaphysics*, he went back to the East, and mentioned its ancient and tremendous creations with interest and respect.

When Aristotle says in his *Protrepticus* that philosophy began with Pythagoras, as we noted earlier, this is because Pythagoras was implicitly linked to Zoroaster, in the same metonymic way that Thales was attached to the mythical figure of Kadmos.[411] In his *Metaphysics* Aristotle repeats the accepted view that the Ionian current began with Thalès:[412]

> Thales, the founder of this school of philosophy, says the principle is water (for which reason he declared that the earth rests on water).

He also contrasts the Ionian and Italian currents in several passages of Book A.[413] So a different vision of history is set out only in his treatise *On Philosophy*, a historical study going back to the Eastern influences according to our historian and philologist Jaeger. But even here, in Aristotle's academic study, which must have been subject to the teaching of the Academy, this lost knowledge must have formed only a part of the information he had gathered about the origins of philosophy. We can also understand that, as this branch of philosophy is placed under the auspices of Zoroaster, it preceded Platonic dialectic. So it is doubtful that it was represented by the Italian school alone. The Ionian school may also have been influenced by this movement. This is indicated primarily by the work of the Ionian Hesiod since, as we have seen, his framework was based on Iranian conceptions. "Thus spoke Zarathustra", thus philosophy unfolds. To understand this, we shall provide a few historical details.

Firstly, Aristotle's reliable account must be understood in the sense of Iranian cosmogony itself. Ohrmazd (the good god, Ahura Mazdâ) and Ahriman (the bad god, Angra Manyu) each reigned for three thousand years, the equivalent of 6000 years, but this period is mythological rather than historical in nature.[414] This theological

411 On the techniques of history writing which link men to legendary figures, see Karin Mackowia's article, "Les savoirs de Thalès et de Kadmos. Histoire et représentation religieuses en Grèce ancienne", *Annales* HSS, July-August 2003, no. 4, pp. 859-876.

412 Aristotle, *Metaphysics*, A, 3, 20-21, trans. Barnes.

413 Aristotle, *Metaphysics*, A, 5, 987a 10; A, 5, 987a 32.

414 See also Jaeger's analysis in *Aristotle. Fundamentals of the History of his Development*, p. 133.

dualism stemmed from the astronomical conceptions we discussed in relation to Hesiod and which were later taken up by Plato. Zurvan, infinite time, is the supreme God of this Iranian pantheon dating back to at least the 12th century BCE.[415] So everything would be comparatively simple were it not for the reform carried out by Zarathustra in the early 7th century BCE., as Brisson describes:[416]

> However, the reform made by Zarathustra, who must have lived around 600 BCE, almost removed Zurvan from the religious sphere of ancient Iran, in a manner similar to Mythra. But when Babylon was taken by the Persians in 538 BCE, the Iranian priests came into contact with the Chaldeans, who were primarily concerned with astrology. It seems that it was in this atmosphere favourable to syncretism that Zurvan once more became an important divinity and Mithriacism emerged. Moreover, it was through these Maguseans that the Greeks, notably Eudeumus of Rhodes, encountered the Iranian religion.

Zarathustra's reform predated the taking of Babylon by the Persians, so this reform was not constrained by Chaldean knowledge, as the Mithraic synthesis long suggested. Conversely, it places us in the time of Thales of Miletus, who died in 545 BCE, and Pherecydes of Syros, the two being contemporaries, as an Aristotelian fragment indicates:[417]

> Socrates had as rivals (so Aristotle says in the third book of his work on poetry) a certain Antilochus of Lemnos and Antiphon the soothsayer, as Pythagoras had Cylon of Croton; Homer while alive had Syagrus, and when dead Xenophanes of Colophon. Hesiod when alive had Cecrops, and after death the aforesaid Xenophanes; Pindar had Amphimenes of Cos, *Thales had Pherecydes*, Bias had Salarus of Priene, Pittacus had Antimenidas and Alcaeus, Anaxagoras hand Sosibus, and Simonides had Timocreon.

While this fragment clearly indicates that the two thinkers were contemporaries, it also seems to suggest a rivalry between two schools of which these two seem to have been representatives. For if Thales was in competion with Pherecydes, they cannot both be placed in the same current. Aristotle also states that Pythagoras, son of Mnesarchus, followed the teaching of Pherecydes:[418]

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415 Cf. Jacques Duchesne-Guillemin, *La religion de l'Iran ancien, Introduction à l'histoire des religions* 1. *Les anciennes religions orientales 3*, PUF, 1962, p. 146.

416 Brisson, "La figure de chronos dans la théogonie orphique et ses antécédents iraniens", *art. cit.*, p. 48.

417 Aristotle, *On Poets*, Fragment 7 in Ross, *The Works of Aristotle*, XII, Select fragments, Oxford, 1952, p. 75 (Colli, 9 [A 7]). Our italics.

418 Aristotle, *On the Pythagoreans*, fragment 1 in *ibid*, p. 134 (Colli, 9 [A 6]).

> Pythagoras, son of Mnesarchus, who first worked at mathematics and arithmetic, but later even indulged in miracle-mongering like that of Pherecydes.

So we might suspect that the Ionian thinker Pherecydes represented the so-called "Italian" school of which Pythagoras was simply a link in the historical chain. It is perhaps based on this account that Diogenes Laertius insistently repeated that Pherecydes taught Pythagoras, the only information he gives us on this philosopher:[419]

> He was a pupil, as already stated, of Pherecydes of Syros, after whose death he went to Samos to be the pupil of Hermodamas, Creophylus's descendant, a man already advanced in years.

In his *Metaphysics* Aristotle places at least two philosophers in this so-called "Italian" tradition: Empedocles and Anaxagoras, with an explicit reference to the Magi, in other words to Iranian culture, while Diogenes sees these two philosophers as belonging to different schools, the first Ionian, the second Italian:[420]

> Pherecydes and some others, make the original generating agent the Best, and so do the Magi, and some of the later sages also, e.g. Empedocles and Anaxagoras, of whom one made friendship an element, and the other made thought a principle.

After this it is easy to link the rest of this Italian current starting with Pherecydes to Pythagoras, Anaxagoras, then Archelaos, then Socrates, then Plato, who shed its influence late in life. This filiation sees Italian thought move from Ionia to Greece, as Diogenes Laertius suggests:[421]

> Archelaus, the son of Apollodorus, or as some say of Midon, was a citizen of Athens or of Miletus; he was a pupil of Anaxagoras, who first brought natural philosophy from Ionia to Athens. Archelaus was the teacher of Socrates. He was called the physicist inasmuch as with him natural philosophy came to an end as soon as Socrates had introduced ethics.

Let us now turn to Pherecydes. Aside from the fact that he taught Pythagoras to analyse numbers, we know little about Pherecydes of Syros other than that he supported the Ephesians against the Magneisans. Only a single authentic fragment remains refering to his philosophy in the Lyceum and, as the luck of history would have it, this fragment concerns his philosophy of time:[422]

> Pherecydes of Syros also says that Zas is always, like Time and Chthonia, as the three primary principles … and that Time with his

419 Diogenes Laertius II, 8, *op. cit.*, p. 25.
420 Aristotle, *Metaphysics*, N, 4, 1091b 8-10.
421 Diogenes Laertius, *op. cit.* II, 4, (Archelaus).
422 Eudemus of Rhodes, *fragment 150*, (Colli, 9 [B 3]).

> own seed produced fire, breath and water … and that of these – divided into five regions – was formed another, numerous lineage of gods, the one that was called "of five refuges", perhaps meaning "of the five worlds".

The supreme God of his philosophy is called Zas and is "always", along with Chronos and Chthonia. It is Cronos who, with his own seed, engenders fire, breath and water. After this time unfolds in five regions which are the five "ages" of the world in Hesiod's theogony. So this conception is manifestly identical to that set out by Hesiod and Iranian in origin. A fragment from the work of Celsus, less reliable than the preceding fragment, confirms that Pherecydes was using Hesiodic conceptions. This passage describes a struggle between Cronos and the serpent Ophioneus, each represented by one of two opposing armies:[423]

> And Pherecydes, who was far earlier than Heraclitus, relates a myth of an army drawn up in battle against another army, and says that Kronos was the leader of one and Ophioneus of the other; he tells of their challenges and their contests, and that they made agreements that whichever of them fell into Ogenus should be the vanquished party, while the party which drove the other out and conquered should possess the heaven.

For Schuhl this episode is an explicit reference to a passage from Hesiod's *Theogony* (ll. 820-880) describing a struggle between Zeus (Zas) and Typhon.[424] Meanwhile Colli links it to the founding of Orphism. We shall consider the source of Colli's confusion.[425] In our view, these two fragments can reasonably be seen to indicate that the thought of Pherecydes of Syros had an identical source to that of the theologian Hesiod. Perhaps under the influence of the later Mithraic synthesis, Cicero suggested that Pherecydes was the first to assert "that the souls of men were immortal" and Pherecydes was later described as a "disciple of Zaratas the Chaldean".[426] As we have seen,

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423 Origen, *Contra Celsum*, 6, 42, trans. Henry Chadwick, Cambridge University Press, 1965, pp. 357-8.

424 Schuhl, *Essai…*, p. 148.

425 Colli links this struggle between Cronos and Orphion (the serpent, Ourobouros) to Cretan culture and thus to original Orphism (I, 382-383, 391-392). We prefer to follow Schuhl in suggesting that this symbolism is linked to Pythagoreanism. There are, moreover, many representations of divinities stemming from Iranian culture showing this serpent in the context of the Mithraic heritage, as Brisson has shown (*art. cit*., pp. 56-57).

426 Plutarch, *De animae procreatione* in *Timaeo* II. Cicero said, "Pherecydes, the Syrian, is the first on record, who said that the souls of men were immortal",

however, Pherecydes was working before the Ionian culture encountered its Chaldean counterpart, which is not supported by history.

So, at the foundation of this Italian tradition we would place the Ionian poet Hesiod, since no other thinker ever depicted Iranian culture in so authentic a manner. It will be objected that Hesiod is a poet and not a philosopher, but such Platonic distinctions have no place in this argument. It is better to say, with Vico, that Hesiod is a "theologian" poet and that this Iranian theology greatly influenced Ionian thought, giving momentum to the tradition called Italian. Lastly, in terms of effective cause, it must be agreed that Hesiod's work gives us far richer information on Iranian theology than the few fragments remaining to us of the thought of Pherecydes. Whether or not this interpretation conforms with that proposed by Aristotle, it is the one we shall follow, since we shall never know whether Hesiod was cited in the historical essay Aristotle provided in *On Philosophy*.[427] As for Zarathustra's reform, we need only read the *Avesta* to grasp it in more detail.[428] This reform raises the question of heroism, whick constantly reappears in European thought from Pythagoras, who is its representative. This reform which hypostasises initiatory heroism would demand a study in itself and if we continued down this path we should find ourselves in deepest theology rather than on the path of philosophy.

So, for want of a hero in this narrative we shall adopt an incident.[429] For our study, held in a mythical time, constantly returns

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Tusculanes, 1, 16, 38, Colli, 9 [B 5), Schuhl, *Essai*…, p. 250. In the same tradition we should note that Origen, in the work cited previously, also seeks to link the episode of the titanic struggle between Cronos and the serpent Orphioneus to Egyptian culture: "This is also the meaning contained in the mysteries which affirm that the Titans and Giants fought with the gods, and in the mysteries of the Egyptians which tell of Typhon and Horus and Osiris." *Contra Celsum*, trans. Henry Chadwick, Cambridge University Press, 1953.

427 Jaeger thinks that Aristotle's history as set out in his *On Philosophy* mentions Hesiod, but no supporting fragment has survived, *op. cit.*, p. 128.

428 Cf. Jacques Duchesne-Guillemin, *Zoroastre*, Paris, 1948, a critical study and annotated translation of the *Gathas*.

429 Considering Aristotle's conception of the narrative presented in his *Poetics*, Victor Goldschmidt suggests: "The nub involves constructing an inextricable situation from which it seems there is no way out – just as a theoretical impasse seems to close off all further lines of thought. Nevertheless, one is found that is

to its origins in Iranian culture, best represented by Hesiod among the Greek studies. So we shall present the so-called "Italian" Hesiodic lineage as follows: Hesiod, Pherecydes of Syros, (reform of the Iranian cult of Zarathustra, which does not succeed in becoming established among the people), Pythagoras, Anaxagoras-Empedocles, Archelaos-Socrates, Plato. We have seen that the conception of time of both the Athenian Plato and Pherecydes of Syros are rooted in this thought. Thought that cannot free itself from this influence will stagnate within myth. The Ionian theoretical knot must thus be untied by considering another influence. This naturally leads us to speak of Thales, historically regarded as the first Ionian philosopher, not representative of the Italian school, and as the first sage of Athenian time.[430] In order to present this philosopher's thought as well as possible, we shall try to determine the strictly Ionian vision of the world from which it stems. This vision of the world seems to have countered the Italian perspective of Iranian origins, at least judging from the aforementioned Aristotelian fragment. While the so-called "Italian" current is rooted in Iranian religion, we shall see that the so-called "Ionian" current could draw directly on a Mediterranean religion described as "Orphic". This current was at least as ancient as that which the Persians sought to impose and which the Italian current promoted in Greece, notably under the auspices of Pythagoras. So we shall start by providing some strictly historical elements.

The Ionian people had their roots among the Achaeans (*Αχαΐα*: Akhaía), the people behind the Trojan War[431]), who were themselves

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entirely unforeseeable (herein lies the power of the nub) and yet, looking back, plausible and necessary," in *Temps physique et temps tragique chez Aristote*, p. 404.

430 We should note that this was the branch of philosophy least explored by Nietzsche, who stepped into the breach of Iranian studies and identified all the consequences of the problem of Mazdaian heroism in a historically correct manner. However, he did so to the detriment of the current we wish to discuss, although we will concede that, while many Vedic texts were discovered in Nietzsche's time, studies on the peoples of the sea are far more recent. See *Les philosophes préplatoniciens* followed by *Les "diadochai" des philosophes*, l'Eclat, 1994 (translated from the German by Paolo D'Iorio, Francesco Fronterotta and Nathalie Ferrand).

431 In talking about the *Achaeans* Homer sometimes uses the term *Argives*, which identifies the city of their culture, *Argos* (Αργος), and also Danaans or Dananaans. Names used by the different cultures (Egyptian, Hebrew, etc.) who mention this

one of the *peoples of the sea*,[432] whose origins remain controversial. This origin explains why, in *The Phoenician Women*[433] Euripides says that Io (*Ἰώ*: Iṓ), from whose name the Greek appellation "Ionian" derives, was from the city of Argos (*Αργος)*. One of the peoples of the sea did indeed settle in Argos around the 15th century BCE, and it was at this time that they took the name *Achaean*.[434] The Achaeans then founded Thebes (*Θήβα)*, native city of Pindar, the great poet of initiation, in Boeotia (*Βοιωτία*). The historians generally agree that Thebes was not founded by the Achaeans but by a "Phoenician" called Cadmus (*Κάδμος*: Kádmos), under whose authority the historian Diogenes Laertius places the first philosopher Thales. So what is the relationship between Thales and Miletus, Miletus and Thebes and Thebes and the Phoenicians? We shall try to understand this in order to return to the world view of the Ionians, of whom Thales seems to have been one of the foremost representatives. Let us start by citing Diogenes Laertius:[435]

> Herodotus, Duris, and Democritus are agreed that Thales was the son of Examyas and Cleobulina, and belonged to the Thelidae who are Phoenicians, and among the noblest of the descendants of Cadmus and Agenor. As Plato testifies, he was one of the Seven Sages.

