

Email exchange between Ed Barnhart and John Major Jenkins, July 2010

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From: Ed Barnhart

Sent: Thursday, July 15, 2010 9:29 AM

To: 'John Major Jenkins'

Subject: my hesitations and questions regarding your theory

Hi John,

I've spent the last couple of days re-reading a lot of your most recent material and looking at your Update2012 archives. I didn't go back and re-read your Izapa stuff from *Maya Cosmogogenesis 2012*, but hopefully my memory is sufficient for the few the comments I have.

First, points I don't argue:

1. There is an alignment of the winter solstice Sun at dawn in the dark rift at 2012
2. The Maya were aware of and calculating precession
3. The Maya were observing the Milky Way as an important back drop location for celestial bodies in our solar system.
4. The Milky Way was considered the road to the other world in Maya cosmology (and in nearly every New World culture I've ever studied)

I am going to send you questions that I have that would clarify your position on certain key points. Okay? Ed.

Dear Ed,

I really appreciate the time you've taken to lay out your concerns and thoughts. I'll try to be brief in my response to your questions, as I know you are busy; I do appreciate the attention you've given. JMJ

Ed: Do you believe that the Long Count resets at 13 Bakt'un's?

JMJ: I believe that at some point, probably early, they had a doctrine of a 13-baktun cycle being important. I believe there were multiple ways the Long Count was used in different contexts by different kings and kingdoms; political rhetoric seems to motivate Pakal's clever use of a 20-baktun period ending. Other huge DNs involve mathematical, numerological, and probably astronomical manipulations (see Grofe for the astronomical DNs). But all that really matters is that the 13-baktun period-ending in 2012 was considered to be a significant major marker in the Long Count. As with all the Long Count periods, there are cycles of 7, 10, 13, 20. But because of the major use of the 3114 BC period-ending (stated as a 13) and the similar 2012 period ending also stated as a 13 pik completion (on TRT Mon 6) I think we have a sufficient parallel to think of these two dates as like-in-kind, calendrically speaking (Bolon Yokte's presence on examples of both dates reinforces this).

Ed: Do you believe the original architects of the long count created it with the end date (2012) as the important anchor point for attaching it into time?

JMJ: In a nutshell, yes. I think they had in mind making the 13-baktun period-ending date coordinate with the future era of the solstice-dark rift alignment. But, more recently, as a result of conversations with Grofe, I have integrated the 3114 BC as an intentional placement as well. This would involve either a precession-specific alignment in era-3114 BC (possibly), or simply the use of a zenith-passage date at the latitude of Izapa. It can be shown that the 13-baktun cycle bridges astronomical alignments in 3114 BC and 2012 AD, one

involving the zenith and one involving the dark rift/crossing point/galactic center (the galactic center, again I must stress, being utilized as a general mythological marker). Both then involve "cosmic centers." So, yes, I believe both 3114 BC and 2012 AD are identified in the Long Count's placement in real time as precession markers.

Ed: There are a lot of alternative correlations floating about out there right now. Have you read them and do they shake your conviction in the 584283?

JMJ: I've exchanged email with Fuls; I looked extensively at Lounsbury's; all these and other correlations neglect the ethnographic correlation of the surviving tzolkin placement, which makes 4 Ahau fall on Dec 21, 2012. None of the other correlations fulfill an interdisciplinary set of criteria. The discrepancies in some of the exact correspondences of the 283 with astronomy is easily explained — generally it involves too much reliance on precise statistical analyses of date sequences, as well as not allowing for the differences between the ideal almanac frameworks sought by the Maya and the inherent vagaries of astronomical cycles (such as Venus varying between 580 and 588 days, sometimes even from cycle to cycle). I think Michael Grofe might be onto something with a localized 285 use at Copan.

Ed: Why is the specific location of the sun in the dark rift at 2012 the ideal location for it to arrive at? Is that it's just entering, or just arrived to the middle of its southern terminus? I must admit I'm not 100% clear about exactly what location within the rift it's arriving to. It seems that first entry, arrival to middle, or just exiting would be part of the argument you make. Perhaps you address that and I missed it?

