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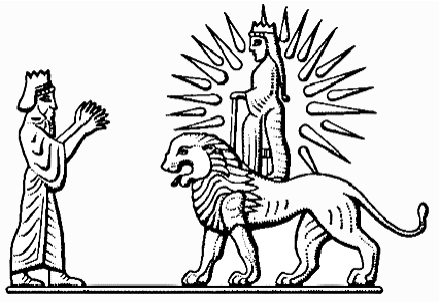

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"Plato and the Mesopotamian Astronomy"

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Plato and the Mesopotamian Astronomy

In his last works, Plato often refers to the discoveries of the Orientals,[1] but such information hasn't always been considered credible, on the basis of the criterion according to which the Greeks would frequently connect Greek knowledge to the Oriental one, in order to mantle it with antiquity and thus with credibility, but also because of the prejudice that the Orientals would have never gone beyond the myth and a "practical science."[2]

However, some scholars tend to reconsider some affirmations of the Athenian philosopher, especially on the basis of the results derived from the study of the so-called Academy. In fact, it is now accepted that, during the Athenian philosopher's last years of life, but also afterwards, "questa scuola costituì il centro di una tendenza orientalizzante, che ha un'enorme importanza per intendere molti aspetti dell'ulteriore storia della cultura greca,"[3] even though "Die Kanäle, durch die die Einflüsse des Orients (in Griechenland) eingedrungen sind, kennen wir nur zum kleinen Teil."[4]

In the VII book of the *Laws*, Plato critically affirms that the Greeks do not like to study the cosmos, as it would represent a disrespectful action.[5] The reason of this is not explained, even though, as

[1] *Phaedrus* 274c ff.; *Philebus* 18b; *Timaeus* 21d ff.; *Critias* 113a ff.; *Laws* 656d-657c; *Epinomis*.

[2] N. Abbagnano, in *Storia della filosofia* (Milan, 1995), 3, as an example, writes: "… Platone stesso (*Resp.*, IV, 435e) contrappone le spirito scientifico dei Greci all'amore del guadagno, proprio degli Egizi e dei Fenici; e così esclude nel modo più chiaro la possibilità che dalle concezioni di quei popoli si sia potuto e si possa trarre ispirazione per la filosofia."

[3] F. Adorno, *La filosofia antica* (Milan 1993[2]), Volume I, 240.

[4] W. Jaeger, *Aristoteles. Gruendlegung einer Geschichte seiner Entwicklung* (Berlin, Weidmann, 1923), p. 133. As an example, thanks to a Herculaneum's papyrus, (*Index Accad. Herculan*, col. III, p. 13, Mekler), it is known that a Chaldee belonged to the Academy as ordinary member. Furthermore, towards 368, Eudoxus of Knidos came to Athens and to Plato's school: astronomer, mathematician and Cyzicene school's leader, he had widened his astronomic knowledge in Asia and Egypt. The arrival of Eudoxus to Athens – W. Jaeger goes on writing, *Aristoteles,* pp. 15-16 – "… War ein aufsehenerregendes Ereignis, fortan sehen wir beständig Mitglieder jener Mathematiker- und Astronomenschule wie Helikon, Athenaios u.a. in Zusammenhang mit der Akademie stehen. … Seit dem Zusammensein mit Eudoxos nimmt das Interesse für die neuen Versuche der kyzikenischen Schule, die irregulären Bewegungen der Planeten durch einfache mathematische Voraussetzungen zu erklären, im Denken Platons und seiner Anhänger einen beherrschenden Raum ein. Aber auch andere Anstöße gingen von Eudoxos aus: der geographische und kulturgeschichtliche Horizont dehnte sich ungeheuer aus. Eudoxos brachte genauere Kunde von Asien und Ägypten mit und berichtete aus mehrjähriger Autopsie über den Erkenntnisstand der dortigen Himmelskunde. Auch für die ethischen Fragen war man ihm zu Dank verpflichtet … Auch gegen die Ideenlehre hat Eudoxos disputiert und einen Vorschlag zur Umbildung der Ideen gemacht." As far as the previous periods are concerned, see, as an example, among the many existing sources, W. Burkert, "La religione greca all'ombra dell'Oriente: i livelli dei contatti e degli influssi," in: S. Ribichini – M.Rocchi – P. Xella (eds.) *La questione delle influenze vicino-orientali sulla religione greca. Stato degli studi e prospettive della ricerca. Atti del Colloquio Internazionale – Roma, 20-22 maggio 1999* (Rome 2001), 21-30 and, in the same volume, S. Ribichini, ""Fascino" dell'Oriente e prime lezioni di magia," 103-115.

