

WILL THE WORLD END IN 2012? A SURVIVAL GUIDE TO MAYA PROPHECIES

FELIX H. CORTEZ, PH.D.
Universidad de Montemorelos, Mexico

During the decade of the 1960s a Maya monument was found in El Tortuguero, Tabasco, Mexico, in which reference was made to the end of the thirteenth calendric cycle on 4 Ahaw 3 Unii, or December 21, 2012. The reference is important because it points to the end of an impressively long Maya calendric cycle of 5,126 years, which is also the winter solstice. This reference and the well-known Maya interest in astronomical phenomena and prophecies has spurred wide speculations and claims that the Maya prophesied the end of the world as we know it towards the end of 2012. This article studies the Maya conception of history and time and its implications for the meaning of Monument 6 of El Tortuguero, Tabasco, Mexico. It concludes that the purpose of Monument 6 was celebratory and not prophetic. It also studies the nature of Maya prophecies and their intriguing similarity to astrology.

Key Words: Maya, prophecies, astrology, eschatology, 2012, catastrophe

Mac to ah bovat, mac to ah kin bin tohol cantic u than uoob lae?
Who will be the prophet, who will be the priest who shall
interpret truly the word of the Book?
—Last Statement of *The Book of Chilam Balam of Chumayel*

1. Ancient Prophecies and the Fall of the Itzá Maya

The last independent native kingdom of Mesoamerica succumbed to the Spanish Empire on March 13, 1697. This was the end of the Maya civilization and way of life that had lasted for millennia. The story of the end of the Mayan world is enthralling, not only because of the military and political prowess of the Spanish conquistadors, but because of the fact that it happened in precise fulfillment of ancient Mayan prophecies. In the

book *The order of the Days*,¹ David Stuart, former professor of Harvard University, current professor of Mesoamerican Art and Writing at the University of Texas, and considered as the world's foremost expert on Maya culture, chronicles the striking fact that in the decades leading to their fall, the Itzá Maya had prophesied their own end. Numerous reports describe that Kanek',² the last Mayan king, had "a strong sense of his inevitable defeat, when . . . a new era of the Maya calendar called *k'atun* would begin."³

The Itzá Maya kingdom was set in a beautiful island called Nohpeten ("Great Island") and occupied a large region of what is today the Island of Flores in northern Guatemala. In ancient times, the place was a wild territory of dense jungles that resisted the advances of the Spanish armies and civilization for almost two centuries. The first to visit the kingdom was Hernán Cortez in 1525, just four years after the defeat of the last Aztec emperor Motecuhzoma II. He sought to reach the Caribbean coast of Honduras to suppress the rebellion of a Spanish officer and passed through this isolated kingdom in a most grueling march. The Maya received the Spaniard army with suspicion but in peace and provided much needed information to Hernán Cortez. When Cortez was preparing to leave he discovered that one of his horses had a large splinter in its foot and so he was forced to leave the utterly exotic animal⁴ with the king who promised to take good care of it. Later historical accounts show that the Itzá Maya came to worship the horse as a divine being. They called it Tziminchaak and the Maya priests fed it with flowers and birds as a deserving god. The poor beast starved to death but the Maya made a large stone image of Tziminchaak and enshrined it at Nohpeten.

Almost one hundred years later, in September of 1618, Fray Bartolomé de Fuensalida and Fray Juan de Orbita traveled for weeks through the jungle with the ambition of converting this remote kingdom to Christianity. The Itzá Maya, however, gave the Franciscan priests a cold reception. In their fascinating written account, Orbita and Fuensalida vividly describe the response of the king Kanek': "It is not yet time to abandon our gods. . . . Now is the age of Three Ahaw." Kanek' then explained: "The prophecies tell us the time will yet come to abandon our gods, years from now, in the age of Eight Ahaw. We will speak no more

¹ David Stuart, *The Order of Days: The Maya World and the Truth about 2012* (New York: Harmony Books, 2011), 1–29.

² The name means "snake star."

³ Stuart, *The Order of Days*, 2.

⁴ Horses were unknown in the new world before the arrival of Columbus.

of this now. You would best leave us and return another time.”⁵ The failure of Orbita and Fuensalida was in fact predictable. Earlier on in the day, they had come across the image of a horse in one of the shrines near the center of the island. The natives explained that it was an image of Tziminchaak, the horse that Cortez had left there. In a fit of zealous rage, Orbita destroyed the horse idol at the spot causing a deep consternation among the people who had venerated the image for almost a hundred years. Orbita and Fuensalida knew that they were not welcomed anymore and returned to Christian territory where they reported to their superiors the intriguing prophecy that the Maya recognized as valid. Five years later (1623), Diego Delgado and a party of ninety Spanish and Maya allies returned to Nohpeten with the ambition of converting the kingdom but were taken prisoners immediately and sacrificed. Delgado’s heart was offered to the Itzá Maya gods in retaliation to Orbita’s smashing of the horse idol.⁶

Seventy years later, in 1695, Fray Andrés de Avendaño y Loyola visited Nohpeten again. Avendaño was both a zealous evangelizer and deep student of Maya culture. He spoke the Mayan language well and had studied over and over the traditional Maya lore and the intricacies of the Maya calendar to understand the heathen prophecies. Avendaño knew that the age of Eight Ahaw mentioned by the king Kanek’ almost two centuries before would arrive in two years and that it was time to act. When Avendaño arrived to the Itzá Maya kingdom, the king led him immediately to the largest, highest temple on the land where they saw the bone leg or thigh of a horse held in a curious box that hung from the shrine’s ceiling. It was the remains of Tziminchaak, the horse of Cortez, which the natives continued to venerate almost 200 years later! Then, Avendaño told the king that they had come in fulfillment of the Maya prophecies to convert them to Christianity. If we believe Avendaño’s own account, he tells that the Maya were particularly surprised and impressed by his mention of the Maya prophecies and his ability to interpret them.⁷ But things did not go well. Prominent Itzá Lords and the king’s own wife saw the king’s relationship to the Spanish priests and his interpretation of the prophecies as troubling and plotted against Avendaño who fled in the middle of the night into the security of Christian territory. Two years

⁵ Stuart, *The Order of Days*, 7.

