

SPECIALIZATION WRITTEN RESEARCH PAPER

THE MAYAN HIEROGLYPHS: MYSTERY AND REALITY

Submitted by  
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## THE MAYAN HIEROGLYPHS: MYSTERY AND REALITY

Shedding light on the mystery and reality of the Mayan Hieroglyphs really means looking at the Mayan people, their way of thinking, and their relationship with Mother Earth and the gods of the universe. The Mayans were a pre-Colombian people. They are Indians who lived in Meso America (mainly southern Mexico) as early as 300 B.C. (maybe 1500 B.C.). They used hieroglyphic writing extensively from 100 A.D. until the arrival of the Spaniards in 1539 when they were forced to adopt the Roman script. Their glyphs are ideas or entire concepts, not just words or letters! They are "figuras" (people): faces, eyes, hands, and feet in motion. They are like gods, sacred and full of mystery. You need to look at them with the eyes of a child. Patience, a good heart, and faith in the Lord are essential if you want to have a dream during which you learn to "see."<sup>1</sup>

The glyphs are also very important weapons for changing man's fate and protecting him from evil spirits. They are art expressing complex thoughts in simple images. There are usually several versions of one glyph. Some were used only for inscriptions (engravings), some only for the Codices (painted messages on bark). The idea remains the same for the different versions of a same glyph. I chose for my illustrations the examples that represent the various discussed ideas best. Mystery is for us the ineffable, the unspoken of, the question without answer. For the Mayans, mystery is the cyclic reality of an ever changing universe which has to be kept in balance by positive and negative forces.

It is not outside reality but an essential ingredient of reality. Life is a journey through time and space, and death is the completion of a life cycle and the beginning of new life.

The Mayan life cycle is beautifully illustrated by the image of "Imix," the earth-crocodile who swallows the sun, "God D," at sunset and lets it rise out of its fangs at dawn (Figure 1).

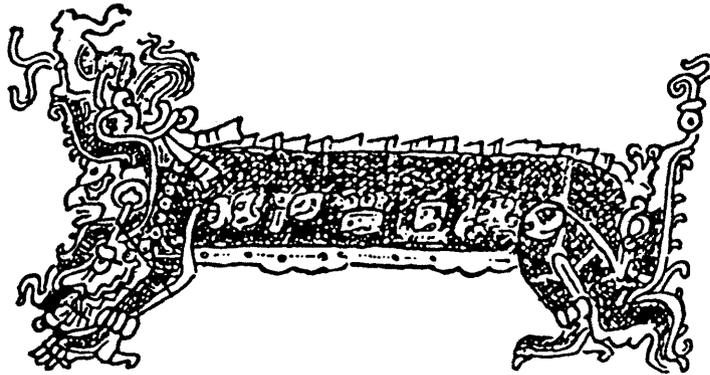


Figure 1. The earth monster. <sup>2</sup>The solar deity emerges from its fangs (Dresden Codex 4-5b).

Day and night, light and dark, good and evil are kept in balance by this devouring crocodile, who is the root from which all things spring. The Book of Chilam Balam of Chumayel calls the earth "Itzam Cab Ain." This name is also used in the Dresden Codex. "It will be then when Itzam Cab Ain, Wizard of water-earth-crocodile will create, will give birth to enduring life on earth."<sup>3</sup> In the Book of Chilam Balam of Maní we are told how the earth surface was formed by the blood of a monster, ". . . when there was a great cataclysm, when the monstrous alligator arose . . . 'Bolontiku' did not wish the monster to destroy the world, for which reason he cut its throat and formed the surface of Petén" (province, region).<sup>4</sup> For the Mayans the term monster might have meant a very

powerful being, a creature with the strength of a dragon, because it had the head of a dragon, and with the magic power of a crocodile. The lacking of the lower jaw and the protuberant nose emphasizes its monstrosity. The Aztecs, too, talk about an earth monster in their story of creation. Their earth was made from god "Tetzcatlipoca's" foot that had been bitten off by the earth monster "Cipactli." Among today's Maya, the idea of an earth monster doesn't exist. They represent the earth by a two-headed serpent, "Itzam-Noh-Kuh," who is the cause of day and night.

