Greece: Child of Egypt

by Susan Kokinda

In 490 B.C., 11,000 Greeks battled 30,000 Persians on a plain north of Athens, called Marathon. In the previous century, the Persians had cut a swath of pillage and conquest westward from their homeland in what is today Iran; they defeated everything in their path: Babylon, Assyria, the entire Turkish peninsula, northern Greece, and the great milliennia-old civilization of Egypt. Nothing, it seemed, could stop them.

But in two days of fighting, the Greeks, with fewer than 200 dead, defeated the Persians, killing over 6,000 of their forces. Ten years later, at the naval battle of Salamis, the Greeks again routed the Persians, destroying the Persians' numerically stronger fleet. In both battles, the Greeks deployed superior forces, from commanders, down to common soldiers. Yet, the tiny Greek city-states had only, in the previous 200 years, recovered from a centuries-long dark age.

clipart.com

The Sphinx, on the Giza Plateau.

In the centuries before and after the battle of Marathon, Greek civilization erupted with a science, an art, and a statecraft which was based on a method of knowing and acting on the universe. Among the gifts of that Classical method are the 15th-Century European Golden Renaissance, the more perfect union of the U.S. Constitution, and the science which put a man on the Moon.

Yet, from approximately 1200 to 800 B.C., the Greek peninsula had experienced a dark age. Its great cities, like Pylos and Mycenae, lay in ruins, its written langauge was lost, and its population levels collapsed. One hundred years later, around 700 B.C., Homer wrote his great epics, *The Iliad* and *The Odyssey,* which presented, in dramatic form, the lessons of that collapse, and the seed crystal of the solution. Then, in 600 B.C., the Greek city-states, on mainland Greece, and on the Ionian coast of Turkey, began to recover. The dawning of the Sixth Century B.C. saw the great political reforms of Solon of Athens, and the scientific work of Thales and Heracleitus. The close of that century found Greece positioned to defeat the Persians.

Where did this upstart civilization come from, to develop, so suddenly, the power to defeat the previously unconquerable Persians, and to unleash such revolutionary new capabilities for mankind?

The answer is: Egypt.

Lyndon LaRouche recently described Classical Greece as the "child of Egypt." The great figures of the Sixth Century—Solon, Thales, and Pythagoras—were, in fact, the children of Egypt, each having travelled to Egypt and

studied under the Egyptian astronomer- and geometer-priests. Through them, and others, Egypt transmitted a science—a method of knowing the universe which has reached its current height in the works of Gauss, Riemann, and LaRouche. Yet, the role of Egypt in relation to science, astronomy, and mathematics, has been almost universally rejected by modern historians of science, as the following samples show:

Chronology

The dates in this chronology are meant to give the reader a sense of the general unfolding of events, and are not meant to be precise. For example, different authorities will have differing dates for Egypt's kingdoms. All dates are B.C.

23,000-10,000	Late Wuerm Period of last Ice Age
10,000-6,000	Glacial melt, rising of sea levels, rainy period in Egypt
3200	"Accepted" date of unification of Egypt
2700-2180	Old Kingdom of Egypt
2650-2500	Construction of Saqqara and Giza Pyramids
2180-2000	First Interdynastic Period in Egypt
2000-1700	Middle Kingdom
1700-1520	Second Interdynastic Period (Hyksos i nvasion)
1520-1300	New Kingdom
1195	Trojan War between Greece and Troy
1200-800	Greek Dark Age
700	Homer writes *Iliad* and *Odyssey*
600	Solon, Thales
569	Liberation of Egypt from Persians by Egyptian General, then Pharoah Amasis
550-530	Pythagoras in Egypt
530/525	Pythagoras to Croton, Italy
525	Egypt falls to Persia again
500	Eradication of Pythagorean community; Pythagoras dies
490-480	Greeks defeat Persians at Marathon and Salamis; Persian War
469	Birth of Socrates
431-404	Peloponnesian War
404-378	Egypt liberated from Persia
399	Execution of Socrates by Athenian "Democracy"
388-386	Plato travels to Sicily to educate Dionysius I; thrown into captivity; then saved by Arcytus
385	Plato returns to Athens and founds Academy
378-341	Persia reoccupies Egypt
334-323	Alexander's campaigns which destroy Persia and liberate Egypt

"[L]ooking at Egyptian mathematics as a whole, one cannot escape the feeling of disappointment at the general mathematical level. . . . Babylonian mathematics . . . did supply a basis for Greek mathematics. . . . We do not need to set up a hypothesis concerning a lost Egyptian higher mathematics."

—B.L. Van der Waerdan;
Science Awakening (Noordhoff, 1954)

"[M]athematics and astronomy played a uniformly insignificant role in all periods of Egyptian history . . . mathematics and astronomy had practically no effect on the realities of life in ancient civilizations."

—O. Neuegebauer;
The Exact Sciences in Antiquity (Dover, 1969)

"The Greeks owed much more to the Babylonians than to the Egyptians."

—Thomas L. Heath;
Greek Astronomy (Dutton, 1932)

Nor will one find much literary evidence of Egypt's role in these fields in available, ancient writings. There are only a few written mathematical-scientific papyri that have been discovered, most dating from Egypt's Middle Kingdom (2000-1800 B.C), and none from the great Pyramid Age of the Old Kingdom. Of Pythagoras, the central figure in this transmission, there are no extant writings. Nor are there any from other Pythagoreans of his generation.

But, if you look with your mind, instead of with your senses, the evidence is abundant.

From Egypt, to Plato, to Kepler

A comparison of a passage from Kepler, to one from Plato, begins the journey. Kepler, in the introduction to Book 5 of the *Harmonice Mundi*, pays homage to the importance of Egypt: "I am free to taunt the mortals with the frank confession that I am stealing the golden vessels of the Egyptians, in order to build of them a temple for my God, far from the territory of Egypt. If you pardon me, I shall rejoice; if you are enraged, I shall bear up. The die is cast, and I am writing this book—whether to be read by my contemporaries or not. Let it await its reader for 100 years, if God himself has been ready for his contemplator for 6,000 years."

Kepler is echoing a passage from Plato's *Laws*, in which Plato, in the person of the Athenian Stranger, cites the same Egyptian golden vessels: "Then there are, of course, still three subjects for the freeborn to study. Calculations and the theory of numbers form one subject; the measurement of length and surface and depth make a second; and the third, is the true relation of the movement of the stars to one another. . . . Well then, the freeborn ought to learn as much of these things as a vast multitude of boys in Egypt learn along with their letters.

