

THE SUCCESSION OF WORLD AGES

Jane B. Sellers

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Taking up the challenge laid down in Hamlet's Mill to find archaeoastronomical origins for many of humanity's myths, Jane Sellers undertook to discover the correlations between the astronomical knowledge of the ancient Egyptians and their mythic structures. In this selection, she discusses the precession of the equinoxes, vital to the understanding of the Mithraic Mysteries. Hipparchus may have rediscovered this astronomical phenomenon, however, it is clear that the Egyptians were aware of it centuries before.

At the moment of the Spring Equinox the heavens are never in quite the same position they were in the year before, since there is a very slight annual lag of about 50 seconds, which in the course of 72 years amounts to 1 degree (50 seconds x 72 years = 3,600 seconds = 60 minutes = 1 degree) and in 2,160 years amounts to 30 degrees, which is one "sign" of the zodiac.

— Joseph Campbell, *The Masks of God: Oriental Mythology*.

Joseph Campbell, mythologist and author of such works as *Power of Myth*, *The Hero with a Thousand Faces*, and the four volume series, *The Masks of God*, has explained the results of the precessional wobble on the risings of zodiacal stars in the above way and his explanation may be helpful in visualizing this slow but steady effect.¹

The division of the zodiac into 12 equal parts of 30 degrees each is believed to have

been the product of a long development, for it is not until the fourth century BC that we find the first use of signs for these segments. But certainly by 700 BC, in a Babylonian text known as *MUL.APIN* the path of the sun was divided into 4 parts with the sun spending three months in each. Since the months were usually reckoned to have 30 days, it easily followed that the monthly segments of the zodiac would be each assigned 30 "degrees."

Antiquity of the Zodiac

Many astronomers harbor a belief that the division of the sun's path into twelve equal segments far predated this text. Charles A. Whitney, Professor of Astronomy at Harvard, in *Whitney's Starfinder, 1986–89* writes, "Three thousand years ago and perhaps longer—astronomers chose the sun signs according to the corresponding zodiacal constellations, and they set Aries at the spring equinox."²



Dominique Vivant, The Zodiac from the Temple of Hathor in Dendera. Original ca. 50 BCE. From *Description de l'Égypte* (1809) engraved during the Napoleonic expedition to Egypt.

At some date then, the 360 degree circuit was divided into 30 degrees, each with a sign that corresponded roughly with a zodiacal constellation. This division was a necessity for astrology, and spread throughout the ancient world.

There is, however, one difference to be understood; the Babylonian division of the zodiac was sidereal and differed from the later Greek system in that the addresses of the signs had a fixed position with respect to the stars. In the Babylonian system the sign of Aries stayed connected with the constellation Aries.

Equinoxes and Solstices

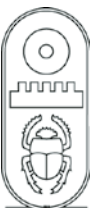
The Greeks introduced the tropical division of the zodiac, which defines the signs by means of the equinoxes and solstices. The equinox point in the spring is called the first point of Aries, and although Pisces now stands at the equinox point, the sign is still Aries. An individual born at the end of March comes into this world when Pisces rises with the sun, yet tropical astrologers are able to ignore the precessional shift and assign him a sun-sign of Aries. The difference now between the signs and constellations should be obvious.

Early astronomer-astrologers believed that every 2,160 years, because the sun rose in a new 30-degree segment of the zodiac at the vernal equinox, we would see a complete change in the world order. It is this idea that inspired the twentieth century song that proclaims, “This is the Dawning of the Age of Aquarius.” The 2,160 figure comes from taking the seventy-two year period that it takes for a 1-degree precessional lag at the horizon of a heliacal rising star and multiplying it by 30 degrees—(Indeed, although a tad off, Otto Neugebauer calls this value for the precessional change “the constant of precession”).³



Kneeling Hapi, Ptolemaic dynasty, ca. 332–30 BCE. On the Dendera Zodiac—and during the Greco-Roman period of Egypt in general—the Nile god Hapi was identified with Aquarius, the sign of the next precessional age. From the collection of the Rosicrucian Egyptian Museum.

Sidereally of course, the claim of a “New Age” is a bit premature. Although now at the boundary of two signs, the sun, at the time of the vernal equinox will not cease to rise in the stars of Pisces (where it has risen since about AD 300)⁴ until approximately AD 2700. At that time it will rise in the constellation Aquarius and the sidereal “New Age” will finally be experienced.