In the "Popol Vuh" or ancient Mayan creation story "Imix" is divided into four crocodiles, the four "Itzamnas," which represent the four directions. The "crocodile of the red quadrant" refers to the east; the "crocodile of the white quadrant" refers to the north; the "crocodile of the black quadrant" refers to the west; and the "crocodile of the yellow quadrant" refers to the south.<sup>5</sup> Each direction has its glyph (see Figure 2) and its "Bacab" or supporter of the sky who is placed at one of the cardinal points: Chac is red (east), Zac is white (north), Ed is black (west), and Kan is yellow (south).

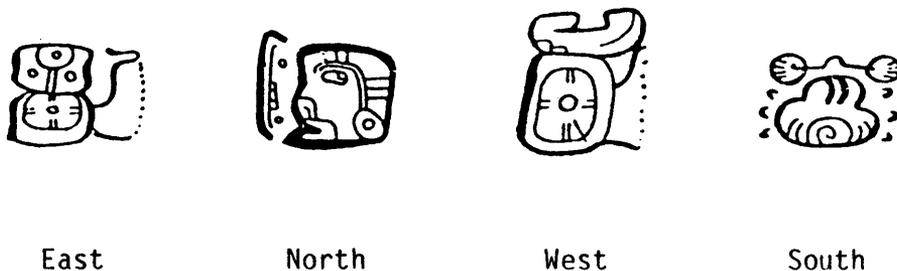


Figure 2. Directional glyphs (orientation of the years) in the carved inscriptions and codices.<sup>6</sup>

In the middle of the earth is the green leafy ceiba tree, the Tree of Life, which makes up the fifth direction. "Yaxché, the ceiba tree, is the one that supports the plateau and the vessel," according to Barrera Vasques, in the Book of Chilam Balam of Chumayel.<sup>7</sup> The ceiba tree is rooted in the earth mask and growing through the earth plate in the Panel of the Cross of Palenque (Figure 3).

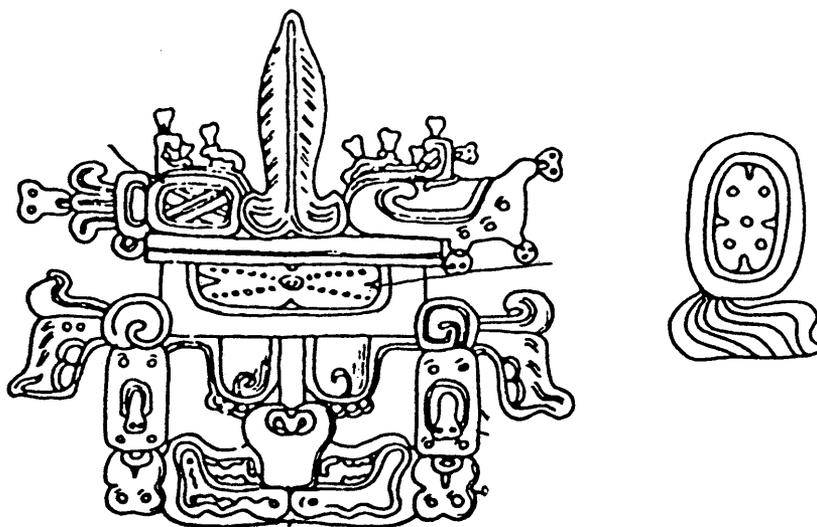


Figure 3. The monstrous mask of the earth, upon which the sacred tree rests. (Panel of the Cross, Palenque)<sup>8</sup> Also, on the right "Kinh," the four-petaled flower.

The earth mask is kept in balance by two jaguar heads, symbols of the night and two "lab" signs (underneath the jaguar heads), symbols of the day. On top of the earth plate, we find decorative corn glyphs and the "Kan cross" (left of the ceiba tree) which stands for water. The four-petaled flower of "Kinh" is centered over the earth mask. Dots arranged in a crosslike pattern inside the flower refer to the four directions and the passage of time; each dot represents a period of time.

The mystery of "Kinh"--one glyph for sun, day, and time--is realized through the sun's daily cycle of rising and descending. The

journey of "K'in" up into the heavens and down into the underworld is represented by the shape of the stepped pyramids (Figure 4).