[5] Plato, *Laws* VII, 821a. A. Diès, in *Platon, Oeuvres complètes, Tome XII (I[re] partie), Les Lois* (Paris 1956), 59, note, underlines: "Cléon fit voter, en 432-431, une loi présentée par Diopeithès (cf. Plutarque, *Péric*. 82) et qui condamnait "ceux qui ne croyaient pas aux choses divines ou qui enseignaient des raisons aux

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Adorno underlines, "il riferimento storico a molti processi per empietà mossi da parte conservatrice – contro Anassagora, contro Protagora, contro Socrate, e così via – sembra evidente."[6] According to Xenophon's affirmations, the reason would probably be that they intended to "find the way the divinity had formed the celestial bodies, which is not only impossible, but also against the will of the gods, who were unlikely to appreciate that men wanted to find out what they had covered with a veil."[7]

It is not a chance that one of the accusations moved to Socrates was exactly that of wanting to investigate the cosmos.[8] Plato, reporting Socrates' defense in the *Apology*, recalls, without mentioning it, a work of Aristophanes, *Clouds*, where the Athenian dramatist outlines Socrates satirically as a representative of the sophist education which subverted the traditional, religious and family values and was concerned with investigations which were useless and even harmful for the practical life, such as the knowledge of celestial phenomena, challenging the official gods.

Now, contrary to what Plato makes Socrates affirm in the *Apology*, and to what Xenophon says in his *Memorabilia*, that is to say that Socrates certainly had a knowledge of astronomy, "but, as for its educational will, it was contained in very narrow limits, that is in limits of practical utility,"[9] Plato, for example, in the *Theaetetus*, makes Socrates sing "einen wahren Hymnus auf das Leben des Forschers an und malt das Idealbild dieses Lebens mit Farben, die er dem Typus des Astronomen und Mathematikers entlehnt .... Es ist seltsam, daß gerade Sokrates dieses Lob der Geometrie und Astronomie hier anstimmt, er, den Plato einst in der Apologie hatte sagen lassen, er verstehe von solch hohen Dingen weder ein Großes noch ein Geringes, sondern schlechthin gar nichts."[10] We find ourselves in front of a total and wanted transfiguration of Socrates' thought who becomes, this way, the representative of the Platonic philosophy.[11]

It is important to outline these contradictions as, if they are put together with the information derived from Xenophon and Aristophanes, we can understand on one side the development of the Platonic thought, and on the other, as for what is our concern here, the Greek hostility towards the scientific research not aiming at an immediate practical utility. This hostility was so deep as to be expressed in an action for impiety and a successful dramatic piece such as *Clouds*.

Plato speaks again about the Greeks' attitude towards the study of astronomy in other works, such as the *Laws* and *Epinomides*. Even Aristotle, in the *Metaphysics*, blames the Hellenes' deep-rooted aversion for the excessive curios-

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phénomènes célestes" (Plutarque, *ibid*). C'est à la suite du vote de cette loi qu'Anaxagore fut accusé d'impiété."

[6] F. Adorno, *Introduzione a Platone* (Bari 1994[7]), 229.

[7] Xenophon, *Memorabilia*, IV, 7, 6-7.

[8] Cf. Plato, *Apology*, 19 b-c.