JMJ: The alignment of the sun on 12-21-2012 is actually touching the galactic equator, the abstract line that basically runs close to the middle of the length of the dark rift. They probably shot for the middle of the dark rift in their calculations, or used a reference star in some manner not understood. The sun in the dark rift is a potent mythological and symbolic occurrence; it echoes many other iconographic themes and can be identified as an intentionally referenced astronomical event in Classic Period inscriptions. (During the Classic the sun would be in alignment with the dark rift every year but not on the solstice; e.g., Bahlam Ajaw's birthday was "sun at the dark rift" but some 20 days before the solstice. Nevertheless, the image of the sun at the dark rift was recognized and used. The arguments that this type of astronomical hierophany just doesn't happen, or wasn't noticed by the Maya, or didn't have any meaning to them, just can't be sustained. Of course, it's the coordination of the solstice position with the perennially occurring "sun-dark rift alignment" that makes 2012 a unique era. Solstices, zenith dates, nadir dates, equinox dates are good reference points for precessional shifting and calculations (see Grofe).

Ed Barnhart: John, here are points that make me hesitant to accept your conclusion:

1. If 2012's end date was the foundation of the calendar's placement in time, why do we only have one hieroglyphic reference in the entire corpus of Maya writing?

JMJ: I don't know, but we have it. And a full analysis of the TRT Mon 6 inscriptions, with the 13 dates, is revealing of an intentional use of the alignment astronomy occurring on 12-21-2012. We also now have an inscribed brick with *possibly* the 4 Ahau 3 Kankin "completion" reference from Comalcalco (see Erik Boot's comments on Aztlan post of July 2010). The explicit exploitation of Creation Myth / Long Count math by late-Classic Maya kingdoms occurs at Quirigua, Palenque, Copan, and TRT — beginning right in the mid-7th century with Bahlam Ajaw (and Quirigua I think). It may be that proscriptions against exploiting the sacred texts for political purposes were lifted or eroded, then the race was on for various kings to relate themselves to the Creation Mythos, 13-baktun period ending events or the 20-baktun ending as with Pakal. Bahlam Ajaw's exploitation of 2012 probably was derived from his happenstantial birthday that fell on the like-in-kind sun-dark rift alignment in 612 AD.

2. If the alignment is not an exact date, as you openly state, why did the Maya pick the exact date of Dec 21, 2012? Was it an arbitrary choice within a range of close enough? That's definitely not the Maya astronomer's style. Observations were made with the naked eye, but calculations were made by averaging many observational results and with exacting, well thought through mathematics. This is what I'm personally talking about when I say "the stars are moving too slow."

JMJ: I believe they wanted to use the solstice date, but of course had to pick a year. It had to be a year that was within range of their forward precessional calculations. Since the tzolkin was already in place, choosing a meaningful tzolkin date falling on a solstice may have been a factor. 4 Ahau would be better than many other choices, thus the year we call 2012 happens to be the one chosen.

3. Is winter solstice sun in the dark rift the only interpretation of the imagery on Izapa Stela 11? The whole concept of a ball court being the cleft in a mountain is also part of the Coatepec myth in which water springs from the base of the mountain with the ball court at the base, watering the first corn fields. At the end of Linda Schele's life, she was working on a new theory about all Maya sites considering themselves Tollan, the place of origin, with a temple/ballcourt/plaza complex. Interpreting the Stela 11 imagery in that way, for example, still gets to your cosmic founding and/or birth idea without necessitating that it's about the sun and the Milky Way.

JMJ: There are multiple ways that mythology represented stellar events and celestial objects. My argument for Stela 11 is based on the entire framework of Izapan monuments, their alignments, and the three main groups referring to 3 different concepts of "cosmic centers". Also, Stela 11 faces the December solstice rising point of the sun.

4. I know that Izapa's ball court is aligned to the winter solstice (by the way, did it really work when you were standing there, visible and compensating for the uneven horizon?), but that does not imply a pan-Maya cosmology. If all, or even a lot of Maya ball courts were aligned to the winter solstice, that would be a stronger point in favor of your hypothesis, but they aren't.

JMJ: Yes, I observed it, adjusted slightly for obliquity shift in 2000 years (very minor). I also measured it with a homemade device. Aveni later published his measurements and confirmed. The solstice ballcourt alignment at Izapa does seem almost unique to Izapa; ideas change throughout hundreds of years. I believe the idea represented in the Izapa ballcourt alignment (that of the sun's rebirth at the December solstice) represented a foundational paradigm that ran into conflicts with other ideas (e.g., equinox or zenith-nadir) throughout the centuries. This almost always happens with breakthrough paradigms; they don't necessarily get enshrined; something of the original conception remains but gets co-opted or integrated with later adumbrations.

