

The “How and Why” of 2012 Revisited:

Twentieth Anniversary Re-Release of my Breakthrough Article of 1994, with New Comments

John Major Jenkins © May 23, 2014

May of 1994 was a busy month and a shift-point in the focus of my work. Up to that point I had been primarily involved in elaborating and exploring the “Root Principle Cosmology” embedded in the Maya calendar and was just finishing my 1994 book called *Jaloj Kexoj and Phi-64* (later reissued as *Mayan Sacred Science* in 2000). In addition, my 1992 book *Tzolkin* was just about to be reissued with Borderland Sciences Research Foundation (which happened in June, just in time for some presentations on a trip back to Chicago).

But something else was percolating up through my process. Since writing *Tzolkin* in 1991-1992 I had been chewing on the Long Count’s astronomical properties and trying to account for the fact that the cycle ending in 2012 fell on a solstice. This required an ability to track the shifting seasonal quarters of the Tropical Year. In *Tzolkin* I shared a periodicity within the Long Count I had discovered, which easily could have been employed by the Maya to identify the December solstice on 13.0.0.0.0 in 2012. This method is reprinted in my 1994 “breakthrough” article, written in a few days May 21-23, 1994.

The article was the sudden expression of some connections I’d been stewing on for some time; notably some diagrams and speculations that can be found in my notebook for the summer of 1993, annotated Xerox copies of pages from *Norton’s Star Atlas* (via the Boulder Public Library) that must be from 1993, and a mail exchange with Terence McKenna. This exchange reveals that I was revisiting and scratching my head over Terence’s description (in *The Invisible Landscape*, 1975) of the idea he found in *Hamlet’s Mill* (1969). I had first encountered this idea during my reading of his amazing book in the Fall of 1985, after moving to Boulder, Colorado. I couldn’t quite grok it in the way it was described; I half disbelieved it because I couldn’t visualize how it worked. It was something about the precession of the equinoxes and the solstice “heliacal rise” of the Galactic Center around the year 2000.

In 1990 my Dad gave me a copy of his EZCosmos astronomy program. I was able to play with it a little, on his computer in Chicago and on the stat-lab computers at the University of Colorado. But every time I snuck into the stat lab I had to secretly install the program and run it. I did this on several occasions during the writing of my book *Tzolkin* (1991-1992), but I was mainly looking at planetary positions on dates in Maya inscriptions. The program adjusted for precession and it was interesting to fast-forward the sky and see how everything morphed. I was deep into my Venus calendar and Maya calendar correlation work and wasn’t thinking

much about 2012 (if I was at all, it was from the perspective of the tropical year and the solstice placement).

But in 1993 the 2012 enigma presented itself again. My notebook drawings show I was trying to figure out what moved and what didn't. The *Norton's Star Atlas* indicated the "solstice colure" running by the ecliptic and the galactic equator, but I was unsure if and how this moved. By this time I hadn't employed my EZCosmos program for some time, and security at the CU stat lab had changed, making it very difficult to use the lab as a non-student. Then I read in a *Parabola Magazine* interview with the Tedlocks that "Maya Creation happens at the Crossroads." Having read Barbara's *Time and the Highland Maya*, I revisited Dennis's translation of the *Popol Vuh* and found some striking comments in his end notes, connecting the *Popol Vuh* to astronomy. By this time Schele's *Maya Cosmos* was released, and I'd already poured over *Forest of Kings* (1990). Schele's work concurred with the Tedlocks: The dark rift in the Milky Way and the Crossroads were key features of the *Popol Vuh*. At some point I realized that the sun, on the solstice in 2012, would be positioned at the Milky Way / ecliptic Crossroads, at the southern end of the dark rift. But in revisiting the books of the Tedlocks and Schele, I couldn't find any reference to this fact.

When I was able to re-launch my EZCosmos program I tracked how the December solstice sun's position was shifting with precession and aligning with the Crossroads in the years around 2012. Terence had pointed to the year 2000, but I realized that the process was slow, thus 2012 was within a zone of alignment. And, seeing that the alignment involved the astronomical features so important within the Maya Creation Myth, a eureka moment happened in which the pieces fell into place.

One important piece was that the December solstice sun was no doubt the primary Maya Sun Lord, the main Ahau guy, the father of the Hero Twins named One Hunahpu. I thus saw the *Popol Vuh* as a metaphor for precessional shifting. And at the end of the story, One Hunahpu gets resurrected or reborn, so they must have thought about 2012 as the rebirth of the world, or Era, when the sacrificed god was returned to, or reborn on, his throne. I was emboldened to read that a scholar of Mesoamerican literature, Gordon Brotherston, also considered the *Popol Vuh* to express a precessional World Age concept.

I was so enthused for what I had synthesized, and sure that there had to be something to it, that I quickly wrote Linda Schele a letter on May 16, 1994 (see Appendix 3). It is dated slightly before the writing of my "How and Why" piece, and contains some hurried expressions that aren't accurate. In my naïvete I expected a quick reply with her own observations and insights, but never received one. In my efforts to engage scholars on my findings (which has continued to this day) I talked with Dennis Tedlock when he spoke at the Ethnopoetics Conference in Boulder in July 1994. I asked him about the fact of the alignment. He said that it could be discounted as a form of "misplaced concretism" — meaning that the sun will obscure the Dark Rift and Crossroads and thus the alignment

can't be observed. This seemed an odd dismissal; it was clearly not a relevant issue since it was a question of the ancient Maya projecting an astronomical calculation into the future. It didn't need to be directly observed; it was an extrapolation or calculation far into the future.

But was there evidence that they could make this kind of calculation? This was to emerge in the work of Michael Grofe beginning around 2003. My own work focused on the iconographic evidence at Izapa, not on a method of astronomical tracking and calculation. One can find the evidence for precessional awareness and tracking in Maya inscriptions, archaeoastronomical alignments, and the iconography of the ballgame and the Creation Myth, and still not know exactly how the ancient Maya accomplished it. I've made this point on many occasions.

Dennis Tedlock, in his 2010 book *2000 Years of Mayan Literature*, obliquely and briefly dealt with the galactic alignment question, but neglected to mention my work (despite a long history of communications with him); in fact he dismissed the alignment while emphasizing a different viewpoint on the culmination of Virgo overhead (a reading that he and Barbara had presented at the Tulane conference in February 2009). Thus the die was cast for how scholars would typically deal with me and my work, even when they might indirectly acknowledged the points I was making.