. . . The boys should play with bowls containing gold, bronze, silver, and the like mixed together, or the bowls may be distributed as wholes."

What is the subject of the boys' play? The incommensurable, as the Stranger elaborates next. In questioning Cleinias, he establishes that Cleinias believes he knows what is meant by "line," "surface," and "volume." Then:

"**Athenian:** Now does it not appear to you that they are all commensurable [measurable], one with another?

Cleinias: Most assuredly.

Athenian: But suppose this cannot be said of some of them, neither with more assurance, nor with less, but is in some cases true, in others not; and suppose you think it is true in all cases; what do you think of your state of mind in this matter?

Cleinias: Clearly, that it is unsatisfactory.

Athenian: Again, what of the relations of line and surface to volume, or of surface and line one to another; do not all we Greeks imagine that they are commensurable in some way or other?

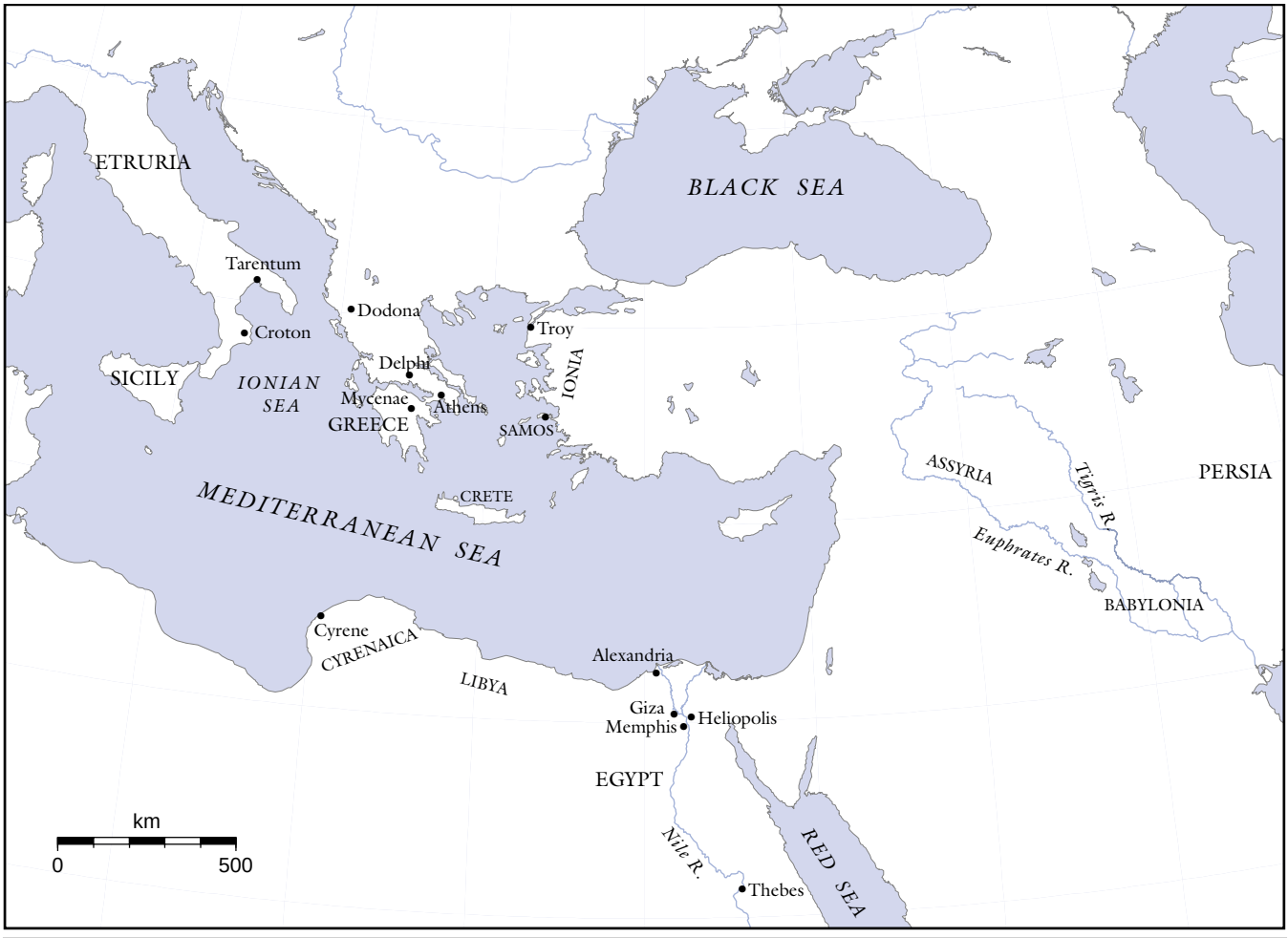
Cleinias: We do indeed.

Athenian: Then if this is absolutely impossible, though all we Greeks imagine it possible, are we not bound to blush for them all, as we say to them: 'Worthy Greeks, this is one of the things of which we said that ignorance is a disgrace?' "

With this brief section of the *Laws*, Plato has given us the essence of the "who" and the "what" behind the development of Classical Greece: The "who" is Egypt, the "what" is a geometrically grounded mathematics, for which the questions involving the incommensurable were primary. Plato unpacks the various paradoxes which deal with the incommensurable in the *Meno*, the *Theaetetus*, and the *Timaeus*.

Many readers will be familiar with Plato's "introduction" of the problem in the *Meno:* that the diagonal of the square is incommensurable with its side. That Socrates is threatened for his method, in the course of the dialogue, by Anytus (who later, helps precipitate his trial and execution), perhaps foreshadows Kepler's recognition that some will be "enraged" by such ideas.

But it is in the *Theaetetus* and the *Timaeus* that Plato estab-



The Mediterranean Region
ca. 2500-300 B.C.