⁶ Juan de Villagutierre Soto-Mayor, *History of the Conquest of the Province of the Itza* (trans. R. Wood; Culver City, CA: Labrynthos, 1983), 92. See also, Grant D. Jones, *The Conquest of the Last Maya Kingdom* (Stanford, CA: Stanford University Press, 1998).

⁷ Stuart, *The Order of Days*, 15.

later, Martín de Ursúa, governor of Yucatán, who was also aware of the prophecies, decided to invade the Maya Itzá kingdom. But the expected great battle did not occur. When Ursúa arrived to Nohpeten, the place was deserted. The houses, the palaces, and the temples had been abandoned. In one shrine they found old horse bones. A frail old woman left behind explained that these were the remains of Tziminchaak. It was March 13, 1697, the age of Eight Ahaw, when the last standing Maya kingdom fell in precise fulfillment of Maya prophecies.

How could the Maya prophets predict with such precision the overthrow of their own civilization? Had the Maya access to privileged information about the future? If they were able to predict their own downfall, could they prophecy the end of the world?

2. December 21, 2012, in Maya Prophecy

Many people think that ancient Maya stone tablets found in southeast Mexico, predict that the world will end in December 2012. During the decade of the 1960s a large concrete factory was built in the small town of El Tortuguero, Tabasco, Mexico.⁸ As some man-made hills were bulldozed, workers were surprised to find among the rubble several carved stone tablets. The tablets were eventually deposited in Mexican museums as curiosities. Since nobody could read the glyphs, the significance of the tablets was unknown and they were mostly forgotten. The site was one of the most important smaller sites in the region, subject to the impressive city of Palenque that lays to the south in the neighboring state of Chiapas, Mexico. Most of the carved monuments came from the reign of King Balam Ahau, A.D. 644–679, which was also the heyday of the city.

Maya glyphs were finally deciphered in the 1980s thanks to the collaborative efforts of many scholars.⁹ Today it is possible to read 80 to 90% of all Mayan texts. With this advancement, scholars remembered the stone tablets of El Tortuguero, especially the one known today as Monument 6. The tablet was broken in several pieces and had been scattered: four in a local Mexican museum, one in the Metropolitan Museum in New York, two in private collections, and several others are lost. In 1996, Stephen Houston and David Stuart, both renowned Maya

⁸ For a brief story of Monument 6, see Matthew Restall and Amara Solari, *2012 and the End of the World: The Western Roots of the Maya Apocalypse* (Lanham, MD: Rowman & Littlefield, 2011), 7–10.

⁹ For the story behind the deciphering of Maya glyphs, see Michael Coe, *Breaking the Maya Code* (New York: Thames & Hudson, 1992).

Scholars, were able to publish for the first time a translation of this monument.¹⁰

Here is what it says: *Tzuh tzahoom uyuxlahuun pikta / Chan Ahau ux unii / Uhtooma ili / Yeni yen bolon yookte kuh / Ta chak hohoyha.*

Literal translation:

The thirteenth one will end on 4 ahau, the third of Uniiw. There will occur blackness and the descent of the Bolon Yookte' god to the red.

Idiomatic translation:

The thirteenth calendrical cycle will end on the day 4 ahau, the third of Uniiw, when there will occur blackness (or a spectacle) and the God of the Nine will come down to the red (or be displayed in a great investiture).¹¹

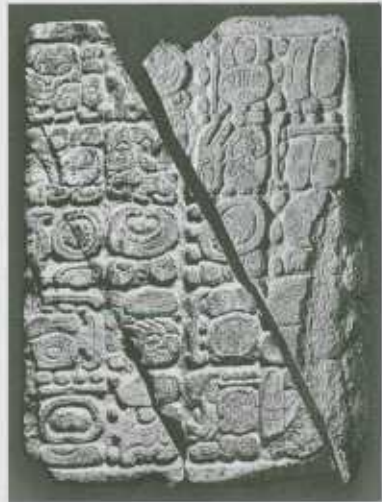


Figure 1. Monument 6, El Tortuguero, Tabasco, Mexico

The tablet called attention for several reasons: The date referred in the tablet is 4 Ahaw 3 Unii which transliterated in our numbers is 13.0.0.0.¹² The date in our calendar is December 21, 2012, which is also the winter solstice, the shortest day in the year. A foreboding aspect of the date is that it is the end of an impressively long calendric cycle of 5,126 years. The beginning of the cycle was in the year 3114 B.C., which is also the creation day in Maya lore. That great span of time takes us back to the dawn of human civilization—the beginning of dynastic Egypt, the rise of the Minoan civilization, and the inception of Stonehenge. Does this tablet predict the end of the world as we know it on December 12, 2012? The proponents behind the 2012 excitement argue that it does. They find support in the following arguments.

¹⁰ Stephen D. Houston and David Stuart, "Of Gods, Glyphs, and Kings: Divinity and Rulership among the Maya," *Antiquity* 70 (1996): 289–312.

¹¹ Restall and Solari, *2012 and the End of the World*, 8–10.

¹² Every number represents a cycle in the Maya calendar. Those cycles are from right to left: a day, a week, a year, a cycle of about 20 years, and a cycle of about 394 years. See a more detailed explanation of the Maya calendar on page 11.

The Maya believed that the world was created repeatedly and that floods destroyed previous creations because of perceived deficiencies (e.g., the man of wood was not capable of worshiping their creators). We are currently in the third or fourth creation, which is the age of Maize (corn), the crop that sustains humans in Maya worldview.

