

The End of Time: The Maya Mystery of 2012 and 2012: Science and Prophecy of the Ancient Maya

BOOK REVIEW

REVIEWED BY JOHN W. HOOPES

The End of Time: The Maya Mystery of 2012, by Anthony Aveni (University Press of Colorado, Boulder, 2009, 190 pp., sources, title, and index, ISBN-10: 0870819615, ISBN-13: 978-0870819612. Paper, \$19.95).

2012: Science and Prophecy of the Ancient Maya, by Mark Van Stone (Tlacaélel Press, San Diego, California, 2010, 169 pp., sources, title, and index, ASIN: B003MAS6XI. Paper, \$49.00).

December 21, 2012, which corresponds to 13.0.0.0.0 4 Ajaw 3 K'ank'in of the Maya Long Count calendar, will mark 1,872,000 *k'ins* (days)—about 5,125 years—from a mythical date of Creation. Because a Creation date of 13.0.0.0.0 (a day that correlates with a Gregorian date in 3114 B.C.E.) was also recorded retroactively by the ancient Maya, a bewildering number of authors—both academic and otherwise popular—have interpreted the upcoming date as the end of a “Great Cycle.” The existence of this cycle has in turn been claimed to reflect Maya prophecies of everything from global catastrophe to spiritual awakening. Did the ancient Maya understand something we don’t about cyclical events in the universe? Was

their complex calendar a means of predicting future events other than the movements of celestial bodies?

Various authors have asserted that the conclusion of a major cycle in the ancient Maya calendar will be accompanied by either death and destruction or a global transformation of consciousness, the underlying assumption being that the “mysterious” Maya could either foretell the future themselves or were informed by a higher intelligence that could. Imagination has sparked a wild array of interpretations that a curious public is anxious to consume. For example, the History Channel’s new series *Ancient Aliens* has revived interest in Erich von Däniken, author of *Chariots of the Gods?* (1969). His new book, *Twilight of the Gods: The Mayan Calendar and the Return of the Extraterrestrials* (2010), is just one of the latest in a new genre of pseudoscientific literature focused on the Maya calendar and 2012. Scientists and other critical thinkers are generally good at spotting fringe literature, but when one of the most speculative popular books on the subject, John Major Jenkins’s *The 2012 Story* (2009), is subtitled *The Myths, Fallacies, and Truth Behind the Most Intriguing Date in History*, then you can’t judge a book by its cover.

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Out of more than 500 titles that have been published on this subject to date, the examples that rise above the genre of New Age speculation and pseudoscience can still be counted on one hand. These two new books, one by astronomer Anthony Aveni and the other by epigrapher Mark Van Stone, are among them. Marketing still rules the day, and Aveni's title, alluding to "the end of time" and "the Maya mystery," is calculated to sell. Inquiring minds want to know: Is Armageddon coming soon? Were the ancient Maya communicating with ETs? Is extraterrestrial intelligence trying to warn us—even through serpentine channels—that we are sealing our doom with nuclear weapons, global warming, government cover-ups, and our stubborn failure to legalize marijuana and embrace metaphysical realities? The themes of the cold war movie *The Day the Earth Stood Still* (1950) seem as relevant today as ever. Is there anything to the claims about ancient Maya prophecies of impending doom? With lighthearted approaches, these two books offer respite from both pessimistic fearmongering and New Age preaching. They offer an informative education about Maya culture along with a solid background of knowledge for evaluating and refuting spurious claims.

The Long Count calendar ceased to be used by the ancient Maya near the beginning of the tenth century C.E. Our understanding of how it works is nothing new. Most of its basic principles had been deciphered by the late nineteenth and early twentieth centuries, although some debates over details continue up to the present. This calendar derived from a remarkable system of mathematics whose use of a placeholder (the equivalent of zero) permitted Maya mathematicians to make calculations based on extraordinarily large numbers. Dates were recorded in a series of five increasing "bundles" of days, from the *k'in* (one day) to the *bak'tun* (144,000 days). Even larger units included the *k'inchiltun* (1,152,000,000 days) and *alawtun* (23,040,000,000 days). The contemplation of vast eons of time can be awe inspiring. There is abundant evidence that the ancient Maya found that to be so.

