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#### Abstract

New media entail much more than a simple translation process from an older to a contemporary version. They challenge us to rethink many of the limitations of earlier modes, methods and even to transform our definitions of the boundaries of disciplines. By way of illustration, this paper focuses on ancient mythology and religion, specifically on monthly cycles of the moon, and annual cycles of the seasons particularly with respect to Mithra and Proserpina to show how ideas which began in India make their way westwards via Persia to Europe. These polyvalent examples serve to show why humanists need much more than simple databases with names and variants. Implicit in these examples also is a need for a new approach to classical studies, whereby the quest to study the continuity of ancient symbols, which Warburg coined *Das Nachleben der Antike*, needs to be complemented by studies into *Das Vorleben der Antike*, i.e. the roots of these symbols in the period 20,000 B.C. -1,000 B.C. This new approach has profound implications for services and digital contents, for models of a digital economy and for Europe's quest to redefine its identity.

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#### 1. Introduction

Mythology is frequently treated as a series of tall tales, the primary value of which lies in the curiosity factor of the stories. Ancient mythology is in fact much more than this. In modern terms, ancient mythology is concerned with sense-making, finding patterns of order, cycles and change in nature and life. These constancies in nature's systems are rendered comprehensible by expressing them in terms accessible to the average person. Hence, the ancients used mythological stories in order to bring to life their understanding of astronomical events, cycles and anomalies. Accordingly, planets and stars were given names of persons and linked via stories. The basic stories were based on a small number of observations and facts. These were then adapted to "national", regional and local versions to produce a richness of cultures and literatures. In retrospect, one challenge lies in identifying the key individuals (*dramatis personae*) and the plots of these stories. A more significant challenge lies in exploring and making visible the contexts and relationships of these individuals and stories.

#### 2. Moon and Phases

In all this, the moon played a special role. The sun was too bright for the naked eye. The moon, by contrast, was the largest object in the sky which one could observe freely. It was particularly fascinating because it had a monthly cycle, which was linked with the menstrual cycle, with the tides, and reflected changes in the seasons. Not surprisingly, it became a starting point for many astronomical and other insights. In India, early proto-astronomers noted that the basic cycle lent itself to a threefold division.

This three-fold cycle became a starting point for fundamental symbols such as the sign for Pisces and the Srivasti sign (linked with fertility and parturition). Stylized versions of two earrings which imitated the phases of the moon became a symbol for a young man (*murukan*).

Intersections of two circular figures (full moons) became a starting point for a symbol known as *Vesica Piscis*. Meanwhile, a threefold combination of partial moons were combined to create a symbol of the nutritive force (*Mama*),<sup>1</sup> which spread eastwards to Japan and westwards to become a leitmotif of Celtic art in the form of the triskell. In Sicily, it became an expression of the earth mother (Demeter) as a *trinacria*, which later evolved into the symbol for the entire island.

These three phases of the moon were given the names of women: Kali, Lakshmi, Durga. These three phases were also linked with the three ages of a woman: young woman (Lakshmi), mature woman (Durga) and old woman (Saraswati). This approach was applied a) to three forces of a cyclical creation: creator preserver and destroyer; b) to male gods: Brahma, Vishnu, Shiva; c) three ages of man; and d) extended to abstract concepts such as desire, power and wisdom. These Indian solutions made their way West and have their equivalents in Persia, the Middle East, Egypt, and later in Greece and Rome. Hence, Greece, like India, has an attractive goddess of youth (Hebe, later Aphrodite); a powerful, mature goddess (Juno) and a wise, old goddess, Minerva (Appendix 1). This approach leads to multiplications of the threefold approach: 3 Graces, 3 Fates, 3 Erinyes, 9 Muses etc. It also inspires the notion of three tribes (Ham: black, Africa; Shem: tawny/red, Asia; Japheth: fair, Europe).

This threefold or trinitarian approach has methodological implications for our databases and knowledge systems. Records of single names in isolation are not enough, We need links to the original associations of these mythological stories if we are to understand how the name functioned. An isolated name in a modern database suggests that the name is or equals (=) something static. Traditionally, Lakshmi as a phase of the moon, has one set of meanings; as a phase of life has another set of meanings. One of the challenges of new media is to represent this dynamic, polyvalent dimension of earlier systems. In the eyes of a narrow computer scientist this may seem to betray a lack of precision on the part of humanists. In fact, it reflects the richness of cultural expression whereby seemingly endless variants are assertions of local creativity rather contradictions in a narrow sense. To overlook these dimensions risks becoming insensitive to the original intent, whereby the whole sense of earlier expressions and systems is lost.

### 3. Seasons and Solstices

This systematic approach to phases and cycles of the moon was one of the starting points for annual cycles of the seasons. Accordingly, early systems often began with a premise of three seasons: spring, summer and winter, with four months for each season. In the threefold approach, the summer solstice (21 June) marked an obvious key-point in the year. Paradoxically, it marked both the time of maximum light of the sun and the time when the moon was again dominant as the light of the sun began its period of waning that continued until 20 December when a new cycle began.

