The Aztec Calendar Stone is not Aztec and it is not a Calendar

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Given that the 2012 end of the world hysteria, and the Maya prophesies, have not turned out as many were expecting, there is a great deal of confusion regarding the prophesies, the Aztec Calendar Stone and the Maya calendars. The three are related, but they are often misunderstood, and many television programs and YouTube videos add to the confusion as they show an image of the Sunstone, when the subject of the narrative is the Maya calendars and their associated prophecies. [i]

The Maya people have three major calendar systems, a 260 day sacred calendar, called the Tzolkin ("day count,") a 365 day "vague year" calendar called the Haab, and one called "the long count," which is based on the 26,000 year long precession of the earth's axis.[ii]

However, there is another calendar used by the ancient Maya called the Venus Cycle, which appears to have fallen into disuse in more modern times, because of the difficulty in using it to make long term predictions, due to the fact that its 584 day cycle is only an approximation.[iii] Nevertheless, the fact that the Tzolkin synchronizes with the Haab every 52 years, which is called a calendar round, and all three calendars synchronize every 104 years, in what is called a Venus round, leads many to conclude that all three of these calendars, the Tzolkin, the Haab and the Venus cycle, must somehow be incorporated into the Sunstone's design.[iv]

Yet, while it is clear that the 20 day signs of the Tzolkin are part of the stone's design, this does not necessarily mean that the Tzolkin calendar itself is to be found in it, and there is no evidence of the presence of the other two calendars at all.[v]

There has been a great effort by modern scholars to understand the ancient Maya attempts to synchronize the observations of Venus risings with the dates of the long count and the Haab cycles, as evidenced by the Venus tables found in the Dresden codex, a Maya document probably written in the mid-13th century, with its observations going back even further, but this does not imply that this ancient attempt to correlate these dates was even known by the authors of the Sunstone, let alone incorporated into its design by them.[vi]

What is clear is that the Sunstone is a complete picture of the solar pattern of Venus, as viewed from the perspective of earth. From the pattern, size and placement of its concentric circles, to its segmentation into 5, 10 and 20 subdivisions, and from the five symbolic markers at its core, to the two inverse symbols on its periphery, the Sunstone is first and foremost an image of the motions of the planet Venus, the bright and morning star, with which Jesus of Nazareth identifies himself in the book of Revelation, chapter 22, verse 16, and which, as some Hebrew scholars assert, is an interpretation of the title of Psalm 22: "rqwbh bkwk," or morning star.[vii]

Conceivably, if this psalm can carry the name of Jesus as the morning star, because it describes him with inspired and powerfully prophetic and poetic prose, the argument can be made that the sunstone's image of intricate and masterful carvings is also a reflection of him, because it represents the motions of his planet, the planet Venus, the bright and morning star, in all its glory.

It is then no small coincidence that the traditions of Quetzalcoatl, Kukulcan, Viracocha, etc., the bearded "pale God," whom the indigenous Americans often referred to as "the prophet," and "the healer" are also identified with the planet

Venus: Of course, while this fact does not amount to reliable evidence that there is a definite connection between the pale God who walked the Americas and Jesus, it clearly implies that Jesus of Nazareth was as known in the New World of America, as he was to the Old World of the holy land.[viii]

Such an intriguing possibility motivates us to study the stone's design, not so much from the usual perspective of Maya calendar intricacies, but rather from the point of view of an unexpected New World capability for prophetic prediction of actual historical events, similar to those in the Bible, but in the context of mathematical precision, in contrast to the same, well-known, Old World capability, in the context of poetic expression.

The connection of the stone to the New World traditions of Quetzalcoatl, the plumed serpent (wise as a serpent, harmless as a dove) is not only evident from the American oral traditions, but also from the design itself: The stone is divided into two parts. One-half is encircled by a plumed serpent, and the other half is encircled by its reciprocal, another plumed serpent facing in the opposite direction, suggesting the two, opposing cycles of the gleaming dawn star, one as the rising morning star, moving away from the sunrise during one part of the year, and the other as the descending evening star, moving toward the sunset, during the other part of the year.

Figure 1. Two, reciprocal, plumed serpents encircle the sun stone.