Two of the sources attesting to this lineage, the philosopher Democritus and the historian Duris of Samos (whose brother Lynceus

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people include: *Danaouna*, *Denyen*, *Danunites*, *Danaoi*, *Danaus*, *Danaids* and *Dene.*

432 This group was first identified and named by the archaeologist Gaston Maspero. The Achaeans (*Akhawaska*) were identified within it by Emmanuel de Rouge in 1861 and the hypothesis was confirmed by the discovery of the Egyptian papyrus *Harris*, which mentions them.

433 Euripides, *The Phoenissae*, ll. 680-685, trans. E.P. Coleridge: "Thee too, Epaphus, child of Zeus, sprung from our ancestress, I call on you in my foreign tongue; all hail to thee! hear my prayer uttered in accents strange, and visit this land; 'twas in thy honour thy descendants settled here, and those goddesses of twofold name, Persephone and kindly Demeter or Earth the queen of all, that feedeth every mouth, won it for themselves; send to the help of this land those torch-bearing queens; for to gods all things are easy." See also ll. 640-660, 795, 800, 805-820.

434 Later, in 710 BCE, they knew where they were going and sailed further, arriving in southern Italy, where they founded the famous city of Croton, where Pythagoras went into politics, with more success than Plato in Sicily (Strabo, VI). *The Odyssey* (VI, VIII, XIII) also shows that the Phoenicians had trading posts in the Ionian islands, notably one in Corfu run by the Phaeacians (*οιΦαίακες*: *hoi Phaíakes).*

435 Diogenes Laertius, *Lives of Eminent Philosophers* I, p. 51 (Thalès), trans. Hicks.

had been a pupil of Theophrastes), have not been preserved.[436] So we must examine the one we still have, which is the historical enquiry by Herodotus, which is regarded as the most reliable. This historian will enable us to remove this apparent contradiction:[437]

> The family of the Gephyraeans, to which the murderers of Hipparchus belonged, according to their own account, came originally from Eretria. My inquiries, however, have made it clear to me that they are in reality Phoenicians, descendants of those who came with Cadmus into the country now called Boeotia. Here they received for their portion the district of Tanagra, in which they afterwards dwelt. On their expulsion from this country by the Boeotians (which happened some time after that of the Cadmeians from the same parts by the Argives) they took refuge at Athens. The Athenians received them among their citizens upon set terms, whereby they were excluded from a number of privileges which are not worth mentioning.

This historical confusion is cleared if we say, with Herodotus, that in the meantime the Achaeans had changed their name to become the people he calls the Gephyreans. Herodotus states that, in the first place, the Achaeans were driven out of the Peleoponnese. After this historians such as Diogenes Laertius thought they had settled in Eretria, which is why they were long thought to be Greeks and that Ionia was an Eretrian Greek colony.[438] But Herodotus says that his research enables him to show that in fact these people came directly from the Achaeans and had settled in Boeotia in order to found the city of Thebes. Then, driven out of Boeotia in turn, some of them took refuge in Athens, without it seems ever mixing with the Athenians, while the rest seem to have gone to the city of Miletus.[439] This historical clarification would be of little importance did we not know that when they migrated to Boeotia, the Achaeans took with them

436 Cf. Duris of Samos, *Chronicles*, Book II, for the preserved epitaph referring to Pythagoras: "All wisdom is summed up in me. He who seeks to praise me should rather praise Pythagoras, for he is the foremost on Greek soil. In saying this I speak the truth." Under the influence of his brother Lynceus, this pupil of Theophrastus advocated an approach to history through the acts of great men, relegating historical rigour and the linear time used by historians to a secondary level.

437 Herodotus, *Histories*, trans. George Rawlinson, 1858-60, 5, 57, LVII. http://classics.mit.edu/Herodotus/history.html

438 Karin Mackowia, "Les savoirs de Thalès et de Kadmos. Histoire et représentation religieuses en Grèce ancienne", *Annales* HSS, July-August 2003, no. 4, pp. 859-876, p. 868. Mackowia sees Eretria as a symbolic space for the intermediate assimilation of a knowledge that is not Greek.

439 Véronique Suys, "Le culte de Déméter Achaia en Béotie. Etat actuel des connaissances", *L'Antiquité classique*, 63, 1994, pp. 1-20, p. 6.

three elements that were fundamental to the knowledge called "Greek" or "pan-Athenian": their own story of the Trojan War, alphabetic writing and the cult of Demeter, which gave rise to the cult of Eleusis. These are no small things. In terms of our own analysis, it was also the research of the Ionian thinkers that produced the first philosophical principle describing time. This is a colossal heritage whose full measure should one day be recognised. It is now well established that the Achaeans (Phoenicians) brought alphabetic writing to our western civilisation.[440] Concerning their real history of the taking of Troy, we now know that the Athenians did not take part in this war. It was the tyrant Peisistratus (600–527 BCE), sponsor of the first edition of *The Iliad* and *The Odyssey*, who placed this story under Hellene colours and in so doing falsified the list of combatants by adding the Athenians. In this regard the episode narrated by Herodotus reveals a climate of extreme tension between Athens and Thebes. Indeed Herodotus relates that the Gephyraeans killed Hipparchus. Hipparchus and his father the tyrant Peisistratus were responsible for the versification of not only all of Homer's work, but also that of a supposed Orpheus said to have come from Thrace to found Orphism. While the Greeks assimiled the Gephyraean story of the Trojan war without fuss, the same cannot be said of their worship of Demeter. On this subject Schuhl says:[441]

> But according to Pausanias (VIII, 37, 5), it was only Onomacritus – the chresmologue who lived in the court of Pisistratus and was caught in the act of falsifying the prophecies of Musaeus (Herodotus, VII, 6) who made the Titans, whose name he took from Homer, authors of the passion of Dionysus.

Herodotus relates that Lasus of Hermione caught Onomacritus in the act of tampering with the sacred springs of "Great Athens", then under construction, for which he was driven out by Hipparchus. Aristotle

440 Herodotus, *Histories*, trans. Rawlinson, 5, 58, LVIII: **"**Now the Phoenicians who came with Cadmus, and to whom the Gephyraei belonged, introduced into Greece upon their arrival a great variety of arts, among the rest that of writing, whereof the Greeks till then had, as I think, been ignorant." The Phoenician alphabet, which originated in Byblos, was discovered on a sarcophagus of a king of Byblos dating from the 12th century BCE. The Phoenician origins of our alphabet are no longer in any doubt. All the references to contemporary studies on this matter can be found in Mackowia, "Les savoirs de Thalès et de Kadmos. Histoire et représentation religieuses en Grèce ancienne", *art. cit.*.

441 Schuhl, *Essai…, op. cit.*, p. 230.

mentions this falsification in his treatise *On Philosophy*[442] and subsequently criticises Orphic ideas on two more occasions.[443] What credit should we give to Aristotle's refusal to accept Orpheus and Orphism in general? And why did Tatian and Clement, two important fathers of the Church, also reject this mythological figure?

The simple answer is that Macedonian culture, from which Aristotle emerged, was closest geographically and historically to the peoples of Thrace, whom they drove further north. Clearly Aristotle had never heard of Orpheus or the oracles of the supposed Musaeus, a term apparently referring simply to the people of the *Musoï*, the Mysians. So the question that remains unanswered is where did all this initiatory content, placed under the aegis of Musaeus or Orpheus, actually come from? If the source was not Thracian culture, to what culture should this knowledge be linked? In order to unravel all this, we need to return to the conflict between the Athenian tyranny of Peisistratus and the Cadmaeans of Thebes, whose Phoenician origin is recorded by Herodotus, as we have just indicated. The first certainty is that, at the end of this confrontation, the Cadmaean priestly class had acquired an unlimited concession over the cult of Eleusis. Two Cadmaean families (the Eumolpides and the Kerykes) controlled the cult of Demeter, as confirmed by Aristotle in his *Constitution of Athens.*[444] So the religious tradition of the "Phoenicians" (or more globally of the peoples of the sea) was preserved in the cult of Demeter Achaia at the shrine of Eleusis. This is convincingly shown by the inscription found on the Parian marble.[445] Musaeus was the son of Eumolpos and Eumolpos is the name of the Achaean family in charge of the mysteries of Eleusis (*Ελευσίνια Μυστήρια)*. So Musaeus can no longer be linked to the Thracians, as Aristotle suggested. Colli says:[446]

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442 Aristotle, *On Philosophy*, Ross Fragment 7, G. Colli, 13 [A1] = Herodotus, 7, 6.

443 Aristotle, *De anima*, I, 5, 410b 28-30: "This problem affects the doctrine in the so-called Orphic poems as well; for he says that Soul, being carried by the winds, enters from the universe into living creatures when they inhale," trans. S. Burges Watson, *Living Poets*, Durham, 2014, https://livingpoets.dur.ac.uk/w/Aristotle,_On_the_Soul_1.5,_410b27?oldid=2488. The same quotation can be found in *Generation of Animals*, II, 1, 734a 18.

444 The two Cadmaean families that ran the cult of Eleusis were the Eumolpidae and the Kerykes, Cf. Aristotle, *Constitution of Athens*, XXXIX, 1.

445 This marble discovered in Paros is a chronicle of the events of Greece, *Inscriptiones Græcæ*, XII, 5, 444, *FGrH* II, no. 239.

446 Colli, *La Sagesse grecque*, I, p. 45.

> The Parian marble tells us that it was Eumolpos, son of Musaeus, who instituted the mysteries in Eleusis.

If Musaeus is the father of Eumolpos, as irrefutably attested by this historical inscription, the legend ascribing a Thracian origin to the mysteries of Eleusis, a legend probably established by the poet Olen, collapses.[447] The Achaean origin is moreover corroborated by a further clue. Demeter still bears the epithet "*Achaia*" or Αχαΐα (Akhaía), Αχαΐα (Akhaía), a reference to the Greek region north of the Peloponnese known as *Achaïe*, a name derived from the Achaeans (Αχαιοί: Akhaioí). So one source of Orphism, and by no means the least, would seem to be the cult of Demeter, of Achaean origin.[448] As for the legendary figure of Orpheus, it is harder to know how to locate his legendary status within history itself. At most, we can make a supposition. The committee set up by Peisistratus had a member called Orpheus of Croton. Should we add his name to the list of forgers among whom the historians have already placed Onomacritus? We do not know.

It remains the case that Orpheus, a founding figure of the cult established by the tyranny of Peisistratus, was later used to push back the religion of the Achaeans. There are two identified fragments that reflect the meeting of Dionysus, of Iranian origin, and Demeter, of "Phoenician" origin. This struggle is played out within the city of Thebes itself. Let us first listen to Pindar's lament:[449]

> Was it when you raised to eminence the one seated beside Demeter of the clashing bronze cymbals, flowing-haired Dionysus?

This fragment of Pindar shows that it was the poet's task to make Dionysus the equal of Demeter, which suggests that Dionysus was less important or more recent. In any case, Demeter definitely preceded Dionysus. While Colli tells us that the second fragment has been identified, the process of attribution remains uncertain:[450]

> Had I the lips of Orpheus and his melody / to charm the maiden daughter of Demeter

447 This legend is said to come from Olen the Lycian, who was the first to dedicate a hymn to an *Achaea* in Delos and to suggest that this Demeter *Achaea* had come from the land of the Hyperboreans, according to Pausanias V, 7, 8. See also Suys, "Le culte de Déméter Achaia en Béotie. Etat actuel des connaissances", *L'Antiquité classique*, 63, 1994, pp. 1-20, p. 7.

448 As we have seen, it was Onomacritus who linked the passion of Dionysos to Homer's story of the Titans.

449 Pindar, *Isthmian*, 7, 3-5; Colli 3 [A 3]).

450 Colli, 4 [A 13].

This second fragment confirms the analysis based on the first. There is a mention of the forcible bending of hymns to Demeter in order to adapt them to Dionysus. In the rest of Greece in this period, the cults nevertheless tried to maintain the presence of both Dionysus and Demeter. At least this is what Suys suggests:[451]

> For example, during the *haloa*, the sacred festival of the grape harvest in December, the two divinities were jointly celebrated. In Corinth the temples of Dionysus, Demeter, Core and Artemis all stood in the same sacred enclosure (I.G.IV, 2003); in the Nymphon of Sicyon were the statues of Demeter, Core and Dionysus (Pausanias, II, 11, 1); at Thelpusa in Arcadia a shrine was dedicated to Eleusinian Demeter, Core and Dionysus (Pausanias, VIII, 25, 2).

It is possible that in some of the Greek cults these two figures were maintained without Dionysus taking precedence over Demeter. This is confirmed by an inscription of the Roman period (I.G.VII, 1867), found in Thespiae. The inscription mentions a certain Flavia, lifelong priestess of Demeter Achaia, "descendant of those who established the cult of Dionysus".[452] But Demeter was not worshipped in the cult at Delphi, since once Dionysus had taken precedence over Demeter in Thebes he became dominant at Delphi. At least this is what Schuhl tells us:[453]

> Apollo could hold back the flood only by channelling it: in Delphi itself he had to allow Dionysus part of the space he had himself conquered from Python. The year there was shared between these two powerful gods, whose statues stood side by side on the pediment of the temple.

So we begin to see that Pythagoreanism was a religious movement whose aim was to fuse the cults. Indeed we have already found two of these: the Iranian cult of Zurvan the starry and the Achaean cult of Demeter Achaea. This was religious syncretism in the service of pan-Hellenism and the tyranny of Peisistratus.[454]

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451 Suys, "Le culte de Déméter Achaia en Béotie. Etat actuel des connaissances", *L'Antiquité classique*, 63, 1994, pp. 1-20, pp. 12-13.

452 Suys, *op. cit.* pp. 6 and 13.

453 Schuhl, *Essai sur la formation de la pensée grecque. Introduction historique à une étude de la philosophie platonicienne*, PUF, 1949, p. 223.

454 Schuhl also says: "The delirium of the Sibyl is no more properly Hellenic in origin than Dionysian enthusiasm. It was introduced into Greece by a religious propaganda movement, which we know only by its results," *in Essai sur la formation de la pensée grecque. Introduction historique à une étude de la philosophie platonicienne*, PUF, p. 138.

Where our study is concerned, this religious syncretism prevents us from having a clear view of the primary source, the Achaean source and its cult of Demeter. So analysis of the Eleusian cult alone may enable us to clearly separate and distinguish the Achaean cult from the Iranian. By analysing this cult we can gain a sufficient idea of the strictly Ionian world view, in other words the conception that predates Pythagorean religious syncretism. However, this will not solve our primary problem. How can we connect Thebes, founded by the Achaeans, to Ionia, of which Miletus (Μίλητος: Mílêtos) is the largest city? Today it is believed that Miletus was founded between 1077 and 1044 BCE by inhabitants who had come from Pylos, a tradition dating back to Strabo:[455]

> Miletus was founded by Neleus, a Pylian by birth. The Messenians and the Pylians pretend a kind of kinship with one another, according to which the more recent poets call Nestor a Messenian; and they say that many of the Pylians accompanied Melanthus, father of Codrus, and his followers to Athens, and that, accordingly, all this people sent forth the colonising expedition in common with the Ionians.

The role of Neleus (Νηλεύς: Nêleús) as founder of Miletus is also attested by Homer.[456] Like the Argives, the Pylians were confused with the "Phoenicians" by another historian, Diogenes Laertius:[457]

> [Thales] was admitted to citizenship at Miletus when he came to that town along with Nileos, who had been expelled from Phoenicia.