Geometrically this led to an inverted triangle with its base at the summer solstice (21 June). Iconographically, it led to images of Durga as earth mother sitting or standing on a lion or a tiger. As the idea went westwards the earth mother became Astarte and images of Spring on the left were typically balanced by images of autumn on the right. This approach also continues in Egypt where a figure of Astarte (Isis) on a lion is flanked on the left by a figure of spring (the fertility god, Min) and on the right by a regal figure (often Horus). As this imagery moved westwards, the associations of a central earth mother were gradually replaced

by those of Venus as goddess of love. In the Greek tradition this leads to new variants, where the central figure becomes Ploutos or Triptolemus, flanked by two ladies, the earth mother, Demeter and her daughter, Persephone again representing the seasons. In more complex versions of the Greek tradition there are three male gods associated with Dionysius: Eumolpus, the shepherd; Triptolemus the cowherd and Euboleus, the swineherd. Just as there were three phases of the moon and three goddesses, there were three kinds of herder: one for wild animals (wild swine or boars); one for semi-domesticated animals (sheep) and one for domesticated animals (cows).

A variant of this approach is to divide the year in two such that the earth mother, Durga, rules over the six months that the moon is dominant (summer solstice to winter solstice c. 21 June-20 December) and a male figure rules over the other six months when the sun is dominant (c. 21 December- 20 June). This male figure has a range of names, including Dumuzi, and Tammuz. Among the Nabateans at Petra he was called Dushares, born on 25 December whose temple (Qasr al Bint, literally castle or palace of the child) was subsequently identified with Dionysius. In India, a related figure is called Ayyappan, (etymologically linked with growth in Sanskrit), who is associated with a tiger and has a forty one day period beginning in December culminating with 14 January. Hence, a female, Durga, riding a lion/tiger at the summer solstice is balanced by a male, Ayyappan, riding a tiger at the winter solstice. (Ayyappan may well be a source for associations of Dionysius with tigers).

The moon and its three principal phases thus leads to much more than an understanding of triple goddesses and proto-trinities among deities in general. When applied to annual cycles this approach helps understand why the earth goddess (Durga, Cybele, Demeter); fertility gods (Pan, Min, Eros); agricultural deities (Dumuzi, Tammuz); wine gods (Dusares, Dionysius, Bacchus) increasingly became linked in trios of different combinations.

India, also developed a system of six short seasons of two months each. Winter, as such, was thus limited to two months and so the year was effectively ten months of “summer” and two months of winter and storms. In terms of astronomy, this period corresponded roughly to the time when the Pleiades disappeared from the night sky in November and returned to the night sky in January. In terms of the Milky Way, this winter period corresponded to a time when the celestial “river” split into two streams only to come to a new confluence once more as a spring came. The constellation linked with this split in the Milky Way was Scorpio. Astronomers recognized that this sign was also linked with one of the nodes of the moon responsible for eclipses. In India, these nodes were called Rahu (in Scorpio) and Ketu (in Aries) and treated as planets. In the West, they were called *Serpens caput* (head of the serpent) and *Serpens cauda* (tail of the serpent) respectively. Hence, winter was much more than a period of cooler weather. It was linked with astronomical events that threatened the order and continuity of the cosmos.

#### 4. Contract

This threat to order in the cosmos inspired the idea of a contract. In India, there were notions of a good weather god of light (Mitra) and a storm god (Varuna). These were subsequently called Hara and Hari, Vishnu and Shiva with various associations (figure 1). In Sanskrit, the word, Mitra, literally means contract. In Persian, the word Mithras also literally means contract. At an initial stage, this contract was seen in terms of Mitra (corresponding to Sagittarius) and Varuna (corresponding to Capricorn), i.e. an accord between Jupiter and Saturn in Roman terms.

Good Weather	Storm God
Light	Dark
Moon Dominates	Sun Dominates
Lunar Race	Solar Race
Mitra	Varuna
Hara	Hari
Woman (Mohini)	Man
Summer	Winter

Figure 1. Associations of Mitra and Varuna

This contract was seen in terms of a handshake and associated with the twins, Gemini. An Egyptian sarcophagus depicting the zodiac shows the twins of Gemini shaking hands. In this version, a one-horned, dark god (Capricorn, Varuna), gives his left hand to a two horned, light god (Sagittarius, Mitra), who offers his right hand.

Precession of the equinoxes is said to have shifted this initial picture of the heavens. As a result, the two winter months were now associated with Capricorn and Aquarius. This led to a second version of the “contract”, whereby the two winter months were associated with Varuna and were balanced by two summer months associated with Mitra. In the Indian system this approach continued to evolve such that Mitra and Varuna became seen as Adityas (powers of order), which increased in number from three, through six and subsequently to twelve. The Indian system was at once cyclical and evolutionary and became associated with different avatars or incarnations.

## 5. Sons of the Sun

As noted above, the cycle of the solstices contained an inherent paradox. The moment that light seemed to triumph at the summer solstice (21 June in our system), the sun had lost its power and began to wane. Similarly, the moment of greatest darkness at the winter solstice (21 December) was when the moon had lost its power and its strength began to wane as the sun regained its ascendancy. Those challenged with making this phenomenon understandable to non-experts were faced with two problems. Firstly, any attempt to describe the sun as dying or being killed at the solstices was contradicted by the fact that it continued to shine. Related to this was a second problem that everyday experience showed no dramatic change in the sky from one day to the next.

The Chinese notion of yin-yang was one solution to this problem. Hereby, every white phase had a dark spot and every dark phase had a light spot. India seems to have developed similar notions. Where we see Orion, the Indians and Arabs once saw Gemini. A star in Orion (Gamma Orionis) called Al Heka is also called Al-Maisan, "The shining one" or "The white spot".<sup>2</sup> Indian authors also conceived the notion of sons of the sun. The sun god, Surya was said to have one son called Karna by his wife Kunti, who became lord of the zodiac signs Kark and Simha, i.e. Cancer and Leo. Meanwhile, Surya was said to have a second son, Shani (linked with Saturn) with another wife, Chayya (literally, Shadow Wife) who was Lord of Makaram and Khumbam, i.e. Capricorn and Aquarius.<sup>3</sup> According to the stories these surrogate sons left the womb prematurely, usurped the throne and were then deposed or killed after a two month reign. As this idea went westwards and northwards, Karna became known as Phaeton, while Shani theoretically became Phainon, but was often associated with Dionysius. As the cult of the sun gained precedence over the cult of the moon there was

ongoing confusion whether Phainon belonged to Saturn and Phaeton to Jupiter (as *astra planeta*) or conversely.<sup>4</sup> In Greece, and in the Celtic tradition, the period of the reign was extended to three months such that Dionysius was associated with the three months when the winter sun ruled.