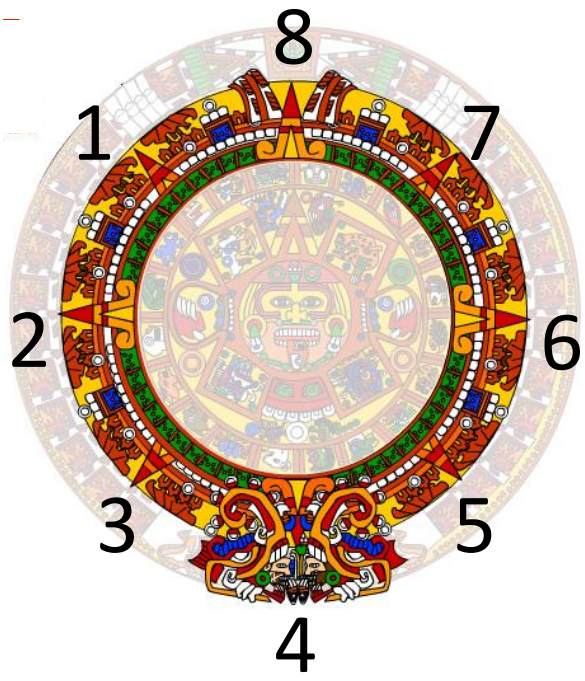

Figure 2. One Earth Year Divided into Eight Parts

This symbol of the earth's annual experience, cast in the light of the planet Venus, is then divided into eight segments by the adjacent inner circle containing eight, evenly spaced, arrow heads, suggesting the division of the earth's orbit into eight parts, while at the same time providing for the enumeration of the eight 1/8 parts, or the sequential summing of them into 8 * 1/8 = 8/8 = 1, as each cycle is completed, just as the division of our clock face divides half of the Earth's revolution upon its axis into twelve parts, while at the same time providing for the enumeration of the twelve, 1/12, parts, or the enumeration of the sequential summing of them, into 12 * 1/12 = 12/12 = 1, as the cycle of the clock is completed with each day's passing.

Dividing the 365.25 days of the Earth's orbit around the Sun into eight parts, gives each division a value of 45.65625, or 45 days, 15 hours and 45 minutes. Eight complete cycles then tallies eight Earth years, or 8x8 = 64 of the 45-day markers, or 2922 days total.

The next inner circle is divided into 40 subdivisions, which will be discussed below, but the fourth circle within the third one is divided into 20 subdivisions, each representing one of the 20 day-names of the Maya Tzolkin. Consequently, in an attempt to explain how this circle of 20 days is incorporated into the design of the stone, it is fashionable to appeal to an analogy with the operation of the Maya Tzolkin, or day count. Each of these 20 day-names of the Tzolkin is associated with one of 13 numbers of the Tzolkin, in the Maya calendar, on a continuously rotating basis. This system can be imagined as two, interlocking gears, rotating so that each of the 20 days corresponds to a number in a consecutive sequence of numbers from 1 to 13, in the 260 days of the Tzolkin calendar.

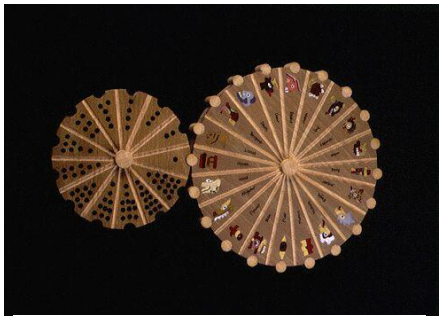

Figure 3. The Maya Tzolkin Calendar

Figure 4. 20 day signs or half of the Tzolkin

The problem is, however, the 13 numbers of the Tzolkin calendar do not even appear on the Sunstone, let alone interlock with the circle of 20 days on it. Yet, instead of looking for another function of the 20 day signs, modern investigators insist that the numbers must be on the stone somewhere and either ignore the fact that they are not, or simply repeat the usual disclaimer that no one really knows how the stone actually works anyway.

In truth, there are plenty of ways to count 13 on the stone, but none of these are the bar and dot numbers of the ancients that can be made to fit the 20 day names in an interlocking manner, as the Tzolkin calendar does.