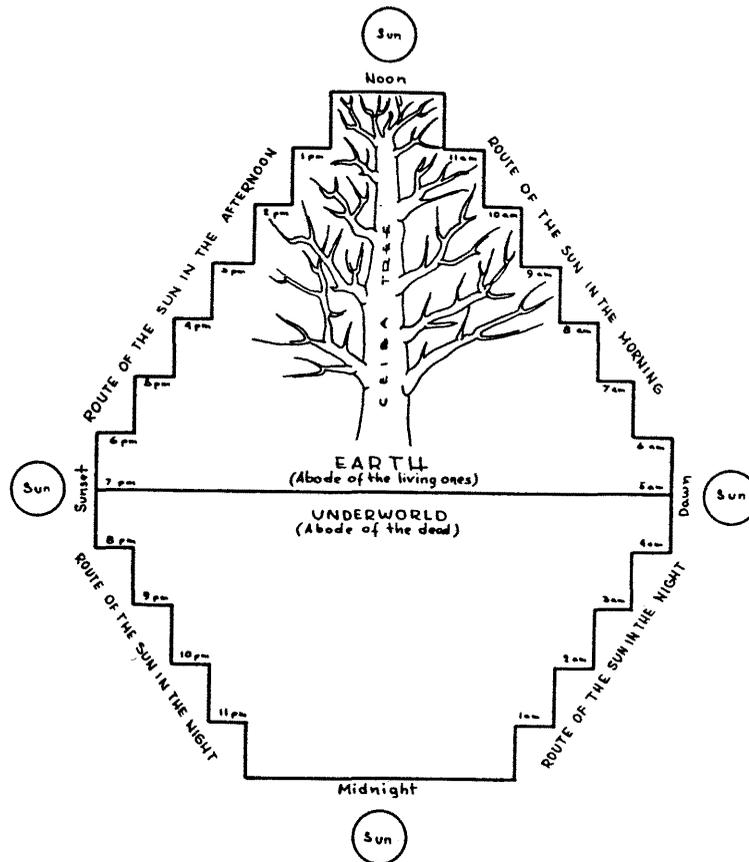


Figure 4. Spatial image of the universe, preserved to this day among the Tzotzil Indians in the state of Chiapas.

The universe is made up of 13 upper and 9 lower levels. This concept has been revealed from the classic inscriptions and from ideas that thrived far into the eighteenth century. The Books of Chilam Balam and the Popol Vuh describe many struggles between the good gods of the upper world and the evil gods of the lower world who keep the universe in balance.

As time is the consequence of the sun's daily journey through space, time and space are inseparable. Suns have been reborn for

millions of years. The succession of solar cycles has no limits, and time is the succession of all solar cycles. Thus, by looking back, you foresee the future. The universe--and with it all life--is an enormous spiral of change and repetition. Miguel León-Portilla in "Time and Reality in the Thought of the Maya" talks about "Chronovision" as the concept of a universe in which space, living things, and mankind derive their reality from the ever changing atmosphere of "Kinh."<sup>10</sup>

"Kinh" is the most important countenance (Figure 5).