Herodotus also suggests that "Thales [was a] man of Miletus, of distant Phoenician stock".[458] Despite the efforts made by Homer and Solon to assimilate this culture, it all seems to show that the Achaeans (Pylians and Argives) were not assimilated by the Greeks, who still regarded them as "Phoenicians". Solon bears a heavy responsibility here for failing to unify the Athenian cults with that of Eleusis. The priestly families were closer to the Dorians of Megara than to those of Athens. While Solon was able to annex them on the pretext that they spoke the same language and by clearing their debts, the same cannot

455 Strabo, *Geography*, XIV, 1 - Ionia. Trans. Horace Leonard Jones, Loeb.

456 According to Homer, Neleus was born to Tyro in Thessaly and married Chloris, daughter of Amphion, King of Orchomenus. He is said to have reigned in Pylos in Messenia.

457 Diogenes Laertius, *Lives of Eminent Philosophers* I, p. 51 (Thales). The etymology of this city is said to be Nileus = Miletus.

458 Herodotus, 1, 170, 3, Colli, 10 [A4].

be said of the Eleusinian cults, as Louise-Marie L'homme-Wéry notes:[459]

> So the presence of Dioclese in the Hymn to Demeter, Aglaulus in the Ephebic Oath and Poseidon in the cult served by the Athenian branch of the Eleusinian clergy indicates a Demeter resistant to the absorption of Eleusis into the Athenian city, despite the efforts approved by Solon to unify the cultures of Eleusis and Athens.

Indeed, Pausanias confirms that, following the war between the Athenians and Eumolpus's Eleusinians,[460] the Eleusinians were subjugated in every way except for the celebration of the mysteries.[461] The Athenians continued to call them the "Phoenicians", showing that the fusion was political only and not cultural. Furthermore, Herodotus says that in his day the Athenians of Hellene descent (the Greeks) were still ashamed to be called "Ionians".[462] On the other hand the collaboration between the priests of Eleusis and Megara gave rise to a new current of philosophy, the Megarian School, which later came closer to Plato's Athens School. Epimenides of Phaistos was tasked with providing the Athenian Eleusinian cults with a semblance of mysteries, which underpinned the initiation of Plato.[463]

In short, whether Thales had his origins in the first wave of immigration to Ionia, that of the Pylians, the one carried out by Neleus as recorded by Diogenes Laertius, or a migration of Thebans as

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459 Louise-Marie L'homme-Wéry, *La Perspective éleunisienne dans la politique de Solon*, Droz, 1996, p. 130.

460 Thucydides, II, 15, 1: "Some of them had also their particular wars, as the Eleusinians who joined with Eumolpus against Erectheus [King of Athens]." Trans. Thomas Hobbes, http://www.perseus.tufts.edu/hopper/text?doc=Thuc.+2.15

461 Pausanias I 38, 3 *op. cit.* p. 54.

462 Herodotus, *Histories*, I, 143.
http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.01.0126%3Abook%3D1%3Achapter%3D143%3Asection%3D3

463 See L'homme-Wéry, p. 102: "Epimenides' action to calm the tense relations between Eleusis and Athens in the aftermath of liberation by founding the *Eleusinion en astei* duplicating the Mysteries in the Athenian *astus*, confirms that he also established civic and corybantic mysteries on the model of those of Eleusis." Was Plato an unwitting *ammoros*? Whatever the case, this Athenian casting of the Mysteries is open to question, since it was not in the interests of the priests of Eleusis to reveal their mysteries to the Athenians in the context of a political peace treaty that in no way obliged them to do so.

maintained by Nietzsche,[464] since the Pylians and Argives were Achaeans, it makes no difference to the origins of Thales, who remains fundamentally Achaean in both cases, in other words Phoenician, if we understand this to mean the civilisation that is more prudently described today as that of the "peoples of the sea".

Michel B. Sakellariou, in his vast work *Migration grecque en Ionie*, does not accept the defeat of Solon, although he is aware that the assertion that the Greek cities of Ionia were Greek colonies was the result of Athenian propaganda that began with Solon.[465] He begins by refusing to accept that Achaea was the "metropolis" of all the Ionians[466] and goes on to deny the presence of Achaeans in Ionia, although the two peoples spoke the same language. He prefers to place their origins exclusively in Boeotia (p. 242), thus turning Solon's argument against the Ionians (p. 491):

> Consequently, at this time no city in Ionia seems to have received colonists from the great "Achaean" centres. This fact, always assuming that it is not due to gaps in our documentation...

The Parian Chronicle clearly states that "Neleus colonised Miletus and all the rest of Ionia" (p. 41) and, according to Diogenes, Neleus came from Phoenicia (p. 42) – Pylos to be precise, according to Homer Pherecydes (p. 43) and Strabo (p. 146). Herodotus describes even Ionians from Pylos as "pure" Ionians (I, 147). Yet Sakellariou prefers to see a Mycenean influence that is not mentioned in any text. He also refuses to accept the presence of "sea peoples" in either Ionia or Achaea (p. 467).[467] So, in the current state of knowledge, the absence of any real historical and archaeological evidence makes it possible to uphold all kinds of theses, none of which can be disproved. So while Greek history may never permit the untangling of this web, we should read the history of other peoples, as suggested by the Ionian Herodotus when he mentions the history of the Medes. This account is

464 Nietzsche, *The Pre-Platonic Philosophers*, trans. Greg Whitlock, University of Illinois Press, 2000, p. 23: "This family therefore at one time migrated from Thebes to Ionia."

465 Sakellariou, *La migration grecque en Ionie*, Institut français d'Athènes, 1958, p. 14.

466 "The thesis that made Achaea the metropolis of all the Ionians is found in a small number of accounts", p. 27.

467 Yet, 138 times in the *Iliad* Homer says that the Achaeans were Danaans or Argives. Why even Herodotus should state that the Achaeans had driven out the local populations (including the Danaans) when the Achaeans were precisely the people known as the "sea peoples" also remains inexplicable.

in our view the most reliable and will underpin our historical reading. Herodotus states that the conflict between Greece and Asia was started by the Phoenicians (I, 1):

> The Persian learned men say that the Phoenicians were the cause of the dispute. These (they say) came to our seas from the sea which is called Red, and having settled in the country which they still occupy, at once began to make long voyages. Among other places to which they carried Egyptian and Assyrian merchandise, they came to Argos, which was at that time preeminent in every way among the people of what is now called Hellas.

So the Phoenicians did first settle in Argos before migrating, some of them to Ionia via Athens, others via Thebes, and apparently directly in the first case. Herodotus says several times that these Phoenicians were originally from Syria (according to Homer, I, 116). He even locates Syria precisely between Arabia and Egypt (II, 5):

> The road runs from Phoenicia as far as the borders of the city of Cadytis, which belongs to the so-called Syrians of Palestine. From Cadytis (which, as I judge, is a city not much smaller than Sardis) to the city of Ienysus the seaports belong to the Arabians; then they are Syrian again from Ienysus as far as the Serbonian marsh, beside which the Casian promontory stretches seawards.

This is the now accepted place of the "sea peoples". For this reason, historically, when the Greeks spoke of the "Phoenicians", they were always referring to the Achaean Ionians. This is why we must be cautious before advancing that the Ionians are Greeks and Thales is the founder of a Greek philosophy. Politically speaking, this is undeniably true, but it is doubtful from a philosophical perspective. The philosophy developed by Thales is not Greek, its origins are Achaean, Phoenician.

This confusion has been broadly fostered by the mythology of the seven sages (*σοφοί)* of Ancient Greece, relayed by Diogenes Laertius. But this mythology was unknown to the Greeks of the 6th and 5th centuries BCE. It is the work of later historians. It is thought to have been initiated under Egyptian influence[468] by Demetrius of Phalerum

468 It seems that Demetrius of Phalerum is the source of the mythology of the seven sages, as recorded by Plutarch. According to Colli (II, p. 121) he wrote a collection on this subject, *The Register of the Archons*, and no other authors are known to have written on this mythology before him. On this subject see also Nietzsche, *The Pre-Platonic Philosophers*, p. 13, pp. 24-25.

(350-282 BCE), pupil of Theophrastus, and based on Plato's *Cratylus*,[469] a tradition later adopted by Plutarch.

As for how to understand the Achaean world view, we could also ask Sanchuniathon, historian of the Phoenicians. A Greek translation of his book in the Phoenician language was made in the time of Porphyry by Philo de Byblos, entitled *Sacred History.*[470] But this would not advance our investigation, since Philo states that this text already mentioned a book on the Magi entitled *Persica*, which took up the Iranian conceptions we discussed earlier in relation to Pythagoreanism.[471] So we do not think that Sanchuniathon can provide a basis for an understanding of the Ionian world view, since his work already seems to be a synthesis of many influences. His historical study was a real and imaginary religious syncretism, according to Eusebius of Caesarea via Philo of Byblos.[472] On the notion of time, it tells us that this culture's god *El* was the master of time and "Father of the Years", and that he had supplanted Ouranos. So *El* would have been the famous Greek Kronos.[473] But in fact it seems that this was an attempt at syncretism on the part of Sanchuniathon. *El* did not precede Ouranos. Why oppose two worlds? This is why we cannot agree with the bold thesis advanced by André Mercier at a conference in Athens on Greek time:[474]

469 Plato, *Cratylus*, 343 a-b. It was Socrates who introduced a list of sages that stopped at seven. This is another Platonic legend.

470 The fragments were preserved by the Church Father Eusebius of Cesarea. On this subject see the work of Edward Lipinski, notably his book *Dieux et déesses de l'Univers phénicien et punique*, Peeters, Brill, 1995, p. 60, note 12.

471 Cf. the work of Joseph Bidez.

472 For example, the cult of Byblos is already a syncretism of the Phoenician and Egyptian gods. There is no Earth-Mother figure, but there is a "Lady of Byblos", linked to Astarte and Amon, the great God of Thebes; Lipinski, *Dieux et déesses de l'Univers phénicien et punique*, p. 72, pp. 90-91. And then the epic of Gilgamesh which originated here (Byblos) retains traces of the influence of the Babylonian religions on this culture.

473 Eusebius of Caesarea, *Preparatio Evangelica*, I, 10, 18, also relates that Philo of Byblos had made Persephone the daughter of Kronos who died a virgin, whereas in the Greek tradition she is the daughter of Zeus and Demeter, which is not a suitable historical symphysis. However, it is true that it is hard to understand how Demeter could have been coupled with Zeus. The historical realities show rather that the Achaeans (Demeter) never mixed with the Greeks (Zeus).

474 André Mercier, "Discours de synthèse de l'entretien d'Athènes", 1986, in *Chronos et Kairos*, Vrin, Diotima, Institut international de philosophie, 1988, pp.

> The God El of the naturist Phoenician myths dating back to the second millennium BCE is said to be the Master of Time, "Father of the Years" as well as father of the other gods and of human beings. And Philo of Byblos relates that El had supplanted Ouranos, to the point where he identified him with Kronos (written with a kappa), and we know today that there were parallels between the mythology of the Ras Shamra texts and that governing the mysteries of Eleusis. Meanwhile the Sidonians, who date to the first half of the first millennium BCE, placed Time above all things, as noted by Damascius in the 6th century CE, on the basis of Aristotle's pupil Eudemus.

Instead we should return to the sources preserved by the priests of the cult of Eleusis to get a clear idea of the Achaean cult independent of all these religious influences. Why? Because while the history of peoples constantly changes, that of cults is not subject to the same hazards of time; it is not subject to the time of heroes or of conquests. Despite the recent discoveries of the Thebes tablets, we know very little of the cult of Demeter Achaea.[475] At the most we know that in Eleusis Demeter *Ma-ka* (known by that name by Aeschylus[476]) is placed before Zeus (*o-po-rei*, the protector of fruit) and that their daughter is Kore (*ko-wa*). But Demeter still has the epithet "si-to" (*Σιτω*), indicating the link with the agrarian world, which also appears in the use of all the flours that spring from the belly of the Earth, and notably the barley flour used in religious services. The chosen animal of this rite is the crane, which acts as a herald. In our view this semantic field could refer back to the Earth-Mother. Such is, moreover, the etymology of the name Demeter itself: Δημήτηρ (Dêmêtêr) derives from Γῆ Μήτηρ (Gễ Mếtêr), "Mother Earth" or Δημομήτηρ (Dêmomếtêr) "Mother of the Earth" and δῆμος / dễmos, "the earth or the land". Both the ritual of the cult and the etymology of Demeter suggest to us that Ionian thought is rooted in the cult of Demeter the Mother Earth. This enables us to provide a historical counterweight to the influence of the Italian current of Iranian origin.

66-73, p. 67. Mercier is the author of a book on time that we have been unable to consult: *El tiempo, los tiempos, y la filosophia*, Mexico, 1985.

475 Cf. Jean-Louis Perpillou, "Les nouvelles tablettes de Thèbes. (Autour d'une publication)", *Revue de philologie, de littérature et d'histoire anciennes*, LXXV, 2001/2, pp. 307-315. The reference works are the series launched by Eleni Andrikou, Vassilis L. Aravantinos, Louis Godart, Anna Sacconi, Joanita Vroom, *Thèbes. Fouilles de La Cadmée. I and II*, Istituti Editoriali e Poligrafici Internazionali, Pisa – Roma, 2006.

476 Aeschylus, *The Suppliants*, 80-892.

It is the endless rebalancing of these two currents, of East and West that, in our view, constitutes the meaning of Pythagorean inspiration itself. So there is no mystery in the land of Greece, we can leave that to the bourgeoisie who need it to establish a status that has no meaning, or to scholars in search of recognition.

For our part we still have to insert this historical vision into our investigation. The agrarian dimension of the cult of Demeter and the semantic register of the Mother Earth mark a lexical field associated with fertility. The Mother Earth is always represented with an outsized belly and is potentially boundlessly fertile. But this potential fertility is not human. She does not give birth to a monster, but to the earth itself, in other words to fertility. The fertility of the world is its ability to keep engendering itself, like Cronos in the myth of races. The notion of fertility is intimately linked to that of time. To impregnate is to ensure the permanence of the world in time. It is eternity over time. From this we can understand that the cult of Demeter Achaea was a cult of fertility, and this fertility was intimately linked to the specific time of the heavens. In many places around the Mediterranean the Mother Earth has also been found with a distaff representing a machine to measure the time of the heavens, as we saw in relation to Penelope's distaff.[477] It is this fertility that gives rise to "physics" and to the strictly Ionian philosophical exploration of "generation" and "corruption". Here again, this thesis is confirmed by Aeschylus, who perfectly describes the immanent Ionian time that is the complete opposite of Iranian transcendent time. Here is what he says in *Seven against Thebes:*[478]

> ...and Mother Earth, your beloved nurse. For welcoming all the distress of your childhood, when you were young and crept upon her kind soil, she raised you to inhabit her and bear the shield.

And more theoretically in *The Libation Bearers*:[479]

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477 Schuhl, *La fabulation platonicienne*, *op. cit.*, p. 77; cf. also Charles Picard, *Le fil d'Ariane dans le merveilleux, la pensée et l'action*, 1952, pp. 125-128.

478 Aeschylus, *Seven against Thebes*, 17-20, trans. Herbert Weir Smyth: http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.01.0014 Cf. L. Lupas and Z. Petre, *Commentaire aux Sept contre Thèbes d'Eschyle*, vv. 17-20 n.

479 Aeschylus, *The Libation Bearers*, trans. Herbert Weir Smyth: http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.01.0008%3Acard%3D106

> ...and Earth herself, who gives birth to all things, and having nurtured them receives their increase in turn.

Ionian time is immanent and constantly recalled to this immanence by the cycle of generations. In our next book we shall investigate in more depth, following the work of Gérard Naddaf, whether the Ionian world view presented here is indeed that adopted in Aristotle's *Physics*.