Figure 5. A Quincunx of 5 Special Glyphs

What should be obvious, however, is that 13 x 45 = 585, which is in the average range of the Venus cycle that varies from 581 to 588 days, and since each 1/8 division of the year on the stone is worth 45.65625 days, a count of 13 of the 1/8 year markers would constitute completion of one Venus cycle. A total of five Venus cycles equals 2,922 days (5 x 584.4 = 2922), or eight years.

In the innermost circle of the Sunstone are five special glyphs in the form of a quincunx, four surrounding the prominent center glyph. In the Aztec myths, these glyphs are currently identified with four different ages in the past through their associated “gods” of wind, fire, rain and water. The four past ages were thought to have been destroyed by these “gods,” and the current age, the fifth and final age, depicted by the center glyph, is predicted to be destroyed by the “god” of movement, which is interpreted as earthquake.

However, while these myths may have become associated with the Sunstone's design over the years, the design itself is amazingly capable of standing on its own, as an abstraction of the *motion* of Venus, the Evening and Morning Star, when considered from the perspective of the Earth, fixed in its orbit.

The basic form of the design of concentric circles and their division into eight major parts, surrounding five special nodes, can be seen in the epitrochoid pattern of the motions of the planet Venus and the sun, generated from the fixed point of view of the Earth, a pattern that has been known from the earliest ages of history.[ix] While the eight concentric rings are formed by connecting the nodes at the intersection of the plots of 13 Venusian orbits, a spatial facet of the design, it requires eight orbits of the Sun (really the Earth) to generate this pattern, a *temporal* facet of the design that is connected with its *spatial* aspect.

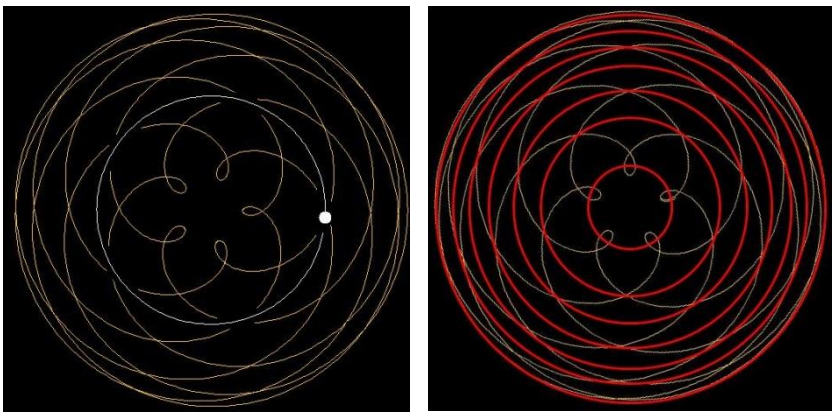

Figure 6. Left: Epitrochoid with quincunx of five central nodes, requiring 8 years (2922 days) to complete. **Right:** Connecting the nodes forms 8 concentric rings

Furthermore, the nodes of the pattern suggest two more divisions, this time in the radial direction out from the center point at the origin. First, starting with the five inner nodes and connecting those nodes in line with them, and then with the five outer nodes, which are between the first five, and connecting those nodes in line with them, we obtain ten evenly spaced radials. An important result of this division is that drawing these ten radials over the pattern of concentric rings isolates two spaces formed by the pattern's curves, leaving two in each of the ten sections of each ring, producing twenty evenly spaced subsections around the pattern in each ring. This strongly suggests that the epitrochoid pattern of Venus is the true explanation of the enigmatic origin for the use of base 20 in the Maya number system, as opposed to the traditional explanation of 20 fingers and toes. [x]

Thus, the basic numbers of the Sunstone's design are found in the epitrochoid pattern, generated by the motions of the Earth and the planet Venus around the sun, from the observer's perspective, when the Earth's own motion is considered as fixed: The basic numbers are 5, 10 and 20. These three numbers constitute the spatial aspects of the motion generating the pattern. When we include its temporal aspects, the fact that the pattern is generated over 8 years, by 8 orbits of the Earth and 13 orbits of the planet Venus, we can add these two numbers to those abstracted from the epitrochoid pattern, bringing the list of the stone's characteristic numbers to: 5, 8, 10, 13 and 20.