As the cosmological system evolved there was inevitably a challenge of drawing more and more correlations between different elements of the system. In a cyclical system, where the two great forces were in a reciprocal contract there were no contradictions in having the moon dominate a period associated with the greatest light or the sun dominate a period associated with the maximum darkness. In such a system, light was linked with Vishnu and darkness with the storm god, Shiva. Vishnu was linked with Saturn and probably with Capricorn. Accordingly Shiva was linked with Jupiter and Sagittarius.

However, when one approached this cycle in more dualistic terms, then Vishnu was linked more strictly with the moon and Shiva more strictly with the sun. In this context, Shiva logically needed to move into the position of light and Vishnu into the position of dark. So Mitra, which had begun in the position of light (summer solstice) was now moved to the position of dark (winter solstice). This paradoxical shift in roles becomes more marked as the framework shifts into dualism and a more obvious set of oppositions. Hence, as the cosmological system moves West, a world view dominated by the moon is gradually replaced by a world view dominated by the sun. The moon, called Sin in Babylon, becomes seen as literally sinful and associated with a world of lunatics. The sun becomes the paradigm of light and truth. Saturn, the key to larger cycles in the heavens, begins as Vishnu, the preserver and gradually becomes Cronos and Chronos, Father Time, linked with more primitive stages of society and becomes vilified as a cannibal who eats his own children. By the time the twins of Gemini reach Rome they are seen as the Dioscuri, both under the realm of Jupiter. Even so, representations of Castor and Pollux or Romulus and Remus typically show one as more primitive as the other. Remus means “the slow one”, an epithet also given to Saturn. And just as Saturn is “killed” by Jupiter at the end of Aquarius, so too is Remus killed by Romulus.

This imagery of gods which replace each other begins in India and receives varying degrees of attention. Within the Indian system there are, for instance, alternative approaches that favour either Vishnu or Shiva as the absolute god. Among the Shivaites, it was Shiva who acquired all positive features, whereas among the Vaishnavites, Vishnu acquired these positive features. From a standpoint of Western logic, which expects a name to be one thing, such Indian approaches are elusive and contradictory. In more complex versions, Vishnu has ten avatars or incarnations and thus undergoes the whole of evolution, beginning as a fish, (*matsya*), linked with a) a crocodile, b) a one horned fish c) a unicorn and d) a half fish-half ram (*makara*), that becomes Capricorn. He then evolves through tortoise, boar, half-man/half-lion; dwarf, warrior priest through good shepherd and finally the Messiah. These stages in the evolution of the god, Vishnu, have parallels in the evolution of individuals as they progress through the seven chakras beginning with self-mastery and then going towards ever higher levels of enlightenment.

## 6. From Mitra to Mithras to Mithra

Initially, what we now refer to as the Indian and Iranian systems, are said to have been a common system. At some stage there was a schism.<sup>5</sup> The Indian cyclical system continued, while the Iranian, Persian approach came to see these processes as oppositions between light and dark. Even so the idea of a contract remains. Various works of art show Shalmaneser

shaking hands with the king of Babylon: earthly kings now continue the original cosmic contract. In this new context, the trinity, which initially involved the earth mother Durga is also adjusted. The earth mother is replaced by a tree of life which is flanked by two kings. The king on the left has a staff positioned horizontally in a position that corresponds to the male member of the spring fertility god, Min, in the Egyptian example noted earlier. The king on the right has a upright staff corresponding to the spear held by Horus in the Egyptian example.

In the ancient world, the planets were seen as rams or sheep, which were cared for and kept in their place by a (good) shepherd (cf. Bootes). In one famous Babylonian example we see a glazed brick panel showing two kings (Shalmaneser and Ashurbanipal?). Above them is a tree of life and two goats associated with the summer solstice. They are surrounded by a large arch with ten rams corresponding to ten signs of the zodiac. The two kings have taken the positions of Sagittarius and Capricorn, or Mitra and Varuna in the original Indian contract.

### Mithra

In the Persian system, the Indian Mitra became Mithras,<sup>6</sup> again meaning contract as in India. At a later stage, Ahura Mazda a god of light, had a son, Mithras, also a god of light, who was opposed to and fought Ahriman, a god of darkness and evil. In this approach, the fluid, cyclical system of India was reduced to direct oppositions. The maximal light of the summer solstice became Mithras and the maximal darkness of the winter solstice became Ahriman. The lion of the summer solstice was now opposed to the bull of the winter solstice. Indeed, in the Near East, the storm god is often shown as a man standing on a bull: e.g. Teshrub among the Hittites. Logically, it was now Ahriman who had to kill the bull in Persia.<sup>7</sup> In terms of moral logic, however, this was problematic: it implied that the return to light and the good required an evil power of darkness to kill the evil bull. While the Cathars and Bogomils effectively followed this logic, others predictably transferred the conquest of evil to the figure of light, namely, Mithra.

