## THE CALCULUS OF PRECESSION.

'ONE YEAR OF THE MORTALS<br>IS EQUAL TO ONE DAY OF THE GODS.'<br>The Puranas, India.

This metaphor of astronomical time, from the Puranas of India, has very profound implications, when it is understood as a metaphor of PROPORTIONALITY AND SIMILARITY for all human knowledge; because it implies that, when a human being thinks at the level of the higher hypothesis, as ancient Indian, or Egyptian astronomers-navigators did, that is, at the level of the GREAT YEAR cycle of the sun, then he has elevated his mind to approximate the simultaneity of eternity, which expresses the individual experience of immortality, that each human being strives to achieve during his, of her, lifetime.

From this standpoint, what is known as PRECESSION TIME is not only an important element of what every human being needs to study in order to understand astronomy; it is the most crucial form of human observation in the universe that children can use to reflect, in their own minds, the highest level of human knowledge as a whole, from the most ancient times until today. Those individuals, who have reached immortality, in that form of study, during early human civilization, can rejoice at the thought that, young children, today, in 2,100 AD can reconstruct their knowledge and re-experiment their precious discoveries of THE CALCULUS OF PRECESSION. Thus, we have established the purpose of our present report.

## WHAT IS PRECESSION?

In astronomical terms, precession is the cyclical period it takes for the sun to proceed through the twelve houses of the Zodiac. The way that this is reflected on earth is through the effect of a triply connected curvilinear action of the
earth with respect to the universe as a whole: that is, a spinning of the earth, like the spinning of a top, which wobbles at an extremely slow pace of a little less than $\mathbf{2 6 , 0 0 0}$ years per cycle; that rotation of the axis of the earth corresponds to THE GREAT YEAR, which determines the orbiting of the earth around the sun: THE EARTHLY YEAR [the day of the gods], as well as the rotation of the earth: the EARTHLY DAY of twenty four hours. [ note on hylozoic monism] Similarly, the human mind proceeds in its universal motion of reason through three levels of self-reflexivity: the triply-connected reflexive process of selfconsciousness. That is how the Universe, and the human mind alike, are created in the image of God, the creator. This is the reason why the CALCULUS OF PRECESSION is the most important pathway of thinking for any human child.

Imagine then, an axis going through the North and South pole of the planet performing a very slow circular rotation against the backdrop of the celestial sphere, and returning to its original position after 25,977 years of rotation. During that period of time, all of the stars of the Northern, and Southern hemispheres, perform an exquisite dance around the pathway of an imaginary sky globe, whose north pole, you must now attempt to see with your mind's eye. [Figure 2]

However, you must consider that the pathway of precession does not represent the true motion of the stars themselves; it merely describes the APPARENT motion of those stars due to the multiply-connected motions of the earth. The PROPER MOTION of a star, that is, the multiply connected angular change between right ascension and declination can, however, be identified, if the star is fairly close to our planet, as in the case of Sirius, which is only 8.4 light years away. Thus, over several thousands of years, the changes of Sirius must be taken into account, as they were taken into account by ancient Egyptians. However, the stars of the Orion Belt, for example, are extremely far, about 1,400 light years away, so, no significant PROPER MOTION can be recorded from it, within a period of $\mathbf{5 0 , 0 0 0}$ years of human accountability on this planet.

This proportion, between Sirius and the Orion Belt, is a very important proportion because it enabled the ancient Egyptians to measure with extraordinary accuracy, the cycle of life for the universe as a whole. Several amazing observations of Herodotus attest to this.

## THE ACCOUNTS OF HERODOTUS.

'During this time, they said, there were four occasions when the sun rose out of his wonted place - twice rising where he now sets, and twice setting where he now rises." Herodotus, THE HISTORY, [2.142] <foot note>

The significance of this rather cryptic message is that it implies an ancient Egyptian knowledge of the solar year: that is, the knowledge of the path that the sun travels by going [eastward] through the twelve houses of the Zodiac, or the path of the stars going in the opposite direction, as a result of the precession. It does not matter which way you proceed. The result is that the Egyptians had a definite ability to measure the precession period of $\mathbf{2 5 , 9 2 0}$ years by half rotations, that is by cycles of $\mathbf{1 2 , 9 6 0}$ years, which is the minimum calculation that they were able to do with a significant amount of accuracy. The question is: "HOW DID THEY DO IT?"