[9] Xenophon, *Memorabilia,* IV, 7, 4-5; cf. also W. Jaeger, *Paideia. Die Formung des Griechischen Menschen* (Berlin 1955), Volume III, 29. Xénophon, *Memorabilia,* IV, 5. Furthermore Xenophon affirms, IV 5: "But he strongly advised against studying the astronomy up to the knowledge of the celestial bodies which are not in the same orbit, the planets and the fix stars, and wasting time to look for their distances from the earth and their routes and the causes of these things."

[10] W. Jaeger, "Über Ursprung und Kreislauf des philosophischen Lebensideals," in *Sitzungsberichte der Preussischen Akademie der Wissenschaften, Philosophisch-historische Klasse* (Berlin 1928), 394-395.

[11] W. Jaeger, *Paideia, III,* 29.

ity of the thought, daringly venturing too high. Several times, he fights the principle of the Hellenic ancient wisdom, that is, the mortal being has to have a mortal soul, and urges the human beings to live on the eternal level.[12]

But let's go back to Plato's *Laws*[13] in order to try to understand how Plato justifies the need of investigating the cosmos against the current opinion. Three data come from the analysis of the VII book of the *Laws*: 1st) as the Greeks, due to religious reasons, do not investigate and have never investigated the cosmos, they have, as a consequence, false information which is also disrespectful towards the planets, and here we come to point 2), considered as divinities;[14] 3rd) finally, that Plato himself has only learnt the astronomic science a short time before.

The reason why the Athenian philosopher has learnt this science a short time before is explained in the *Epinomides* where the Syrian and Egyptian origin of the astronomy is underlined.[15] According to Festugière, this text is "capital pour l'intelligence de la religion hellénistique, du moins sous l'un de ses aspects, la fusion de la Grèce et de l'Orient."[16]

Even if at the moment it's only a superficial investigation, let's dwell upon some Oriental astronomic data contained in Plato's works.

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[12] W. Jaeger, *Aristoteles*, 168 and note 1.

[13] Plato, *Laws*, 821b-821e.

[14] Plato, on this subject, writes in the *Epinomis*, 983e-984a: "However, if our statements on all such existences are to prevail, and the whole order of them is to be convincingly shown to be divine by their origin, we must certainly class them as one or the other of two things: either we must in all correctness glorify them as actual gods, or suppose them to be likenesses produced, as so many images, of the gods, creations of the gods themselves. For they are the work of no mindless or inconsiderable beings but, as we have said, we must class them as one or other of these things; and, if classed as the latter, we must honour them far above all images: for never will fairer or more commonly owned images be found among all mankind, none established in more eminent places, none more eminent in purity, majesty, and life altogether, than in the way in which their exitence is altogether fashioned," trad. ingl. of W.R.M. Lamb, M.A., in *Plato VIII, Charmenides, Alcibiades I and II, Hipparchus, The Lovers, Thaeges, Minos, Epinomis*, The Loeb Classical Library, London, Cambridge 1955, p. 459-460. In 984 d, he writes, "But as our visible gods, greatest and most honourable and having keenest vision every way, we must count first the order of the stars and all else that we perceive existing with them," above mentioned translation, p. 461-463.
See also the 10th volume of the *Laws*. Here, Plato defends the god of the stars polimizing with Anaxagoras who reduced the stars to soil and stones. In 886 d-e, as an example, we read: "It is rather the novel views of our modern scientists that we must hold responsible as the cause of mischief. For the result of the arguments of such people is this, – that when you and I try to prove the existence of the gods by pointing to these very objects – sun, moon, stars, and earth – as instance of deity and divinity, people who have been converted by these scientists will assert that these things are simply earth and stone, incapable of paying any heed to human affairs, and that these beliefs of ours are speciously tricked out with arguments to make them plausible," cited translation, p. 303.
With regard to this, Adorno writes, in *La filosofia antica*, Volume I, 240: "E' questa un'indicazione fondamentale che serve a chiarire l'origine del momento in cui sorse la tradizione dell'influenza delle civiltà orientali sul pensiero greco."