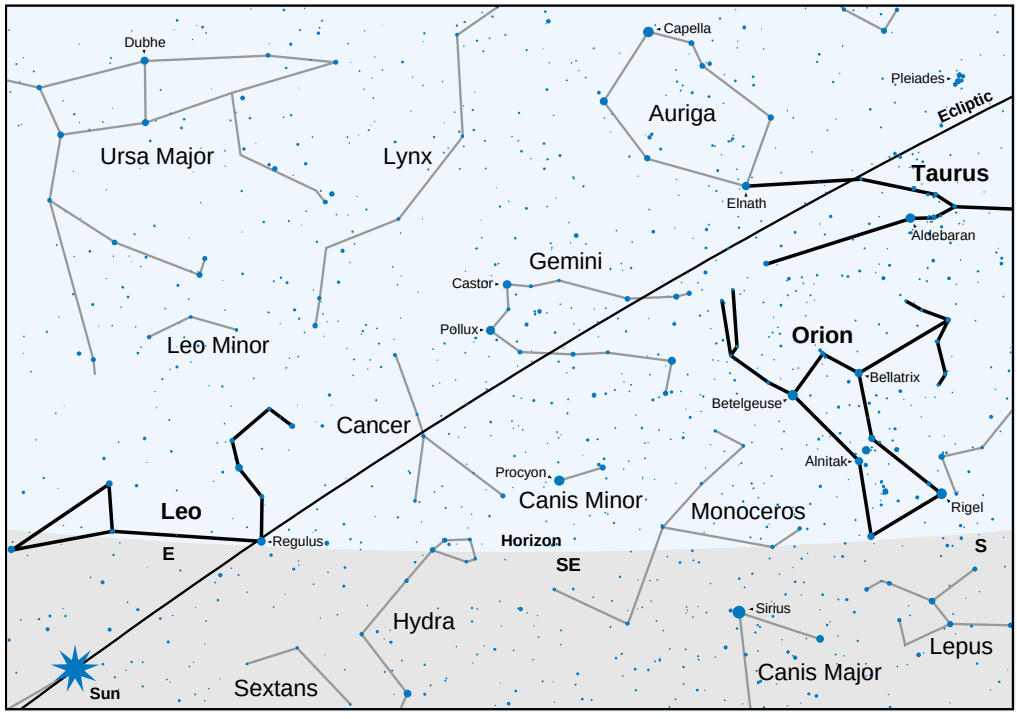
lishes, directly, the debt to Egypt. The *Theaetetus* begins to introduce the necessary concept of "power" or *dunamis.* The power which creates a square or a cube is an action in the universe, an action knowable to the mind, but not reducible to the sense-certainty numbers of the visible domain. The two characters in this dialogue, besides Plato, are two real geometers who made fundamental breakthroughs. The older of the two, Theodorus, comes from the Greek-Egyptian city of Cyrene, a city on the western edge of Egypt, and dominated by the Temple of the Egyptian god, Zeus Ammon. Theodorus is the teacher of the young Theaetetus who goes on to discover the uniqueness of the five Platonic solids.

The *Timaeus*

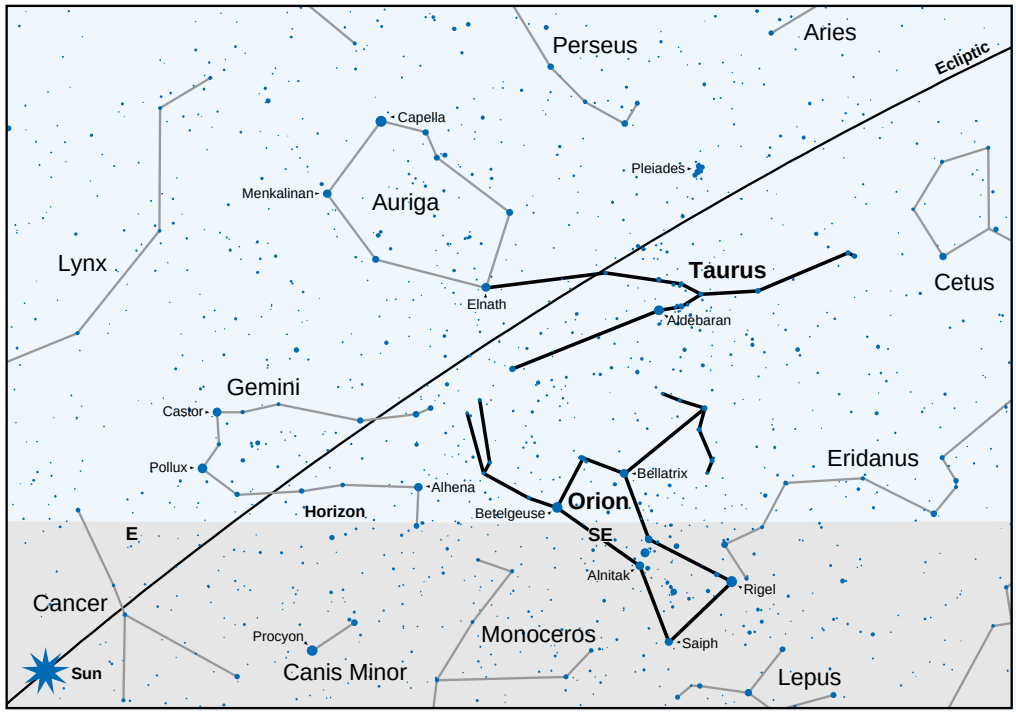
In his masterwork, the *Timaeus*, Plato is even more direct in identifying Greece's debt to Egypt. Plato opens the dialogue by having Plato's uncle Critias tell of the voyage of their ancestor Solon to Egypt, and his instruction by the priests of Heliopolis. When the priests chide Solon, that the Greeks are children, and have no knowledge of ancient things, they tell Solon that Egyptian knowledge and civilization extend back 9,000 years (hence, to 9600 B.C.). With that introduction, Plato unfolds his composition on the universe, in a Pythagorean discussion of astronomy, harmony, and geometry.

Indeed, Pythagoras was the key figure in the transmission of Egyptian knowl-

Although stars move across the sky from East to West in their daily and yearly motion, precession "drags" them slowly "backward" from West to East, over a 26,000-year cycle. (The shaded area represents what is below the horizon.)