The discovery of how this was done is really child's play. Start from the time of Herodotus: that is, around 480 B.C., which is the period of the high priest Hephaestus, and work you way back in time. On the day of the vernal equinox [September 22], at the time of Herodotus, the sun rose in the eastern sky, against the constellation of Aries, and was therefore setting in the constellation of Libra. So, in order to rise twice in Libra, as the account attests [TWICE RISING WHERE HE NOW SETS], the following has to be calculated. Draw a circle of the Zodiac, and divide it into twelve equal parts. [Figure 1]

Consider that, at the other end of the cycle position of Aires, in the west, the sun was setting in the constellation of Libra. If you calculate half the cycle of $\mathbf{2 5 , 9 2 0}$ years, for the time that it takes for the vernal point of Aries to arrive at the current position of Libra, you must go back 12,960 years. Then, what you have is a first inversion where the sun has set ONCE WHERE NOW HE RISES, that is in Aries. Now, for the sun to rise again in Aries, you must go back a full cycle of $\mathbf{2 5 , 9 2 0}$ years. Then, you can say that the sun has SET TWICE WHERE HE NOW RISES; that is in Aries again. Meanwhile, the inverse has also occurred; that is, the sun has RISEN TWICE WHERE NOW HE SETS; that is, in Libra, for the same period of time. That makes a total of $\mathbf{2 5 , 9 2 0}+\mathbf{1 2 , 9 6 0}=\mathbf{3 8 , 8 8 0}$ years for one cycle and a half duration. That is an extremely large period of time where the Egyptians were able to measure the PRECESSION OF THE EQUINOX. [See further details of this in the report of the French mathematician, Schwaller de Lubicz, SACRED SCIENCE: THE KING OF PHARAONIC THEOCRACY, Inner Traditions International, Rochester, Vermont, 1988.]

The discovery of the precession cycle is generally attributed to the Greek astronomer, Hipparchus [second century B.C.] who was able to identify an annual change in the position of the sun, of about 46' seconds of arc; a rough approximation in comparison with the current figure of 50.274 seconds of arc, which corresponds to today's measurements. But, what we are looking at with Hypparchus, is actually a rediscovery, since the ancient Egyptians could also calculate that the sun would take about 72 years, that is approximately a lifetime, to make that annual change of 50 minutes, which corresponds to one sixtieth of one degree. When you consider that there are 360 degrees in a circle, which the ancient Egyptians knew how to calculate, and that the greatest circle of the ecliptic that you can observe is the complete tour of the horizon, the size of this annual change would roughly correspond to the size of your little finger, when you extend your hand toward the horizon.

By stating such a duration, where the sun was to RISE TWICE WHERE HE NOW SETS, Herodotus was giving us a SPECIFIC PERIOD OF TIME which corresponds to the time it takes for the sun to rise and to set during one and one half cycle of the GREAT YEAR. In terms of observation of the stars with respect to the rising and setting of the sun, this meant three periods of $\mathbf{1 2 , 9 6 0}$ years each, representing a total of $\mathbf{3 8 , 8 8 0}$ years. This implies that the ancient Egyptians were already measuring the precession of the equinox, approximately 41,000 years ago. This is the most ancient period of precession ever recorded in the entire history of mankind!

## THE HIGHER HYPOTHESIS OF THE YEAR BASED ON THE STARS

Such a slow rate of change as represented by PRECESSION required a very broad and firm measure of mental determination, which could only be acquire if some individuals of an ancient civilization were able to practice a clockwork measurement from the standpoint of a higher hypothesis; that is, the kind of thinking that is required of an individual who is able to go back, or forward, in his measurement of relative time of precession events, with some understanding of a periodicity that is relative to absolute time; that is, the time assigned to the simultaneity of eternity in which he participates. Thus, the study of this periodic cycle of almost 26,000 years becomes the founding bedrock, the metaphor of all scientific knowledge, the basis from which any scientific investigation can begin
to emerge from the darkness of pre-historic mankind. The question is: How did ancient civilizations discover this?