However, claims about an ancient Maya prophecy for 13.0.0.0.0 4 Ajaw 3 K'ank'in—a specific *day* and not the *year* 2012—have been greatly exagger-

ated. Most are based on circumstantial evidence for a succession of "World Ages" from the *Popol Vuh* and apocalyptic prophecies in various versions of the so-called *Books of Chilam B'alam*, both of which survived in postconquest texts transcribed by Mayas who had learned to write from Roman Catholic missionaries who had presumably taught them about the Great Flood as well as the biblical book of Revelation. Others invoke Aztec (not Maya) accounts of a series of Five Suns, each associated with a different flavor of destruction. However, the Aztecs never used the Long Count. The devil is in the details, and most authors writing about 2012 have played fast and loose with the facts. There is only one known ancient monument, from the now-destroyed site of Tortuguero in the Mexican state of Tabasco, that mentions 13.0.0.0.0 4 Ajaw 3 K'ank'in. Its decipherment has been impeded by the fact that the critical glyph block for the verb is poorly preserved. The latest reading, by Sven Gronemeyer and Barbara Tedlock, translates the prophetic passage as "It will be completed the thirteenth Bak'tun. It is 4 Ajaw 3 K'ank'in and it will happen a 'seeing.' It is the display of B'olon-Yokte' in a great 'investiture'" (2010:8). In brief, the ancient Maya prophecy seems to pertain to a big party for a specific deity.

Whence comes all the hullabaloo about 2012? Some of it can be traced to assertions by scholars. In 1906 Maya scholar Ernst Foerstemann asserted in his *Commentary on the Maya Manuscripts in the Royal Public Library of Dresden* that the image on the last page of this ancient codex "can denote nothing but the end of the world." Since then, scholars from Sylvanus Morley (1946) to Michael Coe (1966) have echoed themes of world destruction in interpretations of Maya cosmology. It was Coe who, in his book *The Maya*, first correlated a Long Count date with a future Gregorian one, associating 13.0.0.0.0 with the word "Armageddon" in 2011 (later "corrected" to 2012). Published amid cold war jitters and counter-culture preoccupations with the dawning of the Age of Aquarius, the concept eventually took on a life of its own, gaining new momentum when Y2K failed to deliver a global meltdown. What did the ancient Maya actually think? Did they know something that we don't?

Aveni and Van Stone each seeks to answer these questions from well-informed but widely varying perspectives. Aveni, the Russell Colgate Distinguished Professor of Astronomy, Anthropology, and Native American Studies at Colgate University, approaches the topic as one of the “grand old men” of archaeoastronomy, having written over a dozen books on topics ranging from skywatching in the ancient Americas to a critical analysis of magic and the occult. Like the inspirational Carl Sagan, Aveni has the ability to write clearly for a general public while sustaining the interest of informed specialists. Van Stone, a professional calligrapher and professor of art history at Southwestern College in Chula Vista, California, comes to the subject as an expert on the decipherment of Maya hieroglyphic writing; he is also coauthor, with Michael Coe, of *Reading the Maya Glyphs* (2005). His approach is as visual as it is verbal—an apt orientation to the ancient Maya, whose words for “writing” also translate as “painting.” Each brings to the task a vast understanding of academic scholarship. The two books complement each other, with Aveni concentrating on evidence from astronomy, archaeoastronomy, and culture history, while Van Stone relies primarily upon art history and epigraphy. Of course, there is also valuable overlap between the two.