10,500 B.C.: *In the hours before sunrise on the vernal equinox, the constellation Leo sits directly on the Eastern horizon, and Orion (Osiris) stands on the Southern horizon.*



8000 B.C.: *Leo has "precessed" below the horizon and is no longer the heliacal constellation on the vernal equinox. Similarly, Orion has nearly disappeared. Note the position of Taurus.*

edge to Greece. The Sixth Century B.C. was the century of Solon, Thales and Pythagoras, and was the century in which the leadership in this method of thinking, passed from Egypt to Greece. Iamblichus, biographer of Pythagoras, writing in the Third Century A.D., said that it was Thales, the Ionian scientist, who deployed Pythagoras to Egypt:

"When he had attained his 18th year, there arose the tyranny of Polycrates; and Pythagoras foresaw that under such a government, his studies might be impeded. . . . So by night, he departed alone [from the island of Samos] . . . going to Pherecydes, to Anaximander the natural philosopher and to Thales at Miletus. . . . After increasing the reputation Pythagoras had already acquired, by communicating to him the utmost Thales was able to impart to him, Thales, laying stress on his advanced age, advised Pythagoras to go to Egypt, to get in touch with the priests of Memphis and Zeus [priests of Ammon—ed.]. (*Plato*, Vol. 11, Loeb Classical Library, Harvard; lines 819-820)

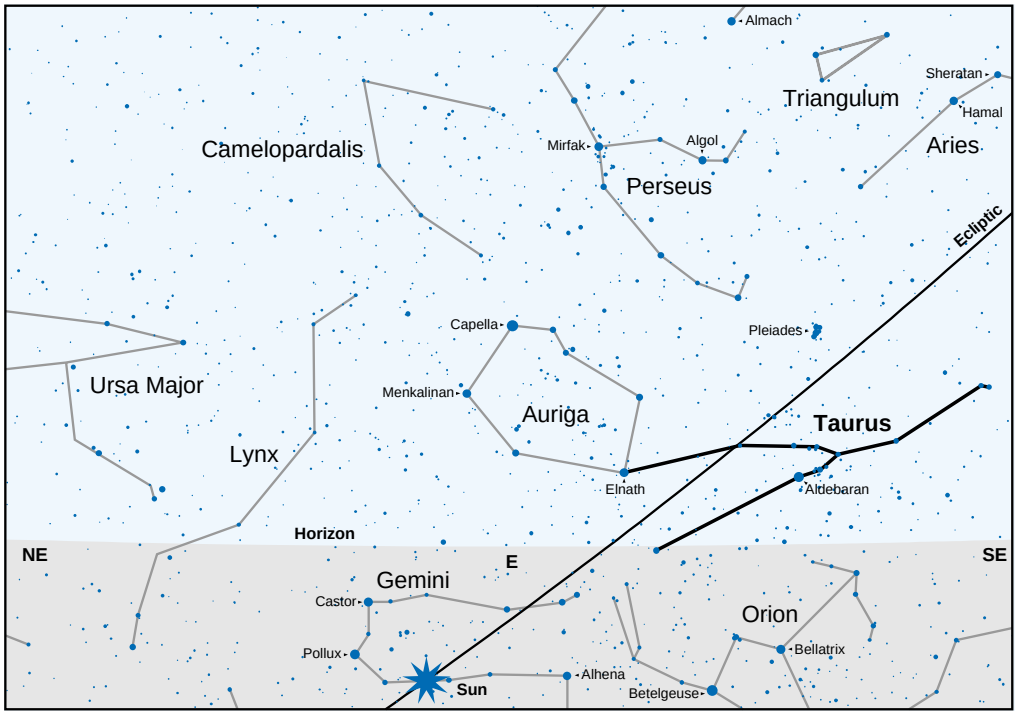
"Thales confessed that the instruction of these priests was the source of his own reputation for wisdom, while neither his own endowments nor achievements equalled those which were so evident in Pythagoras. Thales insisted that, in view of all this, if Pythagoras should study with those priests, he was certain of becoming the wisest and most divine of men. . . . He [Pythagoras] visited all of the Egyptian priests, acquiring all the wisdom each possessed. He thus passed 22 years in the sanctuaries of the temples, studying astronomy and geometry, and being initiated in no casual or superficial manner in all the mysteries of the Gods." (Iamblichus, *Life of Pythagoras* (Phanes Press, 1988)

Working back from Plato's various identifications of Egypt as the wellspring of a geometrical, astronomical, and harmonic tradition which is embedded in the study of incommensurables, to the history of the Sixth-Century B.C. travels and studies of Solon, Thales, and Pythagoras, one might ask Mr. Van der Waerden and his co-thinkers, why they think that Egyptian higher mathematics is either "lost" or non-existent. Perhaps, as Kepler suggests, it is the rage induced by living inside a reductionist's mind that can only see the shadows cast on the cave wall.

Let the Stones and the Stars Speak

But where do we find in ancient Egypt itself, the origins of the Pythagorean and Platonic traditions? The answer is: in the heavens.

Start with an exercise to free your mind from the reductionist notions of sense-certainty numbers, and from the idea of a universe composed of discrete, infinitely divisible particles: Look at the sky as the ancients did. Imagine yourself on the Giza plateau (of the Great Pyramid and the Sphinx) in 2500 B.C., or earlier. Nothing obscures the sky in any direction. No artifical lights ever dim the brilliance of the stars and other celestial bodies. Think of the daily motion of the sun: one period; or the annual motion of the sun: one period; the varying periods of the moon, or the planets: each different, but each one period. Stuck in a world of discrete counting numbers, you can get irritated very quickly—none of the periods fit into each other. (Why do we need leap years? Is the addition of one day every four years sufficient over centuries?) Astronomical observation plunges you immediately into a universe full of incommensurables!



6000 B.C.: *Taurus (Horus) is sitting directly on the Eastern horizon on the vernal equinox, and Orion has completely disappeared—Osiris is dead, and has been replaced by his son, Horus.*

Yet, each of those periods is a One, and the mind begins to grapple with the concept of oneness, and with the relationship of the "onenesses," and with a higher oneness, or a highest oneness which may encompass the relationship of all the incommensurable cycles.