Well, to accomplish the task of determining the precession of the equinox, you require a very precise and patient observation; no computer needed. All you need is to have a very patient and firm design that is coherent with reason, and with the universal quality of the human mind; that is, a mind that inquires from a principle of multiply-connected circular action, and from the standpoint of PROPORTIONALITY AND SIMILARITY. This is how the Egyptians were thinking.

Herodotus provides us with more insights into that sort of thinking :
'But as far as human things go, this is what they [the Heliopolitan chroniclers.] said and were in agreement with one another: that the Egyptians were the first of mankind to invent the year and to make twelve divisions of the seasons for it. They said that this invention of the year was based on the stars. Their reckoning, in my opinion, is much cleverer than that of the Greeks; for the Greeks must insert one intercalary month [because they were counting from the seasons] every other year, but the Egyptians, by allotting thirty days apiece to each of the twelve months [and adding five days outside of the number in each year], make the cycle of the seasons come out to the same point as the calendar." THE HISTORY, [2.2-4]

Two things must be noted immediately. First of all, Herodotus makes 'the cycle of the seasons," conform with the periodicity of "the calendar." This obviously signifies that he is considering a PROPORTION BETWEEN THE CYCLE OF THE SEASONS AND THE PERIODICITY OF THE STARS. That is the key to the discovery here. The Egyptian year was therefore precisely $12 \times 30=360$ days. Five and $1 / 2$ days were added [outside of the number in each year] at the end of each year to celebrate the divinities; but, these were sacred days graciously given to man by the gods, and were not allowed to be included in the human year of $\mathbf{3 6 0}$ days. We shall discover why this is the case in just a moment. Secondly, the fact that he emphasizes that the invention of the twelve months "WAS BASED ON THE STARS", implies that the cycle of the stars is not "DEDUCED" from the seasonal monthly divisions, but, on the contrary, they are APPORTIONED according to the precession of the equinox. In other words, THE DIVISIONS OF THE MONTHLY CALENDAR COMES FROM THE TWELVE DIVISIONS OF THE ZODIAC, WHERE THE YEAR OF THE MORTALS COMES FROM THE DAY OF THE GODS.

If we pay close attention to this statement of Herodotus, we will discover that, indeed, he speaks from the standpoint of a higher hypothesis of PROPORTIONALITY AND SIMILARITY. First of all, in stating that 'the invention of the year was based on the stars," Herodotus makes the explicit point that the year is not to be based on the seasons [as the Greeks were doing], on the crops, or on the day to day toiling of human beings, as it is generally claimed by the pragmatists and the utilitarianism school. Indeed, he asserts that the movement, by which the pole of the ecliptic makes a full rotation every $\mathbf{2 5 , 9 2 0}$ years, is the basic movement that gives life to every other motion in the universe. It is that fundamental movement which is divided into the twelve constellations of the Zodiac. In other words, he started with the higher ordering of the cosmic order of truth, that is of MA'AT, the principle of ordering of truth and justice in the universe, the One, which determines the Many.

The importance of that approach to the UNIT DAY OF THE GODS, as a measure taken from the stars, is fundamental, because it is the unit whereby the twelve months of the year will become proportional to the twelve divisions of the precession of the equinox; that is, whereby ONE DAY IS TO THE GODS AS ONE YEAR IS TO THE MORTALS. So, this is the measure that can account for the daily activities of the mortals, but which cannot be deduced from any such daily activities. This is a discontinuity of physical space-time.