The Sumerian story of Gilgamesh marks a transition as this story makes its way westwards. Gilgamesh and Enkidu are the two twins of Gemini of the original contract in a new form. Enkidu corresponds to Saturn, Capricorn, Vishnu and is the older, more primitive stage now associated with the left. Gilgamesh corresponds to Jupiter, Sagittarius and Shiva and is the more advanced stage of human civilization. In other images, we find Gilgamesh on the right as a horned bull god (now representing the winter solstice of 21 December) fighting a lion (representing the summer solstice of 21 June). This corresponds to the six months of summer-autumn when the moon is dominant. On the left we see Enkidu as Saturn, Vishnu killing the bull. This corresponds to the six months (21.12-20.06) when the sun is dominant. In some versions of the Mithra cult this imagery of Gilgamesh-Enkidu is integrated.<sup>8</sup>

### Two Kinds of Sun

In this new approach, the notion of sons of the sun also changed. The months when the sun was under the power of the moon (21 June-20 December) or sometimes the winter months were associated with *Sol Indigens*, (the indigent sun), while the months while the sun was under in its dominant phase were associated with *Sol Invictus* (the unvanquished sun). The killing of the bull at the winter solstice was thus associated with the death of *Sol Indigens* and the re-emergence of *Sol Invictus*.

In India, there were a series of stories concerning cosmic eggs at the time of creation. One of these claimed that there were two eggs. A story told how Kasyapa and Karthu produced an egg, from which was born a lame child, Aruna, who became Surya's Sarathi (driver of chariot). Meanwhile, Kasyapa and Vinathai produced an egg from which hatched Garuda, who became Vishnu's mount.<sup>9</sup> In the West, the equivalents of Aruna and Garuda were Phaeton and Phainon. In the Mithraic tradition, they were typically depicted as chariots with two and four horses respectively.

By the time, the cult of Mithra had made its way to Rome the killing of the bull became associated with five other elements that provided it with a much deeper significance: 1) symbolism of the world egg linked with creation and origins of the world; 2) cosmic order and eclipses; 3) personal mastery, 4) stages of initiation and 5) mysteries of time.

### Cosmic Egg

As noted above, in India, the cosmic egg figured in a number of myths concerning creation. This idea travelled westwards and became a central element in the Orphic tradition whereby a world egg surrounded by the signs of the zodiac opened to hatch the first born, Protogonos. In the Orphic tradition, the signs of the Zodiac are arranged in a counter-clockwise order – which is different from Eastern traditions where such heavenly directions and motions are almost invariably clockwise.

In the Mithraic tradition, there is also a cosmic egg from which the first born is emerging. However, in this case the order of the zodiac signs is clockwise as in the East. Moreover, these signs are arranged such that the signs for the two winter months, Capricorn and Aquarius, are at the bottom. Capricorn is shown as half-fish/half-animal (ram), while Aquarius is shown as half-fish/half-human being. In this arrangement, one can read the zodiac signs in an ascending fashion as a mini-story of evolution going from fish, through animals (Aries, Taurus) to humans (Gemini and Virgo). As a result, the summer solstice is on now on top and the winter solstice is at the bottom.

Symbolically, the egg from which Mithras emerges is simultaneously a womb and a cave. The signs of the zodiac remind us that the birth of Mithras is not only about the birth of an individual. It is also a re-enactment of the creation of the universe. On looking more closely, we see that more is involved. Mithras holds a sword in one hand in the left of the image and holds a torch in the other hand in the right part of the image. As we saw earlier, with the contract of Mitra and Varuna, there is an implicit contrast between a left, which is associated with spring, male, fertility and war; and a right, which is associated with autumn, female, balance and peace.

The left corresponds to the six months when the sun is dominant (21 December-20 June). The right corresponds to the six months when the moon is dominant (21 June-20 December). This opposition of spring and autumn meant that it could readily be aligned with other examples: e.g. the opposition of Saint Paul with his sword (left) and Saint Peter with his book (right). Implicitly this opposition between left and right, spring and autumn extends to grain and beer in the spring and grapes and wine in the autumn. Dus(h)ares, the patron of the Vine has a host corresponding to spring grain on the left and a cornucopia, corresponding to autumn harvests and wine on the right. In other variants, the Goddess Ceres holds grain on the left (spring) and a cornucopia on the right (autumn). Hence, the zodiacal signs of Mithras link him with annual

cycles of the seasons, whereby he acquires attributes similar to those of Dusares, Tammuz, Ceres and other agricultural, “dying” gods.

### Eclipses

Meanwhile, there are other clues to suggest that these signs of the zodiac are intended to link Mithras with larger cosmic cycles. Originally the bull was killed at the winter and/or the summer solstice. When the cult of Mithras reached Rome, the killing of the bull became associated with the vernal equinox (21 March). One reason was that the Romans and early Christians extended the winter period to include the time from Libra through Aries.<sup>10</sup>

Almost coincident with the point where Mithras’ knife enters the bull we see a tail of a serpent. This serpent stretches downwards towards the left where it terminates as a scorpion. Seen literally this makes no sense. There are no scorpion serpents. Seen metaphorically in astronomical terms, the meaning becomes clear. We noted earlier that the two parts, Rahu (*serpens caput*) and Ketu (*serpens cauda*) determine the eclipses. Rahu is in Scorpio. Ketu is in Aries. Hence, by stabbing the bull on the vernal equinox (21 March, the beginning of Aries), he is metaphorically also killing the power of the Ketu and Rahu with respect to eclipses. Killing the bull is a means of assuring cosmic order.