[15] Plato, *Epinomides* 987a-d; cf. also Aristotle, *On the Heavens*, II. 12, 292 to 5-10 "Similar observations about the other planets are recorded by the Egyptians and the Babylonians, who have watched the stars from the remotest past, and to whom we owe many incontrovertible facts about each of them," translation by W.K.C. Guthrie, M.A., in *Aristotle, on the Heavens*, London, Cambridge 1953, p. 205.

[16] R.P. Festugière, *La Révélation d'Hermès Trismégiste*, Volume II (Paris 1949), 206. Some scholars of Plato's thought tend to minimize his statement about the Syrian origin of astronomy on the base of the discussed authenticity of this dialogue, attributed to Philip of Opous, notwithstanding Plato's explicit statements, in other works, on the Greek total ignorance about astronomy. But, if that is the case, the statements included in this work reflect both the problems of that time and the solutions. Also an Aristotle's statement, in *De caelo*, in which the antiquity of the stars' study by the Egyptians and the Babylonians is underlined, is often undervalued.

First of all, Plato himself declares, in the *Epinomides*, that the Greeks didn't know the names of the stars, apart from those of the fixed stars, of the moon, the sun and the morning star, and that a barbarian had individuated them.[17] More precisely, he writes about the morning star "that Lucifer, or Hesperus (which is the same), should belong to Aphrodite, we may take as reasonable, and quite befitting a Syrian lawgiver."[18] This datum cannot avoid to recall what the Babylonians, and the Sumerians before, had affirmed in relation to the planet Venus governed by Ishtar.[19]

Then, a further even if indirect sign is given by two of the manuscripts which *Epinomides*' modern edition is based on. In both of them, the star of Cronus, that is, Saturn, is reported as *Helios*' star, that is of the Sun. According to Cumont, this variation demonstrated the Oriental origin of the astronomy outlined in the *Epinomides*.[20] As a matter of fact, in the Babylonian texts, Saturn is also known as the night sun or the sun's star.[21]

Furthermore, it has been observed that the association, in the *Epinomides*, between Greek gods and planets corresponds to the Babylonian one.

As for the antiquity of the correspondence between god and planet in the Mesopotamian world, it must be observed that the three components of the astral triad were, already in the Sumerian period, associated respectively to Utu, Nanna and Inanna. It cannot be said for sure when the other four planets were identified and associated to the gods, even if their Sumerian name suggests a datation prior to the documented one, that is 1100 B.C.

Moreover, in the *Epinomides*, two theories on the planet-god relation are expounded: that is, the planet is god or the planet is an image and a divine simulacrum built by the god himself.[22] Also the Babylonian literature seems to be wavering on this matter.[23]

Besides associating the planets to a god, Plato outlines them, in the *Epinomides* and in the *Republic*, in comparison

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[17] W. Jaeger, with regard to this, writes in *Aristoteles*, 134: "Die orientalischen Neigungen hängen teils mit der Bewunderung der chaldäischen und 'syrischen' Astronomie und ihrer uralten empirischen Kenntnis des Sternenhimmels zusammen, der die Akademie die Berechnung der Umlaufperioden und die Kenntnis der sieben Planeten entnahm, die bei Philippos von Opus zum ersten Mal in Europa auftaucht." According to W. Burkert, *Da Omero ai Magi* (Padova 1999), 52, the translation into Greek of the planets' names dates back, at the latest, "all'epoca di Platone, forse anche qualche decennio prima." See in the same *Love and Science in Ancient Pythagoreanism* (Cambridge 1972), 299-301. Furthermore, in this last work, from p. 310 to 317, he dwells upon the contacts between Greece and Orient in the astronomic field after 440 B.C., which do not convince M.L. West, *Early Greek Philosophy and the Orient* (Oxford 1971, Italian translation by G. Giorgini, *La filosofia greca arcaica e l'Oriente*, Bologna 1993), 309-331. On this subject, see G. Pettinato, *La scrittura celeste* (Milano 1998), 331 ff.

[18] Plato, *Epinomis* 987b, cited translation, p. 471.