However hypothetical the Achaean world view identified here may be, it still makes it easier to understand the distance between the Italian vision of philosophy and that of strictly Ionian origin. The Italian vision is subject to the Iranian God Zurvan Akarana, who is infinite time (*aiôn*). Because infinite time is immeasurable to humans, the only possible response to it is heroism. This heroism involves stages of initiation leading back to the initial phase, as indicated by the knowledge assimilated by Pythagoreanism. Hegel seeks to follow this path, but is unable to reach its term because he has not been initiated. Conversely, the Ionian vision of the world, as it appears in the cult of Eleusis, deals with questions directly related to the Earth, fertility and generation. The opposition here is not between good and evil but between things that grow and things that do not. The question of evil is not fundamental to the Ionian perspective, unlike the Iranian. This is why we would suggest that Aristotle's work is of Ionian inspiration. It is this world view that seems to have been transposed into Ionia and it is no coincidence that it was precisely Ionia that saw the emergence of true philosophy rooted in the analysis of fertility, of things that live and grow, of the physical. Indeed, throughout Aristotle's work, he constantly calls the Ionians the physicists *physiologoï*, (physiologues) in contrast to the theologians = *théologoï*, (theologues).[480] So we can now grasp the full meaning and historical depth of this description and contrast it with the Italian thinkers. The substantivised term "physics" comes from the Greek feminine adjective physikè (*φυσικη*). It is derived from the root *phyô* meaning "grow", "develop", and thus signifies generation and growth – in other words the world's fertility, whose guardian in the Mediterranean had always been the Mother Earth. A physical analysis of generation can be applied to anything

480 On this fundamental Aristotelian opposition, see the talk delivered at the University of Nanterre in February 1998 by John A. Palmer, entitled, *Aristotle on the Ancient Theologians* and published in the American journal *Apeiron*, pp. 181-205. The opposition between these two currents is not purely rhetorical. While Thales was the first thinker to express himself clearly, he was also the first to explore the physical world in the fullest sense of the word.

that has life, from plants to human beings. It is a subject intimately linked to time, for it is in time that reasons must be sought for the growth of things that grow (generation) and the diminishing of things that diminish (corruption). Lastly, we note that, since Pythagoreanism brings the Ionian and Italian sources together, the Pythagoreans can be both *physiologoï* and *théologoï*. All this means that the *théologoï* cannot be linked to Pythagoras, because there were Pythagorean physicists. It is better to link the so-called "Italian" school to Hesiod, as we suggested earlier. Conversely, some Ionian *physiologoï* became theologians.

This said, the fact remains that the first philosopher was Thales, an Ionian thinker and *physiologoï*. It was from this current that Aristotle drew his conceptual investigation of time; this is why we have taken care to research its world view. While Aristotle can be located within this school, we shall see that he also took on the Pythagorean theological influence. For this reason we would not place Aristotle's work within either the so-called "Italian" school, or the so-called "Ionian". For where physical questions are concerned, it was natural for Aristotle to base his thinking on that of the Ionians based on Thales; conversely, for questions relating to the soul, it is hardly surprising that he should turn to the *théologoï*. Still, it is the Ionian source that will offer us a way out of Platonic time, the time imposed by Hesiod, in order at last to see Aristotelian time in all its splendour. Having outlined the Ionian world view, we shall now consider the historical accounts that can fill it in. So we shall begin by presenting the contribution of Thales and his students Anaximander and Anaximenes, before considering the Aristotelian approach to time, which owes much to Ionian thought.

Nietzsche gives the following presentation of the Ionian philosophy of its founder Thales, which can still serve as a conceptual introduction to this current, despite the notable historical differences we have mentioned:[481]

> Being a mathematician and astronomer, he had turned cold against everything mythical and allegorical, and if he did not become quite sober enough to reach the pure abstraction "all things are one", instead remaining at a concrete expression of it, he was nonetheless an alien rarity among the Greeks of his time. The highly conspicuous Orphics

481 Nietzsche, *Philosophy in the Tragic Age of the Greeks,* trans. Marianne Cowan, Regenery Publishing Inc., 1962, p. 42.

> perhaps had the capacity of comprehending and thinking abstractions without concrete aids to an even greater degree than Thales did. But they succeeded in expressing it only in allegorical form. Pherecydes of Syros, too, who is chronologically and in several empirical concepts closer to Thales, hovers with his utterances in that middle region in which mythology and allegory are wedded. He dares, for example, to compare the earth with a winged oak which hangs high in the air with wide-spread pinions and which Zeus, after his conquest of Chronos, covers with the magnificent robe of honor on which he himself has embroidered all the lands and waters and rivers of earth. Compared with such obscure allegorical philosophizing, barely translatable into the realm of visibility, Thales is a creative master who began to see into the depths of nature without the help of fantastic fable.

For the Ionians explored a philosophy based on rational first principles, rejecting allegory and myth. The gods were not excluded from this philosophy, as reflected by the fragment of Thales preserved by Aristotle, which says that:[482] "All things are full of gods". However, the Ionians seem to have sought to introduce action into their relationship to the world, making contemplation a secondary form of human activity. Alongside tool-based geometry (the compass) and astronomy (the analemma) and first principles (water, fire, infinity), this philosophy undeniably established a rationality based on demonstration to the detriment of contemplation.[483] Simplicius put this very well in his *Commentary on Aristotle's Physics*:[484]

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482 Thales of Miletus, Fragment D-K A22. This fragment is taken from a quotation from Aristotle's *De anima* 411a 7-8. The whole reads: **"**Some say that soul is diffused throughout the whole universe; and it may have been this which led Thales to think that all things are full of gods", trans. Arthur Fairbanks, *The First Philosophers of Greece* (London: K. Paul, Trench, Trubner, 1898). See also *Generation of Animals*, III, 762a 21 which states the Pythagorean consequence that everything is *full of souls*. Cf. also *Plato, Laws*, 899b: **"**will any one who admits all this venture to deny that all things are full of Gods?" (trans. Jowett).

483 The term principle (*arché*) seems to have been introduced by Anaximander, according to the preserved fragment fr.2 of *Opinions of the Physicists* by Aristotle's student Theophrastus: "Of those who say that the element is one, in motion and infinite, Anaximander son of Praxiades of Miletus – the successor and disciple of Thales – said that the infinite was both the principle and element of the things that exist, and was the first to use this name for the principle." Colli, *La Sagesse grecque II*, pp. 175 and 247**.** Simplicius' commentary is also based on the book by Theophrastus (p. 304). See also Pierre Pellegrin's introduction to Aristotle's *Physics*, p. 12 and of course Book Delta of Aristotle's *Metaphysics* which, according to Pellegrin, adopts the fundamental aspects of Ionian physics, notably the positivity of coming to be. The *arché* is described as "That from which (as an immanent part) a thing first arises", 1013a 3-10, trans. Barnes, *op. cit.*, p. 1599. French commentary

> Thales is traditionally the first to have revealed the investigation of nature to the Greeks; he had many predecessors, as also Theophrastus thinks, but so far suprassed them as to blot out all who came before him.

While the greatest advances were made in physics, so much so that, as we have just seen Aristotle constantly refers to the Ionians as the "physicists" in his *Physics*,[485] they also made other notable advances, crucially in astronomy. Moreover the distinction between the astronomy of the heavens and earthly physics is not found in the Ionian world, in which *phusis* refers to the universe as a whole. Their research seems to have had a certain influence on general conceptions of time, of which there is no trace in the so-called "Italian" world.[486] While the understanding of time is always linked to the heavens, what can be gained from the "Phoenician" knowledge of the stars, which the Ionians enhanced, and how does it overturn conceptions of time and the future in the Greek world?

Until the 5th century BCE the Athenian world had no instrument that could measure time. It was not until the dawn of that century, with the introduction of the clepsydra by the Ionian Anaxagoras[487] that the Athenians could at last measure time in their assemblies.[488] We also know that in this period they had no unified calendar.[489] Later the Athenians had only limited use of the gnomon which, according to Herodotus, came from the Babylonian culture:[490]

> Just as they had no coherent system for counting years, so the Greeks had no uniform monthly calendar. But here in addition to reasons of a

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Métaphysiques. Livre Delta, trans. M.-P. Duminil and A. Jaulin, PUM, 1991, pp. 131-135.

484 Simplicius, *Commentary on Aristotle's* Physics, 23, 29, fr. D-K 1-80.

485 Cf. also Aristotle, *Metaphysics*, A, 3, 983b 21; b 6 ff.; *On the Heavens*, B, 13, 294a 28*; Politics*, I, 11, 1259a 10.

486 Unfortunately, the division between rational Ionians and irrational Pythagoreans is not so simple. It would mean ignoring the eschatological dimension of Chaldean culture, which is present in Ionian thought after the fall of Babylon.

487 According to Aristotle, *Problems*, XVI, 8 914b, it was Anaxagoras who invented the clepsydra used in the Athenian courts, cf. also Empedocles, 21B 100.

488 Aristotle, *Constitution of Athens*, LXVII, 2 and 3.

489 In 264 BCE Timaeus of Tauromenium suggested using the Olympiads to measure years. This was a late initiative to measure time. Before this the Athenian year began in the summer, as did the Olympic, the Dorian year began in autumn and the year in Argos at the spring equinox. So there was no unified calendar in Greece. Moreover, the Pythia used this state of affairs to adjust her predictions at will, cf. the comic episode of the Delphic oracle's advice to Cylon (636).

490 Bouvier, *art. cit*., p. 121.

> political and religious order there was a technological explanation. In the early 5th century Greece had for some hundred years been using the gnomon, a blade fixed to a sundial whose shadow, by its angle and length, makes it possible to measure the position of the sun on both its daily and annual journeys, thereby indicating not only the hours of the day but also the periods of the year, notably the summer and winter solstices that punctuate the solar year.

There were two types of gnomon at this time, the geometric gnomon, which was a measuring square, and the solar gnomon.[491] The solar gnomon functioned as follows: to measure time during the day, the blade projected its shadow onto a dial following the movement of the sun. At midday the shadow curved to its shortest, then lengthened until sunset. But we should note that this projected shadow also made it possible to understand the obliquity of the zodiac and thus to make annual measurements of the time marked by the stars, since the shadow's length varied with the seasons. In this way the Athenians were able to identify the solstices of summer (the shortest shadow) and winter (the longest shadow).[492] These things are the most that can be gleaned from this very limited instrument. Yet the Ionians already had a full technical knowledge of time at least after Thales. So it was natural that they should have developed the first theories on time.

In order to make new discoveries in physics and astronomy, at least two additional kinds of knowledge are required. The first is the information gathered through travel, giving greater knowledge of the world,[493] and the second is geometrical modelling based on the construction of new instruments. The Ionian school was active in both areas.

Where the first was concerned, the need to navigate around the Mediterranean for trade obliged the Ionians to develop their knowledge of the heavens and stars and of the world in general.[494]

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491 According to Schuhl the gnomon came to Athens via Lydia: "The same route must have brought the polos and gnomon, the spherical and flat sundials which, according to Herodotus, the Greeks obtained from the Babylonians – along with the division of the day into twelve hours – and which Anaximander introduced to Sparta". *Essai sur la formation de la pensée grecque. Introduction historique à une étude de la philosophie platonicienne*, PUF, 1949, p. 179.

492 Arpád Szabo and Erkka Maula, *Les débuts de l'astronomie, de la géographie et de la trigonométrie chez les Grecs*, French translation from the German by Michel Federspiel, 1986, pp. 33-35.

493 This was the first criterion for attributing the title of "sage".

494 Homer had the greatest scorn for these "Phoenician" traders. In *The Odyssey* XV, 411 we read: "One day the island was visited by a party of Phoenicians –

While the Greek captains plotted their course by the Great Bear, the Ionians advised them to follow Ursa Minor as a more precise, if less splendid means to find the North Pole.[495] It was also trade that led the Ionians to develop a relationship with numbers. In the world of commerce number is important for exchange and became a key aspect of this culture, as Eudemus of Rhodes explains: [496]

> Just as among the Phoenicians the necessities of trade and exchange gave the impetus to the accurate study of number, so also among the Egyptians the invention of geometry came about from the cause mentioned.

It was again trade that obliged these experienced sailors to go beyond the limits of the known Greek world. By inching their way along the African coast, they made one of the greatest discoveries in all of Antiquity.[497] As they descended the Libyan coast,[498] they realised that

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famous sailors, but greedy rogues – with a whole cargo of trinkets in their black ship"; see also XVII, 428-430. Plato (*Republic*, IV 436a) also criticised this relationship to trade. Lastly, we know that it was the "Phoenicians" who brought the Hebrews the nose piercings and bracelets that were melted down to make the golden calf, not to mention the trade in cedar wood for the Egyptian cults.

495 The source is Callimachus and recorded by Diogenes Laertius, I, 1, *op*. cit. trans. Hicks. Colli (p. 121) confirms it and gives the following references to the corpus of Phoenician studies: *Arat., Phaen*. 37-39 and *Guthrie*, I, 5, in *op. cit.*, II, p. 290. So the source is reliable. (The North Star, nurse of Zeus, was then called *Cynosoura*).

496 Eudemus of Rhodes, *History of Geometry*, fragment 133, trans. Glenn R. Morrow, cited by Colli, *La Sagesse Grecque* II, 10b5a, DK-11A11, p. 139.

497 The first voyage of the "Phoenicians" to distant lands took place in 617 BCE and was organised by the Egyptians. The later voyage of Hanno took place in 425 BCE. A Greek version of the periplus entitled "Narrative of the voyage of Hanno, King of the Carthaginians around the lands beyond the Pillars of Hercules" was engraved on plates hung in the temple of Kronos in Athens.

498 The term *Libya* does not designate the area covered by the Libya of today. Herodotus is using a generic term by which the Ionian geographer Hecataeus of Miletus referred to Africa. For Herodotus, beyond the region of the dunes, which linked the pillars of Herakles to Thebes, there are only three peoples: the Atlanteans, the Alarantes and the Garamantes. Beyond these dunes the world was unknown, which may explain why he was unable to accept the eyewitness accounts of the "Phoenicians" concerning a country that must have been Gabon, if we follow the current line of the equator to the African coast. Moreover, Pliny also says "Libya" refers to Africa in his *Natural History* V, 1-8: "Africa was called Libya by the Greeks, and the sea in front of it the Libyan Sea," and the historians agree that the end of the expedition was the gulf of Guinea, which is the precise location of Gabon. Lastly, in his *Meteorology* Aristotle confirms that Libya was indeed Africa, I, 13, 350b 10.

the sun had changed sides; this was the first historical discovery relating to the equator. It is formally attested by the historian Herodotus, who refused to accept it, so revolutionary did it seem:[499]

> Significantly, he rejects the accounts of a polar night and rules out the accounts of the Phoenicians who, on a voyage around Africa, observed that the position of the sun became inverted after crossing the equator: "They record a fact which I find unbelievable, though others may believe it: sailing round Libya, they said they had the sun on their right." IV, 42.

It seemed the seasons might not be identical over the entire *oecumène*; worse still, they were inverted, as the Scythians had previously told the Greeks, at least in the time of Herodotus.[500] So was the sun not at its solstice in Athens at the same time as in the rest of the known world? This is what the Greeks of this time, gazing into the navel of their Orphic cults, could not accept.[501] Worse, this discovery would discredit the work of Homer, who still believed that the world ended at the Pillars of Hercules. It was a considerable time before the Athenians were able to assimilate all of Ionian knowledge – the denial of Herodotus is incontestable proof of that. Moreover the geographer Strabo says that it was not until the time of Anaximander that a map of the world was finally shown to the public, perfectly illustrating that it took several centuries for Ionian thought to become a part of Athenian culture:[502]

> Anaximander was the first to publish a geographical chart. Hecatæus left a work [on the same subject], which we can identify as his by means of his other writings.