5. I agree that the Maya are noting the wandering objects from within our solar system as they pass front of the milky way, and I agree that Michael Grofe's findings about 19.14.0.0.0, Dec 3, 711 are interesting, but why if Copan, Tikal, and Quirigua were making a connection to 2012 did none of them mention the 13th bak'tun?

JMJ: Actually, the 9.14.0.0.0 date correspondence (on Copan Stela C) with sun-dark rift was noticed and published by me in 2000 in the IMS newsletter, and later in my 2002 book *Galactic Alignment*. I always thought this like-in-kind situation might provide a methodology for investigating other dates in the inscriptions. After Tulane in Feb 2009, Michael Grofe and I communicated about this type of "secondary reference to 2012" and we agreed that we should look carefully at the dates on TRT Mon 6 for this kind of thing. Within 2 days, Michael went through Sven's thesis and nailed them all — Bahlam's birthday, the sweat bath event in

510 AD, the eclipse date in 644 AD, and one other one in 647 AD. To answer your question; I don't know. Why? Why not? Why should we assume they would make an explicit reference to 2012 every time? Do we have the date 33 AD date explicitly mentioned on every image if the Crucifixion? There are many instances of indirect allusions to other things in the inscriptions without explicit statement. For example, 3114 BC is often noted with the three hearthstones symbology, as at Izapa Group B (see Taube); and 3114 BC is often derived from the secondary tzolkin-haab reference of 4 Ahau 8 Cumku, without explicit 13.0.0.0.0 or pik designators.

6. The latest information from Michael Grofe on the dates of Tortuguero Mon 6 is also a strong argument that the Maya were watching celestial objects pass through the Milky Way's dark rift. The fact that it's all sorts of objects passing through instead of just the Sun lessens the connection to 2012, though it is still good evidence. Again, however, a single example in the corpus of 1000's of texts, most being written in this same Late Classic period, make this an enigmatic text, not a pattern through which to argue the case that the Maya designed the long count to reset at 2012.

JMJ: I actually think that the use of other planetary or lunar events strengthens the case. The sun as the ultimate celestial object remains. The meaningful patterns of dark rift alignments are found within the TRT Mon 6 text itself, as well as the slightly larger context of other TRT monuments (Wooden Box, death date of Bahlam Ajaw and Jupiter — see my SAA piece now posted on the Maya Exploration Center website). Beyond that, there is supportive evidence of the paradigm that underlies the use of the dark rift region as a significant celestial region for alignments. Even though the TRT Mon 6 is just one monument with one 2012 date reference on it, a proper reading of the entire text, dates, and astronomy does tell us something very compelling about how they thought about the 2012 date. For example, I believe a full reading suggests very strongly that they were aware that the sun would be positioned in the same spot it was when Bahlam was born, and when the sweat bath rite took place, and also on the December 6, 647 date.

7. Balam Ahau of Tortuguero is clearly referencing the 2012 13th bak'tun, and I accept your point that the fact he did so is just as important as the "why" occulted by the last two glyphs. However, you also mention that he is the contemporary of Pakal at Palenque, the city with which Tortuguero shares its emblem glyph. At Palenque, during this same generation, Pakal's texts (perhaps written by his son Kan Balam) also project a date far into the future, but his goes to the first Piktun in October of 4772 AD and clearly demonstrates that Palenque is saying there are 20, not 13 bak'tuns in the bak'tun cycle. So we have Balam Ahau projecting forward to the 13th bak'tun and Pakal projecting to the 20th bak'tun in the same generation. I believe this confuses your hypothesis too. Who should we believe of these two contemporary kings? If the 13th bak'tun is an important anniversary of the creation date, but not a reset point, why would its ancient architects pivot it around 2012, and not 4772 AD?

JMJ: I don't believe this confuses the thesis at all. I may have mentioned in my previous email that Maya kings were clearly interested in exploiting, in relating themselves to, the calendrically defined Creation Mythos. Pakal basically invented the importance of 20 baktuns, because it happened to fall on the 80 Calendar Round anniversary of his accession date (8 days error actually). His rhetorical association was, in my view, a stretch. But Kan Bahlam did his best to amplify his father's stature and upstage and outdo Bahlam Ajaw, who used the handy astronomical analogy of his birthday with the 2012 date. I believe that the alignment in 2012 would have had to have been known by the Maya priests and elite, and it was an embedded intentional fact of the Long Count. Kak Tiliw did his own thing with the 3114 BC hearth-stone doctrine at Quirigua. Ironically, 18 Rabbit from Copan (who Kak Tiliw sacrificed in 738 AD) seemed more aligned with relating himself to solar-dark-rift symbolism (as seen on 9.14.0.0.0, Stela C Copan). So, in the late Classic Period the variations seen in the uses

of different aspects of the astronomical and calendrical circumstances of the Creation Mythology involved competition more than consensus.