In my naïve way I felt the new breakthrough needed to be published ASAP and I began casting about for some magazine that might publish it. A friend told me that the offices for the *Mountain Astrologer* magazine were in Boulder. I looked them up and rode over on my bike. They liked the idea and agreed to publish it in their December issue. And so it was done! But the real work had just begun. By August I was posing questions that would advance the investigation. Namely, when and where was the Long Count invented? I read in Michael Coe's book that the "Izapan civilization" was likely involved in the formulation of the Long Count. Izapa? I recalled passing through Izapa four years previously, on my way to Guatemala. It wasn't that impressive. But I diligently searched the stacks at CU and was amazed to find the three hefty volumes from the BYU New World Archaeology reports. I recall pouring through them while house-sitting for a friend in September, and having another eureka moment when I realized that Stela 11 was showing the rebirth of One Hunahpu from the maw of the Dark Rift (the upturned frog-mouth glyph that means "to be born"). And I could see from the maps in the BYU book that Stela 11 faced the dawning December solstice sun along the horizon! This was astounding confirmation for what I'd earlier suspected about One Hunahpu — in the oldest calendrical and mythological context, he was the December solstice Sun God, the First Father, the primary solar Lord of the Year. I was now armed with empirical evidence from the site that was relevant to the 2012 calendar's origins. It was all very exciting and now I wanted to share and publish my findings with the academic community of scholars, many of whose writings I had studied deeply and greatly respected. I knew about the archaeoastronomy journals (one out of

the U.K. and one in Maryland) — they were installed in the science library by the big pendulum I used to walk by on my way to my job at the slingshot factory, back in 1985. And the editor of the Maryland journal, John B. Carlson, had written some interesting articles about directional geomancy, magnetic compasses, and Venus. Certainly he would be open minded and might consider publishing a brief report on my findings. I even noted that he wrote an editorial about the contributions of “amateur” astronomers. So on November 22, 1994, I wrote and sent a letter to propose an article. No response. Sent another letter addressed directly to Carlson on March 19, 1995 along with my booklets comprising *The Center of Mayan Time* and another letter on May 12, 1995, which included my “How and Why” piece as well as my 1995 article “Maya Creation: The Stellar Frame and World Ages” (which I also pitched to *Mexicon* magazine for publication). No response. Years later, around 2007-2008, John Hoopes, a friend of Carlson, had mentioned that he had a copy of my 1995 book *The Center of Mayan Time*. I was quite surprised, as I’d sold only about 40 copies through my mail order catalog. He said it was a Xerox copy sent to him by John B. Carlson. This confirms that Carlson had indeed received my letters.

I was transparent about trying to engage scholars about my work. In 1996 I sent letters to Ed Krupp and Anthony Aveni, who both responded. They were generally dismissive of my conclusions.

My “How and Why” article represents a breakthrough, but it was written at a very early stage in the work and therefore contains some inaccuracies of expression. This is to be expected in any evolving investigation. It also refers to some ancillary investigations I was concerned with at the time (such as the Finnish *Kalevala*) which complicate the presentation. I’ve therefore added new annotations as superscripted footnotes, found at the bottom of each page. The original End Notes are preserved in the text as bracketed numbers, such as [4] — and these refer to the numbered notes *at the end* of the article.

My writings and presentations on my 2012 alignment reconstruction have obviously improved and evolved since 1994, but this article remains as the first expression of how the ancient Maya likely thought about 2012. This approach, always a concern of mine, was not how 2012 got branded in the marketplace (the *doomsday* meme got a boost from Cotterell and Gilbert’s flawed *Mayan Prophecies* book of 1995, which led to the solar flare hysteria courtesy of Lawrence Joseph’s *Apocalypse 2012* book of 2006). The approach of reconstructing authentic Maya beliefs wasn’t even a concern of McKenna or Argüelles, who each had already presented their own models about 2012 (see Appendix 2).

But McKenna was supportive of my work. I attended his Boulder events in 1992 and May of 1996 and he posted my “How and Why” article on his website (I think in mid-1996), where it remains today. In one final odd occurrence, I recently discovered that my 1994 article was plagiarized and used, without credit, in a 2009 book called *21 December 2012 End of the World* by Dr. P. Pathak and Krishna Kumari (Prashant Publishing

House, New Delhi). I stumbled across the book in my local library (Farr Library in Greeley), which doesn't carry any of my own titles.



THE HOW AND WHY OF THE MAYAN END DATE IN 2012 A.D.

by John Major Jenkins © May 23rd, 1994

Originally published in the Dec. '94 issue of *Mountain Astrologer*

Why did the ancient Mayan or pre-Maya choose December 21st, 2012 A.D., as the end of their Long Count calendar? This article will cover some recent research.

Scholars have known for decades that the 13-baktun cycle of the Mayan "Long Count" system of timekeeping was set to end precisely on a winter solstice, and that this system was put in place some 2300 years ago. This amazing fact - that ancient Mesoamerican skywatchers were able to pinpoint a winter solstice far off into the future - has not been dealt with by Mayanists.¹ And why did they choose the year 2012?² One immediately gets the impression that there is a very strange mystery to be confronted here. I will be building upon a clue to this mystery reported by epigrapher Linda Schele in *Maya Cosmos* (1993). This article is the natural culmination of the research relating to the Mayan Long Count and the precession of the equinoxes that I explored in my recent book *Tzolkin: Visionary Perspectives and Calendar Studies* (Borderland Sciences Research Foundation, 1992/1994).

¹ It was dealt with by Edmonson in his 1988 book, very briefly. He did suspect that the solstice occurrence suggested intentional placement, and pointed to the Year Drift Formula as a possible explanation.

² *This* is the question that scholars never addressed, and that drove my own investigation.

The Mayan Long Count

Just some basics to get us started. The Maya were adept skywatchers. Their Classic Period is thought to have lasted from 200 A.D. to 900 A.D., but recent archeological findings are pushing back the dawn of Mayan civilization in Mesoamerica. Large ruin sites indicating high culture with distinctly Mayan antecedents are being found in the jungles of Guatemala dating back to before the common era. And even before this, the Olmec civilization flourished and developed the sacred count of 260 days known as the *tzolkin*. The early Maya adopted two different time keeping systems, the "Short Count" and the Long Count. The Short Count derives from combining the *tzolkin* cycle with the solar year and the Venus cycle of 584 days.³ In this way, "short" periods of 13, 52 and 104 years are generated. Unfortunately, we won't have occasion to dwell on the properties of the so-called Short Count system here. The Long Count system is somewhat more abstract, yet is also related to certain astronomical cycles. It is based upon nested cycles of days multiplied at each level by that key Mayan number, twenty:

<u>Number of Days</u>	<u>Term</u>
1	Kin (day)
20	Uinal
360	Tun
7200	Katun
144000	Baktun

Notice that the only exception to multiplying by twenty is at the tun level, where the uinal period is instead multiplied by 18 to make the 360-day tun. The Maya employed this counting system to track an unbroken sequence of days from the time it was inaugurated. The Mayan scholar Munro Edmonson believes that the Long Count was put in place around 355 B.C. This may be so, but the oldest Long Count date as yet found corresponds to 32 B.C.⁴ We find Long Count dates in the archeological record beginning with the baktun place value and separated by dots. For example: 6.19.19.0.0 equals 6 baktuns, 19 katuns, 19 tuns, 0 uinals and 0 days. Each baktun has 144000 days, each katun has 7200 days, and so on. If we add up all the values we find that 6.19.19.0.0 indicates a total of 1007640 days have elapsed since the Zero Date of

³ I considered the Short Count to refer to the Tzolkin-Haab-Venus system; I quickly realized that the Short Count should refer to a truncated version of the Long Count used in post-Conquest Yucatan, and began referring to the Tzolkin-Haab as the Calendar Round and, with Venus added, is the Venus Round calendar (of 104 Haab).

⁴ The Stela 2 monument from Takalik Abaj may be as early as 39 BC, certainly no later than 19 BC. There is a 37 BC Long Count date from Tres Zapotes.

0.0.0.0.0.⁵ The much discussed 13-baktun cycle is completed 1872000 days (13 baktuns) after 0.0.0.0.0. This period of time is the so called Mayan "Great Cycle" of the Long Count and equals 5125.36 years.⁶ But how are we to relate this to a time frame we can understand? How does this Long Count relate to our Gregorian calendar?