Aveni’s book is lively and entertaining, erudite and well-informed. It packs a great deal into a readable text that will be of interest to archaeoastronomers and social critics alike as well as the general public. It would make an excellent gift to a confused high school or college student. In fact, it was written as a kindly response to Dylan, a teenager from Halifax, Nova Scotia, whose anxious e-mail correspondence with Aveni presented earnest feelings of fear, despair, and hopelessness. Were Dylan and his friends really going to be deprived of a future? These fears have been stirred up by popular books such as Geoff Stray’s *Beyond 2012: Catastrophe or Ecstasy?* (2005) and Lawrence E. Joseph’s *Apocalypse 2012: A Scientific Investigation into Civilization’s End* (2007) as well as Roland Emmerich’s (2009) disaster film *2012*. Aveni writes with generosity and attention to detail, providing a basic introduction to what current academic scholars actually think about Maya creation stories and Mesoamerican

archaeoastronomy. He devotes one chapter to the Maya calendar and another to Maya astronomy, although the latter theme runs throughout the book. Aveni systematically addresses the most common questions about astrological and geophysical events that speculative writers have asserted are likely in 2012, including a “galactic alignment,” increased solar activity, shifts in the earth’s magnetic field (or its geophysical poles), and whether there are reasons to anticipate any increases in natural disasters as a result of cosmic phenomena in 2012 (there aren’t).

The principal focus of Aveni’s book is on evaluating whether the Maya knew something that we don’t about astronomical phenomena and whether what they knew can be related to scientifically based assessments of risk from known natural phenomena. To his credit, Aveni also provides a critical analysis of the social context for 2012-related apocalypticism, comparing it to early nineteenth-century Millerite millenarianism, whose predictions of the world’s end in 1844 resulted in what historians term the “Great Disappointment.” Aveni’s previous book *Behind the Crystal Ball: Magic, Science and the Occult from Antiquity Through the New Age* (1996) explores the historical roots of esoterica and includes a chapter (“Only in America”) that reviews the legacy of H. P. Blavatsky, Theosophy, and “occult” currents of religious and spiritual philosophy that have conditioned New Age interpretations of the “mysterious” Maya and anticipation of 2012. However, his treatment in *The End of Time*, though wide-ranging and well-informed, is brief. (Readers seeking more in-depth background should consult Catherine Albanese’s *A Republic of Mind and Spirit: A Cultural History of American Metaphysical Religion* [2008] and Mitch Horowitz’s *Occult America: The Secret History of How Mysticism Shaped Our Nation* [2009].) Aveni also discusses contemporary New Age writers such as José Argüelles, whose book *The Mayan Factor: Path Beyond Technology* (1987) was central to sparking discussion of 2012 in counterculture circles. He critiques independent scholar John Major Jenkins, in whose work he correctly identifies “Gnostic overtones,” self-help advocate Carl-Johan Calleman (2004), and psychedelic guru Daniel Pinchbeck (2006), all of whom have engaged

in imaginative speculation—some of it aided by hallucinogenic visions—about the implications of the Maya calendar.

Van Stone's book, which is available either in hard copy, on CD, or via e-mail (in PDF format) from his Web site (<http://markvanstone.com>), is pitched for the specialist as well as for the enthusiastic neophyte. A former student of the late Linda Schele and a regular participant and instructor in hieroglyphic workshops at the Texas Maya Meetings, Van Stone draws upon a rich and detailed knowledge of an enormous corpus of Maya inscriptions, monuments, and artwork. If a picture is worth a thousand words, Van Stone's slim volume is extraordinarily thick. It is lavishly illustrated with abundant, full-color illustrations of monuments, painted vases, stelae, and artifacts. It meticulously documents epigraphic decipherments, helping the reader to understand the nature of the available texts and to see what has and hasn't been recorded. As such, it provides a rich sourcebook of images not only for following his detailed exposition of current thinking on Maya cosmology but also for undertaking future investigations long after 2012 has passed. Van Stone's experience teaching workshops on Maya hieroglyphs informs every page. Every discussion is accompanied with clear illustrations, stepping the reader through dozens of specific examples. His explanations are thoughtful and deliberate, designed to guide both the expert epigrapher and the novice. Discussion also extends to broader Mesoamerican belief systems, comparing Maya calendrics and mythology to the Aztec traditions with which they are frequently confused and conflated. Van Stone concentrates on answering specific questions: What did the ancient Maya know, and how do we know they knew it? Was there an ancient Maya prophecy, and what do we know about it? What can be read in the inscriptions that reveals details about Maya cosmology and eschatology? These are answered in meticulous detail, inviting readers to return to the text over and over again. Where most New Age literature on the subject is generalized speculation, Van Stone's exploration of ancient Maya texts is relevant to understanding how the Maya themselves thought about time, cycles, and cosmology in a careful exposition of empirical data. What it reveals is that although the Maya clearly had a rich and sophisticated intellectual life, apparently they