The position of Rahu in the form of a scorpion makes it clear that this astronomical connotation has further dimensions. The Scorpion is stinging the genital organs of the bull. Seen in terms of the annual cycle, this alludes to the summer solstice when the six months of fertility and generation dominated by the sun come to an end, and the six months dominated by the moon begin. As mentioned earlier, this two-fold cycle is represented by chariots with four and two horses respectively.

### Personal Mastery

Beneath these representations of the two chariots are two persons. The youth on the left has an erect and upward pointed torch. The person on the right has a downward pointed torch. In some versions the torch on the right is extinguished. These two Persians were known as Cautes, who held his torch upright, representing light; and Cautopates who held his torch reversed, representing darkness.<sup>11</sup> No advanced courses in Freudian analysis are required to understand the further symbolism. The killing of the bull, which is also a killing of the baser passions is a first fundamental step in the quest for self-mastery.

### Stages of Initiation

We noted earlier how the evolutionary incarnations (avatars) of the god, Vishnu, had parallels with the development of individuals as they progressed through different chakras (energy levels) in yogic meditation. India was familiar with the idea of associating different ages of a person and different stages of development. For instance, the columns at Ashoka have sculptures of elephant, bull, horse and lion, which are associated with stages in the Buddha’s life and also became associated with the four points of the compass.<sup>12</sup>

This link between animals and moral characteristics which the West associates with Aesop, underwent major development in Persia. Porphyry, for instance, in his treatise *On Abstinence*,<sup>13</sup> explains that the Persian tradition typically used names of animals to specify various stages of moral and spiritual development. Such systems, often using the seven

chakras of yoga as a point of departure, made their way westwards. In one of these systems of development there were seven stages: 1) bull (Taurus); 2) serpent (corresponding to half fish-half animal now associated with Cetus in the sign of Aquarius); 3) horse corresponding to the centaur, half-animal/half human in Sagittarius), 4) lion, (corresponding to Leo and also to the half-lion/half-man of Narasimha, the fourth avatar of Vishnu); 5) Eros, 6) Chronos, and 7) Zeus. Here, Bull is the most base (stage 1) and Zeus (stage 7) is the most divine. In the rites of Zagreus and Bacchus, the god is cut into seven pieces and is transformed through these seven forms.<sup>14</sup>

In the cult of Mithras, these seven stages of initiation were linked with seven days of the week and with the seven planets (Appendix 2a). In the case of the Mithraeum at Ostia these seven stages were also linked with animals, birds and other symbols (Appendix 2b). So the killing of the bull commemorates a) a primeval establishing of order in the cosmos through control of the eclipses (via Rahu and Ketu); b) the annual cycles of the seasons with the triumph of light over dark and the re-establishment of the unvanquished sun (*sol invictus*); c) a triumph of self mastery whereby the individual soldier gained control of his baser passions, i.e. a triumph of light over darkness in the personal sphere; and d) a series of stages of personal development as one moves from conquering the beast in oneself to becoming more godly. Linked with this personal quest is a quest to understand the mysteries of time and the timelessness of the eternal.

### Mysteries of Time

The Indian creation stories are full of paradox. They assume a cyclical context. They explain how an initial theft of the elixir of immortality forced the gods to enter into a cycle of time whereby the process of creation could begin (anew). So they describe a beginning which assumes an antecedent existence. Accordingly, the story of creation is simultaneously a story of the reasons why creation was/is necessary.

In the Indian approach, time is simultaneously fascinating and frightening. One of its manifestations is *Mahakala* (literally great time), which is typically a frightening, monstrous face that has many parallels with Humbaba and Medusa further West. Time is also implicit in the fourth avatar of Vishnu as Nara-Simha, where he emerges as a half-lion/half-man from between two columns. A variant of this lion-headed man recurs in the Persian sect of Zurvan where he appears as winged and surrounded by a serpent.<sup>15</sup> Other versions show Zurvan holding the keys of time.<sup>16</sup> As the idea travels west there are further variants such as Salu,<sup>17</sup> Serapis and then Mithra as a lion-headed (leontocephalic) man:

The figure symbolizes the inevitable victory of boundless Time (Eternity) over every creature and condition. The resurrection of the figure from the darkness of the tomb reveals the ascension of boundless duration from the narrow limitations of man-conceived time. The three kneeling figures are the limitations of the three-dimensional world—length, breadth, thickness—which bow before the limitless Æon<sup>18</sup>

Hence, the Mithraic initiation is not only about moral improvement but also about a deeper understanding of principles of space and time, seeing in the resurrected Mithras and the surrounding priests symbols of length, breadth and thickness, moving from the limitations of the three-dimensional back into the boundless, unlimited and timeless world of the eternal; moving from the particulars of Aristotle back to the universals of Plato.

Athanasius Kircher, in another version of the Serapis myth, relegates these temporal dimensions to a four-headed snake accompanying the main figure, with heads of a serpent, lion, dog and wolf. Here the serpent represents an author at the time of Serapis (*author temporis Serapis*). The lion represents past time (*tempus praeteritum*). The dog represents the present (*praesens per canem ablandientem*). The wolf represents the future (*futurum per lupum obliviosum*). The coils represent the succession of time(s) (*Successio temporum*). This version by Kircher is the more interesting because it recurs with slight modification on the frontispiece of Eugenio Raimondi's *Delle caccie*, (Napoli, Lazzaro Scorriglio, 1626, Calcografie: Nicolas Perrey).