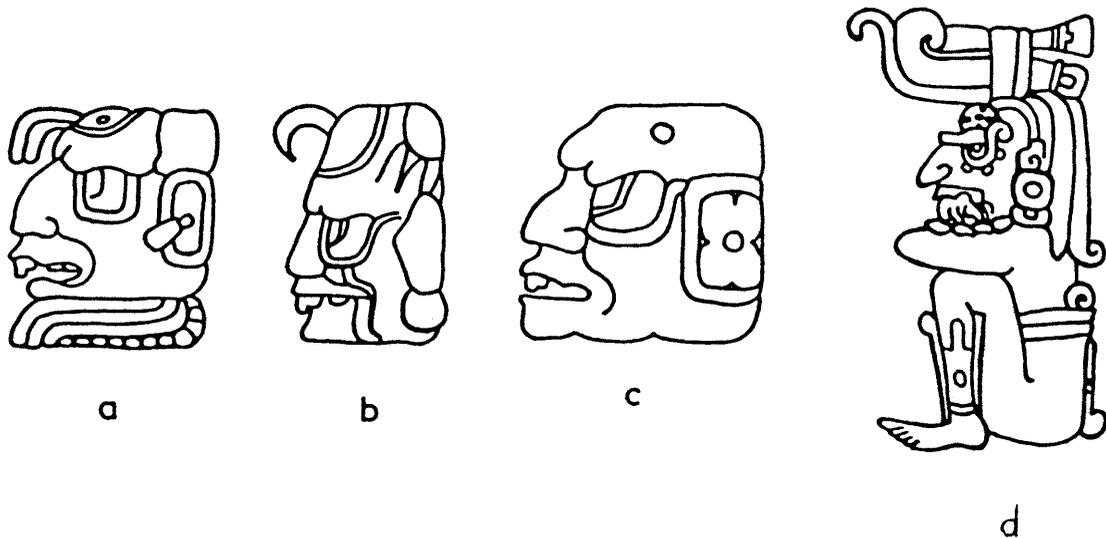


Figure 5. The Solar God, a hieroglyphic variant of Kinh. a) Yaxchilan L; b) Piedras Negras 14; c) Quiriguá, Structure I; d) Madrid Codex 71a.

"Kinh" sets the stage on which the divine faces and forces are expressed in the glyphs. They are oriented, coming and going in the constant flow of time. The bearers of the burden of time are gods of numbers and bearers of the different periods (days, months, years, etc.). They carry the burdens of time on their backs (Figure 6).

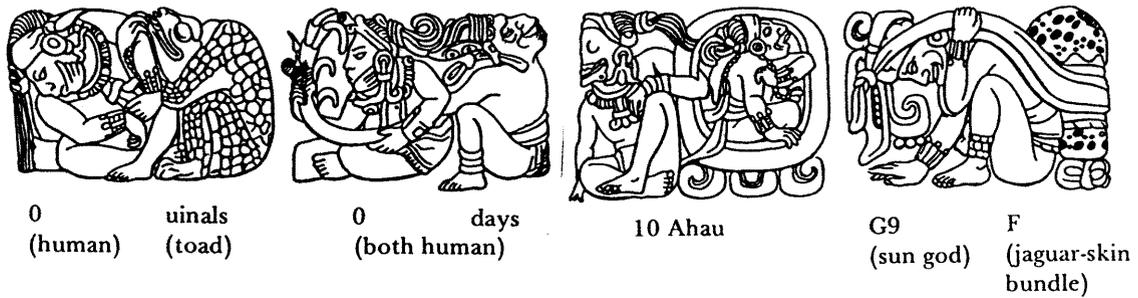


Figure 6. Full-figure glyphs from Copan, Stela D<sup>12</sup>

When they are tired, they arrive at a place of rest, which is the completion of one cycle and the beginning of a new one. Each period has its own burden of good or bad fate. These burdens were computed with accuracy in order to influence man's fate. Religion, art, and science were united in their effort of research. Important decisions were made on lucky days only. There were days favorable for ceremonies such as giving a name to a child, healing, exchanging goods, sowing, and reaping. Through rites and sacrifices at the proper moment, they were able to confront adverse fate. Good and evil had to be kept in balance at all cost.

The Mayan obsession with time becomes evident with the beginning of the Classic Period in the third century A.D. Very complex observatories were built for the purpose of determining the exact moment of the solstice throughout the course of the years. They took into account the length of the tropical years as well as the synodic revolutions of Venus and the lunation periods. Their tropical year was more accurately measured than the one of the Gregorian calendar. It was only 0.0002 days different from today's calendar.<sup>13</sup> The Mayan priests computed

400 million years into the past and predicted the future until the end of the world (Figure 7).

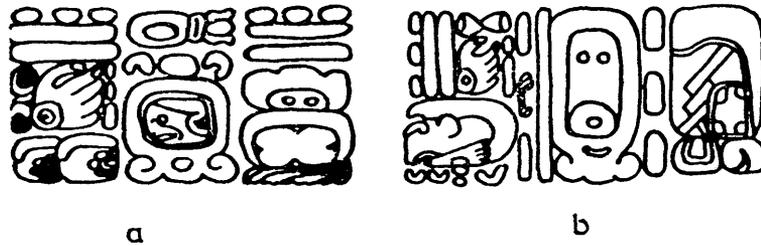


Figure 7. Computations of remote dates in the past, after Thompson. a) From Stela F at Quiriguā, bearing the date 1 Ahau, 13 Yaxkin: 91,683,930 years into the past. b) From Stela D, also at Quiriguā. It bears the date 7 Ahau, 3 Pop:<sup>14</sup> some 400,000,000 years before the erection of this monument.