499 Bouvier, "Temps chronique et temps météorologique chez les premiers Grecs", *art. cit.*, p. 134.

500 Pliny in his *Natural History* says in 2, 186-187: "In consequence of the daylight increasing in various degrees, in Meroë the longest day consists of twelve æquinoctial hours and eight parts of an hour, at Alexandria of fourteen hours, in Italy of fifteen, in Britain of seventeen. Anaximenes the Milesian, the disciple of Anaximander, of whom I have spoken above, discovered the theory of shadows and what is called the art of dialling, and he was the first who exhibited at Lacedæmon the dial which they call sciothericon", English trans. John Bostock, cited in Colli, *La Sagesse grecque* II, p. 221.

501 The navel of the world was a stone found in Delphi. In the same period Anaxagoras' disciple Archelaos of Athens was still trying to describe the Earth as a disk in order to explain why the time of sunrise changes, as do the stars when we move. See Schuhl, *Essai*, p. 341.

502 Strabo, 1, 1,11, DK 12A6, trans. Hamilton and Falconer, cited by Colli, *op. cit.*, II, p. 181.

Similarly Plutarch gives us a short synthesis in *Lives of the Noble Grecians and Romans*, not recorded by Diogenes Laërtius, which should be viewed with the greatest caution, although it offers a perfect illustration of our argument:[503]

> For he who the first, and the most plainly of any, and with the greatest assurance committed to writing how the moon is enlightened and overshadowed, was Anaxagoras; and he was as yet but recent, nor was his argument much known, but was rather kept secret, passing only amongst a few, under some kind of caution and confidence. People would not then tolerate natural philosophers, and theorists, as they then called them, about things above; as lessening the divine power, by explaining away its agency into the operation of irrational causes and senseless forces acting by necessity, without anything of Providence or a free agent. Hence it was that Protagoras was banished, and Anaxagoras cast in prison, so that Pericles had much difficulty to procure his liberty; and Socrates, though he had no concern whatever with this sort of learning, yet was put to death for philosophy. It was only afterwards that the reputation of Plato, shining forth by his life, and because he subjected natural necessity to divine and more excellent principles, took away the obloquy and scandal that had attached to such contemplations, and obtained these studies currency among all people.

Plato's influence in this synthesis may make us smile. However, overall it is likely that it was by reconciling Ionian thought with Athenian religiosity, as Plato manifestly did, that this philosophy had a chance of being accepted in Athens. For at this time the Athenians called the Ionian physicists *meteorolesches*, in other words those who talk about the meteors and in so doing seek to drive the gods from the City. This fusion of the sciences, technical skills and Greek religion is sometimes cited as the reason for Plato's use of myth.[504] However we shall see that the way out of this conflict would be quite different for Aristotle. It was a profound analysis of the sciences and technical skills that enabled him to found solid principles as a basis for a real philosophy and theory of time.

503 Plutarch, *Lives of the Noble Grecians and Romans*, "Nicias", trans. John Dryden.

504 Schuhl, *La fabulation platonicienne*, p. 16: "Windelband sees the myths as reflecting an effort to associate the religion of mysteries with Ionian physics", a thesis contested by Perceval Frutiger [1930] but which we retain, while stating that it is only one aspect of the use of myth.

This happened gradually, according to the practical importance of discoveries, such as those on eclipses for the art of war,[505] on the stars for the art of navigation, and so on. As Aristotle says in his *Nicomachean Ethics*, the Athenians could see the importance of these theoretical and technical developments only when they were applicable to concrete action:[506]

> From what has been said it is plain, then, that wisdom is knowledge, combined with comprehension, of the things that are highest by nature. This is why we say Anaxagoras, Thales, and men like them have wisdom but not practical wisdom, when we see them ignorant of what is to their own advantage, and why we say that they know things that are remarkable, admirable, difficult and divine, but useless, because it is not human goods that they look for.

Here we can grasp the distance between the Athenian and Milesian worlds. While the Greeks subjected technique to human profitability, the Milesians believed in the powers of technical competence. For them it could be an end in itself, a view the Greeks were too religious to accept. Indeed technical discoveries were incorporated into the constitution of the city of Miletus. Aristotle relates in his *Politics* that Hippodamus, who had also drawn the plan of the port of Piraeus, bestowed honours on inventors:[507]

> He also enacted that those who discovered anything for the good of the state should be honoured.

Nothing of this kind was ever advocated by the Athenians. They had the greatest disdain for inventions, technical advances and progress in general. They were prevented by the search for religious harmony from giving any place to the possibility of novelty and technological change, to progress or the future in general. There is a fascinating discussion of this subject in the Platonic corpus. In *The Republic*, when Glaucon asks Socrates if all new things are to be seen as false according to the Greek play on words kainos = kénos (new = empty), Socrates makes the following highly revealing answer:[508]

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505 Eclipses of the moon often triggered battles, such as that against the Syracusians that Plutarch relates in this passage, following Thucydides. Understanding lunar phenomena was an art of war, which is why astral studies eventually became necessary to Athens and Anaxagoras' book became better known after the death of Nicias.

506 Aristotle, *Nicomachean Ethics*, VI, 7, 1141b 2-8, trans. Barnes. See also the commentary by Colli, *S.G. II*, p. 283.

507 Aristotle, *Politics*, II, 8, 6, 1268a.

508 Plato, *The Republic*, trans. Jowett, 414 b8-C7.

> Nothing new, I replied; only an old Phoenician tale of what has often occurred before now in other places, (as the poets say, and have made the world believe).

Socrates is telling us that new things always come from the "Phoenicians" (Ionians), as is the case now and always will be as long as Athenian society has not abandoned its religious categories.[509] And this is why the poets were dangerous, for it was they who preserved the real history of the Athenian state. The Athenian politicians and philosophers were not interested in technical skill and so were never able to assess the real use of knowledge that came to them from adjacent cultures. This may be why their purely theoretical research was never corrected, for example in relation to the revolution of the Earth. While Plato upheld the "Pythagorean" thesis that the Earth made a single revolution, notably to explain the alternation of night and day,[510] unbelievably, in his *On the Heavens* Aristotle followed the Ionian error:[511]

> But there are some, Anaximander, for instance, among the ancients, who say that the earth keeps its place because of its indifference. Motion upward and downward and sideways were all, they thought, equally inappropriate to that which is set at the centre.

Although this thesis, probably taken from Thales, is criticised later in *On the Heavens*, it is ultimately accepted, with the consequences we know. No star has movement *per se*, no star is self-propelled or it would simply wander (*planètos*).[512] Like the other stars, the Earth has its place on a sphere on which it turns, in the model of Eudoxus.[513] In other words, the movement of the stars results entirely from the spheres to which they are attached. However Aristotle follows Thales

509 As we have seen, when Plato wanted to talk about the future**,** he placed all these conceptions in the mouth of Socrates. Aristotle twice cites the *Phaedo* in his *Metaphysics* and, in a rare enough event to be worth mentioning, they are the same two phrases: "In the *Phaedo* the case is stated in this way – that the Forms are causes both of being and of becoming", A, 9, 991b 3 and M, 5, 1080a 2.

510 Aristotle, *On the Heavens*, II, 13, 293a 20-23: "The Italian philosophers known as Pythagoreans take the contrary view. At the centre, they say, is fire, and the earth is one of the stars, creating night and day by its circular motion about the centre." The model of the Earth turning on its own axis is set out in Plato's *Timaeus* (893c) and, in Schuhl's view, experimentally tested by the potter's wheel, *La fabulation platonicienne*, p. 95.

511 Aristotle**,** *On the Heavens,* II, 13, 295b 11-14. At II, 8, 289b 5 Aristotle says: "We take it as granted that the earth is at rest."

512 Aristotle, *On the Heavens*, II, 8, 290a 32-35.

513 Cf. Pierre Duhem, *Le système du monde*, I, *op. cit*., p. 130.

in refusing to accept that the Earth turns on itself. On the contrary, the circular movement it makes takes it towards the centre.[514] In this model it is the sun's sphere that explains the daily movement over the Earth from east to west via the south every twenty-four hours.[515] So Aristotle is using the model of Eudoxus of Cnidual, in tandem with remarks from Eudemus of Rhodes, whose task it was to gather the Academy's astronomical data. This error was not corrected by the astronomer Callippus, nor even by Sosigenes. For that it was necessary to wait until Aristotle's pupil Theophrastus sent his own pupil Strato of Lampsacus to the court of Ptolemy I in Alexandria and one of his successors, Aristarchus of Samos, objected to this enormous error peddled by Aristotle's philosophy, as related by a historian of the Alexandrian school:[516]

> Aristarchus of Samos, who perhaps possessed some traditions of the School of Croton, did the science of the heavens a great service. The old theory that the sun moved round the earth had been re-established on Aristotle's authority, and contrary to the opinion of Pythagoras. Aristarchus did all he could to bring back the bolder, and truer theory of the movement of the earth.

We do not know what role may have been played by the priests of the cult of Demeter Achaea in maintaining the geocentric model. But as the heliocentric model rejected by the Areopagus underpinned the other Pythagorean thesis of Iranian origins, which placed the sun at the centre of the universe, it is understandable that the books of the time could not mention it.[517] We have seen that it was one of the first questions that the members of the Areopagus put to Socrates at his trial, to which Socrates simply replied that all of these things were already contained in books in the public square and, that being so, that they were themselves responsible since they should have prevented their distribution.[518] It remains the case that the Athenians' inability to

514 At 295b 20-21 Aristotle says, "The observed facts about earth are not only that it remains at the centre, but also that it moves to the centre," and lastly on this point, II, 14, 296b 21-22: "The earth must be at the centre and immovable".

515 Cf. Tricot's commentary on Book Λ, 8 of Aristotle's *Métaphysique* II, note 2, p. 691 of the 1962 edition.

516 Jacques Matter, *Histoire de l'école d'Alexandrie comparée aux principales écoles contemporaines*, vol. 2, 1844. On p. 178 he says, "Strato of Lapsacus spent some years at the court of Ptolemy I, sent there by Theophrastus who had been called there and had wanted to oblige the prince by giving him one of his pupils."

517 Matter, *Histoire de l'école d'Alexandrie…,* p. 184.

518 So what does it mean to be an Aristotelian in relation to astronomy? If we remain more Aristotelian than Aristotle himself, the geocentric model can be

identify the right theory was due to their lack of interest in technical skills. Meanwhile we can confirm that the "Phoenicians" living in Ionia, the Milesians, contributed many practical techniques, concrete facts and theories true and false that enabled the Ionian philosophers to develop a conception of the world that was closer to reality.

We shall now consider geometry, the second dimension necessary to make new discoveries in physics and astronomy, and the one underpinning the Greeks' first real conception of the world. It is often said that Greek geometrical knowledge came from the Egyptians. However, the greatest geometrical theorem is attributed to Thales and bears his name, as Aristotle confirms in his *Prior Analytics*.[519] Analysis of the shadows of the pyramids may have provided its explanation, but this theorem should probably be attributed to the knowledge of the "Phoenicians" who had not yet settled in Ionia. Moreover, this is confirmed by Plutarch who, in his *Banquet of the Seven Sages*, emphasises the admiration of the Egyptian king Amasis, who was literally dumfounded when Thales conducted his demonstration to measure the pyramids.[520] Plutarch returns to the basis of the theoretical model a little later:[521]

> Fixing your staff erect at the point of the shadow which the pyramid cast, two triangles being thus made by the tangent rays of the sun, you demonstrated that what proportion one shadow had to the other, such the pyramid bore to the stick.

So Thales, who was then on a visit to Egypt with the Greek Solon, had merely applied the theorem to the pyramids. Its source may well not be the measurement of the pyramids, or architecture at all.[522] We learn

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retained as the one that he truly upheld. If we think that this error was corrected by a pupil of Aristotle's, being an Aristotelian involves accepting the future of this school and thus accepting the heliocentric model.

519 Aristotle confirms that this theorem, found in 1, 5 of Euclid's *Elements*, was based on the work of Thales, cf. *Prior Analytics*, 41b 13-22.

520 Plutarch, *Banquet of the Seven Sages*, 2, 147a-b. Cf. the slightly different versions of the pyramid-measuring story in Diogenes Laertius l. 27 and Pliny, *Natural History* 36.82. Plutarch himself attributes the tyrant's remark to Bias at *De Adulatore et amico* 61c; c.f. the much longer version at *De Genio Socratis* 578d.

521 Plutarch, *Banquet of the Seven Wise Men*, 2, DK-11A21, trans. Roger A.M. Davis, in *Plutarch's Morals*. Translated from the Greek by Several Hands. Corrected and Revised by William W. Goodwin, with an Introduction by Ralph Waldo Emerson. 5 Volumes. (Boston: Little, Brown, and Co., 1878). Vol. 2. 14 April 2015. http://oll.libertyfund.org/titles/1212#Plutarch_0062-02_1551

522 Solon travelled twice with Thales to consult the sages and astronomers of the Egyptian court in the city of Sais, in Diogenes Laertius, *op. cit.*, I, p. 59. In his

from Aristotle's pupil Eudemus of Rhodes (a highly reliable source) that this theorem must have been devised to establish the position of ships at sea:[523]

> And Eudemus, in his *History of Geometry*, attributes this theorem to Thales. He states that the way in which he calculated the distance of ships on the sea made the use of this theorem indispensable.

So Thales' theorem may have been devised to improve the nautical skills of the "Phoenicians". Moreover, nautical knowledge reappears in the Middle Ages, with the development of Jacob's staff, of which a few examples still exist.[524] According to Aristotle in his *Metaphysics*, Egypt was the cradle of geometry and mathematics:[525]

> This is why the mathematical arts were founded in Egypt; for there the priestly caste was allowed to be at leisure.

This being so, it is possible that the "Phoenicians" simply took the culture of geometry from Egypt to the shores of Miletus. We shall follow Aristotle in granting Thales his just deserts.

Secondly, all mythologies had accepted that the world was spherical (ex: Homer's shield, the serpent/river *Ophis/Okeanos*). However, the idea that this circularity could be represented by a circle within which the world, understood as space, could be conceptualised geometrically, remains an Ionian contribution. We have seen that it was this conception that enabled the making of geographical maps. Still more crucially, the notion of the circle and its attributes made it possible to conceptualise the functioning of the world. For the gnomon could be combined with geometry to give the analemma, which at last enabled the development of more rigorous theories about the world. We should also note that, while the Athenians were aware of the seasons, with the gnomon they could not identify the tropics or equinoxes, let alone the ecliptic, as Alain Ballabriga rightly notes:[526]

> The concept of equinox implies the complete representation of a spherical earth and a celestial sphere with its equator, tropics and ecliptic plane. These notions are little attested before the time of

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Constitution d'Athènes (XI), Aristotle makes no mention of Thales, simply saying that Solon was away for ten years.

523 Eudemus of Rhodes, *History of Geometry*, fragment 134, DK-11A20, corroborated by fragment 135: "…according to Eudemus, it was Thales who first discovered*…"*.

524 Colli, *op. cit*., II, p. 290 gives us a strange demonstration of the use of the Jacob's staff.

525 Aristotle, *Metaphysics* A, 1, 981b 23-24.

526 Alain Ballabriga, "*Le Soleil et le Tartare, l'image mythique du monde en Grèce archaïque*", cited by Bouvier, *art. cit*., p. 134.

> Philolaos (late-5th to early 4th) and were not part of a developed mathematical system until Eudoxus, so they are entirely anachronistic in the 6th and even in the 5th.