However, at a simpler time, before sophisticated understandings of the workings of the sky, the idea of the ending of a world age seems to have been intricately tied to special numbers; numbers believed to reveal the true workings of the universe.

So again, multiply the number 2,160, the number of years assigned for the length of a World Age, by the twelve zodiacal areas that the sun appears in and you will have their Great Year of 25,920. The sun has gone a distance of 12 times the 30 degrees of one sign, equaling a complete circle of 360 degrees. (Although today, we know that 25,920 is a tad incorrect: astronomers usually round out the time to 25,800 years.)

During this complete cycle, the stars of summer at one time will be seen as the stars of winter. Another result, due to the change in the declination of stars, would be the differing terrestrial latitudes at which certain star groups could be seen. During the centuries of the rule of Pharaohs, the Southern Cross was seen in the skies of Egypt (and of any other location of that same latitude, such as southern Florida) and disappeared about AD 700.

The clockwise circle traced out on the sky by the wobble of the earth's axis has a total angle of 47 degrees and it can easily be seen that our pole star, Polaris, will not remain the pole star forever. In 13,000 years Polaris will be 47 degrees from



King Esarhaddon of Assyria and his mother Naqi'a-Zakutu in the temple of Marduk. Bronze relief commemorating the restoration of Babylon by Esarhaddon, ca. 681–669 BCE. Photo © 2006 by Marie-Lan Nguyen / Wikimedia Commons.

the celestial pole, its location now, and other stars will have taken their turns at occupying this point in space. (In 14,000 years the bright star Vega will occupy this position.) Twenty-six thousand years from now, the earth's axis will once again point to the present pole star. Polaris too, will have experienced the Eternal Return.

These are the words of the Babylonian mythic hero, Marduk:

When I stood up from my seat and let the flood break in, then the judgment of Earth and Heavens went out of joint...The gods, which trembled, the stars of heaven—their position changed, and I did not bring them back.⁵

The Importance of Precession

Speculations from those working in astronomy, and also in the relatively new field of archaeoastronomy, that many myths originated in observations of the results of the precessional movement, have fallen for the most part on deaf ears. Astronomers often complain of the frustration that comes from realizing that archeologists too often are completely unaware that the North Star is not fixed forever, as indeed, neither are the so-called “fixed” stars.

Precession affects not only the zodiacal star groups, but indeed, the whole star field. The star charts in general use at the present time are predicated on the positions in the year 1950, and in the year 2000 this too, will be superseded by a new chart. Astronomers will call this “Epoch 2000,” and use the term of epoch differently than how we use it here, where it is used interchangeably with the term “Age.” [Ed Note: The text was first written in 1992.]

Archeologists, by and large, lack an understanding of the precession, and this affects their conclusions concerning ancient myths, ancient gods, and ancient temple alignments. Philologists, too, ignore the accusation that certain problems are not going to be solved as long as they imagine that familiarity with grammar replaces the scientific knowledge of astronomy. For astronomers, precession is a well established fact; those working in the field of ancient man have a responsibility to attain an understanding of it.

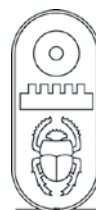
Dr. E.C. Krupp, Director of the Griffith Observatory in Los Angeles, has commented that “whether the Egyptians were fully aware of precession is one thing; that they responded to its effect is another.”⁶ Investigations along this line, however, have been directed at