John Major Jenkins, a prominent author of books about the Maya Calendar and 2012, argues that an important key is the image in the stela 25 at Izapa, a site in Chiapas, Mexico. The man in the image is interpreted to be one of the Hero Twins who in Maya creation Mythology shoots a bird deity named Seven Macaw with a blowgun in order to usher in the transition from one world creation to the next. The caiman in the picture is the Milky Way (the spots in the back are stars), the polar center is at the top and the Seven Macaw is the Big Dipper constellation. All are aligned in the way the sky looked in the summer solstice when the stela was erected (600–100 B.C.). It is argued that this is a dateless reference to creation in 3114, and, therefore, recreation in 2012.¹³

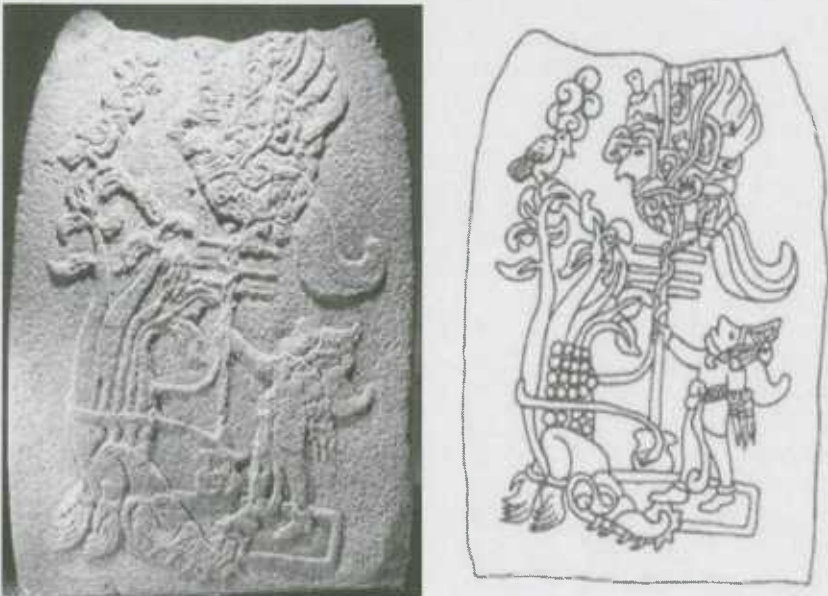


Figure 2. *Stela 25 at Izapa, Chiapas, Mexico*

¹³ See a more detailed explanation of the Maya calendar on page 15–16.

It seems that the end of the calendric cycles was important for the Maya. For example, the Stela 63 in Copán (Honduras) highlights the date 9.0.0.0.0 (A.D. 435). [See Figure 3]



Figure 3. Stela 64. Copan, Honduras

Similarly, the impressive Stela C in Quiriguá (southeast Guatemala) affirms that the kingship of Cauac Sky (A.D. 724–785) was rooted in the moment of the most recent creation 13.0.0.0.0 (3114 B.C.). [See Figure 4]



Figure 4. Stela C, Quiriguá Guatemala.

It is argued that if the turn to the 9 calendric cycle was important as shown in this document, the 13th referred in Tortuguero's Monument 6 was even more significant.

What did the Maya think would happen when the world was destroyed and recreated? One possible answer to this question is what seems to be described in the last page of the Dresden Codex.¹⁴ This is a bark-paper book created by Maya scribes in the fourteenth century A.D. The book has details about the movements of the moon and the planets and their relation with the calendric cycles. The document concludes with the image of a large caiman vomiting of what appears to be water from the sky. The glyphic text has the old goddess Chac Chel pouring down water out a jar in the center of the text and the god Chac painted in black menacing with weapons of destruction. [See Figure 5] This apocalyptic interpretation of the picture in the Dresden codex seems compelling because of the fact that a great deluge or flood is mentioned in other Maya and Mesoamerican sources. The Aztec creation mythology says that the fourth and most recent destruction and recreation occurred with a flood. In the Quiché Maya narrative of the *Popol Vuh*, the humans made of wood from the previous creation were washed away by a flood. *The Books of Chilam Balam*, a Maya alphabetic text produced in colonial Yucatán but containing ancient traditions, describes the flood as being provoked by the battle between the God of the Thirteen (Oxlahuntiku, god of the sky that has 13 levels) and the God of the Nine (Bolontiku, god of the underworld that has 9 levels).¹⁵

¹⁴ It is the oldest and best-preserved book of the Maya. It is found in the Saxon State Library in Dresden and contains various almanacs, divination calendars, astronomical tables, ritual regulations, and numerous representations of gods. For more information on the codex, visit the following site: <http://www.slub-dresden.de/en/collections/manuscripts/the-dresden-maya-codex/> (April 13, 2012).

¹⁵ For a brief introduction to Maya views of the cosmos, read Stuart, *The Order of Day*, 87–92.



Figure 5. Last page of the Dresden Codex

This takes us back to Tortuguero's Monument 6. Using the information gathered from Maya inscriptions here and there and a diversity of Mesoamerican traditions, the stone tablet has been read in the following way (notice the interpretation in the bracketed text):

The thirteenth one will end on 4 ahau, the third of Uniiw [December 21, 2012]. There will occur blackness [disaster: as in the weapon-wielding god Chac painted in black in the Dresden codex] and the descent of the Bolon Yookte' god to the red [the manifestation of this god heralds the flood in The Books of Chilam Balam].

The late Munro Edmonson, one of the translators of the *Chilam Balam* literature, argues that the texts for the celebration of the end of a Maya calendric cycle that took place in Merida, Yucatán, in 1618, contain several references to the fact that the cycle [*Baktun*] finishes in a great flood.

Here is when it shall end, the telling of the *katun*; that is what is given by God; the flood shall take place for the second time; this is the destruction of the world; this then is its end.¹⁶

¹⁶ Restall and Solari, *2012 and the End of the World*, 25.

This celebration honored the beginning of an even *baktun*: 12.0.0.0.0.¹⁷ There were 20 different ceremonies the third of which was a cycle-ending ceremony. This ceremony featured a battle in which the god of the underworld (God of the Nine) defeats and sacrifices the god of the sky (God of the Thirteen). Thus, the apocalyptic interpretation of the end of the calendric cycle seems evident.

3. 2012 and Apocalyptic Concerns

This alleged prophecy has caused great excitement so that the amount of books, web sites, and blogs produced about the end of the world in 2012 is truly impressive. This includes the movie *2012*, directed by Roland Emmerich and released on November 13, 2009, with a revenue of around 769 million USD. There is even a book titled *The Complete Idiot's Guide to 2012*¹⁸ and a website where every kind of survival supplies can be bought (www.2012supplies.com).¹⁹

The 2012 excitement goes beyond the Maya long count calendar and includes a variety of religious, esoteric, and scientific predictions. The most prominent current predictions related to the Maya prophecies in one way or another are the following:

1. Solar Storms. Several scientists have mentioned that there could be solar storms particularly strong in 2011 and 2012 produced by "coronal mass ejections" that would hit the earth with magnetic energy and possibly produce the disruption of cell phone communications, electrical power outages, radio blackouts, and even earthquakes. It is noted that in September 1 and 2, 1859, a solar storm disrupted electrical grids and communications systems. It even shorted out telegraph wires causing fires.²⁰

2. CERN (European Organization for Nuclear Research) and the Large Hadron Collider (LHC). The LHC is a particle accelerator and collider that causes two beams of subatomic particles to collide at very high energy

¹⁷ This was in A.D. 1618, the year that marked the beginning of the last *baktun* cycle (of around 394 years), which will end on December 2012.