8. This brings me to another important doubt – the fact that all of these Late Classic texts are written by Maya scribes who are thinking about the calendar more than 1000 years after it was created. Even accepting that Balam Ahau of Tortuguero's astronomers recognized the galactic alignment connection between his life time and the arrival of 13th bak'tun, that is not proof that the architects of the long count picked that alignment as the pivot point of their calendar.

JMJ: But Balam's scribes would have had to have known about the alignment in 2012 to exploit it. That would suffice all by itself to lend credence to at least a partial acceptance of my work. However, if we say that the 2012 date was NOT intended to mark the alignment, then it's a mighty coincidence that it does, doubly so combined with Balam's birthday astronomy. (I believe his birthday was a coincidence, but was exploited and gave him a special inborn stature because of its parallel to the known astronomy of 2012.) The 3114 BC date was noted and exploited at Quirigua and elsewhere for its astronomical alignment (Orion stars and the zenith), so why not a similar exploitation of the astronomical circumstance of 2012?

9. One of my greatest sources of hesitation to accept your hypothesis is simply human nature. Why would a people base their religious calendar on an event that will happen more than 2000 years in the future? I know we could gloss over that concern by the blanket statement that it's a non-western cultural perspective, but I believe humans and humans and that a lot of our concerns and actions are universal. A priesthood trying to motivate people to participate in their religion needs reasons that are relevant to the current lives of their followers, not something that will happen in the distance future.

JMJ: To the commoners, the exploitation of calendrical and astronomical relationships between the king and the Creation Mythos would do exactly what you require. Motivation for participation comes from the demonstrated divine nature of the king. He is the chosen one, etc etc. With Balam, he too was related to great period endings and Creation rites involving Bolon Yokte, or something to that effect. Par for the course.

10. If the long count was designed to end with a winter solstice galactic alignment, then I would expect the beginning of the calendar in 3114 BC to also hold some astronomical significance. I am unaware of any good theories on that. Faced with the task of anchoring the long count system in time, why would they take such care with when it will end and then make the beginning an arbitrary date?

JMJ: 3114 BC does hold astronomical significance — at least in the limited sense of the zenith/ Orion hearth-stones astronomy (theoretically every year, but **at zenith at dawn** only in era-3114 BC (seeLooper /Schele). Also, Grofe has another precession-based thesis on 3114 BC.

11. The Maya were and still are ancestor worshipping people, not future generation worshipping.

JMJ: The Maya kings frequently projected to future period endings if it suited their purposes. 18 Rabbit did it to the end of a 10th Baktun, Pakal to 20 Baktuns in 4772 AD, Balam to 2012. It did occur. The Maya almanacs were concerned with calculating future Venus risings and other phenomenon applicable to "the future."

11a. When we look to the mechanisms of the right to rulership professed by ancient Maya kings, it was all about their connection to ancestral power. When Teotihuacan imagery was

being forwarded well after the city collapsed, it was harkening back to ancient foundations of power and rulership to validate contemporary leaders' connection to it. So, for me, I've always thought that it was the start date that the architects were anchoring things to, harkening back to a foundation moment, the moment when the Hero Twins made it safe for us on Earth and started the stars spinning (in their processional cycle). Half of the *Popol Vuh* is a long genealogy list, connecting the people who began telling the story to the first four people who established the first Maya communities and were by proxy its rightful rulers.

JMJ: But also, in the *Popol Vuh* the activities of the Hero Twins are oriented to a future goal, of resurrecting their father. In order to accomplish this, many trials are undergone and Seven Macaw and the Underworld Lords need to be vanquished. Within the overall framework of the World Ages alluded to in the *Popol Vuh*, we can see the Hero Twin section as a telescoped telling of one of the World Ages. There is teleological basis to the story because it is all oriented toward the future triumph, the rebirth of One Hunahpu, the sacrificed father of the twins. This is indeed a beginning (of a new World age, as you suggest), but it is also the end of the Age being discussed in that section of the *Popol Vuh*. Thus, the teleological end is the state of renewal, which is a mandate of Maya rulership — to renew and maintain the kingdom.