The ecliptic plane is a strictly geometrical notion requiring the hypothesis of a spherical Earth. The ecliptic must necessarily be an inclined plane to explain eclipses of the sun and moon. For this reason we do not believe that Thales was able to predict the year of the eclipse of 28 May 585 BCE, as recorded by Diogenes Laertius.[527] At best he might have been able to demonstrate the reasons for the phenomenon,[528] since it seems that it was only under Anaximander that the analemma, which makes such predictions possible, was actually constructed.[529] While the equator dividing the world in two may be accepted as a theoretical hypothesis in the time of Thales, alongside that of the tropics, the analemma remains the instrument that demonstrated that the theory worked in practice.[530] The analemma is the meeting point of the gnomon and geometry. It was the building of this tool that enabled the Ionians to provide irrefutable proof of their ongoing construction of the universe. Michel Serres gives the following description of this revolution:[531]

> From Anaximander on, apparently, Greek physicists knew that these readings indicated certain occurrences in the sky. The light from above describes on the earth or on the page a pattern which imitates or represents the forms and real positions of the universe, through the intermediary of the stylus.

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527 Diogenes Laertius, *Vie, doctrines et sentences des philosophes illustres, I & II*, trans. Robert Genaille, Garnier Flammarion, 1965, translator's note p. 269. Colli does not regard this attribution as definitive, in *op. cit.*, II, p. 291, and most other specialists have their reservations.

528 The account of this eclipse, mentioned only insofar as it marks the beginning of a war, is once again from Eudemus of Rhodes. According to fr. 143: "Eudemus observes in his *History of Astronomy* that Thales predicted the eclipse of the sun which took place at the time when the Medes and the Lydians engaged in battle", D-K I, 74-75, trans. Sir Thomas Heath.

529 Szabo and Maula, *Les débuts de l'astronomie, de la géographie et de la trigonométrie chez les Grecs*, French translation from the German by Federspiel, 1986, p. 36. The authors note that Anaximander may have been the inventor of the analemma. This hypothesis is confirmed by Michel Serres (ed.) *A History of Scientific Thought: Elements of a History of Science*, Blackwell, 1995, trans. Ros Schwartz and Daffyd R. Roberts, p. 79.

530 Aristotle assimilated the notions of the equator and tropics and had clearly mastered them as reflected in his *Meteorology*, I, 7, 345a 3-8.

531 Serres (ed.), *A History of Scientific Thought*, p. 79.

The Ionians represented the Earth as a point at the centre of a circle, usually drawn on the ground. Through this point they passed an oblique axis with the two tropics of Cancer and Capricorn.[532] By monitoring the daily and annual movement of the shadow cast by the stylus, they were able to say which sign of the zodiac the sun was in[533] and, through continual approximation, to identify the position of the planets.[534] Far from seeking to provide an exhaustive explanation of the methods and world view that this tool made it possible to develop, we mention this technology in order to note a particular phenomenon that stemmed from it and which remains crucial to a reasoned understanding of Aristotle's philosophy, notably his binary conception of the coming to be of time in terms of generation and corruption. For we shall see that Aristotle could not have adopted this conception without an initial understanding of the particular phenomenon of the ecliptic. We are seeking to set all the technical elements in place in order to grasp the importance of this discovery.

But before proceeding down this path, we must first engage in a historical discussion of Thales' successor Anaximander and his philosophy of time. How can we understand Anaximander's conception of time independently of all these Ionian technical and astronomical discoveries? This question is particularly important as his was the first Greek conception of time to be preserved.[535] Here is what Goldschmidt has to say about it: [536]

> One of the most ancient texts on the power of time, the fragment of Anaximander, sees the alternation of generation and corruption as subject to the "fixed order of time".[537] The idea that these alternations

532 The *Astronomy* of Eudemus of Rhodes contains an account seeking to attribute the discovery of the obliquity of the zodiac to Oenopides: "Oenopides is thought to have been the first to discover the obliquity of the zodiac and the period of the Great Year", cited by Mattéi, *Pythagore et les pythagoriciens*, p. 43.

533 Here we are following Mélanie Desmeules, "L'analemme d'Anaximandre à Ptolémée", *Le Gnomoniste*, vol. 8, 4, December 2001, p. 8.

534 It is said that the astronomer Oenopides placed a bronze table in the shrine at Olympia, showing the movements of the stars throughout a cycle of fifty-nine years representing one Great Year.

535 A single fragment on time is attributed, with very little certainty, to Thales: "The wisest, time, for it brings everything to light", in Diogenes Laertius, I, 35. The same is true of the fragment "know thyself" and the famous "*Meden agan*", which are attributed to all the so-called Sages.

536 Goldschmidt, *Temps physique et temps tragique chez Aristote*, p. 85.

537 Translation by Harold Cherniss.

> are regular constitutes Anaximander's "most important legacy"[538] to later Greek thought; it appears among the Presocratics, such as Heraclitus, Empedocles and on to Alcmaeon […] and it is even incorporated into the philosophy of Aristotle (*De gen.* and *Corr*., I, 3, 317b 33 sqq.), with an explicit reference to time (II,10, 336 b10), reflecting the cosmic "order" (b12).

This fragment of Anaximander is the first fragment on time preserved by our philosophical heritage and must thus be treated with particular care. It is as follows:[539]

> The Non-Limited is the original material of existing things; further, the source from which existing things derive their existence is also that to which they return at their destruction, according to necessity; for they give justice and make reparation to one another for their injustice, according to the arrangement of Time.

This fragment first appears in Simplicius' commentary *On Aristotle's Physics*. Simplicius also noted it in the work of Aristotle's pupil Theophrastus, entitled *Doctrines of the Physicists*, of which Book I is now available in a French translation at the end of Colli's book, which we have cited several times.[540] Colli assumes that Aristotle had this fragment in his possession, but this is not attested by any commentator.[541] If we put it back into its context, in which Theophrastus is talking about Anaximander's philosophy, we have:[542]

> He says [the principle *arche*] is neither water nor any other of the so-called elements, but some other, unlimited nature, from which come to be all the heavens and the world-systems within them [quotation] he speaks of them in these rather poetic terms.

In the light of this it must be said, firstly, that this fragment describes a first principle that precedes even the physical elements (water, fire, etc.). It is a principle that describes nature, but a nature that is "other" than that of classic physics and must be linked to the notion of the

538 According to Cherniss.

539 Simplicius*, Commentaire sur la Physique d'Aristote*, 24, 18, in Colli, *La Sagesse grecque* II, p. 155 (D-K I 89), this English translation by Freeman. For the ancient commentaries, see Harold Cherniss, *Aristotle's Criticism of Presocratic Philosophy*, New York 1964, Baltimore, 1935, pp. 376-377.

540 Theophrastus, *De physicorum opinionibus. Libri primi fragmenta*, in Colli, *La Sagesse grecque*, II, pp. 245-260.

541 *Ibid*., p. 295.

542 Theophrastus, *Doctrines of the Physicists*, in *op. cit*., p. 247, also p. 175. This translation by John Palmer, "The World of Early Greek Philosophy", in James Warren and Frisbee Sheffield (eds.), *The Routledge Companion to Ancient Philosophy*, Routledge, 2014, p. 8.

"unlimited" (*apeiron*).[543] In conceptual terms this principle generates the relationship between heavens and worlds. We are in a context of manifest polytheism within Ionian culture, of which it would be wrong to see the Ionian Democritus of Abdera as the sole spokesman. Democritus' thought is undoubtedly the core of Ionian philosophy, a resistent core that never allowed itself to be mixed with the Italian thought of Athens. The split between the two was such that Plato was obliged to erase it from the historical landscape in his history of philosophy. If Aristotle had not rescued its memory, it seems more than likely that this thought would have been lost. In short, Ionian philosophy is polytheist, as this fragment shows, and within its framework there are several worlds and even several heavens. This came as no surprise to Simplicius, who makes the following comment:[544]

> For those who supposed the worlds to be infinite in number, like the associates of Anaximander and Leucippus and Democritus and afterwards those of Epicurus, supposed them to be coming-to-be and passing away for an infinite time, with some of them always coming-to-be and others passing away; and they said that motion was eternal.

In this commentary Simplicius has the merit of silencing a common error which asserted that worlds in the Ionian universe were infinite. This relates to the problem of the translation of the term *apeiron*. Those who see this term as strictly quantitative make the same mistake as Giordano Bruno, asserting that there are several infinite worlds at the same time. But this does not seem to be the thesis maintained by the Ionians, for whom worlds were infinitely multiple becase they succeeded each other in time. The universe as they understood it was thus subject to the repetition of birth and destruction over time. Because the universe was in motion, it was possible to apply the principle of generation and corruption to its movement. So we need to clarify the fragment of Anaximander in order to see whether Simplicius' comment does indeed describe the universe as the Ionians saw it. Can heaven be subject to a principle of which it seems

543 We shall return to this concept of *apeiron.* However, we should be clear that in this perspective the notions of the infinite and of time are consubstantial, as Aristotle explains in his *Physics.*

544 Simplicius, *On Aristotle's Physics*, 1121, 5 (and 12), ed. G.S. Kirk and J.E. Raven; cf. also *Commentary on Aristotle's De Caelo*, 615, 13 "as it seems, he posited infinite worlds and that each of the worlds is generated from such an element, which is infinite", cited in Anthony Preus (ed.) *Essays in Ancient Greek Philosophy VI: Before Plato*, State University of New York Press, 2001, p. 52.

itself the guarantor? Is there not already a Chaldean influence in this theory, and a new latent eschatology close to that of Heraclitus?[545]

For the moment we shall remain focused on the fragment of Anaximander, while retaining from Simplicius' comment the idea that it is movement that makes generation and corruption possible. While the fragment seems to contain a principle that is crucially important for an understanding of the march of time in which the world is engaged, how can we grasp the foundations of this principle? We shall start by looking at a different translation of the fragment and by using common sense:[546]

> The original sources of existing things are also what existing things die back into "according to necessity"; for they give justice and reparation to one another for their injustice, in accordance with the ordinance of Time.

While this fragment is attributed to Anaximander, it seems that the principle itself is earlier, since the sage Solon had already brought it into the public sphere in the time of Thales rather than Anaximander. Herodotus's history places the words in Solon's mouth, as follows:[547]

> Learn this first, that for the affairs of men there is a revolving wheel, and that this in its revolution suffers not the same persons always to have good fortune.

Herodotus also names Solon as the author of a magisterial philosophical analysis addressed to Croesus on human equality before time, the vector of which seems to be the Ionian principle we seek:[548]

> Crœsus, thou art inquiring about human fortunes of one who well knows that the Deity is altogether envious and apt to disturb our lot. For in the course of long time a man may see many things which he would not desire to see, and suffer also many things which he would not desire to suffer. The limit of life for a man I lay down at seventy

545 Simplicius' analysis was perhaps influenced by the approach of Heraclitus in fragment DK, 30: "This ordered universe (*cosmos*), which is the same for all, was not created by any one of the gods or of mankind, but it was ever and is and shall be ever-living Fire, kindled in measure and quenched in measure", trans. Freeman, *Ancilla to the Pre-Socratic Philosophers*.

546 Anaximander, DK, 12 B 1. See Conche, *Anaximandre. Fragments et témoignages*, PUF, 1991, pp. 175-176.

547 Herodotus, *Histories*, I, 207, 10, cited by Goldschmidt, *op. cit.*, p. 135, this translation *The History of Herodotus*, parallel English/Greek, trans. G.C. Macaulay, [1890], at sacred-texts.com. Goldschmidt goes on to analyse the impact of this conception on the various popular representations of the wheel of fortune, pp. 136-137.

548 Herodotus, *Histories*, I, 32, cited by Darbo-Peschanski, *art. cit.*, pp. 106-107, this English translation by G.C. Macaulay.

> years: and these seventy years give twenty-five thousand and two hundred days, not reckoning for any intercalated month. Then if every other one of these years shall be made longer by one month, that the seasons may be caused to come round at the due time of the year, the intercalated months will be in number five-and-thirty besides the seventy years; and of these months the days will be one thousand and fifty. Of all these days, being in number twenty-six thousand two hundred and fifty, which go to the seventy years, one day produces nothing at all which resembles what another brings with it. Thus then, O Crœsus, man is altogether a creature of accident.

In this analysis Solon is looking for a human *limit*,[549] the end of human lives. Having found this limit, he has all of human life in his hand, in the place of the parcae or the gods. He can then divide this totality in two, each part bringing "nothing at all which resembles what another brings with it". One brings its share of benefits and happiness (generation), the other horrors, torment and misery (corruption). This division is made possible only in the light of human time as a whole, which is why Solon says that life is a matter of accident. In sum, overlaying generation and corruption there is an objective time that smooths out human events in order to give each individual equal shares of what they are owed. Temporal justice is thus equality (A=A). In giving individuals their share of happiness and misfortune, objective time delivers justice or, rather, equality. So throughout their lives, human beings are subject to positive generation and negative corruption in an egalitarian fashion. In relation to global time, which constantly reasserts its function, all human beings are thus equal. There is something in these conceptions of time developed by Solon that is not reducible to the arbitrary nature of divine will seeking to do justice in a religious universe. There is no divine justice, but there does seem to be a principle of equality, the true nature of which is given us by the fragment of Anaximander. While this incontestably is a fragment of Anaximander, the conception of time developed within it cannot be specific to him, since it was previously expressed by Solon. We can assume that it was during his travels to Egypt that Thales told him of this Ionian principle. However, we should recognise that this is manifestly a new conception of time, in which it seems that cycles (periods: *périodos*) have acquired a new meaning. The cycle is no longer seen as a repetition of the same (the

549 The time limit also becomes the spatial limit of the Athenian city. At the end of a famous poem, Solon says: "But I stood firm, like a boundary stone between two armies".

eternal return of the mythologies), but it seems that within a given stretch of time there must be a principle of balance implying that corruption is equal to generation and vice-versa. This is no longer the return of the same to its eternal beginning that we find in the Iranian religious tradition; here time as a whole seems to oscillate in order to maintain a balance between generation and corruption. But what is this Ionian principle that governs all of physics, leaving behind the elements that are its foundation? At this level of analysis our technical discussion of "Phoenician" astronomy using the Ionian technology of the analemma, can provide useful conceptual support.

While it was Anaximenes, teacher of Parmenides, who first discovered that the moon received its light from the sun, it was his teacher Anaximander, contemporary of Empedocles, who used the discoveries of astronomy to develop formulations that could overturn all mythologies. Let us start by following the reliable account of Simplicius in his *Commentary on Aristotle's De Caelo*:[550]

> Let these things, he says, "be studied on the basis of astronomical works". For there, demonstrations have been given about the order of the planets and their sizes and distances. Eudemus recounts that Anaximander was the first to have given an account of their sizes and distances […]. The sizes and distances of the sun and mon have been figured out before now, the first impulse to their apprehension being taken from eclipses (and it is likely that Anaximander also discovered these things). And the first impulse for the apprehension of the sizes and distances of Mercury and Venus was taken from their conjunction with the sun and moon.

This first account teaches us not to take lightly the astronomical research of the period. The calculation of the distance between the planets shows that Ionian astronomy had already made considerable progress. This account also reveals that astronomical knowledge focused on research into the eclipses; this is our first point, which will provide a basis of the development to follow. Next, we must be satisfied with Aristotle's many comments on this subject and, more globally, on this Milesian school. In his treatise *On Generation and Corruption* he reviews the philosophers of Ionia, of both the strictly "Ionian" and "Italian" tendencies, and notes the most recent theoretical advances with the philosophy of Anaxagoras and the

550 D-K 1 86 in *Simplicius, On Aristotle. On the Heavens*; trans. Ian Mueller, Bloomsbury, 2009, p 11; Aristotle, *On the Heavens*, 291a 29, cited by Colli, *La Sagesse grecque* II, p. 179.