The year 3133 B.C. was their fixed reference point. It is the date of the last part of the creation of the world when man was made from corn.<sup>15</sup> The oldest known Mayan calendar inscription on Stela 29 of Tikal, in Guatemala is dated A.D. 292.<sup>16</sup> The smallest time measure used was the day. Breaking up the day would have meant breaking up the sacred journey of the sun. Disturbing the wholeness and harmony of the cycle of "Kinh" would have had very grave consequences for the fate of mankind. Circles are manifestations of cycles and, therefore, were sacred. For this reason, the Mayans did not use the wheel even though they had the technical capacity. They also believed that going through a hoop provokes evil spirits. Their cycles were gods (day, month, year gods, etc.).

During the Classic Period (100 A.D.-900 A.D.) the Long Count calendar was used. The 365-day year, or "haab," was composed of 18 "uinals" (20-day month) and 5 "uayeb" (unlucky days). Each day and month had its glyph. In the sixteenth century (1539) Bishop Landa, the

Spanish explorer and destroyer of most of the Mayan cultural documents, gave us his version of the day and month glyphs. He destroyed the original Mayan explanation because he wanted the world to see the Mayas through his eyes. Landa's selfish crime has made the research of the Mayan truth extremely difficult.

The day and month glyphs also represent other words and ideas besides the date. The glyphs of the "uinals" (months) beautifully portray the year's cycle from the dark of winter through the warmer seasons of growing, ripening, harvesting, hunting and fishing, and back to the cold season of regeneration. There are times to think about the divinities, fertility, the beginning, and the completion.



The uinal "Pop" begins the year and celebrates its sovereignty with the symbol of the mat.



We pass through "Uo" with the sun still in the black region of the underworld. (The cross is on a black background).



The uinal of "Zip" invites us to go hunting, and "Zotz" opens the spring fishing season with the face of a bat. His patron is "Xoc Muluc," the mystical fish.



"Zec" warms up the season with the glyph of the "Kinh tail" on the right side and the symbol of "Chuen" in the middle. Both are symbols of the sun.



"Xul," the sixth month, is the sun represented as a day with the typical tail of "Kinh." It reunites the idea of night (the dog) and day ("Kinh").



This leads us to the day month of "Yaxkin," the seventh uinal. Yax means new and green. It refers to the new green

plants of spring. "Kinh" is represented with its most typical face, the face of an old man. "Yaxkin" can be looked at as Father Sun of the little green plants.



"Zac," the eleventh uinal, is represented by a reptile or batrachion that refers to "Kukulcan" as rain god, "God B." He is the warm, fertile summer rain which makes the plants grow. Zac is also one of the Bacabs or supporters of the sky. His color is white which refers to the northern direction. During the month of "Zac" the sun is seen more north on the horizon than the rest of the year. It is the time of summer solstice.



After the deer hunting month "Ceh" (deer) and the fishing month, "Mac," we arrive at the month of the harvest, "Kankin."



"Kan" means ripeness and is the young maize god. Together with "Kinh" we arrive at the idea of sunripened corn, which is beautifully shown in the glyph. The corn plant is growing out of "Imix," the earth.



The harvest is followed by the rain brought by "Muan," the Moan bird, a symbol of water.



The seventeenth uinal, "Kayab," is dedicated to the children, the youth, and health. The glyph is a turtle, symbol of fertility. It is associated with the day god "Men," a young lunar deity.



"Cumku" closes the yearly cycle as the god of the corn bin. It is the symbol of the celestial dragon monster, which is related to the water divinities. The ripened corn in the bin has arrived at completion, just like the year at this

point. The glyph is made up by "Kan" (ripeness, abundance) on the bottom and corn, seeds, and water symbols on top.



The five unlucky days without a name, or "uayeb," are represented by a combination of earth and water symbols (snake, shell, Imix, water drop, seed). Each uinal is a 20-day cycle with one god presiding over each day. These day gods keep light and dark, good and evil, life and death in balance. The Mayan days start at noon when the sun is at its brightest. The days refer to the vertical pyramid image of the sun's daily journey through the light and dark regions.