Raimondi's frontispiece is very instructive from a methodological standpoint. Historians of the book and historians of art are trained to look carefully at the image and to analyse its constituent parts. Art historians are trained also to look for parallels and precedents which might lead them to Kircher. But as we have seen these allusions to different times take us back to Mithras and then via Serapis, Salu and Zurvan to the fourth avatar of Vishnu and ultimately back to the Indian creation story itself. Databases of Ancient, Mediaeval and Renaissance images are not enough. We need a new framework that takes allows us to consider on equal footing the contributions of Iraq (Babylon); and Persia, India, China, Japan as well as Russia and Siberia. Ultimately this framework should allow us to consider equally the contributions of Oceania, Africa and the Americas, South as well as North. To achieve a big picture we need to transcend Euro-centric, Asia-centric or other limited approaches.

## 7. Das Vorleben der Antike

When Aby Warburg founded his famous institute in Hamburg in the early 20<sup>th</sup> century he set out to trace the continuity of ancient symbols throughout the Middle Ages and Renaissance into modern times (*Das Nachleben der Antike*). This noble task was continued when the Warburg Institute moved to London in 1933. In the meantime, many other institutes with direct or indirect links to the Warburg have further expanded the original scope of this excellent endeavour. The purport of this essay is at once to praise these efforts and to insist that something more is needed. In addition to *Das Nachleben der Antike* we need *Das Vorleben der Antike*.

A catchy phrase is attractive and seems easy. Methodologically, it poses enormous challenges. Traditionally, scholarship has departed from the premise that one only deals with cultures when one has mastered their languages. Dealing with Rome requires Latin; dealing with Greece requires ancient Greek. If the territory of study suddenly extends eastwards to India, we are confronted not only with Sanskrit but with dozens of languages in the expanses between India and Europe: Old Tamil, Urdu, Persian, Parsi, Arabic, Sumerian, Akkadian, Armenian, Turkish, Hebrew, Aramaic to mention only some of the most obvious. And if we look to the larger picture then there are Chinese, Russian, Nepali, and Tibetan. In the really big picture we are ultimately confronted with over 6,500 languages around the world. This is challenge beyond the limits of even the most dazzling linguist.

The rhetoric of new media is often in terms of collaboration and collaborative networks as if this were a pleasant luxury offered by advances in technology. From a methodological standpoint, the discovery of new links between East and West implies that such collaboration is not a luxury but a scholarly necessity. Without networks and common databases, without co-operation across a daunting array of languages no individual in isolation is equipped to contribute to the creation of a new approach to world culture, a World Online Network of

Distributed Electronic Resources (WONDER).<sup>19</sup> Paradoxically, the deeper implication of new media is that they challenge us to change the whole framework of our studies: to work together rather than in isolation, which has already become a paradigm and *modus vivendi* in science.

The humanities and social sciences have rightly insisted that they are different from the sciences in some ways. For instance, in the sciences different languages are merely alternative ways of communicating a single set of formulae and laws of physics, chemistry etc. that apply throughout the world. In the humanities and social sciences, languages play a fundamentally different role; unless we create distributed databases that give equal ranking to the whole range of languages and dialects we eliminate the richness of national, regional and especially local expressions that are key dimensions of culture. This requires collaborative networks. Hence, while the reasons may differ slightly, the humanities and social sciences have as much need as the exact sciences for distributed frameworks and networks in order to advance their understanding. Ultimately, such collaborative networks are keys not only to services with digital contents, but also to new economic models, to the future of scholarship and to new senses of identity in a global society.

## 8. Conclusions

Our brief survey began with three phases of the moon. We showed that these three phases served as a starting point for various triangular symbols such as the triskell and triacria; that this threefold approach was a basis for triple goddesses and for three-fold gods. We suggested that this threefold approach, when applied to the annual cycle helps explain why the earth goddess, fertility gods, agricultural gods; and wine gods are often coupled and tripled in a dazzling variety of ways. Hence, the myths of Durga and Demeter; Persephone and Dionysius, of Dumuzi and Astarte; of Dusares and Venus, of Isis and Osiris; of Bacchus, Pan and Silenus are inextricably linked. Frequently the interplay and interconnections between, among these triplicities, triple gods, and goddesses are at least as important as identification of the individual figures. This insight provides a contribution to requirements for cultural computing. Databases of isolated names and variants need to be complemented by an approach that throws light on the contexts in which they appear.

Our detailed examination of Mitra throws further light on these needs. Contemporary databases assume that we need only record a name, and provide some variants. However, as we have seen, Mitra entails at least six quite different contexts: 1) there is an initial contract between Mitra and Varuna coupled as the two winter months corresponding to Sagittarius and Capricorn; 2) there a further contract wherein Mitra represents the two summer months (Cancer, Leo) and Varuna the two winter months (Capricorn, Acquarius); 3) there is an opposition between Mithras and Ahriman in Persia; 4) there is a notion of Mithra connected with solstices and astronomical events; 5) there is the Roman Mithra cult that includes personal mastery and levels of initiation; 6) there is a dimension of the Mithra cult concerned with understanding of time and space (length, breadth, width) as a means of understanding timelessness and the eternal. Any database that reduces Mitra and Mithra to simple variant spellings would eliminate the richness of these associations and distort more than it contributes. Needed are new forms of databases that reflect and provide access to these differing and sometimes competing contexts.

Nearly a century ago, Aby Warburg embarked on a journey that called for a systematic study of *Das Nachleben der Antike*. Our study of versions that link Indian, Persian, Babylonian,

Near-Eastern and Greco-Roman sources suggests that this needs to be complemented by a study of earlier sources to provide insight into *Das Vorleben der Antike*. Hence, the new media imply much more than access to traditional sources in new forms. They point to a need for new sources and new methods for how we do our research. Networks need to link individual researchers and also provide collaborative frameworks for comparing studies in unfamiliar languages.