The Egyptian hieroglyphic for "one" speaks loudly of this ancient world view. Take the symbol () and turn it on its side, it represents an open mouth. Why? Because when Ptah, the creator god, created the universe, he did so by speaking. ("In the

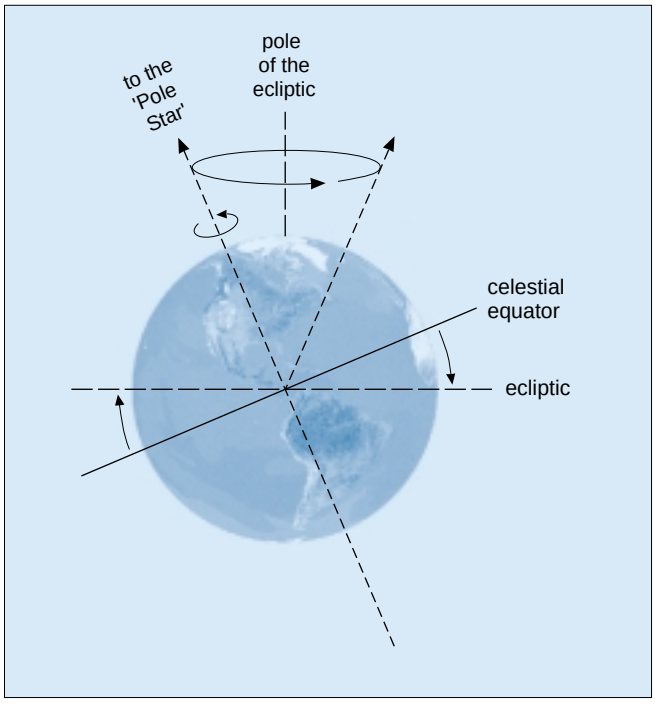


FIGURE 1

The precession of the equinoxes (about 25,700 years), appears as a gradual shift in the apparent positions of rising and setting stars on the horizon, as well as a shift in position of the celestial pole, a phenomenon which arises because Earth's axis of rotation is not fixed in direction relative to its orbit and stars, but rotates (precesses) slowly around an imaginary axis called the "pole of the ecliptic," the direction perpendicular to the ecliptic plane (the plane of the Earth's orbit.)

beginning was the word. . . .") To the Egyptians, the idea of One is the idea of a single universal principle of creation. Everything in existence unfolds from the One, an idea which Kepler later echoes when he uses the word, "*dianoia*" (through the mind) to discuss the unfolding of the universe from God's mind.

Now, pull out a globe, put a light source (the Sun) in the center of the room. Play with the daily and yearly motion of the Earth around its axis and around the Sun. In which direction is the Earth rotating in order for the Sun to "rise in the East and set in the West"? You quickly discover that everything in the sky, which you see with your senses, is an inversion of the actual motions of the Earth.

Next, let us take one of the longer astronomical cycles—the approximately 26,000 year top-like rotation of the Earth called precession of the Earth's axis, or precession of the equinoxes (**Figure 1**). Notice on your globe that the axis of the Earth is not perpendicular to the plane of the solar system (the floor of your room)—it is at an angle, 23° off the perpendicular. Today, the axis points at Polaris, our current North Star. Rotate that axis, as a top would rotate, over a 26,000-year cycle. Different stars will become the "North Star" over that period of time.

This rotation is in the opposite direction of the daily and yearly rotation of the Earth. So, over the thousands of years of this cycle, stars and constellations are slowly rotating "backwards" in our sky. A constellation will rise a little later, on the same day, each year. Use your mind to think about the actual motions of the Earth, and how that translates into what you see with your eyes in the sky. So, today, on the vernal equinox, the Sun rises in Pisces, as it has for about 2,000 years. In several hundred years, it will rise in Aquarius (hence, the lyrics to that infernal song we still hear in elevators).

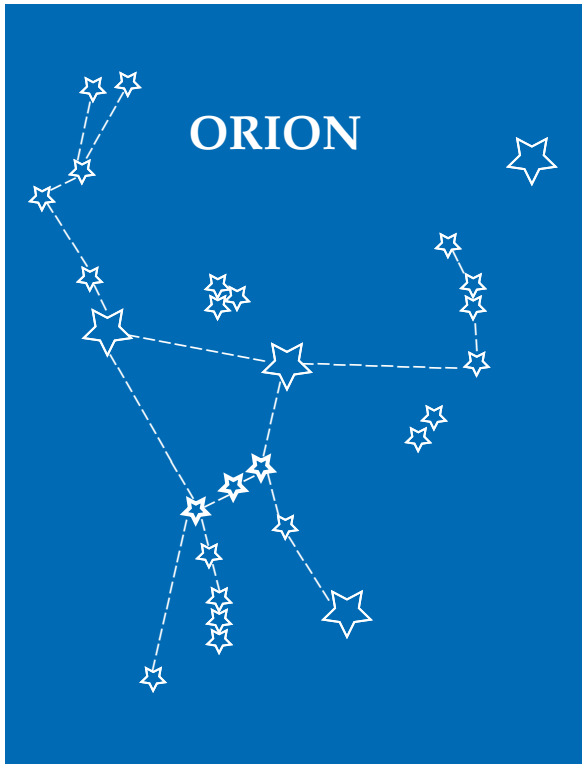
The idea that this 26-millennia precessional period would be relevant to, or recorded by, ancient civilizations, is anathema to the oligarchy. After all, according to them, civilization started in Mesopotamia, only about 3000 B.C.—hardly enough time to notice even a portion of one 26,000-year cycle. Yet, the precessional changes of the constellations in the sky, are found throughout ancient literature and society. (Tilak's work, *The Orion*, is among the most competent, in a growing literature on the subject, during the last hundred years or so.)

How Old Are the Pyramids?

Let us now take the date identified in Plato's *Timaeus*, about 10,000 B.C., (9,000 years before Solon's visit in 600 B.C.). Remember, we are dealing with very long cycles, so these dates are not identifying one year, but an era of about 2,000 years. Look at the skies of Egypt from the Giza Plateau, adjusting for the precessional shifts. What does the sky look like in the hours before dawn on the vernal equinox, an annual event marked by most cultures? The constellation due east, on the horizon is Leo (the lion). This is called the heliacal constellation (rising just before the Sun in the East). To the South, Orion (one of the most prominent constellations, with its belt of three stars), is at its lowest culmination in its 26,000-year-precessional cycle. Orion bestrides the horizon.

What is on the ground of the Giza plateau? The Sphinx and the three main pyramids. The Sphinx (a lion's body, with a man's head) is looking due east, right at the constellation of Leo, pre-dawn on the vernal equinox around 10,000 B.C. (Most ancient cultures, including Egyptian, Chinese, and Indian, divide the constellations of the zodiac—those constellations on the ecliptic plane—in an amazingly uniform way. The lion, scorpion, ram, bull, etc. appear in most.) The three pyramids, although right next to each other, are not in a straight line to each other. If you were to draw a line through the apex of the two larger ones, the third smaller pyramid would be slightly off kilter. Look at Orion's belt: Draw a line from the two brighter stars in the belt, the third, "smaller" star is off kilter, in the same way as the third pyramid.