This means that in order to understand the significance of THE GREAT YEAR, you must think, not in hours, or in days, weeks, and months, but, as the ancient Egyptians did, in years, centuries and millennia. Anyone, who has his nose to the grind stone, and who relates to the world, from day to day, following some periodical set of hourly accounting, has no capability of understanding the kind of thinking that is required for the higher hypothesis of the CALCULUS OF PRECESSION.

Furthermore, the unit of THE GREAT YEAR is crucial for Egyptian measurement, because it establishes the limit of a periodic cycle, a definite accounting for the specific recurring position of the sun, in the observable hemisphere, and a definite recurring of positions of the stars in the same hemisphere. Then, and only then can you take one of those 26 units and divide it, in turn, into useful markers for the determination of the seasons; that is, the division of the $\mathbf{1 2}$ months into four seasons of 90 days each, and which are based, nowadays, on the winter solstice [21 December] to the spring equinox [22

March], and the summer solstice [21 June] to the fall equinox [22 September]. Thus, the Egyptians defined the precession of the equinox, from the standpoint of the higher hypothesis.

## HOW BRITISH INTELLIGENCE CREATES MAGIC

In their ORION MYSTERY book, Robert Bauval and Adrian Gilbert, wrote the following useful piece of scientific distortion in order to attract the lazy mind:


#### Abstract

"Having noticed that precession provided a uniform motion "eastward" of the sun along the ecliptic of some 1 degree 23 minutes per century relative to a given constellation or star, it was not difficult for ancient Egyptians to deduce that a full cycle would take about $\mathbf{2 6 , 0 0 0}$ years to return to the same place relative to the constellation or star."


This is a typical British intelligence absurdity, and fallacy of composition, a tautology whereby they pretend to deduce the whole from the part. You can't do it like that, because you don't know what the timing of one year is, let alone the timing of one whole century. You cannot make such a deduction because you need the whole cycle of $\mathbf{2 6 , 0 0 0}$ years, in order to make that assumption, or at least, half of the cycle, that is 13,000 years, and you don't even have that to go with. So, if the ancient Egyptians did know how to calculate quite accurately the entire cycle of the ecliptic, they must have discovered a different method. So, let us begin to debunk some of this British phony science.

First of all, It is not necessary to speculate on whether or not the ancient Egyptians were able to calculate, with extreme precision, the actual value of the duration of a cycle, whatever length that cycle may have had. The question was not how long is the cycle? That's the wrong question. What they were looking for was A PROPORTION BETWEEN THE GODS AND THE MORTALS, a proportion between the sphere of the heavens and the earth, a proportionality between two different worlds. In other words, the ancients knew that, according to reason, precession not only had to be proportional to living processes of earthly cycles, but also had a causal determination of life on earth as well. That is the ordering of truth and justice that they were seeking to discover in their astronomy : the proportionality between two incommensurable manifolds!

## A SIMPLE CONSTRUCTION DEVISED FOR OBSERVATION

Following the metaphor of proportionality devised by Nicholas of Cusa, and whereby, the CIRCLE IS TO GOD AS THE STRAIGHT LINE IS TO HUMAN BEINGS, the ancient Egyptians also believed that THE SPHERE OF THE HEAVENS IS TO THE GODS AS THE TERRITORY OF EGYPT IS TO THE EGYPTIAN PEOPLE; and therefore, THE LIFE OF THE IMMORTAL GODS MUST BE PROPORTIONAL TO THE LIFE OF MORTALS. The simplest expression of that idea lies in the proportionality between a man's life and a god's life with respect to precession. This is how the genius of Imhotep was applied to a crucial question: How can a man's life be a proportionate multiple of a god's life?