did not think 13.0.0.0 4 Ajaw 3 K'ank'in would be marked by world or consciousness-changing happenings. With his exploration of the Maya calendar and claims of ancient prophecies, Van Stone has created an attractive invitation into Maya scholarship.

While much is known, it is clear that a great deal remains for deeper investigation. These discussions of 2012 reveal some issues that merit more careful consideration. For example, neither of these books explicitly addresses a distinction between astronomy and astrology, especially in Maya thought and practice. The slim discussion of this topic by Aveni may be due to his detailed exploration of the origins of astronomy in astrology in his earlier book *Conversing with the Planets: How Science and Myth Invented the Cosmos* (1992), in which he notes (in writing about Maya mathematics), "Its means would follow the stars—true astronomy—while its ends served a New World form of astrology" (1992:89). However, Maya astrology remains poorly defined. Even Aveni's earlier work repeatedly refers to "Maya astronomers" without any reference to Maya *astrologers*. Too often, Maya calendrics are termed *astronomy* when they have more in common with astrological birth charts and horoscopes. Both astrology and astronomy are "exact and predictive," to use V. Gordon Childe's famous phrase (1950), but they are not both *sciences* in the modern sense of the word. Unlike biology, geology, and anthropology, the *-ology* in astrology does not imply scientific methodology. It is astronomy that is the exact and predictive science, while astrology is more pliable. The ancient Maya did do astronomy, making naked-eye observations and compiling precise and predictive tables of the movements of celestial bodies. However, language regularly makes the Maya seem more similar to Western scientists than astrologers of classical antiquity. Yes, the ancient Maya were keen observers of the heavens. However, they never figured out that the stars and planets were material balls of gases, liquids, and solids rather than supernatural beings. They never knew that the motions of the stars and planets reflected the effects of gravity. Decipherment of ancient Maya hieroglyphic texts to date has not yet revealed any preoccupation with theories of celestial mechanics. There are no ancient Maya astrolabes or telescopes. Yes, their precise

calculations were both obsessive and impressive, but so are those of professional astrologers.

Whether or not the ancient Maya operationalized the concept of “as above, so below,” what they were doing was much more similar to the work of Hermeticism and Ptolemy than Copernicus, Galileo, Newton (his alchemy aside), and Kepler. This is becoming ever more clear from detailed decipherments of Maya hieroglyphic texts such as the kind that Van Stone presents. The ancient Maya used their calendars for divination and metaphysical interpretations. For example, the ancient Maya used cycles of Venus to schedule key battles and associated military events. While this had a practical, chronological function, serving to coordinate the efforts of both central polities and their allies, it also had supernatural objectives. Maya *ajawob* (kings) used astrological data to plan accessions, dedications, and other kingly activities. They also used backward-projected astrological correlations to add prestige to their biographies and justify their authority. Their observations of heavenly bodies were used to create a precise agricultural calendar, but they were also used for supporting myths and metaphysical insights, not empirical scientific inquiry.

In this context, the distinctions between astronomy and astrology are crucial. Asking questions based on our understanding of astrology may lead to new insights into Maya beliefs and practices. We do not yet understand, for example, how Maya observations of heavenly bodies may have been used in ancient medicine. The existence of a Maya zodiac remains a matter of debate. However, the relationship between the Maya calendar and celestial events in 2012 to the physical, emotional, and spiritual health of planet Earth and its inhabitants is at the heart of a great deal of 2012-related speculation. Most of this is not astronomy but astrology, and it is important to know the difference. The role of astrology in ancient Maya politics, for example, is gradually becoming apparent, but it is still termed *astronomy* (Rice 2004). Perhaps a clearer distinction between archaeoastronomy and *archaeoastrology* is required to parallel distinctions we routinely make between what happens in scientific observatories versus the local psychic bookstore.