Does that mean the pyramids were built in 10,000 B.C.? No. Not only is the record of the building of the pyramids (around 2600 B.C.) during the Old Kingdom of Egypt, very



The three pyramids are in the same relationship to one another, as the stars in Orion's belt.

clear, but the pyramids themselves were **astronomical observatories,** with shafts that look at the three most important stars in the sky (Orion's brightest star, the North Star of the time, and Sirius), in 2600 B.C., not 10,000 B.C.

Does that mean the Sphinx was built in 10,000 B.C.? That is a more interesting and very controversial question. There is no real textual evidence that identifies when the Sphinx was built. There is evidence of water erosion on the walls of the quarry which surround the Sphinx, which argues that the stones for its building were quarried during a period of heavy rainfall, last seen in that area around 6000 B.C. The controversy swirls among scientists, Egyptologists, and a fair share of kooks, and is beyond the scope of this article. (I lean toward the much older dates.)

But whenever the Sphinx was built, those who built it and the pyramids, built them with a knowledge of how the skies looked in 10,000 B.C. That is when, in the 26,000-year cycle, Leo is on the pre-dawn eastern horizon, on the vernal equinox, and Orion, to the south, is at his lowest culmination.

Egyptian history, culture, and religion are filled with the images of zodiacal and other prominent constellations. The precessional changes in those constellations give us a long-cycle calendar of Egyptian civilization, much older than the dating of Egypt's pre-dynastic unification around 3200 B.C.

Leo and the Sphinx point to the time when Earth's most recent Ice Age was in its final stage of melting, and major climatic changes were afoot; perhaps the time when a seafaring, Atlantean civilization was launching a new society on the Nile—what Egyptian religion calls "the first time."

Orion, while not on the ecliptic of the zodiacal constellations, does dominate the pre-dawn sky from 10,000 B.C. to 6700 B.C., at which point, precessional movements delay its rising until it coincides with the rising of the Sun, and cannot be seen. Orion, as the ancient texts make clear, is Osiris. His disappearance from the pre-dawn sky is his "death."

The near-by star, Sirius, the brightest in the sky, is known as Sothis, and is well-identified with Isis. The Egyptians had several calendar cycles, the longest of which was the Sothic calendar, based on a 1,461-year cycle of Sirius. Knowing that these stars and constellations were astronomically important, one can read the Pyramid texts, the *Book of the Dead,* and many other ancient Egyptian writings as descriptions of the motions of celestial bodies. Certainly, that was their original purpose, not the "death cult" concept, which was introduced, in its most elaborate form, by the Delphic priest Plutarch, and which dominates current discussions of ancient Egyptian religion.

After the disappearance of Orion/Osiris, Taurus, the bull, replaces him as the heliacal constellation of the vernal equinox. Jane Sellers, in her book *The Death of the Gods in Ancient Egypt,* proposes that the battle between Horus and

Seth, to replace Osiris after his death, is mirrored in the night sky. Taurus/Horus, the heliacal constellation of the vernal equinox, is counterposed to Scorpio/Seth, the heliacal constellation of the autumnal equinox. The Horus-as-Taurus idea is quite compelling, given the existence of a priest-astronomer class known as the Shemsu-Hor, or "followers of Horus."

Gods and Heroes

It is fascinating to compare the most ancient histories of Egypt, against this precessional backdrop. Diodorus Siculus, writing around 30 B.C., states that the "gods and heroes" ruled Egypt from 23,000 to 10,000 B.C., which coincides with the final period of the last Ice Age, when, as Lyndon LaRouche has hypothesized, a seafaring, astronomical culture existed. That 13,000-year period is also one-half of a precessional cycle. Diodorus then claims that Osiris brought civilization to Egypt around 10,000 B.C., at the time Orion is at his lowest point on the horizon. An earlier ancient historian, Manetho, writing about 300 B.C., similarly reports on a 12,000-14,000-year rule by the "gods," following by the rule of "demigods and kings," followed by the rule of the "followers of Horus."

How much of Egyptian culture was dominated by this "star-religion" and not a death cult, can be seen in any exhibit of Egyptian art or artifacts which includes an empty, open coffin. The lid of the coffin is often an elaborate star chart, so that the soul will know how to return to its star after its death. That idea is later echoed by the Pythagoreans, and is found in Plato's *Timaeus.*

Thus, when Thales and Solon speak of the knowledge gained from the priests of Egypt, they are speaking of an astronomical tradition extending back to, at least, the 9,000 years identified in the *Timaeus*. And Egyptian astronomy was a many-millennia-long immersion in astronomical incommensurables.

So, return once more to Plato, and his *Epinomis* (meaning "after the laws"). The Athenian Stranger poses, "But surely there must be found some science, the possession of which will cause the wisdom of him who is wise, in essence, and not wise merely in men's opinion. . . . [I]t is the science which gave number to the whole race of mortals; and I believe it was God, rather than some chance, who gave it to us, and preserves us. And I must explain who it is that I believe to be God, though he be a strange one, and somehow not strange either; for why should we believe the cause of all the good things that are ours, to, likewise, have been the cause of that which is by far the greatest of all, understanding?

"And who is it that I magnify with the name of God? It must be Ouranos [Heaven] which has full claim. . . . That it has been the cause of all the other good things we have, we shall all admit; that it really gave us number also, we assert. . . . For if one enters on the right theory about it (whether one be pleased to call it Cosmos or Olympos or Ouranos), but follow him in his course as he bespangles himself, and turns his stars in all their courses, providing us with seasons. . . . And thence, accordingly, we have understanding in general, together with number, and all other good; but the greatest of these is when, after receiving this gift of numbers, one lets one's mind explore the entire period. . . .

"Now, let us go on to inquire into the actual question of how we learned to count in numbers. Tell me, whence we have got the conception of one and two, a natural gift we have from the All, to enable us to conceive of such things? Then again, many other living creatures are not endowed by nature even to the mere point of being enabled by the Father to learn to count; whereas, in us, in the first place, God implanted this very faculty, so that we might be equal to comprehending that which is shown to us.

"Among such, what more singularly beautiful can a man behold than the genus of the day? Then he comes to the part of night with his vision; and there, we will find quite another sight before him. And so the heaven, revolving these very objects for many nights and many days, never ceases teaching to each man, the idea of one and two, until even the most unintelligent have learned sufficiently to number; and will form the notion of three and four and many, each of us must further conceive on seeing those objects.