This problem of correlating Mayan time with "western" time has occupied Mayan scholars since the beginning. The standard question to answer became: what does 0.0.0.0.0 (the Long Count "beginning" point) equal in the Gregorian calendar? When this question is answered, archeological inscriptions can be put into their proper historical context and the end date of the 13-baktun cycle can be calculated. After years of considering data from varied fields such as astronomy, ethnography, archeology and iconography, J. Eric S. Thompson determined that 0.0.0.0.0 corresponded to the Julian date 584283, which equals August 11th, 3114 B.C. in our Gregorian calendar. This means that the end date of 13.0.0.0.0, some 5125 years later, is December 21st, 2012 A.D.[1]

The relationship between the Long Count and Short Count has always been internally consistent (both were tracked alongside each other in an unbroken sequence since their conception). Now it is very interesting to note that an aspect of the "Short Count", namely, the sacred tzolkin count of 260 days, is still being followed in the highlands of Guatemala.⁷ As the Mayan scholar Munro Edmonson shows in The Book of the Year, this last surviving flicker of a calendar tradition some 3000 years old supports the Thompson correlation of 584283. Edmonson also states that the Long Count was begun by the Maya or pre-Maya around 355 B.C., but there is reason to believe that the Long Count system was being perfected for at least 200 years prior to that date. The point of interest for these early

⁵ I use the term Zero Date here, which is a term used in different meanings in *Hamlet's Mill* and among Egyptologists. My use refers to the Era Base or Base Date in 3114 BC.

⁶ It became a premise-attacking trope among scholarly 2012 debunkers to question whether the Maya even had a "cycle" concept associated with the 13-Baktun period. But many scholars casually use the phrase "13-Baktun cycle" (Carlson, Loooper, Schele, many others) and it follows clearly because the 3114 BC Era Base date is identified in the inscriptions as *the end of the previous* period of 13 Baktuns. Then, obviously, the counting starts over because all Classic Period Long Count dates are dated, in the inscriptions, with the back-calculation counting back to "0" in 3114 BC. Thus, 13.0.0.0.0 = 0.0.0.0.0, the concept involves a turnover, a cycling back to zero. Victoria Bricker concurred on this perspective regarding whether the count should return to 0.0.0.0.0 in 2012, although most of the other scholars who were queried on this point claimed the Baktun count should go up to 20, because they were Pakal fans and JMJ bashers. (In other words, agreeing with the evidence and logic that 2012 would be a *cycle* ending would be giving an inch toward supporting my work, which could not be allowed.)

⁷ This leads to the key litmus test for any proposed correlation, resulting in only the 584283 meeting the requirements of all the tests. Scholars were adept at ignoring this key test, up through 2012, to call into doubt the solstice 2012 correlation, because they were ideologically committed to mitigating my work (attacking its premises) or were ideologically committed to Thompson not being correct or the modern Maya not retaining a ritual continuity with their past — all these positions are problematic and biased.

astronomers seems to have been the projected end date in 2012 A.D., rather than the beginning date in 3114 B.C. Having determined the end date in 2012 (for reasons we will come to shortly), and calling it 13.0.0.0.0, they thus proclaimed themselves to be living in the 6th baktun of the Great Cycle.⁸ The later Maya certainly attributed much mythological significance to the beginning date, relating it to the birth of their deities, but it now seems certain that the placement of the Long Count hinges upon its calculated end point. Why did early Mesoamerican skywatchers pick a date some 2300 years into the future and, in fact, *how* did they pinpoint an accurate winter solstice? With all these considerations one begins to suspect that, for some reason, the ancient New World astronomers were tracking precession.

The Precession

The precession of the equinoxes, also known as the Platonic Year, is caused by the slow wobbling of the earth's polar axis. Right now this axis roughly points to Polaris, the "Pole Star," but this changes slowly over long periods of time. The earth's wobble causes the position of the seasonal quarters to slowly precess against the background of stars. For example, right now, the winter solstice position is in the constellation of Sagittarius. But 2000 years ago it was in Capricorn. Since then, it has precessed backward almost one full sign. It is generally thought that the Greek astronomer Hipparchus was the first to discover precession around 128 B.C. Yet scholarship indicates that more ancient Old World cultures such as the Egyptians (see Schwaller de Lubicz's book Sacred Science) and Babylonians also knew about the precession. I have concluded that even cultures with simple horizon astronomy and oral records passed down for a hundred years or so, would notice the slow shifting of the heavens. For example, imagine that you lived in an environment suited for accurately demarcated horizon astronomy. Even if this wasn't the case, you might erect monoliths to sight the horizon position of, most likely, the dawning winter solstice sun. This position in relation to background stars could be accurately preserved in oral verse or wisdom teachings, to be passed down for centuries. Since precession will change this position at the rate of 1 degree every 72 years, within the relatively short time of 100 years or so, a noticeable change will have occurred. The point of this is simple. To early cultures attuned to the subtle movements of the sky, precession would not have been hard to notice.[2]

The Maya are not generally credited with knowing about the precession of the equinoxes. But considering everything else we know about the amazing sophistication of Mesoamerican astronomy, can we realistically continue to deny them this? Many of the as yet undeciphered

⁸ Whatever the details, it is certainly true that the Long Count was NOT inaugurated back in 3114 BC — a contention promoted by Zechariah Sitchin as part of his ancient aliens belief, and repeated by many of his students and others even up to an essay posted on Graham Hancock's website in November of 2012.

hieroglyphs may ultimately describe precessional myths. Furthermore, as I show in my book Tzolkin: Visionary Perspectives and Calendar Studies, the Long Count is perfectly suited for predicting future seasonal quarters, indefinitely, and precession is automatically accounted for. Some of the most incredible aspects of Mayan cosmo-conception are just now being discovered. As was the case with the state of Egyptology in the 1870's, we still have a lot to learn. In addition, Mayanists like Gordon Brotherston (The Book of the Fourth World) consider precessional knowledge among Mesoamerican cultures to be more than likely.

The Sacred Tree

We are still trying to answer these questions: What is so important about the winter solstice of 2012 and, exactly how were calculations made so accurately, considering that precession should make them exceedingly difficult?

If we make a standard horoscope chart for December 21st, 2012 A.D., nothing very unusual appears. In this way I was led astray in my search until Linda Schele provided a clue in the recent book Maya Cosmos. Probably the most exciting breakthrough in this book is her identification of the astronomical meaning of the Mayan Sacred Tree. Drawing from an impressive amount of iconographic evidence, and generously sharing the process by which she arrived at her discovery, *the Sacred Tree is found to be none other than the crossing point of the ecliptic with the band of the Milky Way*. Indeed, the Milky Way seems to have played an important role in Mayan imagery. For example, an incised bone from 8th century Tikal depicts a long sinking canoe containing various deities. This is a picture of the night sky and the canoe is the Milky Way, sinking below the horizon as the night progresses, and carrying with it deities representing the nearby constellations.