¹⁸ Synthia Andrews and Colin Andrews, *The Complete Idiot's Guide to 2012: An Ancient Look at a Critical Time* (New York: Alpha, 2008).

¹⁹ For more information about the 2012 excitement, see Raymond C. Hundley, *Will the World End in 2012?* (Nashville, TN: Thomas Nelson, 2010), ix–xxiv; Andrews and Andrews, *The Complete Idiot's Guide to 2012*, 122–48.

²⁰ Hundley, *Will the World End in 2012?*, 21–23. See also, Andrews and Andrews, *The Complete Idiot's Guide to 2012*, 122–123.

levels at 99.99 percent the speed of light. Scientists believe that these collisions may produce never-before-seen particles they can study to understand secrets of how atoms and our universe work. Others are concerned that it could produce a black hole or “strangelets” (a form of matter thought to be at the center of neutron stars) that could destroy the world. The CERN research board and other famous scientists assure, however, that the LHC poses no risks to the planet.²¹

3. Predictions of Nostradamus. The book called *The Prophecies of Nostradamus* is a collection of eighty watercolor images by the famous sixteenth-century soothsayer that some think predicts the end of the world on December 21, 2012. Italian journalists Enza Massa and Roberto Pinotti discovered the collection in the Central National Library of Rome in 1982. There is a considerable controversy, however, whether the watercolors were actually drawn by Nostradamus.²²

4. Reversal of the North/South magnetic poles. Geophysicists have observed with concern a crack in the magnetic field of the earth that protects us from harmful radiation that comes from the sun. This crack is found in the Atlantic Ocean between Brazil and Africa. The weakening of the earth’s magnetic field could lead to a reversal of the magnetic poles and leave us vulnerable to radiation from the sun.²³

5. Collision with “Planet X.” Nancy Lieder claims that aliens called “Zetas” warned of a collision or near miss in 2012 with a Planet X, which is four times as big as the earth.²⁴

Our planet is constantly bombarded with rocks hurtling around our solar system. Every five minutes a fragment of rock the size of a pea hits and burns in the earth’s atmosphere. Once or twice a century, a rock 40-50 meters in size hits our planet. They are large enough to obliterate a city if they strike it directly. It is estimated that there are between 500 and 1,100 asteroids 1 kilometer or more in size that have trajectories that cross that of the earth. An asteroid of this size would have devastating

²¹ Hundley, *Will the World End in 2012?*, 27–38.

²² *Ibid.*, 39–52.

²³ *Ibid.*, 53–60. See also, Andrews and Andrews, *The Complete Idiot’s Guide to 2012*, 123–125.

²⁴ Lieder has made other predictions and failed. For example, she announced based on revelations by the “Zetas” that Planet X would pass close to the earth in the spring of 2003 causing the axis of the earth to tilt by 90 degrees and wiping out 90% of humanity. When the date passed, Nancy claimed that the date was intended to “confuse” the establishment (i.e., agencies like NASA, CIA, and scholars working for universities, etc.). She then claimed that “Zetas” gave her further revelations that Planet X would hit the earth in 2012, Hundley, *Will the World End in 2012?*, 68–69.

consequences in a global scale lofting enough pulverized debris to plunge the earth in a freezing cosmic winter for years. Three hundred twenty of asteroids of this size have already been identified and their trajectories are being projected in time to see if they pose a threat in the medium term. This is only part of the threat. There are also comets that are larger, travel faster, and are much more difficult to track. We would get only six months of warning of a future comet impact. There is no known threat, however, of a hit by an asteroid or comet for 2012.²⁵

6. Earth's alignment with the galactic plane. John Mayor Jenkins, one of the main proponents of the 2012 excitement, argues that our solar system will align with the center of the Milky Way galaxy on December 21, 2012. This will interrupt the energy that supposedly flows from the center of the galaxy to the earth producing either a crescendo of natural disasters or a change in the consciousness of humanity (which is Jenkins's own view). Dr. David Morrison, senior scientist at the NASA Astrobiology Institute argues that the alignment of the earth and sun with the center of the galaxy occurs every December with no devastating consequences. Additionally, he states that the claims that we are about to cross the galactic plane are just untrue.²⁶

7. Eruption of the super volcano. There are fears that the super volcano that is found below Yellowstone Park might make eruption.²⁷ The eruption of this volcano would be a thousand times more powerful than the eruption of Mt. St. Helens in 1980 and 10 times larger than the explosion of volcano Tambora in 1815.²⁸ According to scientists, the largest explosion ever was that of volcano Tambora 73,500 years ago. It was so massive that it tore a hole of 100 kilometers wide and ejected 3,000 cubic kilometers of debris—enough to cover the whole of India under 1

²⁵ See Bill McGuire, *A Guide to the End of the World: Everything You Never Wanted to Know* (Oxford: Oxford University Press, 2002), 135–68.

²⁶ Hundley, *Will the World End in 2012?*, 71–82.

²⁷ *Ibid.*, 83–92. The term supervolcano is applied to a volcanic center that has had an eruption of a magnitude 8 on the Volcano Explosivity Index (VEI). This means that the measured deposits for that eruption are equal or greater to 1,000 cubic kilometers. For more information on this and super volcanoes in general, visit the website "Yellowstone Volcano Observatory" [<http://volcanoes.usgs.gov/yvo/index.php>] (April 16, 2012) created and maintained by the U.S. Geological Survey (USGS), Yellowstone National Park, and the University of Utah. For a brief introduction to super eruptions, see McGuire, *Guide to the End of the World*, 93–133.

²⁸ McGuire, *Guide to the End of the World*, 98–99.

meter of ash.²⁹ An explosion of this type would cause a volcanic winter among other things and threaten the survival of the human race.