[19] As an example, cf. lines 5-8, 30-33, 73-74 of the Hymn: *Ishtar si presenta*:

5 Quando sto nei cieli la sera
io (come) luce del cielo sto alta nel cielo.
Quando al primo mattino m'affaccio nei cieli ...
dal sorgere del sole fino al tramonto, io [domino]
il cielo (?).

30 Quando sto la sera nei cieli,
io sono la signora che riempie i confini del cielo.
Il mio aspetto nei cieli ispira soggezione,
al mio bagliore divino si conturbano i pesci
nell'abisso.

73 (Quando) mi presento nei cieli [mando] la pioggia;
(quando) mi presento sulla terra [faccio spuntare]
la verzura.

Italian translation by G.R. Castellino, *Testi sumerici e accadici* (Turin 1977), 94-97.

[20] Cf. E. des Place, in *Platon, Oeuvres Complètes,* Volume *XII*, p. 126.

[21] U. Koch-Westenholz, *Mesopotamian Astrology* (Copenhagen 1995), 122-123.

[22] Plato, *Epinomides* 984a.

[23] Even though in the *Enuma Elish* it is clearly stated that planets are images of the gods, the same ambiguity can be found in the Sumerian texts. In some of them, like for example in a Pre-Sargonic text issued

with their movement and relevant colors; characteristics which were well expounded by the Babylonians. In the *Astrolabe B*, for example, Mars receives as much as 24 names, three of which are relative to its color.[24] With regard to this matter, Des Places, in his comments to the *Epinomides*, reports an affirmation of F. Cumont according to whom "A l'époque alexandrine seulement, les astronomes helléniques imaginèrent "pour les cinq planètes des noms tirés, non de leurs rapports avec telle ou telle divinité, mais de leur aspect physique. Saturne fut le Lumineux, Jupiter le Resplendissant, Mars le Rutilant ou l'Igné, Vénus le Porte-Lumière, et Mercure le Scintillant." A cet égard aussi, d'ailleurs, ils avaient été devancés par leurs confrères chaldéens"."[25]

In the above mentioned *Laws*, Plato observes that Greeks erroneously affirm that the sun and the moon

> do never travel on the same course and that also other stars do so,
> but "wander" all ways,[26]

that is "planets." In this regard, Simplicius[27] informs us that Plato asked all astronomers to find which were the regular and uniform movements able to explain the planets' apparent movement. Eudoxus answered with the theory of the concentric spheres. According to an anonymous commentator,[28] he brought to the Greeks the Assyrian spheres. According to the scholar Pingree,[29] this affirmation is true as Eudoxus described a large number of constellations known in Mesopotamia. Then, he also placed solstice and equinox in the middle of the following zodiac signs: Aries, Cancer, Libra and Capricorn, showing, this way, he was continuing the Mesopotamian tradition expressed in the manual *Mul-Apin*, the composition final date of which goes back to the year 1000 B.C.

Furthermore, from the Astrolabes dating back at least to the Kassites' period, that is 1400 B.C., we know about the existence, already in that epoch, of the zigzag pattern to measure the length of the day.[30] Then based on the stars' revolution and on the mutual relation on the basis of their speed, the so-called stars'

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during the reign of Urukagina, hereinafter enclosed, the sky seems not to coincide with the sky god, that is An. I am expressly using the conditional because, as we know, in the interpretation of the Sumerian texts, there is the aged problem of the distinction between sky An and god An.

In quel giorno (tutto) era argilla
I [ ]
i vermi possano scendere là,
la terra possa far risplendere la sua …,
nei pacifici prati e campi
egli riempì di acqua un buco (scavato) nel terreno.
II An incedette da signore come un giovanotto,
Cielo e Terra si chiamarono vicendevolmente:
allora Enki (ed) Eridu non erano germogliati,
Enlil non esisteva (ancora),
Ninlil non esisteva (ancora);
III Quando esso era argilla,
il bocciolo era ancora argilla,
i giorni non erano chiari,
le falci lunari non sorgevano ancora.

(Italian translation by G. Pettinato, *Mitologia Sumerica* (Turin 2001), 96-97).

[24] Or: fire-red star; red star; yellow star.

[25] E. des Place, *Platon. Ouvres complètes*, 125-126.