First of all, Imhotep was able to operate a division of the circle into 360 degrees, and apply it to precession. Secondly, he observed that 1 degree of change on the ecliptic corresponded to $\mathbf{7 2}$ years of a man's life. So, he established the following series of apportioning in which the lifetime of man is made proportional to the cycle of THE GREAT YEAR of precession.

| 1 | 360 |
| :---: | :---: |
| 2 | $\mathbf{7 2 0}$ |
| 4 | $\mathbf{1 4 4 0}$ |
| $/ 8$ | $/ 2880$ |
| 16 | $\mathbf{5 7 6 0}$ |
| $\mathbf{3 2}$ | $\mathbf{1 1 5 2 0}$ |
| $/ 64$ | $/ 23040$ |

## MAN'S LIFE TIME 72 YEARS THE GREAT YEAR 25920

The forward slash / represents in Egyptian notation the two proportional values that must be added to one another in order to obtain the desired total. The values of $8+64=72$ are proportional to $2880+23040=25920$. Thus, the multiplication of $72 \times 360=25,920$ becomes the metaphor of the proportionality of the two different manifolds, in which one lifetime of man $1 / 360$ is made proportional to THE GREAT YEAR of the gods, 72/25,920. You can pursue this calculus in the following manner.

Consider the multiply-connected circular action of precession in correspondence with a simple set of whole numbers. An ancient Egyptian astronomer would always use whole numbers for his calculus, and would relate them to the periodical observations of the precession of the stars.

360 is the number of degrees in the circle of the Zodiac.
12 is the number of divisions of the circle of the Zodiac.
30 is the number of degrees of one constellation of the Zodiac.
72 is the number of years required for the sun to shift eastward one degree along the ecliptic. [1.23 degrees per 100 years]
$72 \times 30=2160$ is the number of years required for the sun to shift 30 degrees along the ecliptic.
$2160 \times 6=12,960$ is the time it takes for the sun to set once where he now rises.
$2160 \times 12=25,920$ is the number of years required for the sun to complete the circle of the Zodiac, that is, the GREAT YEAR of precession.

These are the numbers that the Ancient Egyptians used to determine the proportionality of THE GREAT YEAR. Compare these ancient figures with those of Hipparchus of Samos, and note the closeness with today's figures:

| ESTIMATES | ANCIENT EGYPT | HIPPARCHUS | TODAY |
| :--- | :---: | :---: | ---: |
| 1 DEGREE | 72 years | 78.26 years | 71.6 years |
| 30 DEGREES | $\mathbf{2 , 1 6 0}$ years | 2,347.8 years | $\mathbf{2 , 1 4 8}$ years |
| 360 DEGREES | $\mathbf{2 5 , 9 2 0}$ years | $\mathbf{2 8 , 1 7 3 . 6}$ years | $\mathbf{2 5 , 7 7 6}$ years |

Once you discard the insane mumbo-jumbo garbage that the British-Israelite free-masons write about such numbers, then the simplicity, and the sanity of science regains its rightful place, as all the magical nonsense is thrown into the garbage heap. All the Egyptians did to calculate the GREAT YEAR, is to multiply the number of years in one degree of the circle by 30 , then, multiply the result by 12 to get the number of years in the full 360 degrees of the circle for the GREAT YEAR. This cycle is also coherent with what is called the PERIODICAL CYCLE OF THE HELIACAL RISING OF THE STAR SIRIUS. This is the first star, and most brilliant, to rise at dawn, after a seasonal absence, and just before the rising of the sun in the eastern sky. The surprising regularity of the rising of Sirius, marks precisely $365.1 / 4$ days between two such rising! Such a date corresponded to new years day of the Sothic cycle for the ancient Egyptians. According to the Pyramid Texts, discovered by Maspero, in 1881, Sirius is referred to as "THE NAME OF THE NEW YEAR." It is to this star that the southern shaft of the Queen's chamber, in the Great Pyramid is oriented. Note the astonishment of R.A. Schwaller de Lubicz concerning this phenomenon:
> "We cannot but admire the greatness of a science capable of discovering such a coincidence. The double star Sirius was chosen because it was the only star that moves the needed distance and in the right direction against the background of the other stars. This fact, known for thousands of years before our time and forgotten until our day, obviously demands an extraordinary and prolonged observation of the sky." SACRED SCIENCE: THE KING OF PHARAONIC THEOCRACY, P. 27.