8. The Web Bot Project. Clif High and George Ure developed a software that they claim is able to predict future events by tracking keywords in the Internet.³⁰

The fact is that most of 2012 predictions have no credible evidence behind them. We know that there are real threats to the survival of our planet. Scientists all over the world have warned about them.³¹ These threats, however, are not directly related to December 2012. A serious book describing the natural threats that humanity faces is *A Guide to the End of the World* by Bill McGuire and published by Oxford University Press. Bill McGuire is an "eminent volcanologist and expert on the ominously-titled high-impact, low-frequency mega-geohazards." His book "reveals just how fragile and violent the planet we inhabit can be, while at the same time explaining the science behind the threats." He focuses on four kinds of threats: global warming, a new ice age, geological threats (super eruptions, giant tsunamis, and great quakes), and threats from space (impacts of Asteroid or comets).

The question, however, still remains: Did the Maya predict that the world would end on December 21, 2012? If yes, how were they able to predict with such precision the demise of their own civilization? Is there something we can learn from Maya prophecies?

4. Did the Ancient Maya Predict the End of the World as We Know It in 2012

If we want to understand the Maya Monument 6 of El Tortuguero and its meaning, we need to understand Maya calendars and their understanding of time. Maya calendars are complex. They used three calendars, all of which were interrelated: a lunar or gestational calendar of 260 days,³² a

²⁹ McGuire, *Guide to the End of the World*, 103.

³⁰ Hundley, *Will the World End in 2012?*, 93–100.

³¹ See suggestion for further reading in William R. Stoeger, "Scientific Accounts of Ultimate Catastrophes in Our Life-Bearing Universe," in *The End of the World and the Ends of God: Science and Theology on Eschatology* (ed. John Polkinghorne and Michael Welker; Theology for the Twenty-First Century; Harrisburg, PA.: Trinity, 2000), 19–28. Also, Isaac Asimov, *A Choice of Catastrophes: The Disasters That Threaten Our World* (New York: Simon and Schuster, 1979).

³² Stuart, *The Order of Day*, 146. For an analysis of the 260-day calendar origin, see *Ibid.*, 152–155.

solar 365-day calendar,³³ and a long count calendar that registered the passing of time on a large scale similar to our centuries and millennia. The 260-day calendar approximates the time of gestation for human beings and it was the calendar that Mayas used for divinatory purposes. This calendar pervaded all the aspects of life and continues to be used among the high-land quiche Maya of Guatemala.³⁴ The 365-day calendar provided a framework for agricultural and communal festivities and ceremonies. Both the 260-day and the 365-day calendars make a Calendar Round of about 52 years.³⁵

The Long Count calendar was developed somewhere in the second or third century B.C. This calendar counts elapsed time from a starting point in the past, which is August 11, 3114 B.C. It is a vigesimal counting system in which the number thirteen has special importance.³⁶ Mayanists record dates with five numbers separated with a dot.

Going from right to left, the units of time indicate the following:

K'in: 1 day (the word means "sun" as well as "day")

Winal: made of 20 k'ins (= 20 days)

Tun: made of 18 winals (= 360 days)

K'atun: made of 20 Tuns (= 7200 days, close to 20 years)

Bak'tun: made of 20 k'atuns (= 144,000 days, around 394 years)

For example the date 0.0.0.0.1 would mean that 0 Bak'tuns, 0 K'atuns, 0 Tuns, 0 Winals, and 1 k'in (=day) have elapsed from the starting point, which is August 11, 3114 B.C. This is the date of the beginning of the Long Count Maya Calendar. The total long count cycle is of 5,126 years in total. The full cycle of the Long Count Maya takes us from 3114 to 2012. Thus, December 21, 2012, will be 13.0.0.0.0, which is the same as 0.0.0.0.0, that is, the end of the age and the beginning of a new one.

There are several reasons why the end of the Maya Calendar did not mean for the Maya the end of the world:

1. El Tortuguero's Monument 6 is not prophetic but dedicatory. When the Tortuguero tablet was first deciphered in 1996 by David Stuart and Stephen Houston it was the first monument of its kind to be found and

³³ Stuart, *The Order of Day*, 155–160.

³⁴ *Ibid.*, 115–155.

³⁵ *Ibid.*, 155–160. This means that any date would receive two names because of the two ways of reckoning the time—the 260-day calendar and the 365-day calendar. The same two names for any given date would repeat every 52 years. The two calendars coincide or synchronize about every 52 years. This is the calendar round. See also Andrews and Andrews, *The Complete Idiot's Guide to 2012*, 61–71.

³⁶ For a fuller explanation, see *ibid.*, 162–194.

deciphered. Later, two other monuments of a similar genre were found in Naranjo (dated to A.D. 593) and La Corona (dated to A.D. 677) both in Guatemala. The Naranjo document refers to 10.0.0.0.0 (A.D. 890) and the La Corona to 9.13.0.0.0 (A.D. 692). Both of these documents, like the one at El Tortuguero, were erected to celebrate the completion of new buildings. The numbers that refer to the future are nice round numbers. None of the monuments predicts disasters or the like. It is not clear, however, why they refer to future dates. Most probably it could mean something like: "Built in 1900, this will stand in 2000."³⁷ This would fit the reference in Monument 6 from El Tortuguero to the God of the Nine seen and displayed "in a great investiture."

Both David Stuart and Stephen Houston, the first translators of the Monument 6 of El Tortuguero, are outstanding Maya scholars.³⁸ Sixteen years after translating the document and speculating it was prophetic in nature, Stephen Houston recognized in the face of new discoveries that Monument 6 "had nothing to do with prophecy."³⁹ But it was too late. They had spurred unwittingly broad and bizarre speculations.

2. There may be no special significance for the date at the start of the calendar. Zero years in calendars often refer to significant events in history, religion, or politics, like the birth of Jesus Christ, or the year when Mohammed left La Mecca, or Japan's mythical founding by emperor Jimmu. Regarding August 11, 3114 B.C., the starting date of the Long Count calendar, Maya texts explain that "the gods of creation were set in order."⁴⁰ It is a mythical creation date.⁴¹ This probably refers to the initial ordering of broad categories of divine beings (gods of earth and gods of heaven) as suggested in the Vase of the Seven Gods. Astronomers tell us, however, that nothing significant occurred in 3114 B.C. in terms of the night sky or in terms of planetary alignment. Complex civilization of any sort would come well after this date and Maya civilization two and a half

³⁷ Restall and Solari, *2012 and the End of the World*, 28.