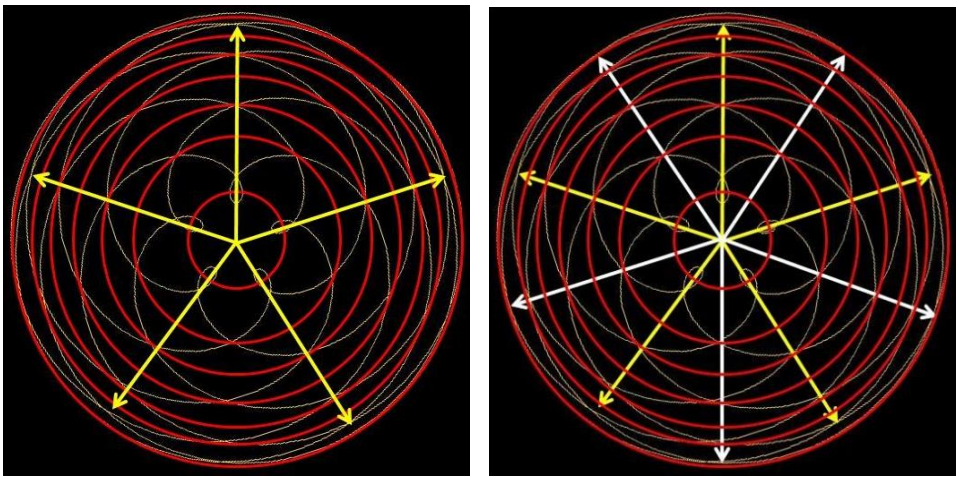

Figure 7. The 20 sections of the epitrochoid derived from 10 radials.

Accordingly, while comparing the stone's design to this epitrochoid pattern and its natural subdivisions, it appears that the number 8 is spatially imposed on the pattern as radial subdivisions, in the form of the eight arrow heads (AH), and the crucial calendric number, 13, required for the Tzolkin, appears only symbolically, in various glyphs carved into the stone. It does not appear explicitly in the Sunstone's geometry. Most strikingly, the crucial calendric number 18,

required for the Maya Haab calendar, is missing altogether from both the stone's list of characteristic numbers and its geometric design.

There have been many attempts to supply these missing numbers, some very ingenious, but the fact remains that they do not appear in the Sunstone's geometry. Indeed, only when we consider the element of time in the stone's calculations, as explained previously, do the numbers 13 and 18 emerge, suggesting that *both* space and time, the two, reciprocal aspects of motion, are incorporated into the Sunstone's design.

The best way to explain the stone's design is to realize that it is not a calendar, but a timer, a time-keeping device, meaning that it doesn't necessarily start and end on any particular dates, but can be started on a given date and then used to count the time periods extending out into the future from there. It's more like a table of numbers in this respect.

In fact, if we compare it to a table of numbers, or a matrix of numbers, the table is a 13 x 20 = 260 matrix with the number 8 contained in each of its 260 positions. Hence, the total sum of the table is 13 x 20 x 8, or 260 x 8 = 2080. When these 2080 positions are given the value of years, we can see how they are encoded into the rings and carvings of the stone.

First, the 2080 year total is divided into two parts by the two plumed serpents: Half of the stone's face represents 1040 years, encoded by 20 of the stone's 40 quincunxes carved into the third ring of "fives," just below the ring of 8 arrow heads. Each quincunx represents 52 years, but they are counted in pairs, each pair representing 104 years, as indicated by the placement of the pair carved into the stone, just below its center glyph.

Figure 8. Quincunx Pair

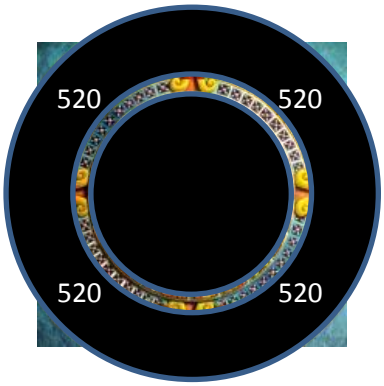

Figure 9. Ring of Forty "Fives"

Half of this 1040 year period, or 520 years, is therefore represented by the 10 quincunxes carved between each two large arrow heads in the third circle of the stone. We can represent these four 520 year periods encoded on the stone face in the ring of "fives," as the ring of 40 quincunxes is sometimes called, as shown in figure 10 below. If each small square in the graphic of figure 10 has a value of 8 years, then each column represents 13 x 8 = 104 years, and each 5 columns represents 5 x 104 = 520 years, and 4 x 520 = 2080 years.