These complementary, collaborative networks have profound implications. Traditionally we have assumed that everything began in Greece, or possibly Egypt and Sumer. We need to look further to India, China and ultimately to other cultures around the globe. The rhetoric of the day has seen globalism mainly as a threat to national, regional and especially local identities. Paradoxically, globalism offers much more optimistic potentials. Comparing notes can help us recognize our common humanity and see beyond the doom and gloom scenarios of clashes of civilizations (Huntington<sup>20</sup>). Indeed, once we recognize creativity as local and regional versions as these larger themes, there are new incentives towards variety.

Traditionally we have often assumed that the constellations of the heavens are effectively static. Our brief study has pointed to a more complex picture. Where we see Orion, the Babylonians saw a figure called the Central One (Hubal?); and the Indians saw Prajupati, the god of creation. At an earlier stage, they saw the twins of Gemini, who were at one stage Mitra-Varuna, then the Aswin twins, then two horses, one black, one white, then the morning and the evening stars. We have long been familiar with notions of a history of astronomy. Ultimately, however, we need dynamic versions of this history, whereby we recognize that the images seen in the skies change as stories of the skies change in different cultures.

There are also two more subtle implications. Firstly, we need to reconsider our basic assumptions about future economic models. In the Anglo-Saxon world, there was a vague assumption that the digital world effectively implied another cycle of the colonial mentality whereby one country produces content and services, which are then exported around the world to so-called developing countries. Historically, of course, it was Europe which was the developing country as it gradually learned of the more advanced methods of the Asian subcontinent. Our specific focus on Mitra-Mithras-Mithra suggested how this occurred at a detailed level. The so-called bad news in this message is that Europe will need to share the process of building future databases with many other players such as India and China. The good news is that the results will potentially be of interest to persons around the world: i.e. much larger markets. The real path beyond post-colonialism is in new models where all countries share knowledge and services rather than assuming that one has a monopoly.

Second, if these deeper connections between East and West truly exist, then attempts to identify or redefine Europe in terms of native, or indigenous symbols are too narrow. The symbols as such are shared by the great cultures. Important are national, regional and local versions of symbols. Ultimately it is not the symbols which define a country or series of countries such as an European Union. What counts are the frameworks of interpretation, the contexts wherein they are understood: whether they are merely rhetorical appeals without foundation or whether these are supported by laws and procedures that protect citizens as well as the rich and mighty. In this sense, the new media challenge us to think anew not only about contents and sources, but about what and who we are. Ultimately, the real revolution of new media lies not in the superficial technologies, but in the new methods and approaches of the human spirit, which they enable and encourage.

## Appendix 1. Phases of the Moon and Applications

	New Moon	Full Moon	Dark Moon
Female			
India	Kali Young Woman Lakshmi	Lakshmi Mature Woman Durga	Durga Old Woman Saraswati
Arabia	Al-Uzza 'Uzza (Most Mighty) Virgin	Al-Lat Allat ( <i>al-ilāhat</i> Goddess) Mother	Manat Manat (Manathu) <sup>21</sup> Visionary, witch <sup>22</sup>
Greece	Selene Persephone Luna Aphrodite	Artemis Demeter Diana Hera	Hecate Hecate Persephone Minerva
Male			
India	Creator Brahma Prajapati	Preserver Vishnu Vishnu	Destroyer Siva Siva
Egypt	Min	Set	Horus
Israel	Latipan	Baal-Hadad	Baal
Greece	Eros	Chronos	Zeus
Rome	Pan	Saturn	Jupiter
Abstract			
3 Gunas	Desire Tamas Darkness	Power Rajas Passion	Wisdom Sattwa Goodness <sup>23</sup>
	Hub (Dharma) Khumbha Brahma Vase, Chalice	Point of Contact Cakra (Wheel) Vishnu Discus	Radiant Shafts Arrows Siva Trident
3 Eyes	World Tamas-guna Desire	Wine Rajas-guna Power	Vedas Sattva-guna Wisdom <sup>24</sup>
3 Tribes	Ham Black Africa	Shem Tawny Asia	Japeth Fair Europe

Appendix 2. Two versions of Seven Stages in the Mithraic tradition.

Heliodromus	Sun	Desire for control
Persian	Moon	Emotions
Miles (Soldier)	Mars	Capacity for war
Corax (Raven)	Mercury	Desire for communication
Leo (Lion)	Jupiter	Desire for abundance
Nymphus (Bridegroom)	Venus	Desire for beauty and love
Pater (Father)	Saturn	Desire for material stability <sup>25</sup>

Heliodromus	Sun	Rooster
Persian	Moon	Owl
Miles (Soldier)	Mars	Scorpion
Corax (Raven)	Mercury	Raven
Leo (Lion)	Jupiter	Fire
Nymphus (Bridegroom)	Venus	Serpent
Pater (Father)	Saturn	Old Man (Saturn) with extinguished torch and Scythe. <sup>26</sup>

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Notes

<sup>1</sup> F. Martin-Cano, *Culturas de Elam, Afganistan, Kurdistan, Turkmenistan, Beluchistan, Bangladesh, La India...Manifestaciones Artísticas Prehistóricas y de la edad del Bronce.*

[http://es.geocities.com/contraandrocristismo/elam\\_india.html](http://es.geocities.com/contraandrocristismo/elam_india.html)