The incredible Mayan site of Palenque is filled with Sacred Tree motifs and references to astronomical events. In their book Forest of Kings, Schele and Freidel suggested that the Sacred Tree referred to the ecliptic. Apparently that was only part of the picture, for the Sacred Tree that Pacal ascends in death is more than just the ecliptic, it is the sacred doorway to the underworld. The crossing point of Milky Way and ecliptic is this doorway and represents the sacred source and origin. In the following diagram of the well known sarcophagus carving, notice that the Milky Way tree serves as an extension of Pacal's umbilicus. The umbilicus is a human being's entrance into life, and entrance into death as well:

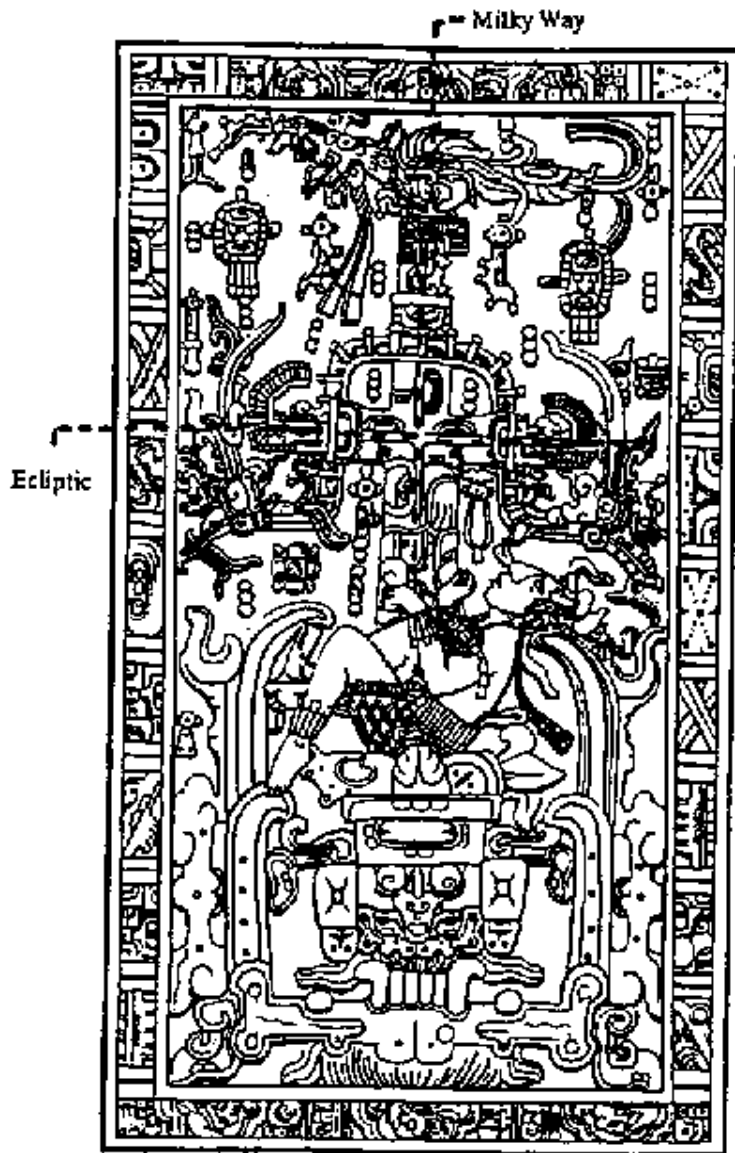


Diagram 1: Pacal and the Sacred Tree.

We may also remember at this point that the tzolkin calendar is said to spring from the Sacred Tree. The Sacred Tree is, in fact, at the center of the entire corpus of Mayan Creation Myths. We should definitely explore the nature of this astronomical feature. The first question that came up for me was as follows. Since Lord (Ahau) Pacal is, by way of divine kingship, equated with the sun, and he is portrayed "entering" the Sacred Tree on his famous sarcophagus lid, on what day does the sun come around to conjunct the crossing point of ecliptic and Milky Way? This would be an important date. In the pre-dawn skies of this date, the Milky Way would be seen to arch overhead from the region of Polaris (Heart of Sky) and would point right at where the sun rises. This (and the corollary date 6 months later) is the only date when the Sun/Lord could jump from

the ecliptic track and travel the Milky Way up and around the vault of heaven to the region of Polaris, there to enter the "Heart of Sky." It should be mentioned that 1300 years ago, during the zenith of Palenque's glory, Polaris was much less an exact "Pole Star" than it is now. Schele demonstrates that it wasn't a Pole Star that the Maya mythologized in this regard, it was the unmarked polar "dark region" symbolizing death and the underworld around which everything was observed to revolve. Life revolves around death - a characteristically Mayan belief.

The dates on which the sun conjuncts the "Sacred Tree" are thus very important. These dates will change with precession. Schele doesn't pursue this line of reasoning, however, and doesn't even mention that these dates might be significant. If we go back to 755 A.D., we find that the sun conjuncts the Sacred Tree on December 3rd. I should point out here that the Milky Way is a wide band, and perhaps a 10-day range of dates should be considered. To start with, however, I use the exact center of the Milky Way band that one finds on star charts, known as the "Galactic Equator" (not to be confused with Galactic Center). Where the Galactic Equator crosses the ecliptic in Sagittarius just happens to be where the dark rift in the Milky Way begins. This is a dark bifurcation in the Milky Way caused by interstellar dust clouds. To observers on earth, it appears as a dark road which begins near the ecliptic and stretches along the Milky Way up towards Polaris. The Maya today are quite aware of this feature; the Quiché Maya call it *xibalba be* (the "road to xibalba") and the Chorti Maya call it the "camino de Santiago". In Dennis Tedlock's translation of the Popol Vuh, we find that the ancient Maya called it the "Black Road". The Hero Twins Hunahpu and Xbalanque must journey down this road to battle the Lords of Xibalba. (Tedlock 334, 358). Furthermore, what Schele has identified as the Sacred Tree was known to the ancient Quiché simply as "Crossroads."

This celestial feature was not marginal in ancient Mayan thought and is still recognized even today. In terms of how this feature was mythologized, it seems that when a planet, the sun, or the moon entered the dark cleft of the Milky Way in Sagittarius (which happens to be the exact center of the Milky Way, the Galactic Equator), entrance to the underworld road was possible, which could then take the journeyer up to the Heart of Sky. Shamanic vision rites were probably involved in this scenario. In the Yucatan, underground caves were ritual places used by shaman to journey to the underworld. Schele explains that "Mayan mythology identifies the Road to Xibalba as going through a cave" (Forest of Kings, 209). Here we have a metaphorical reference to the "dark rift" in the Milky Way by way of its terrestrial counterpart, a syncretism between earth and sky which is characteristic of Mayan thinking. Above all, what is becoming apparent from the corpus of Mayan Creation Myths is that creation seems to have taken place at a celestial crossroads - the crossing point of ecliptic and Milky Way.

To clarify this ever growing picture, we should stop here and plot out some charts. In addition to the detailed star maps from Norton's 2000.0

Star Atlas which allowed me to pinpoint the crossing point of Galactic Equator and ecliptic, I use EZCosmos to plot these positions.[3] What I found answers the question of why the Maya chose the winter solstice of 2012, a problem seemingly avoided by astronomers and Mayanists alike.

