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Opinion

A Brief History of Timelines

Leo Dubal*

Virtual Laboratory for Archaeometry, 48500 Soulages, France

***Corresponding author:** Leo Dubal, Virtual Laboratory for Archaeometry, 48500 Soulages, France, **Email:** dubal(at)archaeometry.org

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The concept of monitoring events on a linear time scale has a long history. Before listing the chronological highlights of this never-ending story, the role of the human must be discussed.

Human primal time's perception is a chain of cycles: daily cycle (earthly spin), monthly cycle (lunar spin), seasonal & annual cycles (earth rotation around the sun). Therefore, timelines represent a kind of mental revolution in the history of mankind: to free oneself of timeless circular thinking, numerous steps have been necessary as the way our brain works is intimately involved. Our right cerebral hemisphere has the astonishing ability to catch a scene all at once, as coined by the neurosurgeon Leonard Shlain. It is able to synthesize a huge number of elements, to generate metaphors & dreams or what is called today "emoticons". On the opposite, our left cerebral hemisphere, only after a certain point of the socio-cultural development, became able to analyse elements one at a time, to translate them into words, to distinguish before & after, to recognize the past from the future. In other words, the left hemisphere developed the ability to establish the causal link between events, their order of appearance, i.e.: their chronology. As physicist, my hypothesis is that Homo Faber succeeded first to understand the two steps trick to smelt iron & only thereafter discover the role of the father in procreation. Considering the perenniality of the Immaculate Conception myth, I guess that this discovery was far from obvious!

What have been, chronologically, those numerous steps to escape the thinking in terms of the circular time! Since the dawn of time, women might have noticed the synchronism between their oestrous cycle and the lunar cycle. During Palaeolithic age, women might have observed the moonset's round trip along the horizon line. Under our latitudes, the positions of the setting of the Moon range between 230° and 310° north. Therefore, the tracking from one turnaround point to the next, from the austral to the boreal lunistice, is easy. A 35'000 year's old bone found in Sergeac (Dordogne) exhibits an engraved ribbon with about fifteen cup-marks per lace which strongly suggests such a tracking. The writing was not linear, but plane, the typical design issued from a right cerebral hemisphere.

Observations of the solar turnaround points are testified only since 5'200 years Before Present. It is true that far longer times of observation are necessary for the solstice than for the lunistice, but the reason for this late arrival might be else: a Megalith lover, Donald Cyr, boldly suggested that a high-altitude permanent layer of clouds during the whole Mesolithic could have diffused the direct solar light, impairing the determination of the Sun's position. This hypothesis contrasts with the doubts expressed by Françoise Vimeux on the possibility of such canopy over long periods of time. The first marker of the austral solstice (which eurocentrists call winter solstice) is the tumulus of Newgrange discovered in +1963 by Michael O'Kelly. The lightbox over the door of the tumulus is framing the solstitial sunrise. The 19 meters long corridor is then illuminated a few second long on December 17th, three minutes long when the Sun reach its meridional turnaround on December 21st, then, declining to a few seconds on December 25th, then nothing during the rest of the year.

In 1984, Mark Lehner discovered, at Giza, a most unexpected recording device for the position of the sunset at boreal solstice: a megalithic construction by 600 years younger than Newgrange's tumulus. Juan Antonio Belmonte succeeded, just before the shortest night of year +2006, to frame there the Sphinx haloed by the Sun. Thereafter, one no longer can discard the hypothesis of a Master

plan behind this artificial landscape. Was it inspired by hieroglyph akhet (horizon) depicting the Sun framed by two mountains? In The Riddle of the Pyramids published in +1974, the Nobel Prize Kurt Mendelssohn insists on the matriarchal character of the ancient Egyptian society: only a direct filiation and wedding with the queen allowed access to power.

1'400 years after the erection of the pyramids, two colossal statues, near Luxor, are watching out the sunrise at the austral solstice: there, Pharaoh Amenhotep III is, metaphorically speaking, seated on matrilinearity, on each side of his legs are standing his mother Mutemuia and his spouse Tiyi! It is this same queen Tiyi who chaperoned her son Amenhotep IV for his coronation at the age of ten. At fifteen, under the name of Akhenaten, he has a new capital built: Akhet-Aten. I dated this event -1336.03.02 under ISO 8601-2000.