The white horizontal bar divides the four 520-year periods into eight 260-year periods on the graphic to indicate that there are two ways to count the four 520-year periods on the stone. One way is to count down thirteen 8-year periods (one column,) 5 times. An alternate way is to count across a row of five 8-year periods, 6 and one-half times, twice.

In both cases, however, the count of 8 is the key count, even though it's not readily apparent from the ring of fives, in the graphic of figure 9.

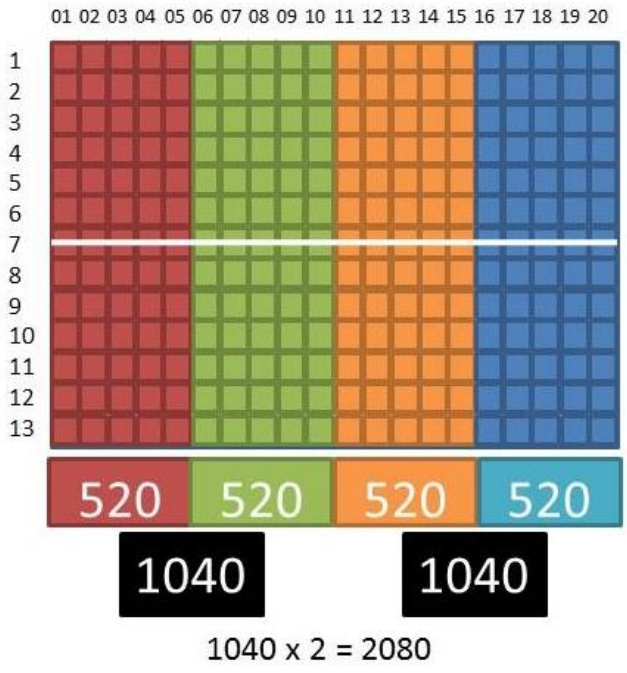

Figure 10. The 260 Position Structure

Since the count of 13 x 8 = 104 years, the basic cycle of the stone, is accomplished in two, 52 year cycles, as indicated by the pair of quincunxes in figure 8, this would entail counting down a column 6.5 rows, something that doesn't fit the aesthetics of the stone very well, even though such a count is encoded at the very top of the stone, half way through the 13 Acatl count glyph.

Figure 11. 13 Acatl

Each dot in this glyph is equivalent to one small square in one column of the table of figure 10, and so it counts 8 revolutions of the AHs, or 8 orbits of the earth. However, while each of the 13 dots on the Acatl glyph can be used to uniquely identify each 8-year period in the series of 13, it would be easy to lose track of when a given 8-year period ended and the next began, without some means to carefully track and identify each of the 8 years. Fortunately, as it turns out, there is a convenient way to keep track of each 8 year count in the series: Divide their 2922 days into the five Venus years of 584.4 days, as discussed above.

This can be done by dividing the 584.4 days into 20 months of 29.22 days each, which is within hours of the average length of a synodic lunar month of 29.53 days, according to the best modern day calculations.[xi] Of course, this requires that the 20 day names of the fourth circle would be changed to 20 month names and each of the five glyphs of the inner circle be used to track and uniquely identify each of the five cycles of the 20 named months.

To be sure, that this is the way the Toltecs actually did it cannot be established with certainty, but it's interesting to see that the pattern of glyphs in the inner circle is itself a quincunx, and that the inner circle of the epitrochoid pattern also has 5 nodes, as can be seen by comparing figure 5 and figure 6 above. It's unlikely that this striking similarity is just a coincidence, given the remarkable match between the overall design of the Sunstone and the epitrochoid pattern of the planet Venus motion.

To summarize, then, the Toltec Sunstone is an image of the motion of Venus, consisting of two hundred sixty, 8-year, periods, divided up into forty 52 year periods, as encoded in the ring of 40 quincunxes surrounding the ring of 20-day names. Each 8-year period of 2922 days is counted by a rotation of the 20 day-sign ring, where each day-sign actually represents one month of 29.22 days.