Eleatics. Those wishing an exhaustive account should refer to the start of the treatise.[551]

We, meanwhile, will go directly to the passage regarded by Goldschmidt as a commentary on the fragment of Anaximander, as we have seen above. This is a passage of great importance, since Aristotle was seeking to find the effective causes of generation and corruption. It is precisely by studying the Ionian astronomical conceptions that he comes to the following crucial view:[552]

> We assert that motion causes coming-to-be.

While, in his *Physics*, Aristotle starts by positing that the phenomena studied are engaged in a process of change, there is no evidence to reinforce what seems to be his basic postulate. This is why it is necessary to read *On Generation and Corruption* in order to grasp his subsequent thoughts on physics. It is in this text that Aristotle sets out his reasons for adopting this position, in a tone unusual for him. That he says "we assert" clearly shows that this is a major thesis that involves his entire philosophical undertaking. What motion is Aristotle referring to? And how does this thesis shed light on the Ionian thesis on time advanced by Anaximander? Is it the linear movement we find in the *Physics*, which implies that the elements change rather than happen, insofar as they are not created? It is clear – and we shall return to this – that in the context of non-absolute generation, of physics, mobile things change, but do not happen. We are dealing with a model in which changes affect elements that "are" absolutely and do not need to happen insofar as they are already present in Nature. For from the Ionians onwards, there is no longer any need to describe and create the elements. The natural elements are present, they exist in Nature, they do not have to be engendered. At the most they can be mixed to provide combinations, as in the model of Democritus. This is the register of physics rather than cosmogony or mythology, in which, as we have seen, the gods create the elements by waving magic wands. The elements change, they do not happen. Conversely, in the passage we are studying, generation and corruption are absolute. This is not a question of physical change, but of overall physical happening. What is the basis of the division between generation and corruption? Why this dichotomy? Are these conceptual

551 Aristotle, *On Generation and Corruption*, I, 1-2, trans. Barnes.
552 Aristotle, *On Generation and Corruption*, II, 10 336a 25, trans. Barnes.

opposites or conflicts that are natural and perceived by the senses? In addition, and more globally, how can this dichotomy give rise to the thesis that "motion causes coming to be"? Is the world suddenly engaged in time, making the emergence of an open future inevitable? This is how we could describe in a roundabout way what is involved in the development to follow. Is the physical world engaged in time? If it is, firstly, what is the movement that explains its coming to be? Secondly, why is this process binary (generation and corruption)? Can we lift this principle out of the world of dreams in order to find its scientific foundation?[553] Can we get away from the illusory Athenian sacred future in order to understand unfolding time as it seems to have been developed by the Ionians?

Aristotle presents an explanation of this principle in a passage that we should like to cite in its entirety because it magnificently illuminates the source of an intellectual principle that would later be called "mechanics". We should note that it relates to the particular, observed and modelled movement between two astral bodies, the sun and the Earth, and called the ecliptic.[554] The passage in question provides the endpoint of a discussion of the continuity of time. Time is said to be cyclical to maintain its continuity and total non-corruption, and it is precisely this continuity that implies that the future is possible:[555]

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553 Perhaps we can lift this principle out of "dreams" as Aristotle says, to find the basis of a movement called *dialectic* in Hegel's philosophy? But this movement cannot be reduced to either the *sensory conflicts* (hot and cold) which Empedocles wrongly transposed into the conceptual order, or to the *conceptual opposites* (A-inv. A), other than in the principle of identity which supports the principle of logical non-contradiction) which Hegel wrongly projects onto *sensory conflicts*. (If the dialectic is circular, in other words encased in language, in a conceptual logic as Hegel said, then dialectic is no longer possible). Let us cite Aristotle: "But the third principle must be present as well – the cause vaguely dreamed of by all our predecessors, definitely stated by none of them", *On Generation and Corruption*, II, 9, 335b 8-9.

554 The discovery of the inclination of the ecliptic is attributed, unreliably, to Oenopides, an Ionian of Chios and a successor to Thales. According to Schuhl, "A slightly younger contemporary of Anaxagoras, Oenipodes of Chios, may have discovered the inclination of the ecliptic. This would have solved the difficulties that seem to have preoccupied Anaxagoras. Oenopides fixed the length of the solar year as 365 and 1/3 days and that of the Great Year as 59 years. For Cleostratus, who introduced the signs of the Zodiac around 520, it was eight years and nineteen years for Meton, who expounded his theory in 432 with much success", *Essai…*, p. 336.

555 Aristotle, *On Generation and Corruption*, II, 10, 336a 31-35- 336b 1-10.

> This explains why it is not the primary motion that causes coming-to-be and passing-away, but the motion along the inclined circle; for this motion not only possesses the necessary continuity, but includes a duality of movements as well. For if coming-to-be and passing-away are always to be continuous, there must be some body always being moved (in order that these changes may not fail) and moved with a duality of movements (in order that both changes, not one only, may result). Now the continuity of this movement is caused by the motion of the whole; but the approaching and retreating of the moving body are caused by the inclination. For the consequence of the inclination is that the body becomes alternately remote and near; and since its distance is thus unequal, its movement will be irregular. Therefore, if it generates by approaching and by its proximity, it – this very same body – destroys by retreating and becoming remote: and if it generates by many successive approaches, it also destroys by many successive retirements. For contrary effects demand contraries as their causes; and the natural processes of passing-away and coming-to-be occupy equal periods of time.

While the theologians portray the future as an illusion the better to maintain the sway of their traditions, astronomy counters mythological conceptions that enclose time in a circle and refutes such religious mythologies. Both *really* and *apparently*, the sun's distance from the Earth is not constant. And, through ontocentrism, we understand that the same is true of human beings in relation to their time and also of the other creatures on Earth. Generation can be understood to occur when the Earth nears the sun and corruption when the two move away from each other. But, more crucially, through an anthropocentric analogy, this model brings the realisation we have seen expressed by the sage Solon, that when it comes to human affairs time can no longer be the indefinitely regular and circular repetition of identical sameness. Time has phases, which explains its necessary irregularity. These phases are periods (*periodos*) and are subject to the two great phases of generation and corruption. These two phases are themselves integrated into an overall cycle, as Aristotle indicates: "the natural processes of passing-away and coming-to-be occupy equal periods of time". Here we return to the order of time in the quotation from Anaximander, who says of the two phases "for they give justice and make reparation to one another for their injustice, according to the arrangement of Time." To invert Jaeger's proposition, this is not:[556]

556 Jaeger, *Paideia, The Ideals of Greek Culture, Volume 1, Archaic Greece: the Mind of Athens*, trans. Gilbert Highet, Oxford University Press, 1945, p. 160, cited by Anna Kelessidou, "L'avenir chez les présocratiques de Thalès à Démocrite", in

> The immanent compensatory process in human life [that] induces him to believe that nature too with its forces and oppositions is subject to an immanent rule of law like mankind, and that it is this rule of law which regulates coming-to-be and passing-away throughout creation.

On the contrary, it is natural (physical) activity that subjects human life to a reliable principle on the basis of which decent men such as Solon can proceed. Nietzsche, Rohde, Jaeger here and later Colli have all seen this fragment of Anaximander as a kind of "decree of justice" applied to the world.[557] They see it as the sphere of religion or more strictly justice (*dikè-adikia*) found in the natural approaches of the Ionians. But these interpretations seem to be totally incompatible with Ionian thinking as we have just depicted it. We would answer that, had Solon based his action on such transcendental conceptions of justice, the Athenian democracy might never have seen the light of day. The notion of religious *justice* has been replaced here by that of physical *equality*, and it was the astronomical discoveries that paved the way for the vision of the world set out in Anaximander's fragment. However, we do concede that these interpretations reflect a possible Greek reading that does not necessarily correspond to the approach of Ionian philosophy itself. We have already mentioned the fact that the Greeks paid no attention to purely technical discoveries unless they contributed to the good of the city. There is still a problem related to what Aristotle says in his *Constitution of Athens* about Solon, whose words he records:[558]

> My witness to this before the judgement of the future will be the great mother of the Olympian gods, dark Earth; I took up the markers fixed in many places – previously she was enslaved, but now is free.

L'Avenir, actes du Congrès des sociétés de philosophie de langue française, Vrin, 1987, pp. 250-253, p. 251. See also Jean Brun, *Les Présocratiques*, PUF, 1968, p. 45. Meanwhile Heidegger's interpretation desperately cuts all ties between this fragment and cosmology, culminating in a highly arbitrary semantic analysis. Cf. *Off the Beaten Track* trans. Julian Young and Kenneth Haynes, Cambridge University Press, 2002 (French ed. *Chemins qui ne mènent nulle part*, trans. W. Brokmeier, Gallimard, 1962, p. 430).

557 I refer to Colli's enumeration of these interpretations, *SG II*, pp. 293-295. These commentaries culminate in a pessimistic interpretation of the world, particularly in Nietzsche, whereas, of course, we see here the founding principles of future time. Meanwhile Colli seeks to interpret this fragment in the light of the Orphic influence, but this commentary leads to the disappearance of time itself.

558 Solon, fragment 24, in Aristotle, *Constitution of Athens*, XII, 4, trans., J.M. Moore, reprinted in, *Aristotle: The Politics and the Constitution of Athens*, Stephen Everson (ed.), Cambridge University Press, 1996, p. 218.

Here Solon links three notions that corroborate the traditional interpretations of the fragment of Anaximander. First, the relationship between time and justice manifested in the court of the future;[559] secondly the fixed markers referring to the debts accumulated by the Athenians, which Solon clears, thereby freeing them of the past and enabling them to go forth into the future; thirdly, these things are done under the eye of the "great mother of the Olympian gods". But, in concrete terms, is it time, the gods and justice that have reimbursed the future Athenian citizens? No, it is the class "in generation" that has reimbursed the "corrupted" class, in other words the class of the dispossessed. By cancelling this financial debt, which severely restricted the future of the Greeks, Solon gave them new impetus. In sum, like the first cosmological sphere, Solon restablished the balance between the *kakoi* (poor Athenians close to evil) and the *agathoi* (the rich seeking good). In discussing Solon, Vico mentions a similar situation in ancient Italy. The plebeians (the class in corruption) challenged the patricians (the class in generation) with the assertion that all are equal in the eyes of Jupiter, in relation to the time of the heavens:[560]

> Here is the civil history of the phrase: *Jupiter omnibus aequus*, from which the scholars conclude that all minds are equal, and they take their differences from the different organisation of bodies, and the divergence of civil education. A just appreciation of their own merit led the Roman plebeians to demand that the patricians allow them to enjoy civil liberty, and gradually change the republic's aristocratic constitution into a popular constitution.

We are all equal in the eyes of Jupiter, we are all equal in the eyes of universal time, we are all subject to generation and corruption. So Solon locates time on the side of justice in order to thank the gods. The same is true of Anaximander, who gives thanks to the gods for having discovered such a fundamental principle. However, it remains the case that this Ionian principle, taken up by Aristotle, is not a postulate. Firstly, it is an analogy based on the functioning of the heavens. Secondly, future time is not demonstrated. Its existence is

559 This is Jaeger's interpretation: "When Anaximander proposes this image as an explanation of the coming-to-be and passing-away of things in the natural world, he is obviously thinking of their very existence as dependent on a state of having-too-much, for which they must make amends by ceding to others the things they now enjoy. A very similar idea appears in Heraclitus when he says that 'these live the death of those, while those die the life of these'." *Op. cit.*, p. 35.

560 Vico, *Science nouvelle*, trans. idem, Gallimard, p. 152.

taken from the probability that the world will continue. If the continuity of the world cannot be maintained, the future collapses. If the continuity of the world is certain, the future becomes probable. If the continuity of the world is probable, the future becomes merely possible. Lastly, if the continuity of the world is only possible, the future also becomes possible, but its probability becomes more or less impossible. Is this a necessary and sufficient reason to accept that, in adopting this model, Aristotle was forced to be a philosopher of continuity? At this stage in our study we shall leave this question open.

To return to Aristotle's discussion, we must note the following: generation occurs when the sun and Earth are closer, and corruption when they move apart. We shall see in greater depth in the context of physics that generation and corruption explain "change". It remains the case that, scientifically, this continuous, twin movement is irregular and liable to stop. For, when phases of greater luminosity are registered on the gnomon, the stars seem to stop and go backwards, then stop again and continue their regular course, later described in technical terms as "stations" and "retrogradations" of the stars. The information obtained via the gnomon leads to reservations regarding the model's reliability. For if a star temporarily stops moving, what guarantees that this stationary state will not be permanent? The same question arises in relation to Aristotle's physics, in which elements can pause but never definitively stop until they reach their *télos*. And when a star temporarily reverses direction, what ensures that its probable course will never depart from its sphere? There is here a kind of tautology which consists in suggesting that, because the course of the stars is continuous, the world cannot stop, when the very definition of the continuity of time is taken from these same stars. In this model the guarantee of the world and the permanence of time are provided by the motion of the heavens. The movement of the stars and sun along the ecliptic are subject to a different movement, that of the "motion of the whole". It is this movement that explains why increasing generation cannot be unlimited, since it is constrained by corruption, and vice-versa. This general motion that gives movement to the stars enables time always to be. So it is clear that ultimately universal time retains the property of smoothing out and balancing the two phases and thus of enabling the renewal of change through this balance itself. For generation and corruption do not balance automatically, the cancelling of negative and positive does not

produce a *zero*; it is only in relation to universal time that everything is balanced. It is the "motion of the whole" that plays the role of the analytical medium term. If there is a fixed order of time, it is that of the sphere of the sun in relation to our own sphere of the Earth. The global cycle of time is thus not absolute – it is not a circle in which human beings are imprisoned. It is the inclination of the ecliptic that allows us to understand that there is a non-linear time, with fluctuations that fall into the two phases of generation and corruption. Schuhl says – and it is a view we share – that this principle is "a very important philosophical discovery" that gives being its permanence.[561] This is also shown by Empedocles, whose fragment on the elements we shall cite:[562]

> In turn they get the upper hand in the revolving cycle, and perish into one another and increase in the turn appointed by Fate. […] But in so far as they never cease their continuous exchange, in this sense they remain always unmoved (*unaltered*) as they follow the cyclic process.

However, Aristotle says in his *Physics* that Empedocles and Anaximenes[563] reduced this Ionian principle to condensation and rarefaction, considerably diminishing its scientific importance. Generation can indeed be understood in terms of the addition of elements and corruption by their subtraction, in such a way that the reference to the ecliptic is no longer necessary. The inclination of the ecliptic, which is a scientific fact, can be replaced by the interplay of the One (which replaces the entire sphere of the heavens) and the multiple (which replaces the changes arising out of the sun's course along the ecliptic), as described in the following passage:[564]

> They are of the opinion that the primary substances are not subject to any of the other motions, though the things that are compounds of these substances are so subject: the processes of increase and decrease and alteration, they say, are effects of the "combination" and "separation" of atoms. It is the same, too, with those who make out that the becoming or perishing of a thing is accounted for by "density

561 Schuhl, *Essai…*, pp. 299-300. However Schuhl accepts that this principle is a projection of the social sphere onto the natural sphere, and so, as we have seen, does Colli (p. 300).

562 Empedocles, fr. 26, cited by Schuhl, *Essai…*, p. 299.

563 See Colli, *La Sagesse grecque* II, p. 331, for the relationship between Anaximenes and Empedocles on this subject.

564 Aristotle, *Physics*, 265b 28-32, in *The Works of Aristotle,* ed. W.D. Ross, trans. R.P. Hardie and R.K. Gaye, Clarendon Press, 1930; cf. Colli's commentary, *SG* II, pp. 311-312.

> and "rarity": for it is by "combination" and "separation" that the place of these new things in their systems is determined.