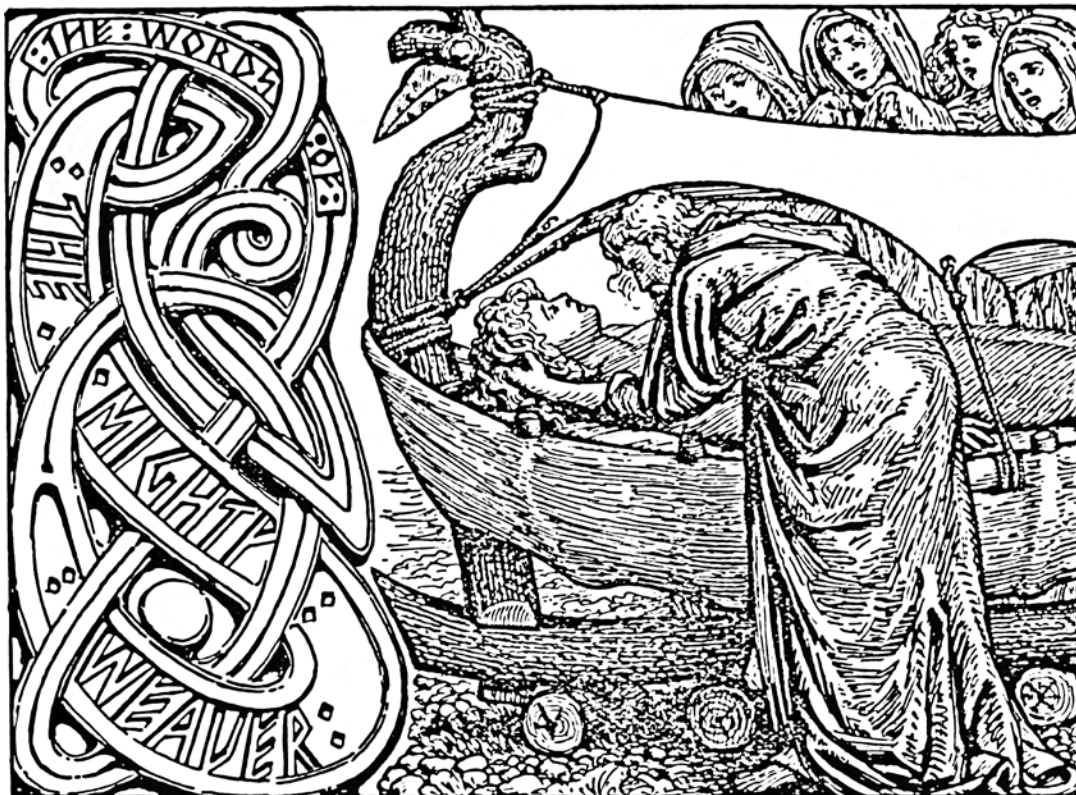
establishing alignments on important stars in different epochs. As far I can determine, no one has thoroughly searched the texts and the artwork to determine its effect upon their religion. We do know that man came to believe that this great cycle could affect human life as a whole; even that this inexplicable motion determined a succession of world ages, ultimately culminating in a return to the beginning.

It must be realized that it may not have been a difficult task to predict the number of years needed for the stars to return to the same place in the heavens. Once the lag was perceived, if it could be measured, finding the total number of years in a “Great Year” would have been merely a matter of simple mathematical computation. But could the lag have been measured with any degree of accuracy?

Ancient man was not limited in his ability to observe this lag. Nor, as we will see [ed: in subsequent chapters of *The Death of Gods in Ancient Egypt*], does he seem to have been limited in his ability to predict it, and to compute the expected time of the “Eternal Return.”

Balder lay dead on his funeral pyre, which would soon be in flames. But Odin had whispered a secret word to him. “You would feel better if you could find out what the magic word was, I think.” says High to King Gylfi....“Nobody knows or ever will know for certain except two people, Odin and Balder. But your own experience must have told you that nothing disappears, nothing is ever entirely destroyed, it only changes.... According to the prophecies the earth will rise again fresh and green out of the sea and the Aesir will rise to a new Asgard and meet like old friends.”⁷





W.G. Collingwood, *Odin's Last Words to Baldr*. The god Odin whispers in the ear of the dead Baldr, lying in the boat. From *The Elder or Poetic Edda*, 1908.

ENDNOTES

¹ Joseph Campbell, *The Masks of Gods: Oriental Mythology* (New York: Penguin, 1972), 117.

² Charles A. Whitney, *Whitney's Star Finder, 1986-1989* (New York: Knopf, 1985), 35.

³ Otto Neugebauer, "The Alleged Babylonian Discovery of the Precession of the Equinoxes," *Journal of the American Oriental Society* 70(1) (1985): 1-8.

⁴ The advent of Pisces in the sun on the Equinox date was seen as a portent by early Christians who

used the sign of the Fish as an acronym for Christ.

⁵ Giorgio Santillana and Hertha von Dechend, *Hamlet's Mill* (Boston: Gambit, 1969), 325.

⁶ E.C. Krupp, *In Search of Ancient Astronomies* (New York: Doubleday, 1979), 218-19. He contends that "the calendar and system of decans argue for a certain level of sophistication and observational expertise," while admitting that "comprehensive knowledge of precession seems incompatible with the descriptive non-mathematical picture of astronomy that is the natural conclusion of Neugebauer's and Parker's meticulous analysis of Egyptian astronomical texts."

⁷ Brian Branston, *Gods and Heroes from Viking Mythology* (New York: Schocken Books, 1982), 149.