While it is true that the sun conjuncts the Sacred Tree on December 3rd in the year 755 A.D., over the centuries precession has caused the conjunction date to approach the winter solstice. So, how close are we to perfect conjunction today? Exactly when might we expect the winter solstice sun to conjunct the crossing point of Galactic Equator and ecliptic - the Mayan Sacred Tree? Any astronomer will tell you that, presently, the Milky Way crosses the ecliptic through the constellation of Sagittarius and this area is rich in nebulae and high density objects. In fact, where the Milky Way crosses the ecliptic in Sagittarius also happens to be the direction of the Galactic Center.[4]

The Charts

So the quest returns to identifying why December 21st, 2012 A.D. might represent some kind of astronomical anomaly. I'll get right to the heart of the matter. Let's look at a few charts.

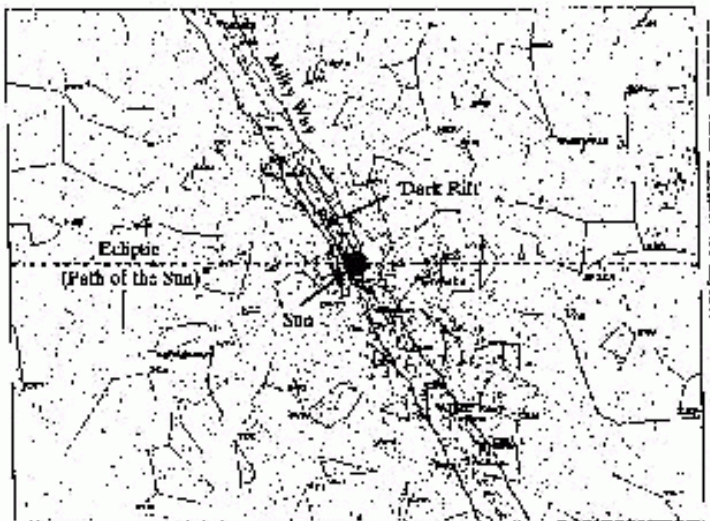


Chart 1. Here is a full view of the sky at noon on December 21st, 2012 A.D. The band of the Milky Way can be seen stretching from the lower right to the upper left. The more or less vertical dotted line indicates the Galactic Equator. The planets can be seen tracing a roughly horizontal path through the chart, indicating the ecliptic. The sun, quite strikingly, is dead center in the Sacred Tree. Let's look closer.

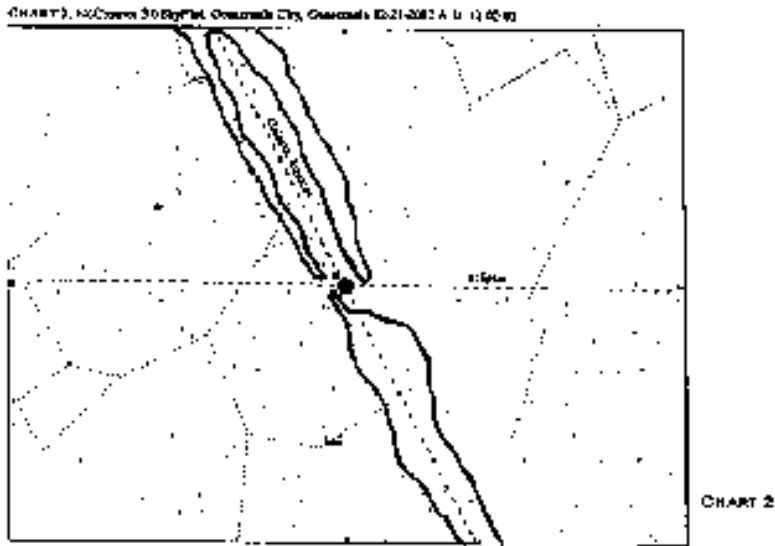


Chart 2. The field is now reduced from a horizon-to-horizon view to a field of 30 degrees. Part of the constellation of Sagittarius can be seen in the lower left portion of the chart. The planet in the middle-to-upper left portion of the chart is Pluto, which rarely travels directly along the ecliptic. The center square near the sun is placed on the Trifid Nebula (M20). According to the star chart I used, this nebula is very close to the crossing point of Galactic Equator and ecliptic. However, a small star (4 Sgr) is even closer; it sits right on the Galactic Equator and its declination is only $00^{\circ}.08'$ below the ecliptic. Let's look closer at these features.

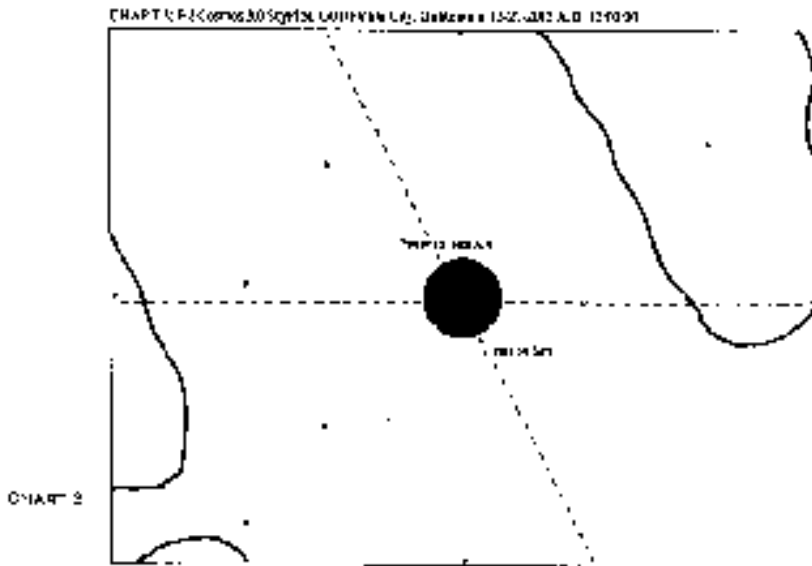


Chart 3. The field is now reduced to a 5-degree span, what astrology considers to be within conjunction. The dot to the lower right of the sun is the star 4 Sgr. Amazingly, the Sun is right on target. We couldn't have hoped for a closer conjunction. 1 day before or after will remove the sun a noticeable distance from the crossing point. December 21st, 2012 (13.0.0.0.0 in the Long Count) therefore represents an extremely close

conjunction of *the winter solstice sun* with the crossing point of Galactic Equator and the ecliptic, what the ancient Maya recognized as the Sacred Tree. It is critical to understand that the winter solstice sun rarely conjuncts the Sacred Tree. In fact, this is an event that has been coming to resonance very slowly over thousands and thousands of years. What this might mean astrologically, how this might effect the "energy weather" on earth, must be treated as a separate topic. But I should at least mention in passing that this celestial convergence appears to parallel the accelerating pace of human civilization.

It should be noted that because precession is a very slow process, similar astronomical alignments will be evident on the winter solstice dates within perhaps 5 years on either side of 2012. However, the accuracy of the conjunction of 2012 is quite astounding, beyond anything deemed calculable by the ancient Maya, and serves well to represent the perfect mid-point of the process. Let's go back to the dawn of the Long Count and try to reconstruct what may have been happening.

Why: Winter Solstice Sun Conjuncts The Sacred Tree in 2012 A.D.