The border stele K indicates that the laying of the foundation stone took place on Pharaoh's 5th regnal year. This date clearly does not refer to an individual, but to the Pharaoh, as an anonymous social function. Concomitantly, the cult to Solar Disk Aten, with Akhenaten as his earthly representative sounds as the first cult of personality, but by proxy!

At Akhenaten's death, Tutankhaten being too young, his sister (and mother?) Meritaten took the throne. Once she passed away, Tutankhaten, aged of 7, keeping away other pretenders to the throne, married his 13 years old sister (and aunt?) Ankesepaaten. He was crowned under the name of Tutankhamen. At his death, his widow Ankesepaamen married her maternal grandfather Aï (Nefertiti's father?). Matrilinearity was obviously still very popular during the 18th Dynasty!

One thousand years after Akhenaten, a stele testifies for the fading of the anonymity of social function. Kings no longer hesitated to declare the number of their personal regnal years. I suggest this is the time of the emergence of patriarchy. On a southern-arabic stele, Seleukos, the successor of Alexander the Great, let engrave year second / SLK / king, i.e.: the second regnal year of king Seleukos (whose consonantal skeleton is SLK). Thereafter, the individual will come first, in front of his social function, while the exclusivity of cyclic times (lunar, solar, then imperial) will break apart. Babylonians astronomers (experts of the sexagesimal numeration system!) sixty-one years after the take-over of Babylon by Seleukos, invented a linear time scale for the recording of their astronomical observations, a timeline which we call today Seleucid Era. On a clay tablet, written in cuneiform, a total solar eclipse is reported in all details. Peter J. Huber & Herman Hunger deciphered that this eclipse occurred in year 175 of this calendrical era, and they identified this total solar eclipse over Babylon as the one on -135.04.15. Just one year before this eclipse, a self-declared philhellenist, the Arsacid king Mithridates minted a tetradrachm at Seleucia o/T. The mint year there is written with the Miletian numeration system, i.e.: Delta Omicron Rho for 174 (i.e.: -136). Among other Seleucid dated artefacts let us mention a tetradrachm minted, in Akko, in year Zeta Pi Rho for 187 (i.e.: -124) by Cleopatra Thea when she was ruling alone over the Seleucid empire. Another interesting item, written in Edessa and dated, in Syriac in full, 723 (i.e.: +412) is the oldest Christian manuscript (a copy of Eusebius' martyrology). The colophon of the latest manuscript dated Seleucid was written in Syriac letters with numerical value: 1795 (i.e.: +1484). Seleucid era can therefore claim the absolute record of longevity, and of course aroused followers.

Let us look at the case of the Era Hispanica. A manuscript reports a solar eclipse having occurred in ERA 1117. Thanks to the retrodiction software 5 Millennium Canon of Solar Eclipses of Xavier Jubier, I identified it as the total solar eclipse over Coimbra which occurred on +1079.07.01. Era Hispanica is therefore 38 years ahead of today's ISO 8601-2000 calendar. In Merida, at the centre of the Suevi kingdom, the date ERA CCCCLXXX on a funerary Arianist stele testifies for the introduction of a new calendrical era in its year 480 (i.e.: +442, just 3 decades after the above mentioned Arianist martyrology), a way to create a new legitimacy while the Western Roman empire was collapsing. Among ERA-dated artefacts, the sole coin is a dinero minted in Toledo in ERA 1204 (i.e.: +1166).

As long as ancient total solar eclipses observation reports exist, one can tune perfectly any timeline. Particularly enlightening are the registration dates of major timelines:

- Anno Domini, in its year 725 (i.e.: +725), by Bede the Venerable, in Jarrow.
- Anno Hegirae, in its year 67 (i.e.: +686), by Abdalmalik ibn Abdullah, in Bishapur.
- ERA Hispanica, in its year 480 (i.e.: +442), on a funerary stele, in Merida.
- Ab Urbe Condita, in its year 700 (i.e.: -52), by Varro, in Rome.
- Seleucid Era, in its year 61 (i.e.: -250), by astronomers, in Babylon.

Unfortunately, no solar eclipse observation report has been found in terms of the Maya era.

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Conflict of interest

No conflict of interest.