But in that case it becomes necessary to find new ways to explain these changes; *friendship* then explains the agglomeration of elements (generation) and *hatred* their separation (corruption). In his *Rhetoric* Aristotle suggests that this approach should be regarded as poetic, since it manifests a flagrant incomprehension of the Ionian principle set out by Anaximander.[565] So we need to stay close to Anaximander's version on pain of losing ourselves in sophistry. In his *On Generation and Corruption* Aristotle ends his demonstration by positing that this principle is likely, since it is attested by observation, but he never provides any scientifically-obtained evidence, even in his *Posterior Analytics.*[566]

For although this principle was one of the most trustworthy in Aristotle's day, since, alongside geometry, eclipses provided the most convincing example in support of the universal science contained in his *Posterior Analytics*, we do not find there the scientific argument that underpinned it in the Ionian world. Aristotle first states that the eclipse is a phenomenon on which the certainty of knowledge cannot be faulted. He then uses it to support his philosophical approach (the four causes), since the eclipse is a sign with a *tekmêrion*:[567]

> Evidence for this: on finding that [the sun] is eclipsed we stop; and if from the start we know that it is eclipsed, we do not seek whether it is. When we know the fact we seek the reason why.

Later on Aristotle suggests that seeking the "reason why" is the same as seeking "what it is". For this it is necessary to find a middle term. The pattern of eclipses involves three elements: the Earth, sun and moon, and whether one is on the Earth or the moon, the reason why is equivalent because the phenomenon is universal (there is always an eclipse of the moon in the first case and of the sun in the second).[568] Geometry then takes over in chapters 3-7 in order to define the

565 "Such people are apt to put that sort of thing into verse. Empedocles, for instance, by his long circumlocutions imposes on his hearers; these are affected in the same way as most people are when they listen to diviners, whose ambiguous utterances are received with nods of acquiescence – 'Croesus by crossing the Halys will ruin a mighty realm'"; Aristotle, *Rhetoric* III, 1407a 33-40, trans. W. Rhys Roberts.

566 Aristotle, *On Generation and Corruption* II, 10, 336b 16-20: "And there are facts of observation in manifest agreement with our theories", trans. Barnes.

567 Aristotle, *Posterior Analytics*, B, 2, 89a 25-29, trans. Barnes.

568 Aristotle, *Posterior Analytics*, B, 2, 89b-90a, trans. Barnes.

quiddity of the being of the phenomenon, after which the eclipse returns in Book 8 to question the value of the judgement of the *existence* of what *is* by accident in order to produce a syllogism.[569] But what can the middle term tell us about what an eclipse is? The meeting of geometry and the gnomon having produced the analemma, the information obtained using this instrument should guarantee what is being said, but Aristotle shuts himself away in his syllogistic theory, never mentioning practical approaches. Later on he again uses eclipses to distinguish demonstration "of the bare fact" from demonstrations through "the reasoned fact":[570]

> And the earth's being in the middle is explanatory of the eclipse, but the eclipse is not explanatory of the earth's being in the middle – so if the demonstration through the explanation gives the reason why, and the one not through the explanation gives the fact, you know that it is in the middle but not why.

If we are on the moon, it is no longer the earth that is in the middle during an eclipse, such that the demonstration of the fact is not a demonstration of the reason why. But while it is clear that the demonstration through the "explanation" requires the use of syllogisms, on what can we base the judgement of existence if not in this case on practical knowledge obtained by technical means? Without the discovery of the analemma would it have been possible to conceive of the existence of change? This brief detour allows us to begin to mark out the distinction between the physical judgement of existence and the logical judgement of quiddity. To suggest that Anaximander's principle is based on a judgement of the existence of the ecliptic leading to the induction that the movement of time is always binary, thus giving us the division between generation and corruption, still indicates nothing of the *being* of time. In other words, this demonstration of the unfolding of time through *fact* still says nothing about its *quiddity*. For example, if, once plants have grown, they always diminish, we can suggest "de facto" that time has passed. Except that, as Aristotle says in the aforementioned passage using the example of leaves falling from the trees, it is not time that makes the leaves fall; we should instead seek the elementary material cause.

We shall address these theoretical questions in our next book, as it is impossible to deal with these problems without considering the layers of interpretation they have historically received. We shall,

569 Aristotle, *Posterior Analytics*, B, 8, § 93a.
570 Aristotle, *Posterior Analytics*, B, 16, § 98b.

however, set out a few more markers here. It is generally thought that the concept of existence is not present in the Aristotelian corpus and that the division between *being* and *essence* was made by St. Thomas Aquinas in his *De ente et essentia*.[571] For Aquinas *ousia* was the equivalent of *essence*. Access to existence takes two forms: singulars and the soul. As there is no generic access to singulars, it is impossible to place existence in any category. This allows Aquinas to dispense with reason the better to bury existence beneath the intelligence underpinning his notion of the soul. He follows Averroës in saying that species can ultimately be known through this intelligence, so that all natural species are governed by intelligence. We shall return to this philosophy in more detail later. For the moment we shall simply note Etienne Gilson's view of it:[572]

> It is as though Thomism had inherited from Aristotelianism the notion of substance understood as a solid ontological mass in which essence, existence and unity are all one.

However, it is apparent that neither the aforementioned model of the ecliptic nor Aristotle's physical conception reflect this categorisation. A return to the *Posterior Analytics* will enable us to grasp this fully. Firstly, if the concept of existence did not exist in Aristotle's work, what status should we give to the "signs" he calls *tekmêrion*? These are indeed special signs, underpinning the syllogisms which, by induction, ground the notion of existence in the categories. It is true that in Aristotle's epistemology induction is possible only in physics, while logic is dominated by deduction and, unlike physics, does not make hypotheses. We shall nevertheless seek to lift existence out from under the yoke of intelligence the better to place it in the empire of the senses which, for Aristotle, are themselves governed by *phantasia*. In order to defuse the criticisms this thesis will arouse, we should like to make available to all Aristotle's thinking in *Sense and Sensibilia*:[573]

> For if it is impossible that a person should, while perceiving himself or anything else in a continuous time, be at any instant unaware of his own existence, and if there is in the time-continuum a time so small as to be absolutely imperceptible, then it is clear that a person would,

571 Thomas Aquinas, *L'Etre et l'essence. (De ente et essentia)* French trans. C. Capelle, Vrin, 1982. We shall follow the commentary of Canon Daniel-Joseph Lallement, Tequi, 2001.
572 Etienne Gilson, *L'Être et l'essence*, Vrin 2000 (1948), p. 93.
573 Aristotle, *Sense and Sensibilia*, VII, 448a 26-29, trans. Barnes.

> during such time, be unaware of his own existence, as well as of his seeing and perceiving.

We will say openly that, when we came upon the meaning of this statement, much of our understanding of Aristotle's thought fell apart. So we shall consider the autonomy of existence over being (*ousia*) and whether this dichotomy is applicable to time itself. Along the way we shall seek to show that time is underpinned by *phantasia*, which, by epistemic circularity, will enable us to assert the independence of time's existence from its being. We shall also see whether *ousia* (*ti esti et tode ti*) can be reduced to substance (*essentia*), as Aquinas says. We think it somewhat hasty to turn to Book Z of the *Metaphysics* while completely ignoring the rest of the Aristotelian corpus, as Heidegger also did.

In sum then, while Aristotle's discourse is grounded in astronomy, at no point does he seem to find it necessary to back it up with any scientific evidence. For Aristotle, proof remains a matter of language. It is provided only by the internal consistency of what he says, by means of syllogisms. So deep down Aristotle is more Athenian than Ionian. Instead of measuring, he talks; instead of demonstrating, he argues; instead of numbering, he conceptualises. Not a single measuring tool is mentioned in his *Posterior Analytics* and not a single number is used. This observation is enough to gauge the gulf between the Ionian and Athenian worlds. It remains true that the fragment of Anaximander posits the the physical existence of time. Time exists through its binary movement of generation and corruption. It is the enduring constancy of this movement that implies that time lasts and thereby frees up the possibility of the future. But how can Aristotle move from this technically demonstrated existence of time to its *quiddity*? Does the scale of this question not oblige him to return to the ideas of the *théologoï*? This is the reason we shall cite in order to understand why the Ionian approach is not enough. If the so-called "Italian" current makes a comeback in Aristotle's work in order for him to think about time, this is because the *quiddity* of an object cannot be reduced to its *existence*, however formally attested.

Then comes the application of astronomical notions to human beings in his *On Generation and Corruption*. Here we find the following, somewhat odd reasoning:[574]

> Thus, since the upper movement is cyclical, the sun moves in this determinate manner; and since the sun moves *thus*, the seasons in consequence come-to-be in a cycle, i.e. return upon themselves; and since they come-to-be cyclically, so in their turn do the things whose coming-to-be the seasons initiate.
>
> Then why do some things manifestly come-to-be in this fashion […] while men and animals do not return upon themselves so that the same individual comes-to-be a second time (for though your coming-to-be presupposes your father's, his coming-to-be does not presuppose yours)? Why, on the contrary, does this coming-to-be seem to constitute a rectilinear sequence?

The present work ends with this question, which thus remains unanswered here. How can we comment on this passage? We are faced with an argument that seems absurd, as did that of Solon on time, before we compared it to its Ionian source. In the first place we can say that, while, at the analytical level, physical movement is linear in the *Physics*, it is circular at the level of synthesis, since when linear movements as a whole are placed in a sphere they join up to form a circle, as attested by the notions of the equator and tropics. However, at the local level, where human beings find themselves located in space by their biological body, the analogy does not seem to work. How can a human being return to the start of a cycle, as do the seasons or the course of the stars on their sphere? So human beings seem to be the site of a split between local and global time. While global time can be theorised by research into the ecliptic, local time resists this analogy by maintaining its linear movement. But these are not categories used by Aristotle. We find an answer to this question within the Aristotelian corpus, in the treatise entitled *Meteorology*, but it deals only with non-human living beings. In the following passage Aristotle considers the disparity of the cycles of generation in different parts of the world:[575]

> The principle and cause of these changes is that the interior of the earth has its periods of maturity, like the bodies of plants and animals. Only in the case of these latter the process does not go on by parts, but each of them necessarily grows or decays as a whole, whereas it does go on by parts in the case of the earth. Here the causes are cold and heat, which increase and diminish on account of the sun and its

574 Aristotle, *On Generation and Corruption*, II, 11, 338b 01-12, trans. Barnes.
575 Aristotle, *Meteorology*, 14, 351a 27-35, trans. Barnes.

> course. It is owing to them that the parts of the earth come to have a different character, so that some parts remain moist for a certain time, and then dry up and grow old, while other parts in their turn are filled with life and moisture.

So, in applying Anaximander's principle to human beings, we should respect Aristotle's conception of the heavens. In this model human beings have no direct connection with the heavens; there are many concepts that make it possible to move from human beings to the heavens, set out in *Meteorology* and *On the Heavens*. They will be the subject of the next part. Moreover, the hiatus between the time of the heavens and human time underpins Aristotle's conception of history. As the time of the heavens is greater than human time, history cannot give us an idea of the history of peoples, since most of them disappear before leaving a memory of their presence in the world:[576]

> But the whole vital process of the earth takes place so gradually and in periods of time which are so immense compared with the length of our life, that these changes are not observed, and before their course can be recorded from beginning to end whole nations perish and are destroyed.

This is also the reason given to explain Aristotle's great love of proverbs; as we shall see, this hiatus also has major consequences for his ethical vision. Before focusing more specifically on all these notions in his philosophy of man, we shall simply say that this Ionian principle is compatible with a conception of time on the human scale. It moreover became the notion of *akmè*, which the Greek historians used in writing the history of the figures of archaic Greece. This notion takes its energy from the traditional concept of *thûmos*,[577] which can be translated as the human capacity of "velocity". Human velocity is fundamentally finite, shooting up towards the *akmè*, the better to fall back down and end in certain death, as Conche clearly describes:[578]

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576 Aristotle, *Meteorology*, 14, 351b 9-12, trans. Barnes.

577 Bénédicte Durosel, "Un versant obscur du temps: la genèse du vivant. (Homère, Hésiode)", in *Constructions du temps dans le monde grec ancien*, pp. 65-87. Aristotle uses this term in *Metaphysics*, lamda, 7, 1072b 25-30 and 9, 1075a 10; this is confirmed by Brague, *Aristote et la question du monde*, p. 159; cf. also, Plato, *The Republic*, IV, 439e 3-441c 3. Brague also suggests that the notion of *thûmos* is the crux of Aristotle's ethical analysis.

578 Conche, *Temps et destin*, p. 41. When Conche goes on to say: "The life force (*aiôn*) is fundamentally finished. Human life first has a period of growing vitality until the prime of life (*akmè*), then comes the diminishing and decline of vitality", the term *aiôn* should be understood in the sense of *thûmos* (Cf. p. 83).

> The *aiôn* can be compared to a jet that first rises vigorously, then levels out and finally declines and falls back down. The ages of life are youth, maturity and old age, according to whether the life force dominates matter, the two are in balance or matter gradually overpowers vitality.

So human life is contained in an interval between birth and death, whose middle point is the *akmè*. There is a phase of generation rising to the age of forty, a solstice around that age, then the beginning of a corruption leading inevitably to death. This is what we wanted to say concerning this first analogy of the time of the heavens with that of human lives. In the next part we shall take a more analytical approach in discussing the a priori conditions of these analogies to gain a better understanding of this apparent theoretical impasse.

PERORATION

By way of conclusion, we can see that we have gone from an initiatory, entirely mythical conception of time, with the image as its touchstone, to a truly scientific, Ionian conception in which observation-based evidence using an instrument provides proof in a discourse of engagement with the world. After this we have sought to show that Ionian philosophy is at the core of Aristotelian philosophy by returning to the analytical connection of generation and corruption. We have been concerned to show that it was through the discovery of the ecliptic that change in time was positively asserted, countering the mythologies that portrayed it as an illusion. This Ionian change in time, understood through the binarity of generation and corruption, remains a revolution in conceptions of time in the history of philosophy. In addition, we have shown that, rather than contrasting circular and linear movement, circular movement should be understood in the light of its grounding in astronomy. It was by analysing the circular movement of the stars that the Ionians were able to conceive of a future that is positive, rational, scientific and irrefutable.

So there are two conceptions of circular movement in the Greek universe, on which models of time are based. The first is mythological and maintains that time is illusory, since it always returns to its origin. Human beings are thus prey to a temporal illusion summed up in the notion that the future is illusory, which supports the religious notion of the "fall". Conversely, according to the second conception of time, which is of "Phoenician" origin and scientifically tested by the Ionian thinkers, circular time gives rise to the thesis that time is positively unfolding through change in a perceptible manner. This conception of time, modelled on the basis of scientific discoveries relating to the phenomenon of eclipses, demonstrates that change over time is binary. It is this scientific conception that gives rise to the thesis that all sublunary phenomena are subject to generation and corruption.

However, while these notions are valid for describing the time of the heavens and physical time, they cannot necessarily be used to analyse human time. For this reason we shall go on to consider the question of the existence of time within the human sphere. In the second volume we shall propose a strictly philosophical approach to this subject. We acknowledge that these analyses will become very difficult. However it is important to understand that what is at stake in this question is beyond the scope of a purely historical approach. So we shall now enter the domain of Aristotle's philosophy itself and set out what is called the metaphysics of time.

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Régis Laurent is a philosopher and member of the association Kairos Kai logos *(Centre for the study of ancient philosophy)*. This book is the first part of his doctoral thesis in philosophy, undertaken under the aegis of three French universities *(Grenoble, Clermont-Ferrand and Rennes)*. In addition to his philosophical training, the author is also qualified to Masters level in linguistics and in general psychology, and studied theology at the Thomist University in Paris *(ULSH)* and at the CEJ of the EHESS.

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