First, the tzolkin count originated among the Olmec at least as early as 679 B.C. (see Edmonson's Book of the Year). We may suspect that astronomical observations were being made from at least that point. The tzolkin count has been followed unbroken since at least that time, up to the present day, demonstrating the high premium placed by the Maya upon continuity of tradition. In this way, star records, horizon positions of the winter solstice sun, and other pertinent observations could also have been accurately preserved. As suggested above, precession can be noticed by way of even simple horizon astronomy in as little time as 100 to 150 years. (Hipparchus, the alleged "discoverer" of precession among the Greeks, compared his own observations with data collected only 170 years before his time.) Following Edmonson, the Long Count system may have appeared as early as 355 B.C. Part of the reason for implementing the Long Count system, as I will show, was probably to calculate future winter solstice dates. We must assume that even at this early point in Mesoamerican history, the crossing point of ecliptic and Milky Way was understood as the "Sacred Tree". Since the Sacred Tree concept is intrinsically tied into the oldest Mayan Creation Myths, this is not improbable. At the very least, the "dark rift" was already a recognized feature. Early skywatchers of this era (355 B.C.) would then observe the sun to conjunct the dark ridge in the Milky Way on or around November 18th.[5] This would be easily observed in the pre-dawn sky as described above: the Milky Way points to the rising sun on this date. Over a relatively short period of time, as an awareness of precession was emerging, this date was seen to slowly approach winter solstice, a critical date in its own right in early Mayan cosmo-conception. At this point, precession *and the rate of precession* was calculated, the Long Count was

perfected and inaugurated, and the appropriate winter solstice date in 2012 A.D. was found via the Long Count in the following way.

How: Long Count and Seasonal Quarters

Long Count katun beginnings will conjunct sequential seasonal quarters every 1.7.0.0.0 days (194400 days). This is an easily tracked Long Count interval. Starting with the katun beginning of 650 B.C.:

<u>Long Count</u>	<u>Which Quarter?</u>	<u>Year</u>
6.5.0.0.0	Fall	650 B.C.
7.12.0.0.0	Winter	118 B.C.
8.19.0.0.0	Spring	416 A.D.
10.6.0.0.0	Summer	948 A.D.
11.13.0.0.0	Fall	1480 A.D.
13.0.0.0.0	Winter	2012 A.D.

Note that the last date is not only a katun beginning, but a baktun beginning as well. It is, indeed, the end date of 2012.[6]

The Long Count may have been officially inaugurated on a specific date in 355 B.C., as Edmonson suggests, but it must have been formulated, tried, tested, and proven before this date. This may well have taken centuries, and the process no doubt paralleled (and was perhaps instigated by) the discovery of precession. The Long Count system automatically accounts for precession in its ability to calculate future seasonal quarters - a property which shouldn't be underestimated.⁹

Summary

This has been my attempt to fill a vacuum in Mayan Studies, an answer to the why and how of the end date of the 13-baktun cycle of the Mayan Long Count.¹⁰ The solution requires a shift in how we think about

⁹ This is inaccurate. The method I shared accounts for the tropical years and can locate future seasonal quarters within the Long Count period endings, but where those quarters will fall against the sidereal backdrop (which would involve precession) is not accounted for. But what Michael Grofe discovered is that sometimes two paired dates in Maya inscriptions define a very large Distance Number that is evenly divisible by an accurate constant for the Sidereal Year (365.256355). The context of the related inscription very often supports the indication that the Maya were intentionally wanting to place the sun at the same sidereal position, often over an interval of thousands of years. This effectively does provide evidence that the Maya were using the Long Count to indicate Sidereal Year calculations, which is virtually equivalent to tracking precession. In other words, Grofe's findings show that the Maya were capable of the same level of astronomical ability that is required to place the sun at the Crossroads on the solstice in 2012.

¹⁰ At the time of my writing, this question had not been posed by scholars and for years afterward the 2012 topic was treated largely with contempt and derision by scholars. This

the astronomy of the Long Count end date. The strange fact that it occurs on a winter solstice immediately points us to possible astronomical reasons, but they are not obvious. We also shouldn't forget the often mentioned fact that the 13-baktun cycle of some 5125 years is roughly 1/5th of a precessional cycle.¹¹ This in itself should have been suggestive of a deeper mystery very early on. Only with the recent identification of the astronomical nature of the Sacred Tree has the puzzle revealed its fullness. And once again we are amazed at the sophistication and vision of the ancient New World astronomers, the descendants of whom still count the days and watch the skies in the remote outbacks of Guatemala.

This essay is not contrived upon sketchy evidence. It basically rests upon two facts: 1) the well known end date of the 13-baktun cycle of the Mayan Long Count, which is December 21st, 2012 A.D. and 2) the astronomical situation on that day.¹² Based upon these two facts alone, the creators of the Long Count knew about and calculated the rate of precession over 2300 years ago. I can conceive of no other conclusion. To explain this away as "coincidence" would only obscure the issue. For early Mesoamerican skywatchers, the slow approach of the winter solstice sun to the Sacred Tree was seen as a critical process, the culmination of which was surely worthy of being called 13.0.0.0.0, the end of a World Age.¹³ The channel would then be open through the winter solstice doorway, up the Sacred Tree, the *xibalba be*, to the center of the churning heavens, the Heart of Sky.¹⁴

Notes:

¹Linda Schele and David Freidel, unlike most Mayanists, continue to support the work of Floyd Lounsbury in promoting the 584285 correlation. This is 2 days off from the Thompson correlation that I use. The decisive factor in supporting the Thompson correlation of 584283 is the fact that it corresponds with the tzolkin count still followed in the highlands of Guatemala. To account for this discrepancy in his correlation, Lounsbury claims that the count was shifted back two days sometime

is why circa 1996-1997 I couldn't secure a deal with an academic publisher for my book *Maya Cosmogogenesis 2012*, and released it with a trade publisher in 1998.

¹¹ This idea seems to originate with Frank Waters (1975), and has received support from MacLeod's work on the 3-11 Pik formula, although in her reading the great cycle in which the tropical and sidereal years rejoin occurs in 66 Baktuns, not 65.

¹² These two facts led to the evidence that supports my "2012 alignment reconstruction." The congruence of the two facts is compelling, and invites deeper investigation — a path that all Maya scholars failed to go down because, when questioned, they would dismiss the congruence as coincidence. I was willing to investigate the possibility, asked the right questions, and was led to the Creation Myth astronomy, renewal teaching, and Izapa.

¹³ Notice I write the "end of a World Age" not the end of *the world*. So, even at the very beginning of my work I didn't assume the "final end" of the doomsday meme. Why didn't I? Because of *the evidence* I was finding as to how the Maya thought about it.

¹⁴ Here I followed Schele on her "Black Transformer" and "Pole Star = Heart of Sky" conceptions, which I soon abandoned in favor of my "Three Cosmic Centers" thesis.

before the conquest (not likely), thus explaining its present placement. This means that either correlation will give the December 21st end date. Nevertheless, Schele and Freidel still report that the end date is December 23rd, 2012 rather than Dec. 21st, an unfortunate *faux pas* understandable only because they aren't particularly interested in the specifics of the correlation debate. For a detailed discussion of this topic, refer to my book Tzolkin: Visionary Perspectives and Calendar Studies.