"And among them God made one thing he wrought, the Moon, which shows herself at one time larger, at another smaller, and runs her course, showing ever a new day, until 15 days and nights are passed. If one will treat its whole orbit as unity, constituting a period, we may say that even the least intelligent creature must learn it, among those whom God has bestowed the natural gift of the capacity to learn. Within this, and in this whole, the power of the living is able to count, when it examines any one itself. But as to the reckoning of number, as they all do in their relations to each other, I think that God, not only for a greater reason, but for this end, installed as we mentioned, the waxing and waning of the Moon, and combined the months to make up the year, and they all began to have insight into the relations of number with number, by a happy occurance." (*Plato,* Vol. 12., Loeb Classical Library, Harvard; lines 976-977 [slightly edited].)

The Historical Battle

Locating Plato's dialogues within this arc of history, from Egypt to Greece, only serves to intensify their power. One is reminded of LaRouche's description of his youth movement as a "combat university on wheels," when one looks at the battle to transmit these ideas from Egypt to Greece.

From the time of the unification of the Upper and Lower Kingdoms of Egypt—today, generally set around 3200 B.C., but undoubtedly much earlier—through to 1200 B.C., Egypt had a remarkable record of independence and continuity. A relatively brief period of instablity occurred between the Old Kingdom (the Pyramid Age) and the Middle Kingdom. This

first inter-dynastic period lasted from approximately 2180 to 2000 B.C. Foreign invaders (known as the Hyksos) occupied Egypt from around 1700 B.C. to 1520 B.C., the second inter-dynastic period, which separated the Middle Kingdom from the New Kingdom.

So, with only these two inter-dynastic upsets, Egyptian civilization existed, with amazing stability, for over two millennia. Then, around 1200 B.C., toward the end of the New Kingdom, various civilizations around the Mediterranean and the Black Sea, entered into a period of dislocation and collapse. The Trojan War, between the Greeks and their Trojan cousins, resulted in the collapse of both societies, and ushered in the 400-year-long Dark Age in Greece. The Hittite Empire, which dominated the Turkish peninsula, and sometimes beyond, collapsed, never to recover.

As a result of this instability, roving bands, including Libyans, Etruscans, Greeks, and others, known as the Peoples of the Sea, added to the tumult. Egypt was invaded by and fought, both their southern neighbors, the Nubians (today, Sudan), and the Peoples of the Sea. The continuity and power of Egyptian society was weakened. Much more significant attacks came from various eastern oligarchical societies. At varous times between 1100 and 500 B.C., different parts of Egypt were under different foreign occupiers. The great cities of Heliopolis and Memphis in the north, and Thebes in the south, were conquered or sacked.

The geographical center of the oligarchical enemy shifted, from Assyria to Babylon, and finally to Persia in 550 B.C., but the essential characteristic of tyranny, pillage, slavery, and usury remained the same.

Throughout this period, the Temple of Ammon, based in Thebes, was at the center of defending Egypt, sometimes succeeding in restoring Egyptian rule to all of Egypt, sometimes to only part of it. Together with the priests of Heliopolis and Memphis, they preserved the astronomical and mathematical knowledge of the past, and began to establish outposts and colonies in order to preserve, and, ultimately, spread this knowledge. In the Seventh Century B.C., the Temple of Ammon played a role in the establishment of the city of Cyrene, Cyrenaica—the city which later produced the geometer Theodorus, of the *Theaetatus* dialogue, and other Pythagoreans. The Temple of Zeus Ammon, founded at Dodonna (in modern-day Albania), was, much later, important in the life of Alexander the Great, as we shall see.

(The parallel of Egypt's colonization of Greece, Italy, and Ionia, to that of the European Renaissance forces colonizing the Americas, two millennia later, is unmistakable.)

Pythagoras in Egypt

The Sixth Century B.C. saw the passing of the baton from Egypt to Greece. In Egypt, the key figure was Amasis (570 to 525 B.C.), a general who became Pharoah after allying with the Libyans and Cyrenaicans, and liberating Egypt from the Babylonians. Amasis was married to a Cyrenaican Greek, and was described by Herodotus, as a great friend of the Greeks. He was the host of Solon and Thales, and, later, of Pythagoras.

Pythagoras, as recorded by Iamblichus, spent over 20 years in Egypt, probably from around 550 B.C. to 530 B.C., under the reign of Amasis. He returned to his native island of Samos, whose leader Polycrates had been in an alliance with Amasis and Egypt. But, Polycrates betrayed Amasis to ally with the now-dominant Persian Empire. It was during this period that Pythagoras left Samos, or, perhaps was redeployed, to another area of Egyptian influence, southern Italy. There, Pythagoras founded his community in Croton, and he and his followers soon liberated a number of other cities from local tyrannies.

As Pythagoras was establishing his presence in Italy, Egypt was beginning its fall to the Persians. Amasis died in 525 B.C., and his son and successor lost Egypt to the Persians in 522 B.C.

But Egypt had given successful birth to its offspring, Greece. Greece defeated the Persians at Marathon and Salamis by 480 B.C., and liberated Egypt, briefly, from the Persians.

But then, as today, the oligarchy knew and feared the power of universal ideas and those who carried them. Pythagoras and his followers came under two kinds of attack. The first was very direct and physical. As many ancient sources report, the main Pythagorean community of 50 to 60 people, was trapped in their main dwelling in Croton around 500 B.C., and burned to death. Pythagoras either escaped or was not among them, but died shortly thereafter.

But the Egyptian-Pythagorean method, of knowing the universe through the mind, came under a different kind of attack—one which finds its current corollary in the Nietzschean and Straussian philosophical and political currents. Deployed directly against the Pythagoreans were the Eleatics, most notably Parmemides, who argued that, since truth was not knowable through the senses, truth was not knowable at all! It was a short step from this, to the Sophists, who simply declared that there is no such thing as truth, and whoever gives the best speech (or has the biggest army) wins. It should not be a surprise to find that most of the 20th Century's most notorious existentialists, such as Nietzsche, Heidegger, and Hannah Arendt, were enamored of the Eleatics.