Therefore, one complete revolution of the day-sign ring counts 20 x 29.22 days, or the average Venus year of 584.4 days. Five of these revolutions, each uniquely named in the center quincunx, counts 100 x 29.22 = 2922 days, or five Venus years of 584.4 days each, which is equivalent to eight years of 365.25 days each.

By assigning the 20 day-sign symbols to a lunar month of 29.22 days, each month of the Venus year has a unique name, just as the twelve months of our Earth year has, making it easy for the public to mark the months, or "moons," as they went by.

Then, as each of the 5 uniquely named Venus years were completed in the inner circle, the uniquely named 8-year period was tallied at the top of the stone (see figure 11): 1 Acatl, 2 Acatl, 3 Acatl, …13 Acatl, completing one 104-year cycle, in two, 52-year, subcycles.

Subsequently, the process was repeated for the next 104 year period. Of course, since the 104 year cycle was divided by the 52-year pair of quincunxes corresponding to a given cycle, which don't seem to have a unique name, it's important to note that they do have a unique position in the ring of fives, so it wouldn't be difficult to track them, given that, for most people, this unique position on the ring of fives wouldn't change for generations.

According to the Toltec oral tradition, the Sunstone was carved at the behest of Quetzalcoatl (or Kate-Zahl.) This same tradition tells us that it is indeed based on the cycles of Venus, which was his star, the bright star of the morning. That it was given to the ancient American people as a beautiful and utilitarian reminder of his promise that the times of the

Conquistadores, their possession of the New World, was limited to five full cycles of the Dawn Star, as it was known then.[xii]

If those five cycles began in 1492 A.D., when Columbus sailed the blue, they have now been completed, 520 years later, in the year 2012 A.D. (1492 + 520 = 2012). But just as it was the Tainos of the Caribbean, who first saw the white sails of the Pinta, the Niña and the Santa Maria, quietly marking the end of the reign of the ancient Americans, now it is the Tainos of the Caribbean who, once again, first carry the message of quiet, but monumental change: The times of the gentiles (strangers) in America is over. A new age is born, the age when the promises of the Root and the Offspring of David, the Bright and Morning Star, which were made to the ancient Americans, concerning the great blessings to be poured out upon their descendants, is to be fulfilled.[xiii]

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[i] Vance, Erik, Scientific American, 8 Jul 2012. The author quotes Diana Magaloni Kerpel director of the National Museum of Anthropology in Mexico City: "It is not a calendar. It's really the image of space and time. It's an image of how the Aztecs conceived themselves as in the center of time and space," she says. "Look at that. There is face in the middle—that is the cosmos. The Maya wouldn't do that—ever."

[ii] Wikipedia, "Maya calendar," https://en.wikipedia.org/wiki/Maya_calendar.
[iii] Jenkins, John Major, "Venus, Moon and the Tzolkin Calendar," 1995, http://edj.net/mc2012/fap14.html
[iv] Jenkins, John Major, *Tzolkin: Visionary Perspectives and Calendar Studies, Introduction, Borderlands Science Research Foundation, Garberville, CA, 1994. http://edj.net/mc2012/fap4.html*
[v] Ibid, *Chapter Two. http://edj.net/mc2012/fap3.html*
[vi] Jenkins, John Major, "The Mayan Venus Calendar and the Golden Proportion," http://www.hiddenmysteries.org/themagazine/vol8/articles/mayanc.shtml

[vii] John Gill's Bible Commentary, Revelation 22:16, http://www.squidoo.com/johngill.
[viii] 2007 Wikipedia Selection for schools, "Quetzalcoatl," http://www.cs.mcgill.ca/~rwest/wikispeedia/wpcd/wp/q/Quetzalcoatl.htm.
[ix] Myer, Michael R, "Venus Morning Star, Venus Evening Star," http://www.khaldea.com/planets/venus_type.shtml
[x] See Mac Tutor at http://www-history.mcs.st-and.ac.uk/HistTopics/Mayan_mathematics.html
[xi] Wikipedia, "Month," http://en.wikipedia.org/wiki/Month
[xii] Hansen, Lucile Taylor, *He Walked the Americas*, pp 167-172, pp 243-244, originally published by Ziff-Davis, 1942, reprinted by Legend Press , 1994.
[xiii] Smith, Joseph Jr., *The Book of Mormon*, The Church of Jesus Christ of Latter-Day Saints, 1830.