## IMHOTEP : THE LEONARDO DA VINCI OF ANCIENT EGYPT

The Egyptians consider Imhotep as the Leonardo da Vinci of ancient Egypt. He was an architect, mathematician, engineer, astronomer, who served as grand vizier to King Zoser, about fifty years before the erection of the Great Pyramid. It was Imhotep, who was the architect-astronomer of the great pyramids of Egypt. He may also have been the designer and builder of see-going vessel similar to the streamline 4500-year-old boat, built to the specification of a 'Polynesian" design, that was recently found buried next to the Great Pyramid. There are at least five unmistakable references to the maritime role of ancient Egypt in the Pyramid Texts. This should be looked at very closely.

The lining up of the Chaops pyramid with the four cardinal points is in itself, a most extraordinary accomplishment; the discrepancy is about three minutes of arc in any direction; that is, a variability of about 0.06 percent. This accuracy provides for the lining up of a quasi perfect true north oriented meridian circle that would be projected through the tip of the pyramid. It is difficult to understand how Imhotep could have had a more precise measure for his precession calendar than Hipparchus had. According to Livio Catullo Stecchini, in his NOTES ON THE RELATION OF ANCIENT MEASURES TO THE GREAT PYRAMID, the ancient Egyptians were able, very early on, to establish a geodetic system of the entire territory of northern and southern Egypt. Graham Hancock notes that it was the French cartographers and surveyors of Napoleon Bonaparte, during the invasion of Egypt, who discovered that the Great Pyramid actually served as a geodetic marker, and an astronomical observatory. Hancock writes:
"One of the tasks the savants were set, after the conquest was completed, was to draw up detailed maps of Egypt. In the process of doing this, they discovered that the Great Pyramid was perfectly aligned to true north- and of course to the south, east and west as well, as we saw in part VI. This meant that the mysterious structure made an excellent reference and triangulation point, and a decision was therefore taken to use the meridian passing through its apex as the base-line for all other measurements and orientations. The team then proceeded to produce the first accurate maps of Egypt drawn up in the modern age. When they had finished, the were intrigued to note that the Great Pyramid's meridian sliced the Nile Delta region into two equal halves. They also found that if the diagonals running from the pyramid's apex to its north-eastern and north-western corners were extended (forming lines on the map running north-east and north-west until they reached the Mediterranean), the triangle thus formed would neatly encapsulate the entire Delta area.' [ Graham Hancock, FINGERPRINTS OF THE GODS, Three Rivers Press, New York, 1995, p.431.]

## SOME REMARKS ABOUT BAUVAL AND GILBERT'S BOOK : THE ORION MYSTERY.

Robert Bauval and Adrian Gilbert write that 'there is no hard evidence to prove that the subterranean chamber (of Cheops) was ever intended as the burial chamber of the king; indeed it may have been in existence before the
pyramid was built as part of an earlier structure on the same site." Bauval also indicates that the Queen's chamber was not meant for burial either. But why were these chambers built? The answer to these questions will be found by discovering the reason for the so-called "air shafts", which are directed true north and true south. The shafts in the Queen's chamber, however, do not, like those of the king's chamber, reach the outside of the pyramid. This means that they could not have been built for the purpose of ventilation, as it was previously supposed.

It is reported by Proclus, in his commentaries of the Timaeus of Plato that the Great Pyramid actually served as an astronomical observatory before it was completed. Many modern commentators, and especially British intelligence operatives of all sorts, also claimed that Cheops was an astronomical observatory in which the different corridors might have been used to sight stars while the pyramid was being built. In 1883, for instance, A. Proctor wrote a book THE GREAT PYRAMID: OBSERVATORY, TOMB AND TEMPLE, in which he indicated that the great gallery was used for the study of the movements of stars in the southern hemisphere, since it is aligned with the meridian.