<sup>2</sup> <http://www.winshop.com.au/anne/Meissa.html>

<sup>3</sup> *Indian Divinity: Shani:* [http://www.webonautics.com/mythology/shani\\_saturn.html](http://www.webonautics.com/mythology/shani_saturn.html)

<sup>4</sup> *Astra Planeta:* <http://www.theoi.com/Titan/AstraPlaneta.html>

<sup>5</sup> I. J. S. Taraporewala, *The religion of Zarathushtra*, Madras, 1926. See:

<http://www.farvardyn.com/zoroaster.php>

<sup>6</sup> *Mithras:* <http://www.iranvision.com/mithras.html>

<sup>7</sup> Franz Cumont, *The Mysteries of Mithra*, translated from the second revised French edition by Thomas J. McCormack, Chicago: Open Court, 1903. See:

<http://www.sacred-texts.com/cla/mom/mom00.htm>. Cf. David Ulansey, *The Origins of the Mithraic Mysteries: Cosmology and Salvation in the Ancient World*, Oxford: Oxford University Press, 1989 (revised paperback, 1991):

<http://www.well.com/~davidu/mithras.html>; Franz Cumont, *The Oriental Religions in Roman Paganism*. With an Introductory Essay by Grant Showerman. Authorized Translation. Chicago: Open Court; London: Kegan Paul, Trench, Trübner, 1911.

<sup>8</sup> See, for instance: <http://www.unf.edu/classes/freshmancore/core1images/mithras-killingabull1.jpg/>

<sup>9</sup> S. Janardhanan, "Lore in Stone", *The Hindu*. 16 September 2001:

<http://www.hinduonnet.com/2001/09/16/stories/1316049c.htm>

<sup>10</sup> Charles François Dupuis, An Explanation of the Fable in which the Sun is Worshipped under the Name of Christ, (From chapter IX of his book), *The Origin of All Religious Worship*, Paris, 1798: <http://members.cox.net/srice1/books/dupuis/dupuis9.htm>

"It is at the seventh sign, corresponding to the Balance, or at the first of the signs of autumn, of the season of fruits and of winter, that they place the commencement of the reign of Darkness and of Evil. This reign lasts until the return of the Sun to the sign of the Lamb, which corresponds to the month of March and to Easter."

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- <sup>11</sup> Marcus Minucius-Tiberius Audens, *The Religion Brotherhood of Mithraism*, 2005: <http://www.novaroma.org/aquila/april05/03.htm>
- <sup>12</sup> Pillars of Ashoka, Wikipedia. [http://en.wikipedia.org/wiki/Pillars\\_of\\_Ashoka](http://en.wikipedia.org/wiki/Pillars_of_Ashoka)
- <sup>13</sup> Porphyry, *On Abstinence*, Book IV, 16: <http://www.thedyinggod.com/porphyry.htm>
- <sup>14</sup> Pip Wilson, Dionysius and his Festivals: [http://www.wilsonsalmanac.com/dionysus\\_bacchus.html](http://www.wilsonsalmanac.com/dionysus_bacchus.html)
- <sup>15</sup> Zurvan: <http://altreligion.about.com/library/glossary/bldefzurvan.htm>
- <sup>16</sup> Michael Lütge, *Indoeuropäische Tradition schamanischer Himmelfahrt*, 2006: <http://homepage.ruhr-uni-bochum.de/Michael.Luetge/Diss2a.htm#IndoeuropäischeTraditionschamanischer>; Especially: <http://homepage.ruhr-uni-bochum.de/Michael.Luetge/magier.gif>
- <sup>17</sup> Mesopotamian Mithraism: Salu: [http://mmothra.blogspot.com/2005\\_04\\_01\\_mmothra\\_archive.html](http://mmothra.blogspot.com/2005_04_01_mmothra_archive.html)
- <sup>18</sup> Symbolic Prints of Knapp/Hall: [www.prs.org/symbprint.htm](http://www.prs.org/symbprint.htm)
- <sup>19</sup> Some assume that Google is effectively achieving this already. In this context it is sobering to learn that Eric Schmidt, one of the heads of Google has explicitly stated that their full program is a 300 year effort. In light of the problems of privacy posed by Google and the obvious tensions posed by a company where commercial interests are in the forefront, the question arises whether the task of universal access can best be achieved by a group which is ultimately focussed on using this goal, or the rhetoric thereof, in advancing the economic interests of a relatively small number of shareholders.
- <sup>20</sup> Samuel P. Huntington, "The Clash of Civilizations", *Foreign Affairs*, v.72, n.3, Summer 1993, pp. 22-28: <http://www.alamut.com/subj/economics/misc/clash.html>. Published as a book: *The Clash of Civilizations and the Remaking of the World Order*, New York; Simon and Schuster, 1998.
- <sup>21</sup> *Genesis of Eden Diversity Encyclopedia*: <http://www.dhushara.com/book/orsin/orsin3.htm>
- <sup>22</sup> Formerly: <http://forums.understanding-islam.org/community/showthread.php?t=1796>; I. Marc Carlson, "Notes on an ancient Arabic pantheon(s)": <http://www.personal.utulsa.edu/~marc-carlson/history/arabic.txt>
- <sup>23</sup> Sattwa, Rajas & Tamas: <http://www.hinduism.co.za/sattwa.htm>
- <sup>24</sup> The Asylum of Sarabhanga: <http://www.geocities.com/sarabhanga/rishi.html>
- <sup>25</sup> [www.mithraeum.org/planetary\\_work.htm](http://www.mithraeum.org/planetary_work.htm)
- <sup>26</sup> Mithra. Deo Soli Invicto: <http://www.sunnyart.com/mithra/mitrei/mitanimali.htm>