[26] Plato, *Laws* VII, 821c, cited translation, p. 113.

[27] Simplicius, *De caelo*, 498a.

[28] Anonymous commentator of Aratos. Cf. F. Lasserre, *Die Fragmente des Eudoxos von Knidos* (F. 2), (Berlin, 1966), 39.

[29] D. Pingree, *Legacies in Astronomy and Celestial Omens*, in S. Dalley (edited by), *The Legacy of Mesopotamia*, (Oxford 1998), 133.

[30] G. Pettinato, *La scrittura celeste*, 330; at page 378, note 4, of chapter XII of the same volume, the Italian scholar reminds that "Il metodo era basato, secondo O. Neugebauer, *Le scienze esatte nell'antichità* (Milano 1974), 142 ff., sulla constatazione che il movimento della luna non è costante, ma oscillante da un massimo a un minimo, sicché per la misurazione si stabilisce un valore intermedio calcolato matematicamente."

withdrawal had already been observed in the 8th century B.C.[31] Also their periodicity, which Plato speaks about in the *Republic*[32] and in the *Timaeus*,[33] has an Oriental origin.

But why did Plato need the astronomic data?

According to Jaeger, "Die Hypothese der Kreisförmigkeit und vollkommenen Gesetzmäßigkeit der Umläufe der Planeten und der periodischen Wiederkehr der ursprünglichen Gesamtkonstellation in dem großen Weltjahr rückte den Grundgedanken Platons, den der Herrschaft des Geistes und der Ordnung über die materiellen Erscheinungen der Sinnenwelt, in das überraschendste Licht und eröffnete fruchtbare Beziehungen zwischen Philosophie und Tatsachenforschung."[34]

According to Plato, Adorno observes, "Astri, luna, terra, saranno pure di terra e di pietra e di fuoco, ma in quanto si muovono e i loro moti sono calcolabili in misure e proporzioni, in termini di intelligenza, e, quindi, in leggi, essi sono 'animati,' sono la prima espressione della causa prima e sono, dunque, divini. Entro questo termine divine sono tutte le 'leggi' da quelle che ordinano il movimento dei cieli, nella loro circolarità, specchio della 'prima divinità', a quelle senza di cui non vi sarebbe un corretto ragionare, alle leggi degli Stati,"[35] therefore: "Risolta ..., per Platone, la 'natura' nei termini della razionalità, di cui la divinità è il principio, si capisce che per Platone... empi divengono gli Stati di 'oggi' che ritengono empio chi si occupa della divinità e degli dèi che non sono oggetto di scienza e di ricerca, per cui leggi e rapporti umani ed istituti sono dovuti all'arbitrio di chi ha più forza, dei potenti, siano essi i *dèmi* o i *signori*."[36]

On the other hand, one could object, as it occurred, that the Babylonian astronomy, arrived to the Greeks through the mediation of Philip of Opous and Eudoxus of Knidos, was functional only to the astrology, had a religious basis, was practised and studied exclusively by the priests. In other words, it wasn't a real science.

As far as the astrology-astronomy relation is concerned, it must be observed that for the ancients, included Greek and Latin scholars, there was no distinction between astrology and astronomy.[37]

Then it's true that the Mesopotamian astronomy had a religious basis, or better still it was imbued with, as the stars, "the gods' writing," sent messages to the men. But just for a full comprehension of the divine will, it was necessary to study the

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[31] As we can deduce from a passage taken from a report to the sovereign (SAA X 8): "Se Marte, retrocedendo, entra nello Scorpione, non essere negligente durante la tua osservazione; il re non dovrebbe uscire di casa in un giorno così nefasto" (Italian translation by G. Pettinato, *La scrittura celeste*, 206). Planets' impossibility to wander has both a scientific and mythological explanations, as we deduce, for example, from the *Enuma Elîsh*.