³⁸ I have already spoken about David Stuart at the beginning of the article. Stephen Houston is Dupee Family Professor of Social Science and professor of Archaeology and Anthropology at Brown University, Providence, Rhode Island. He also teaches in the department of Anthropology. On July 21, 2011, Houston was awarded the prestigious Order of the Quetzal by the vice president of Guatemala for his contributions to the study of Maya culture. Visit his web page at http://research.brown.edu/myresearch/Stephen_D._Houston (December 4, 2011).

³⁹ Restall and Solari, *2012 and the End of the World*, 29.

⁴⁰ Stuart, *The Order of Day*, 216.

⁴¹ *Ibid.*, 170–173.

millennia later. Mayanists conclude that it is better to understand this date as an artificial construct.⁴²

3. We are not 100% sure of the correlation between the Maya dates and our dates. The correlation most scholars use today is called GMT (after the initials of Goodman, Martínez, and Thompson). Not all scholars accept these dates, however.⁴³ There has always been a doubt, for example, whether the date from Monument 6 of El Tortuguero really falls on December 21 or December 23 of 2012. The difficulty to ascertain the correlation is well illustrated by an inscription found at Santa Elena Poco Uinic, a very remote place in Chiapas, México. It records the date 9.17.19.13.16, which according to the GMT correlation system fell on July 13, 790 A.D. The accompanying glyph depicts a sun with two elements covering the top and its sides. Mayanists thought that it referred to a sun eclipse. After doing some research they found that there had been a sun eclipse over southern Chiapas three days after, on July 16. This, of course, would agree more with correlation dates falling on December 23, 2012. The truth may be, however, that both counting systems are correct and that the use of the calendar was not entirely consistent either throughout history or throughout the Maya world.⁴⁴

4. Mayas stop using the Long Count Calendar a little after A.D. 910. The Maya created and used their two short calendars (the 260-day and 365-day calendars) long before creating and using the Long Count Calendar. The Long Count calendar is intimately related to the institution of the sacred ruler, the *kol ahaw*. In fact, both institutions rose, flourished, and fell together. The purpose of the great long dates in the stone monuments was to glorify the great kings.⁴⁵ Once kings lost power, the reason for the long dates ceased to exist.⁴⁶ The last Long Count date

⁴² Stuart, *The Order of Day*, 170. See also Restall and Solari, *2012 and the End of the World*, 31.

⁴³ See a brief analysis of the "correlation question" in Stuart, *The Order of Day*, 186–94.

⁴⁴ *Ibid.*, 191–92.

⁴⁵ See Stuart, *The Order of Day*, 252–74. See also Restall and Solari, *2012 and the End of the World*, 32.

⁴⁶ All period endings finished occur in the same "ajaw/ahaw" which means "lord, noble." These days were the rulers of the period and its character was described by the number of the period. The k'atun period (20 years) was considered a ruler who was enthroned every 20 years. The ascension monuments were dedicated on the first period ending of a new king (not on his actual crowning date) so that local kingship (history) and time were fused. We need to understand, then, that the king was the embodiment or bodily manifestation of the period and their function (among others) was to tend time and to "replant it" at the period endings. Kings,

registered on a Maya monument dates from A.D. 910, six centuries before the Spaniards arrived. The Maya themselves abandoned the Long Count Calendar long before the time of the Spanish conquest.

5. Maya believed that the world existed before 3114 B.C. and would continue to exist after A.D. 2012. The Long Count date of December 21, 2012, is 13.0.0.0.0. Did the Mayas expect further events after that date and/or how would they record these events? The Long Count Maya calendar works like the odometer of a car. The date 13.0.0.0.0 will be also 0.0.0.0.0 and will mark the beginning of a new cycle. The Stela 1 at Cobá also shows that Maya would add an extra digit indicating the beginning of a new age in the calendar. [See figure 6] Thus, December 22, 2012 will be simply 1.0.0.0.0.1 and it would continue as time marched indefinitely. Did the Mayas expect events to happen after this date? Yes, they did. One glyphic text in the Temple of the Inscription at Palenque, Chiapas, celebrated that the 80th round calendar anniversary of the reign of the great king K'inich Janaab' Pakal (known as Pakal) would take place eight days after the end of a 8,000-year Long Count cycle called the *pictun*. This refers to October A.D. 4772, almost three millennia after 2012. Evidently, the Mayas did not believe that the world would end in 2012.



Figure 6. Stela 1 at Cobá.

however, did not control time. At the final of a calendar round of 52 years among the Aztecs the king performed the most important ceremony of the new fire. Among the Mayas periods ended more frequently.

Maya inscriptions also refer to events before the starting point of the Long Count calendar. A Maya glyphic text in the Temple of the Cross at Palenque records the birth of a woman and a man 7 to 8 years before the beginning of the Long Cycle (i.e., 3122–3121 B.C.). These were probably creation deities who engendered the three patron gods of the local dynasty.⁴⁷ It seems clear that the creation date in 3114 is a momentous occasion but not one marked by cataclysm or destruction. See the text of the document:

On 12.19.13.4.0 [December 7, 3121 BC], First Lady Sek was born. Five months and eight years after she was born, the era was wrapped up; the 13 cycles of 400 years were completed on 13.0.0.0.0 [August 13, 3114 BC]. A year, 9 months, and 2 days after the face of the new era was revealed, Hun Ye Nal Chac, appeared in the sky; on 13.0.1.9.2 [February 5, 3112 BC] he dedicated the Raised-Sky House, the Eight Chac House was its holy name, the home of the North.⁴⁸

Thus, the end of the era was more like the resetting of the clock than about death and destruction. Indeed, the deity that best signifies the beginning of a new era was Ix Ahaw Na, Lady House. She is not a harbinger of doom but represents the Dawn. In a Maya alphabetic text from the colonial period this goddess is called Ix Kin Suntal, meaning literally "She of the sun's turn."⁴⁹ A more idiomatic translation could be Lady of the Returning Sun. Another Palenque tablet has the date 12.10.1.13.2 in which one of the gods (GI) is seated in kingship before creation date. So, there were kings before creation but we are not sure of what they ruled.⁵⁰ All this tablets connect events in the present with events in the past. Maya loved to connect the king's ceremonies to events in the mythical past. In fact it is possible to say that they fudged the dates to make the symmetries that they loved to display on the monuments.