However, Bauval and Gilbert will steer their delphic approach to the discovery of the Pyramid Texts, toward a stellar cult with Babylonian polytheistic overtones of star worship versus the solar ideology of the Pyramid Age represented by the American Egyptologist, James Henry Breasted. Bauval and Gilbert are hell bent on imposing an esoteric mystical meaning to the whole affair. This is not just a bias, this is a deliberate falsification of conclusions, turning a development of early astronomical science into a free-masonic mumbo-jumbo stellar symbolism for initiates. The purpose is obviously to destroy any historical account of ancient application of higher hypothesis. This is precisely in tune with Prince Phillip and Maurice Strong's polytheistic paganist revival of today. The significance of the Pyramid Texts is not that they showed the "belief that the dead king would be reborn as a star', but rather that the knowledge acquired from the understanding of the higher hypothesis of precession astronomy brings the mind to participate in the only true human knowledge which is that of simultaneity of eternity. And there is nothing esoteric or ritualistic about that. There is a difference between mingling mythologies and rituals with astronomy, and seeking universal application of ideas and making them available for future generations. We must rediscover how to use non-linear PROPORTIONALITY AND SIMILARITY as
metaphoric means of superseding deductive logic, and reductionist forms of scalar measurement.

## THE MAPPING OF SIRIUS AND THE ORION BELT.

There is no magic in considering that the Land of Egyptian Pharaohs was very early on used as a means of mapping the heavens, and that the pyramids themselves, with their galleries and shafts, have been used as instruments to measure the movements of the sphere of the heavens. So, there is no such symbolic meaning in the lining up of the pyramids with the Orion Belt. It does not mean that the constellation of Orion is 'one of the afterlife dwelling-places of the souls of departed kings who became stars," and who's souls escaped through the so-called "sighting shafts." This is all complete nonsense.

The way to look at the Pyramid Texts should be rather from the standpoint of, the demystification of such "Orion Mystery", and bringing out how the texts develop a metaphoric notation which shows a scientific understanding that the very architecture of the pyramids, their orientations with respects to the Orion Belt, and the relevant numbers pertaining to precession astronomy, are all reflections of ancient Egyptian understanding of a higher hypothesis of proportionality, that is of a proportionality between the two different manifolds of the gods and of the mortals, as we have indicated above, also the difference of manifolds between spherical geometry and plane geometry.

## FOOT NOTES

(1) A similar account is reported by POMPONIOUS MELA, Roman historian of the fist century A.D. 'In their authentic annals, one may read that since they [Egyptians] have been in existence, the course of the stars has changed direction four times, and that the sun has set twice in the part of the sky where it rises today."
[2] First, there is the historical account that the Egyptians can trace back their kings 11,340 years before the time of Herodotus [480 B.C.]
'Up to this went the record of the Egyptians and their priests; and they counted, from the first king to this priest of Hephaestus as the last, three hundred and forty one generations of men, and in these generations there had been, in each, a king and a high priest. Now three hundred generations of men added up to ten thousand years, for three generations of men are one hundred years. And the forty one of the generations that remain make up thirteen hundred and forty years. So, in eleven thousand three hundred and forty years, said the priest, there had never been a god in man-shape [a god in the image of man.]; nor, moreover, neither beforetime nor thereafter, among the rest of those who became kings of Egypt, had any such thing happened.
...'Hecataeus had traced his family tree and connected himself with this god in the sixteenth generation; but the priest countered by constructing a family tree by their method of reckoning, because they would not take it from him that a man had been born from a god. As they established their rival family tree, they declared that each one of these huge figures was a "piromis" succeeding a "piromis". Until they had gone through the entire line of three hundred and forty-five figures, and they failed to connect any one of these with either a god or a hero. A "piromis is, in Greek, a "gentleman." THE HYSTORY, 2.242-243.

Precession astronomy, that is, the astronomy of the solar system period as a whole, represents the clockwork of higher hypothesis, that is the clock of the stars which apportions their stellar years in periods of $\mathbf{2 6 , 0 0 0}$ earthly years cycles. How then can such a precession study be reflected as crucial for daily activity? What are the appropriate forms of inverted proportionality (opposite to the earth's spin?) which make the higher hypothesis intelligible to anyone for daily life, and how can such a proportional language be expressed by way of metaphor?