The “2012 phenomenon” makes much more sense in the context of astrology than astronomy, as

becomes clear from the influence of astrologer Dane Rudhyar (1895–1985) on New Age prophet and 2012 guru José Argüelles and on John Major Jenkins (who once worked as a professional astrologer). Rudhyar, best known as one of the twentieth century’s most noteworthy avant-garde composers (Ertan 2009), also developed a field he labeled “humanistic astrology.” Combining classical astrology with psychology, it was defined in *The Astrology of Personality* (Rudhyar 1936), published with the assistance of mystic Alice Bailey, another apostate Theosophist. Familiarity with Rudhyar’s work remained within esoteric circles until the late 1960s and early 1970s, when it was revived in the context of California’s counterculture. Rudhyar, who lived in San Francisco, became a popular lecturer whose combination of astrology and psychotherapy inspired a new generation of New Age astrologers. His book *The Planetaryization of Consciousness* (1970) helped inspire the first Whole Earth Festival (South 2009:116), while *The Sun Is Also a Star: The Galactic Dimension of Astrology* (1975) provided the intellectual underpinning for claims by Argüelles (for whom Rudhyar was a personal mentor) and Jenkins about ancient Maya concerns with the movements of the Sun relative to the Milky Way galaxy. Rudhyar’s “humanistic astrology” played a fundamental role in the foundational mythology of the 2012 phenomenon. However, because astrology is a pseudoscientific “fringe” discipline, his work has been freely ignored by Mesoamerican archaeoastronomers and Mayan epigraphers alike. Intriguingly, Rudhyar’s divination, exemplified by *The Astrology of America’s Destiny: A Birth Chart for the United States of America* (1974), echoed the astrological concerns of the ancient Maya. His indirect influence extended even to the White House, where Nancy and Ronald Reagan are reported to have consulted astrologers before making personal plans or state decisions. In this respect, the similarities between modern astrology and ancient Maya practices merit more careful attention. Given the absence of scientific evidence for a galactic beam from the center of the Milky Way galaxy, an approaching Planet X (a.k.a. Nibiru), or massive solar flares scheduled for December 21, 2012, concern with what will or will not happen in 2012 has become more a matter of astrology than astronomy.

Hermeticism has been revived in New Age circles known for extreme speculation, poor scholarship, and exploitation of ignorant and gullible audiences whose critical thinking skills are weak. However, the role of related ways of thinking in Mesoamerican worldviews and cosmologies remains underdeveloped. To paraphrase Mayanist J. E. S. Thompson, Maya astrology is too important to be left to astrologers. (Thompson's original statement is: "[O]ne is inclined to say that Maya astronomy is too important to be left to the astronomers" [1974:97].) Writers such as Argüelles, Jenkins, Calleman, Pinchbeck, and hundreds of others have succeeded in promoting and aggressively marketing what amounts to poorly informed pseudoscience. Astrology, UFOlogy, psychedelics, and metaphysics—Christian, Eastern, and New Age syncretism—are all significant elements in the hype. Of course, there's also the profit motive. Fear and fantasy both sell well, especially in uncertain times. Using these in manipulations of power and wealth is something the ancient Maya appear to have understood at least as well as we do. For Dylan and others, it's critical to understand what science knows and what it doesn't. The degrees to which it is poorly informed vary, but out of the hundreds of books that have been published to date on the theme of Maya predictions or prophecies for 2012, only the two reviewed here stand out as works of sober, informed scholarship within scientific and historic paradigms. Their erudition and thoroughness should make it clear to any discerning reader that they are in an entirely different category of scholarship than the majority of what is offered to the general public. They also reveal what is already well known by scholars, that careful evaluations of specific phenomena can raise fascinating questions about the "big picture."

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