²Case in point is the mysterious existence of myths obviously describing precession in the ancient verses of the Kalevala, the Finnish National Epic.¹⁵ These myths were relayed from the earliest times by way of singers. Many of these stories are thoroughly magical and are filled with sky lore. The Finnish language is not of Indo-European origin and up until the late 19th century peasants in Finland and northwestern Russia had little contact with Europe. Indeed, their heritage suggests more contact with Central Asia than Europe. Some of the Kalevala stories describe a sacred Mill called the Sampo (derived from sanskrit Skambha = pillar or pole) with a "many ciphered cover". This spinning Mill is a metaphor for a Golden Age of plenty and the starry sky spinning around the Pole Star (known as the Nail of the North), which in the Far North is almost straight over head. The Mill at some point is disturbed, its pillar being pulled out of its peg, and a new one - a new "age" - must be constructed. This becomes the chore of Ilmarinen, the primeval smith. In this legend, ancient knowledge of precession among unsophisticated "peasants" who were nonetheless astute skywatchers, was preserved via oral tradition almost down to modern times.

³EZCosmos is a graphic software package that can accurately plot and animate the positions of planets, stars, nebula and so on, for 14,000 years. It is well suited to this research because it accounts for precession in its positional calculations. It also happens to be the software that Linda Schele used to discover the astronomical meaning of the Mayan Sacred Tree.

⁴ Here we briefly converge with the ideas of Terence McKenna. In the book he co-authored with his brother Dennis (Invisible Landscape, Seabury Press 1975 and Harper San Francisco, 1993), Terence suggests that the position of winter solstice sun within 3 degrees of the Galactic Center in the year 2012 A.D. (a "once-in-a-precessional-cycle" event) may provide the eschatological end point for his theory of time known as Timewave Zero. His end date was chosen for historical reasons and was,

¹⁵ In 1994-1995-1996 I was deeply immersed in my Kalevala research, which was triggered by reading *Hamlet's Mill*. It led to some editing work and becoming the literary executor for Finnish-American poet and translator Eino Friberg (1901-1995), who in one of his final letters to me passed me the Bardic baton, saying that, with my Kalevala recordings, I had "joined the long felicitous lineage of Runo singers."

apparently, only later discovered to correspond with the Mayan end date. The McKennas point out that this unusual astronomical situation has been noted by other writers, namely, Giorgio de Santillana and Hertha von Dechend in Hamlet's Mill (1969). As ACS Publication's The American Ephemeris for the 21st Century shows, in the year 2012 the Galactic Center is at 27° Sagittarius (within 3° of winter solstice). Thus McKenna demonstrates that on winter solstice of 2012, Galactic Center will be rising heliacally just before dawn,¹⁶ in a way reminiscent of how the Maya observed Venus's last morningstar appearance.

⁵This basically follows the "1 degree every 72 years" rule of precession. In this way, back in 3114 B.C. the sun conjuncted the Sacred Tree on Oct 10th, which is 72 degrees, or 1/5th of the ecliptic from the winter solstice. The Fall Equinox sun conjuncted the Sacred Tree about 6400 years ago (1/4th of a precessional cycle). Ancient cultures in Mesopotamia may have recognized this alignment, and called it a Golden Age. The fall from this state of alignment may be responsible for the original Fall from Paradise myth, which filtered out to the Judaic tradition.¹⁷

⁶The Long Count has other strange astronomical properties. For instance, the 13- katun cycle of 256 years was known to the Yucatec Maya as a prophecy cycle. We see it used in the Books of Chilam Balam. The astronomical reference here is to conjunction cycles of Uranus and Pluto, two of which equal 256 years. From another angle, 3 katuns equal exactly 37 synodical cycles of Venus.¹⁸

Sources:

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¹⁶ But I soon learned that the ACS ephemeris gives the tropical positions and the Galactic Center at 27° Sagittarius (tropical) equals 6° Sagittarius (sidereal). This caused some confusion until I accessed Horton's Star Atlas. Even so, McKenna's choice of descriptive terminology also caused some confusion. Rather than a "heliacal rise" scenario, a simple solstice sun alignment to the galactic equator is less ambiguous, even while realistically allowing for a temporal range or "alignment zone" as I put it (1980 – 2016).

¹⁷ This is the thesis presented by the authors of *Hamlet's Mill* (1969). Too bad they didn't elaborate more on the next occurrence in this process, around the "millennium" as they put it. Neither they nor the McKennas (in 1975) connected it to the Maya cycle-ending date.

¹⁸ My observation here has implications in how the Calendar Round and Long Count have periodic connection points, and were integrated at Chichen Itza in the 9th-century AD.

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Author's Biographical Information:

John Major Jenkins (March 4th, 1964, 9:19 p.m., Chicago) is a student of Mayan time. On several trips to Central America in the late 80's, he worked and lived with the Quiché and Tzutujil Maya in Guatemala. Observations gathered on these trips were published in Chicago area newspapers. Since then he has devoted his time to studying Mayan cosmo-conception and the mathematical and philosophical properties of the sacred calendar. More thought provoking ideas can be found in his recent book Tzolkin: Visionary Perspectives and Calendar Studies (Borderland Sciences Research Foundation, 1994). Additional information on the Mayan end date alignment¹⁹ is available by writing the

¹⁹ Notice that “end date alignment” is used here — a common linguistic convention that doesn't mean I believed *the calendar* or *the world* would end with the alignment. As I tried to converse with debunker types, I realized that one needed to be very careful with ones choice of terminology, and so I began to almost always say “cycle-ending date” or

author at Four Ahau Press: ~~P.O. Box 3~~ [no longer valid] Boulder, CO 80306. <http://www.Alignment2012.com>.

Appendix 1

Here is the Introduction added to the article as it was republished in *The Center of Mayan Time* (1995). The file is dated February 11, 1995:

The following article was originally published in the December '94 issue of *The Mountain Astrologer* magazine. It synthesizes several disparate pieces of the "Mayan end date" puzzle and reveals an exciting breakthrough. With the new perspective offered in this article, it now appears probable that this end date, as has long been suspected, was chosen for an astronomical reason. However, it is not one to be found on standard planet-based charts. Instead, it involves the orientation of the earth and the sun to the greater galaxy. This orientation is defined by the winter solstice sun conjuncting the Galactic Equator on December 21st of 2012 A.D. While this may sound abstract and even irrelevant, we have little idea how life on earth is affected by our orientation to the larger picture. The overall energetic field of the galaxy and its angular relationship to the sun and earth must have sound kind of effect. As far as life on earth, this may not quite be a "cause and effect" scenario; rather, it may be more akin to the immediate changes that take place when the orientation of a magnetic field changes the structure of iron filings inside it. At any rate, this discovery needs to be discussed with an interdisciplinary approach by Mayanists, astronomers, and other researchers.

This astronomical situation, since it is related to the precession of the equinoxes, has converged very slowly over a period of decades [and centuries]. Because of this, for all intents and purposes, it is happening right now. Furthermore, because this alignment involves the winter solstice, the traditional low-point in the sun-earth system, we may understand what is happening as an appropriate beginning/end point to the 26,000-year gestation cycle of collective human growth. This means that the 12-sign zodiac of traditional astrology may be completely missing the point. The original "marker" of precessional phenomena could easily have been understood by ancient skywatchers to be the Milky Way, that is, the Galactic Equator. And the corollary positions in the year cycle to mark this point would have been the sun's position at the equinoxes and solstices - the "pillars" of the sky. After all, movement into any of the traditional 12 signs is extremely inexact; no one is certain exactly when the Age of Aquarius is to begin. Originally, the 12 signs of modern astrology were subdivisions of the four seasonal quarters, and perhaps we need to go back to the archaic beginnings of astrology to re-synchronize

some such variation. But small-minded pedants dead set on mitigation can never be convinced of what they don't want to see.

with the intended astronomical model. At any rate, the Mayan perspective on these celestial events provides an unambiguous beginning point for the precessional "Great Year." So reset those clocks.