That important areas of Maya thought might be directed towards future “events,” whether they be astronomical, calendrical, or ceremonial in nature (or all three), is evidenced by Maya kings referencing a future 10th baktun ending, a future 13th and a future 20th baktun ending. [Note: this bolded comment was added 12-23-2010.]

12. As you point out, the Maya seem to have conceived of the turn of major cycles in their calendars as moments of transformation and renewal. I agree with that. However, I think that each of the turns of bak'tuns were a moment like that, not just the 13th bak'tun (I think you agree with that too).

JMJ: Sure, I agree.

12a. Like the New Fire Ceremony for non-long count using Mesoamerican people, these moments to stop following the status quo and enact voluntary change are at the core of Mesoamerican philosophy. It's not just 2012 and the 13th bak'tun.

JMJ: That's true, but I think the 2012 alignment was a big motivator at the origins of the Long Count, in the Izapa civilization, because of the compelling nature of the solstice sun converging with a very important region of the sky.

12b. Only if we accept that the calendar resets at 13 bak'tuns, which I do not, can we forward that this is the grandest of all cycles coming around and explain it as singular compared to the other cyclical nodes.

JMJ: I think in the original formulation it was considered a very grand future event, but was complicated by other doctrines and considerations throughout the Classic Period. There is some echo of an idea that the Long Count must cycle back to 0 when it reaches 13, which we see implied in the use of 13.0.0.0.0 for 3114 BC — yet all post- 3114 BC dates are counted as if the cycle reset (whether it be 13 = 0 or 14 = 1). However, all of the hair splitting around this is really pretty misleading and irrelevant.

13. Finally, just to have 13 points ☺, it's bothersome to me that one cannot see the milky way and the dark rift when the sun comes up on Dec 21, 2012. I believe in the ancient Maya

ability to project where objects will be in the sky, like they could calculate the location of Nadir when the sun passed perfectly beneath their feet, but it bugs me that an event happening in the sky cannot be seen.

JMJ: Same issue with 9.14.0.0.0. I guess I just don't understand why this would be bothersome. The ancient astronomers, I believe, had noticed a convergence occurring and became interested in projecting (calculating) a future alignment.

Ed: So, in summation, I don't have much criticism about your research and the facts you line up. In fact, I think you are much better read than most scholars and have a great mastery of the literature. It's the conclusion you draw from the facts you've assembled that I have doubts about. I freely admit that I do not have a better idea and that hypotheses must be forwarded or we are going no where in the study of subject. You have a viable theory and the only one out there that I know of. It deserves to be out for the public to consider. However, I just don't think its right for the reasons I have listed above. I look forward to your responses and your corrections to my understanding where it's false.

I hope not to fall into the same combative pattern that you've been in with other scholars – the one where they dismiss and discredit your work and you in turn find flaws in their scholarship to re-credit yourself by discrediting them. I can see that many of them have lumped you in with groups who have used your research to validate apocalyptic nonsense or overly optimistic hopes of standing passively by to receive enlightenment, and I know that you are not one such. I hope that you will actually consider my points of hesitation here and not focus in on off-topic things like the poke you've given all of them about blaming Frank Waters instead of Michael Coe (100% true, he was the first to open the apocalypse bag).

JMJ: Thanks Ed! I always appreciate good debate and questions and an opportunity to clarify things in an open minded and non-combative environment. I hope my responses don't sound too obscure or irrelevant. I feel that when the astronomy of the dates on TRT Mon 6 gets allowed into the discussion, things I've been arguing for years could receive a more fair treatment. The unfair and biased treatment I've encountered for many years has been a frustrating point of contention but I think more evidence and clarity will be forthcoming. Michael Grofe is writing up his findings on many aspects of Maya astronomy and I wish epigraphers and astronomers could work together more closely. I sometimes think we are still in the throes of an anti-Schele backlash, and astronomical research just gets waved aside. Best wishes,

John Major Jenkins

Ed: On an end note, I want to commend you on your work with and respect for modern Maya people. Too many scholars, including a surprising amount of New Age authors, never even consider them in the equation.

JMJ: Thank you, I appreciate that, and what Robert Sitler is doing too. Reports forthcoming on <http://themayaconservancy.org> or <http://thecenterfor2012studies.com>.

Ed: Feel free to post this to your Update2012 website with your responses to my email. I appreciate the chance to have this discussion with you.

Respectfully, Ed

JMJ: Thank you for that offer; it will make a very nice positive example of exchange.