6. The Cycle Finishing in December Is Just a Part of a Much Greater Cycle. The scale of our deep time cosmology pales in comparison to that of the Maya. According to scientists our universe began to exist around 14 billion years ago. For the Maya, however, time began 28 octillion, 679 septillion years ago. That is 28 followed by 27 ceros. 14 billion is not even 0.0000000000000005 percent of Maya deep time.⁵¹ Stelae 1 and 2 in Coba,

⁴⁷ Stuart, *The Order of Day*, 247.

⁴⁸ Restall and Solari, *2012 and the End of the World*, 33–34.

⁴⁹ *Ibid.*, 34–35.

⁵⁰ Stuart, *The Order of Day*, 248.

⁵¹ *Ibid.*, 230.

México, have very interesting inscriptions. [See figure 7] Both mention the creation date (13.0.0.0) but prefixed by 19 units of 13. This means that the creation date was in fact an abbreviation of a still longer date. This equals 8,285,978,483,664,581,446,157,328,238.631 years of elapsed time from the true beginning of time in Maya conception of the cosmos. That is 28 octillion years in the past. Now, if we extend to the future, the Maya Calendar projects 43 octillion years (43,517,152,096,098,311,708,523,306,538). That is well beyond the time that according to scientific calculations our sun will cease to exist.⁵²



Figure 7. Stela 2 at Coba.

In summary, December 21, 2012 is an important anniversary of creation date (August 13, 3114) not as the “end” but as the first of many future

⁵² According to these calculations the sun was born 4.5 billion years ago and will become a white dwarf star at a little less than 13 billion years old. Then it will take some trillions of years to cool off completely. See Harold Zirin, “Sun: Evolution,” *Encyclopaedia Britannica Standard Edition 2005 CD-ROM*. Version 2005, 1994–2005; Richard W. Pogge, “The Once and Future Sun,” Public lecture given on June 12, 1997, at the Perkins Observatory in Delaware, Ohio, as part of the New Vistas in Astronomy Series. Available from <http://www.astronomy.ohiostate.edu/~pogge/Lectures/vistas97.html> (April 16, 2012).

repetitions. An identical repetition will occur in a little more than 100 thousand years from now (that is, after 13 pictuns have elapsed after 2012).⁵³

7. There is no evidence that the Maya were aware of precession. John Mayor Jenkins, the leader of 2012 enthusiasts, suggested, in his book *Maya Cosmogenesis 2012* published in 1998, that the Galaxy, or even the universe, will be realigned or altered in a way that will either usher in a new and improved era (Jenkins's own position) or destroy the earth. The Maya with their vaunted astronomic observation abilities are credited with having anticipated this event.

"Precession is the astronomical term that refers to how the sun becomes gradually aligned with the Milky Way."⁵⁴ As the earth rotates around the sun it wobbles, which results in a little difference between the solar year (how long it takes for the earth to rotate around the sun) and the stellar year (how long it takes to line up with the stars). Hipparchus, a Greek Astronomer, observed this phenomenon in 128 B.C. The truth is that we are not sure if Mayas were aware of precession. They could, but we just don't have the evidence. Even if they did, the truth is that a precession cycle is of about 26,000 years and cannot be predicted through observation to a specific date. It can be predicted to a period of a few centuries but not to a year, much less to a specific date.

In fact, we have evidence that Mayas were not as good at astronomy as sometimes credited to be. The famous Venus Tables of the Dresden Codex show that they are not merely tallies of observed data but astronomical observations for long periods that were "tweaked" to conform to other ritual cycles that were important for the Mayas. Note the differences between the Maya observations of the mean intervals of Venus that Ernst Försterman deciphered in the Dresden Codex and astronomical reality (figures between brackets):⁵⁵

Visible as a morning star	236 days [263 days]
Invisibility of Venus at superior conjunction	90 days [50 days]
Venus again visible as an evening star	250 days [263 days]
Venus disappears at an inferior conjunction	8 days [8 days]

The only figure that really matches is the last one. What was important for the Maya time keeper was that a number *conceptually* accommodated the different types of heavenly phenomena.

⁵³ Zirin, "Sun: Evolution," 311.

⁵⁴ Restall and Solari, *2012 and the End of the World*, 43.

⁵⁵ Stuart, *The Order of Day*, 292-93.

8. The Maya were not Map Makers. The famous Maya Stela 25 at Izapa probably was not a cosmic map of creation as 2012 enthusiasts argue. There are no other maps in the vast corpus of Maya literature and art.⁵⁶

In their book *2012 and the End of the World: The Western Roots of the Maya Apocalypse*, Maya specialists Matthew Restall and Amara Solari argue that explosion of interest and speculation about 2012 and supposed Maya prophecies tell more about modern western culture and its obsession with millennialism and apocalyptic fears than of ancient Maya beliefs.⁵⁷ The supposed Maya prophecies are in the end more an excuse than the basis of the 2012 phenomenon.

9. The interrelationship between the future and the past in Maya prophecies. One last question posed at the beginning of this article was: Did the Itzá Maya predict the fall of their own civilization? Did the Maya prophets in this case know the future, were they just lucky in their predictions, or are there other factors that we have not yet taken into account?

For the ancient Itzá Maya, time was not just a measure for history; it was also a "deterministic, shaping force in human experience."⁵⁸ Each k'atun was named after the day in the calendar in which it ended and had its own personality and character. Thus, each k'atun had its own idol, its own priest, and its own prophecy of events.⁵⁹ The names of the k'atun would repeat every 256 years. This was a large cycle made of 13 k'atuns.⁶⁰ The system was cyclical and the Maya believed that history was based on familiar recurring patterns and, therefore, "prophecy" was in fact "a reflection of events and trends of the past."⁶¹ This is why it is so difficult

⁵⁶ Restall and Solari, *2012 and the End of the World*, 44.

⁵⁷ For a popular introduction to apocalyptic views regarding the end of the world in different cultures from the ancient civilizations to our time, see Sharan Newman, *The Real History of the End of the World* (New York: Berkley, 2010). A more scholarly introduction is the massive book by Jerry L. Walls, ed., *The Oxford Handbook of Eschatology* (New York: Oxford University Press, 2007). For a popular introduction to the influence of John's Book of Revelation in western culture, see Jonathan Kirsch, *A History of the End of the World: How the Most Controversial Book in the Bible Changed the Course of Western Civilization* (New York: HarperOne, 2007).