Subsequent research with EZCosmos indicates that, assuming a "zero degree" latitude position and also assuming the exact time of the winter solstice, this alignment will be most exact in 1997 or 1998. However, it may be more appropriate to assume the time of sunrise and positional coordinates centered on the Mayan region,²⁰ and these considerations change the exact year of perfect alignment. And again, since this is such a slow process, we may as well see it as a process, and its sphere of activity might spread over a 50-year period. We are in the crucible of transformation now. In 20 years we may not even recognize ourselves anymore.²¹ Thus, it serves us to know what is happening.

Appendix 2

On "Transformation" in the Works of McKenna and Argüelles

McKenna's 2012 theory was explicitly derived from his study of the I Ching's embedded mathematics. Argüelles's Dreamspell system and 2012 ideas were purportedly "Mayan" but when examined were easily seen to be based on a mistaken day-count and were more about his own visionary models and terminology, being eventually qualified (after my exposés) as a "new dispensation" of the discarnate revelations of Pakal Votan (the 7th-century king of Palenque) speaking through Valum Votan (Argüelles).

That "transformation" was a concept involved in both McKenna's and Argüelles's conceptions perhaps indicates a common understanding about cycle endings, but they didn't articulate how that idea manifests in Maya traditions, the Creation Myth, or at the dawn of the Long Count. This is where my work was unprecedented and pioneering. After all, "transformation" can mean a lot of things (Hitler wanted to transform the human species). McKenna's clearest statements about the galactic alignment's relation to the Maya's 2012 date come from his introduction to my book *Maya Cosmogenesis 2012*, where he was reiterating and paraphrasing my own findings on the role of the Dark Rift as a birth canal and the Galactic Center as the womb of a Great Mother. These ideas *came from my own work*. Before that he had characterized the alignment as a "heliacal rise" of the Galactic Center at sunrise on the solstice (which is

²⁰ No, these things aren't relevant to the precise timing of the galactic alignment. But my suspicion was reasonable and correct, that some range for the alignment was allowable.

²¹ Ha ha! Yeah, I don't really recognize myself anymore, having been through the crucible of the treatment of my work and 2012 by a vapid media and myopic scholars. The hopeful and earnest young man, offering a gem to the world, has been torn to shreds, kicked and spit on, by contemptuous fools. My attempts at this stage to preserve my writings and the exchanges that unfolded over 25+ years of efforts may be a fool's errand. This all may be dust in a matter of decades. Maybe there will be reasonable historians in the future and maybe this will be helpful to them.

not accurate), resulting in some confusing reportage about sunrise being a relevant feature of the galactic alignment's timing.²²

Certain documentaries (*2012: The Shift of the Ages*) have quoted from Terence's intro to my book and gave the impression that he originated those ideas and connections, and I was following his lead. The actual situation is the reverse. A similar situation is seen in Richard Grossinger's 2013 book where he cites comments Terence made in 1998, after my book came out, virtually attributing my new finding to Terence while neglecting to credit me with the new perspectives. On December 13, 1998, Terence responded to a question posed from David Ulansey at a talk in San Francisco, and directed David to my work. On that same day I was giving a presentation at the Tattered Cover Bookstore in Denver, during which I explained and clarified the exact same astronomical issue that David was asking Terence about (it's also dealt with in my book).

An email exchange ensued (in 1999-2000) with Ulansey and one of his students or colleagues, Jim Fournier, in which I clarified the question of the exact galactic alignment versus the Maya's selection of the 2012 date. I then sent Ulansey a copy of my follow-up book, *Galactic Alignment*, in 2002, met him at the 2002 *Cosmological Imagination* conference in Berkeley, and had lunch with him in Berkeley in 2008. Then, in 2008, Ulansey asked if I would appear for a quick talk, *gratis* and at my own expense, at a conference on 2012 he was giving through the CIIS school in San Francisco, with Daniel Pinchbeck as a paid associate adjunct teacher. I declined. I couldn't afford to fly cross-country and speak for free to legitimize other people's events and increase their paychecks.

Well, these comments reflect my disappointments with scholars and the reception of my work, even while many elements of it have now been embraced as common knowledge (and, as I mentioned in my introduction above, my "How and Why" article was itself plagiarized in a book published in 2009). It's the way it seems to go when blazing a new trail, even though the reverse of the metaphor should be what happens — the trailblazer shouldn't get left in the dust.

Appendix 3. Letter to Linda Schele, May 1994:

Dear Linda Schele,

May 16th, 1994

I'd like to share some of my thoughts that may contribute to your work with Mayan epigraphy and cosmo-conception. I'll try to be brief.

Since you have identified the crossing zone of the ecliptic and Milky Way as a significant Mayan concept — none other than the Sacred Tree — I'd like to point out some related considerations. First,

²² McKenna noted the longitude relevant to sunrise at the precise solstice moment on December 21, 2012 and found it curious that it indicated La Chorrera in Columbia.

during the Mayan heyday, where was the crossing point in relation to the winter solstice? In other words, there must be a specific yearly date when the sun comes around to conjunct this point. Right now, this date is approximately the winter solstice. Some 1500 or 2000 years ago, the date would have been some 20 to 27 degrees out. If the precession of the equinoxes was noticed by the Maya when the Long Count was inaugurated circa 300 B.C., and they noticed that the precession was causing the “Sacred Tree” to slowly approach the winter solstice, a forward calculation to 12.21.2012 may have been made to calculate when synchronization would occur. ... 1) consider the dates when the sun conjuncts the Sacred Tree at various historic times in Mayan History; this changes with time and may explain the Creation Day [12.21.2012] ... 2) We might want to consider precession, a forward Long count calculation at the Long Count’s inauguration, and the unique astronomical situation revolving around 2012 (winter solstice sun conjuncting the Sacred Tree) as the how and why of end point 12.21.2012.... If time permits, it would be great to hear your thoughts on this idea. If not, thank you very much for all your breakthroughs. [unedited and verbatim excerpt of a one-page letter]

---end

It’s interesting that a key idea I wanted to convey was how we could look to the Classic Period inscriptions for dates when the sun was aligned with the Dark Rift / Crossroads (even though they would be many days before the solstice). I mentioned and applied this approach again in *Maya Cosmogogenesis 2012* (1998) and hit a breakthrough with the efficacy of this method when I discovered, in early 2000, that the dedication date of Copan Stela C (9.14.0.0.0 = November 29, 711 AD) placed the sun right at the Crossroads. (My article on this was published in the *Institute of Maya Studies* newsletter in December 2000; also republished in my 2002 book *Galactic Alignment*).

In early 2009, during a collaborative investigation of Tortuguero Monument 6 with Michael Grofe, I mentioned this approach and sent him my 2000 article. That evening he hit upon the situation with Lord Jaguar’s birthday (which he published in 2011 and 2012 and I presented at the SAA conference in April 2010) — the sun being positioned *on his birthday* at the Crossroads *in parallel to the same astronomy on the 2012 date*. And the rest is history; a history that the mainstream scholars have yet to acknowledge let alone embrace. And within academia it can all be traced back to my letter to Schele in May of 1994.