The Temple of Apollo at Delphi helped to spread the infection of the Eleatics and the Sophists to Greece over the next century. Where the generation of Greeks who were victorious at Marathon and Salamis, had ignored the Oracle at Delphi, which told them to surrender to the Persians, the next generation was easily manipulated by the Oracle (that day's version of Fox-TV). Pericles and other leaders were heavily influenced by Sophists such as Protagoras and Gorgias, and were manipulated by the Persians through the Oracle at Delphi, into the disaster of the Peloponnesian Civil War (431-404 B.C.).

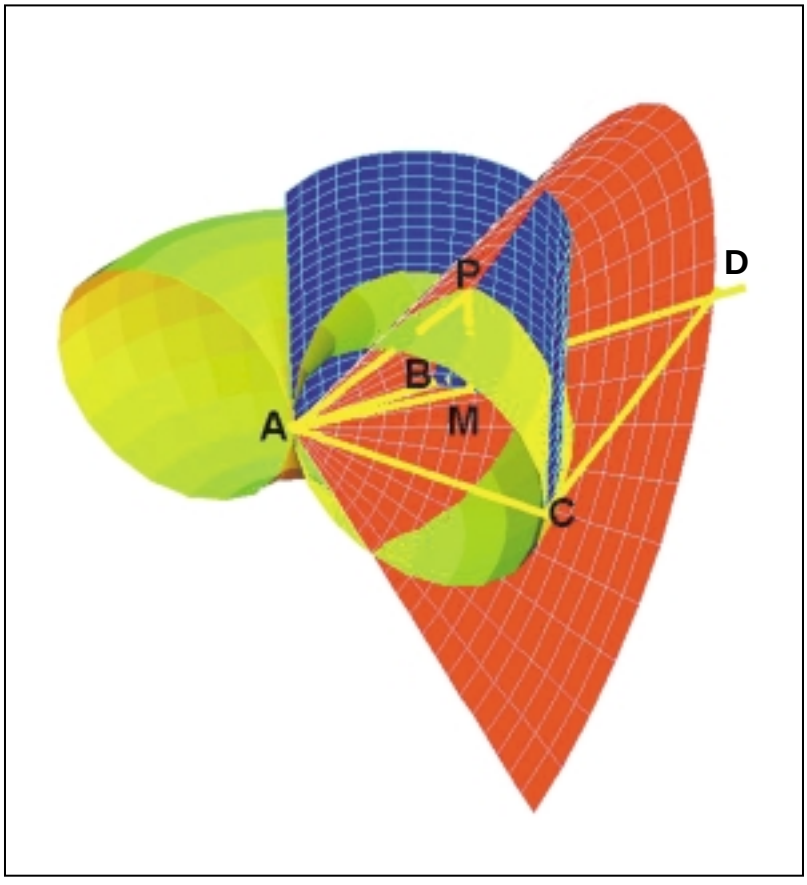


FIGURE 2
Arcytus, the Pythagorean geometer and statesman, who discovered this solution to the problem of doubling the cube, saved Plato's life in Italy, in 386/85 BC.

Again, today's parallel deployment of the existentialist "Staussians," such as Paul Wolfowitz and other "Chickenhawks," in leading the United States into an imperial war-precipitated disaster, bears a lawful resemblance to the destruction of Athens.

Socrates was executed, shortly after the end of the war, for daring to try to undo the damage of Persian-manipulated public opinion, and to teach the youth of Athens to, once again, seek the truth. Socrates was as deadly a threat to the Persian-dominated Democratic Party of 400 B.C., as Lyndon LaRouche is to the organized-crime-dominated Democratic Party leadership of today.

But Socrates' truly sublime death provoked his young protégé Plato, to abandon his career in politics and turn his attention to creating philosopher-leaders. Plato attempted to put his ideas into practice and educate a "philosopher king," in Sicily, travelling there in 388 B.C. His effort collapsed under the strategic necessity of chosing an inadequate candidate, Dionysius I. Plato found himself held captive and, in danger of being sold into slavery. Plato was saved by his friend, the Pythagorean statesman, and leader of the Tarentum League, Arcytus—whose solution to the problem of the doubling of the cube is one of the great discoveries in the history of knowledge (**Figure 2**).

Plato returned to Athens to found the Academy, and to give the world the gift of his dialogues—spiritual exercises which simultaneously provide unique insight into the history and nature of the battle extending from ancient Egypt to Socrates.

A student of Plato's method, Alexander the Great, whose mother was a priestess of Ammon, at the Temple of Dodonna, finally destroyed the Persian Empire, liberating Greece and Egypt. Alexander made a pilgrimage to the Temple of Ammon at Siwa in western Egypt, after his liberation of Egypt, where he founded the city of Alexandria. After his assassination, his political heir, Ptolemy I, began the construction of the great Library at Alexandria, which gathered together the greatest works of this millennia-long intellectual journey. One can surmise that the works of early Pythagoreans, and more than just fragments of Thales and Arcytus, and more extensive texts of Erathosthenes and Apollonius, were under that roof, only to be burned, in the First Century B.C., by Persia's child—the evil Roman Empire, at the start of another long dark age.

As we have seen, the ancient Egyptians looked to the stars, and believed that a good man's soul returned to the star whence it came, after his death. It is time to defeat the oligarchy, permanently, so that mankind can take the heritage of Egypt, of Plato and Kepler and Gauss, and travel to those stars, not merely in spirit, but in fact.

Author's Note on Sources and Recommended Reading:

Most of the current literature on the "alternative history of Egypt," is dominated by kooks and intelligence assets, the latter most notably represented by Graham Hancock, co-author with Robert Bauval of *The Message of the Sphinx* (Crown, 1996).

Jane B. Seller's *The Death of the Gods in Ancient Egypt* (Penguin, 1992) is an exception, and is a serious effort at presenting an hypothesis based on science and astronomy.

The standard in this methodology, was set by Bal Gangadhar Tilak, whose books, *The Arctic Home of the Vedas* and *The Orion*, examine the Vedic hymns, to demonstrate the much older origins of Vedic civilization, than presumed by the British.

Two other books which I consider well-intentioned and serious are *Hamlet's Mill* by Giorgio de Santillana and Hertha von Dechend (Godine, 1977), which looks at the sweep of ancient civilizations and mythologies from the standpoint of precession, and *Homer's Secret Iliad* by Florence and Kenneth Wood (John Murray, 1999), which examines Homer's *Iliad* from a precessional approach.

A note of caution, however: Unless the reader is approaching the investigation of these subjects with a "Platonic" and "Gaussian" methodology, it is very easy to wander into the thickets of kookery and unsubstantiated speculation.