> Dopo che egli ebbe stabilito la durata dell'anno con le costellazioni,
> egli fondò la postazione della stella polare (Nebiru) per determinare i legami fra le stelle,
> e affinché nessuna di esse potesse errare o essere negligente,
> egli stabilì vicino ad essa le postazioni di Enlil ed Ea

(Translation by G. Pettinato, *La scrittura celeste*, p. 81).

[32] Plato, *Republic*, 529a-530b; 616b-617d.

[33] Plato, *Timaeus*, 39b-d e 40a-b. Furtheron, D. Pingree observes, *Legacies in Astronomy and Celestial Omens*, 133, that Plato was informed about the division of the ecliptic into twelve parts, as we understand from *Phaedrus*, 246e-247c.

[34] W. Jaeger, *Aristoteles*, *cited*, 157-158.

[35] F. Adorno, *Introduzione a Platone* (Bari 1978), 226.

[36] F. Adorno, *Introduzione a Platone*, 227-229.

[37] Plato, too, here and there in his works, mentions the stars which are interested in the human matters (*Laws*, X 886 d-e) and send signs (*Timaeus*).

sky. Therefore, the religion represents a motivation and incentive of the astronomic study. It is the search engine. And because of this, we are not surprised by the level reached by the ancients in the scientific discoveries, which were certainly not only of an exclusively practical kind. Then, contrary to what one could think, the astrologer didn't belong to the religious entourage. He was simply a scholar of the celestial things.[38]

The Greek attitude towards the astronomy is totally different. As we already said, the astronomy was considered a useless science, disrespectful towards the gods. Its practice could lead to the accusation for impiety, as occurred to Socrates. Then, the religion in Greece inhibited the scientific research, at least in this field.

In any case, when it wasn't used for practical utility, but within and as a support of a philosophical thought, the astronomy[39] kept a strong link with the religion. For example, in the *Laws*, Plato affirms that the citizens have to learn from this science at least that much allowing them "not to blaspheme about them, but always to speak piously both at the sacrifices and when they pray reverently at prayers."[40] We should also note, then, how he uses the astronomic data defending his thought which, in the *Epinomides*, becomes a real astrolatry.

However, to admit that the Orientals have produced science, a science "from which it was possible to draw inspiration for the philosophy," means to question the contemporary studies on the development of the thought, that is the passage from the *mythos* to the *logos* and from the practical science to the theoretical science.[41]

Due to this firm belief, the continuous and productive contacts between the Greek and Oriental intellectual worlds were never emphasized, and, when recognized, they have mainly been relegated to the so-called beginning of the philosophy, that is to the pre-Socratic thought.[42] I say 'mainly' as the scholars of Plato's School recognize the relations with the Orient; the Academy is even considered a core of a trend having an Oriental turn of thought.

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[38] As underlined by G. Pettinato, *La scrittura celeste*, 132, the astrologer was he who knew "... perfettamente il movimento delle stelle e ne interpreta i segni che gli dèi mandano agli uomini perché possano regolare la loro vita e così non soccombere ai mali eventuali."

[39] Cited translation p. 113

[40] Plato, *Laws*, 821d, cited translation, p. 113.

[41] On this subject, we have to underline that W. Burkert, *Da Omero ai Magi. La tradizione orientale nella cultura greca*, 52, observes "… Non è il caso di affermare che gli orientali rappresentino il prerazionale, il livello mitico da cui i Greci hanno preso le mosse per dare inizio all'illuminismo; la dipendenza dei Greci è evidente soprattutto nel campo dell'astronomia dove i Babilonesi svilupparono metodi di calcolo assolutamente razionali, mentre nelle cosmogonie il mito continuò a dominare anche tra i Greci. E' diventato un luogo comune che siano stati i Greci a compiere l'intero cammino dal μῦθος al λόγος. In tempi più recenti è stato osservato che anche gli orientali, ad esempio i dotti assiri, erano già su questa strada."

[42] By affirming this, I do not want to deny that the philosophic speculation is a Greek product, I would just like to stress the point that the productive contacts between Orient and Occident were not limited to the previous periods – according to what is generally and tendentially affirmed; I'd also like to point out that, in the beginning, the theorical thought needed the results originated by the non-Greek investigations.