⁵⁸ Stuart, *The Order of Day*, 17.

⁵⁹ Fray Andrés Avendaño y Loyola, *Relation of Two Trips to Peten, Made for the Conversion of the Heathen Itzaex and Cehache* (trans. C. P. Bowditch and G Rivera; Culver City, CA: Labryinthos, 1987), 39.

⁶⁰ Similarly, there was also a 260-day cycle. For an explanation of how these cycles worked, see Stuart, *The Order of Day*, 115–7.

⁶¹ Stuart, *The Order of Day*, 20.

to differentiate between history and prophecy in Maya thought and documents.

The ancient prophecies of the Itzá Maya said that the time they would abandon their gods would be the age Eight Ahaw (or 8 Ahaw). Since time was a deterministic force based on recurring patterns it is important to know about what had happened in the previous ages of Eight Ahaw. The events are quite revealing:

(Katun) 8 Ahau was when *Chichen Itzá was abandoned*. There were thirteen folds of Katuns when they established their houses at Chakanputun.⁶² (Emphasis mine.)

13 katuns later, we find a similar event. (I am not sure of the format) (Katun) 8 Ahau was when Chakanputun was abandoned by the Itzá men. Then they came to seek homes again. For thirteen folds of katuns had they dwelt in their houses at Chakanputun. *This was always the katun when the Itzá went beneath the trees, beneath the bushes, beneath the vines, to their misfortune.*⁶³ (Emphasis mine.)

13 katuns later, history repeats itself. (I am not sure of the format) (Katun) 8 Ahau was when *the Itzá men again abandoned their homes because of the treachery of Hunac Ceel*, because of the banquet with the people of Izamal. For thirteen folds of Katuns they had dwelt there, when they were driven out by Hunac Ceel because of the giving of the questionnaire of the Itzá.⁶⁴

It is quite fascinating to note that events and trends of history repeated itself from one era to the other. There was a pattern of rises and falls throughout the history of the Maya, and the priests who read the calendars and explained the meaning of the days in which they lived were in fact recognizing the pattern of history and applying it to the future. This means that the Maya were not masters of time but slaves of their own history. They were deterministic in their understanding of history. In some sense they fulfilled their own prophecies. Since many people as well as influential individuals believed in these "prophecies," they worked. Thus, it was not pure prediction that we find in these Maya documents but self-fulfilling prophecies where one would sufficiently believe the prophecy, which produces reactions, that ultimately fulfill the prophecy.

The ancient Mesoamericans were not different to us today in this respect. They had something similar to our horoscope. The Aztecs called

⁶² Ralph L. Roys, *The Book of Chilam Balam of Chumayel* (Washington, DC: Carnegie Institution, 1932), 136.

⁶³ Roys, *The Book of Chilam Balam of Chumayel*, 136.

⁶⁴ *Ibid.*, 137.

their 260-day cycle the *tonalpohualli*, which means "count of days." It contained the full array of numbers and day names that were the essential tool for the Aztec soothsayers to foretell the future. These manuals of fate were known as *tonalamatl* ("books of days") and day priests would use it to understand the supernatural forces and influences associated with a given day.⁶⁵ Every day (260 of them) was a *tonalli* that had positive and negative associations (sometimes both). The *tonalli* referred to the life force that was thought to reside in the head of the person. Once a baby was born, the child was ritually bathed and assigned his or her *tonalli*.⁶⁶ Fray Bernardino de Sahagún, a sixteenth-century priest who worked among the Aztecs and documented many aspects of the Aztec civilization, gives us an example:

[The day sign] One Flower . . . The man born upon it, they said, and it was averred, would be happy, quite able, and much given to song and joy: a jester, an entertainer. And it was said that women were great embroiderers. It was said that this sign was indifferent; that is to say, a little bad and a little good.⁶⁷

The *tonalli* readers were called *tonalpouhque* and were considered among the wisest and most important members of the community. Their prognostications penetrated all aspects of life. In fact, the day count has survived to the present time in remote areas of Mesoamerica. It is because of this belief on the power and nature of time itself that ancient Maya prophecies had such a power in the life of the Maya people. The horoscope has a similar power on those persons who believe in it. Charles Strohmer, a former practitioner of astrology, describes how this system works and why it has such powerful influence in some people but is uncompromising in asserting that astrologers do not and cannot know the future. Astrology is, instead, a shaping force that ends up governing the life of those who believe in it.⁶⁸

⁶⁵ For a brief description of how this system worked, see Stuart, *The Order of Day*, 119–129.

⁶⁶ If the day was bad, the rite could be delayed in a specific period of time, see *ibid.*, 120.

⁶⁷ Fray Bernardino de Sahagún, *The Florentine Codex* (transl. A. J. O. Anderson and C. Dibble; Santa Fe, NM: School of American Research and University of Utah Press, 1950–1982), 4:23.

⁶⁸ Charles Strohmer, *What Your Horoscope Doesn't Tell You* (Wheaton, IL: Tyndale House, 1988), 39–55.

5. Conclusion

The story of Monument 6 of El Tortuguero, Tabasco, Mexico, has been remarkable. The speculation of the Maya scholars who first translated it that it was prophetic in nature has produced wild speculations. Nevertheless, new discoveries and a better understanding of the Maya culture and worldview have thrown new light on the meaning and significance of this fascinating monument. Tablets found at Naranjo and La Corona, Guatemala, suggest that Monument 6 is not prophetic but dedicatory. Its purpose was to celebrate the completion of a new building and its permanence into the far future. Inscriptions at Palenque, Mexico, also refer to dates long after 2012 suggesting that the Mayas did not believe in an intervening destruction. The Maya believed that 2012 marked the end of a cycle that was part of larger cycles. In fact, Maya conceptions of time go deeper into the future and the past than modern science does.

There are, however, important similarities between Maya conceptions of the forces that shaped history and certain sectors of modern society. The Maya were deterministic in their worldview. For them, time was a force that shaped history and was largely out of the control of humanity. That ancient worldview mirrors current beliefs in astrology and/or other deterministic forces among different sectors of human society today. In the end, the way we read Tortuguero's Monument 6 may tell more about our beliefs and worldview than those of its creators.