The welcoming hand of "Imix," the earth, greets us at the beginning of each uinal. It is a closed hand on top of which we recognize the sun surrounded by raindrops. This hand is the breast of Mother Earth who holds the origin of all life, the sun and the rain, in her hand. All living things are under her care. This idea is very different from the image of the earth crocodile which is seldom used in calendrical inscriptions.



Life is continued to be celebrated with "Ik," the second day of the uinal. "Ik" is the breath of life, the wind, and the rain. It is balance and the absence of death. In the Book of Chilam Balam of Chumayel we read, "On 12 Ik the breath of life was created. The reason it was called 'Ik' was because there was no death in it."<sup>17</sup> "Ik" often introduces the rain god "Kukulkan" as "God B" and reminds us that water is crucial to survival. It is interesting to observe that the doors of the ancient cliff houses in the American Southwest have this same T-shape. The ancient Egyptian hieroglyph for life is



T-shaped too. "Ik" becomes a status symbol when found on the earrings of important Mayan gods. "Takao," a Mayan Prince, was found buried with a turquoise "T," an ally to lead him to his next life in his mouth.



On the fifth day, we meet "Chicchān," the "celestial serpent that brings rain. His eye discovers evil and death in the underworld.<sup>18</sup> He bears the burden of the "baktun" (400-year period).



"Oc" takes us to the underworld, where the sun has entered darkness, on the tenth day. "Oc" means to enter and thus refers to the foot. It is mostly represented by a dog head as the symbol of darkness, night, and evil.<sup>19</sup> Its direction is the east, celebrating the entrance of light at dawn.<sup>20</sup>



"Chuen," the eleventh day, celebrates life as the patron of knowledge and the arts. As an artisan called the "Great Money Craftsman," he refers to the hand. The monkey face is shown in the glyph. "Chuen" is the first day that "Hunab-Ku," the "Great Hand," created. It is presided over by the sun god, "Yaxan Chuen."



The fifteenth day is "Men," the aged moon goddess, our mother in the sky, who watches over our lives with her eagle eyes. Just like in the "Imix" glyph, the idea of the mother is expressed by a caring hand (right side).



"Ahau," the radiating sun, brings the uinal to a close. His circular mouth breathes life. Small circles have symbolized life under the form of seeds, water, and blood drops since the beginning of pre-Colombian culture. I have found such

symbols in the "Olmec" Iconography written as early as 4,000 years ago (Figure 8).



Figure 8. Feathered Seed Corn.<sup>21</sup>

"Ahau" was called "Hunahpū" in Quiche Mayan. He was the son of "Hun-Hunahpū," who was born by a virgin maiden. According to the "Popol Vuh," the maiden got impregnated when "Hun-Hunahpū's skull, while hanging from a tree, spit into her hand. "'In my saliva and spittle, I have given you my descendants,' said the voice in the tree."<sup>22</sup>

The repetition of an Ahau-day was used in determining man's fate in the Short Count calendar, which was used after 900 A.D. In this calendar the year was made up of 260 days or 13 "Ahau" periods of 20 days. It was called the "Wheel of the katuns." The repetition of an "Ahau" day coinciding with the same number as the termination of a katun (20-year period), which happens every 256 years, means a recurrence of a certain kind of event. Another cycle of good or bad fate is determined by the repetition of the same day in the same month position, which happens every 52 years.<sup>23</sup>

After seeing the sun as "Kinh" bringing time and space together in its daily journey and as "Ahau" radiating and breathing life, let's look at "Kukulkan," the sun god who personifies the four elements: fire, water, earth, and air. He is the natural and supernatural power brought together in the Feathered Serpent, called "Quetzalcoatl" by the Aztecs. He is a flying serpent too vast for the human mind to grasp. The Mayans

saw him manifested in all snakes, lightning, serpentine-shaped rivers, and runoffs. They feared and worshiped him because he controlled floods and droughts, hail and frost. As a symbol of water, he is usually decorated with many small circular water droplets and snakes coming out of his eyes, mouth, and headdress.

As a beneficial rain god, "Kukulcan" is called "Chac" (the Aztec "Tlaloc"). He is easily recognizable at his protuberant nose (Figure 9).

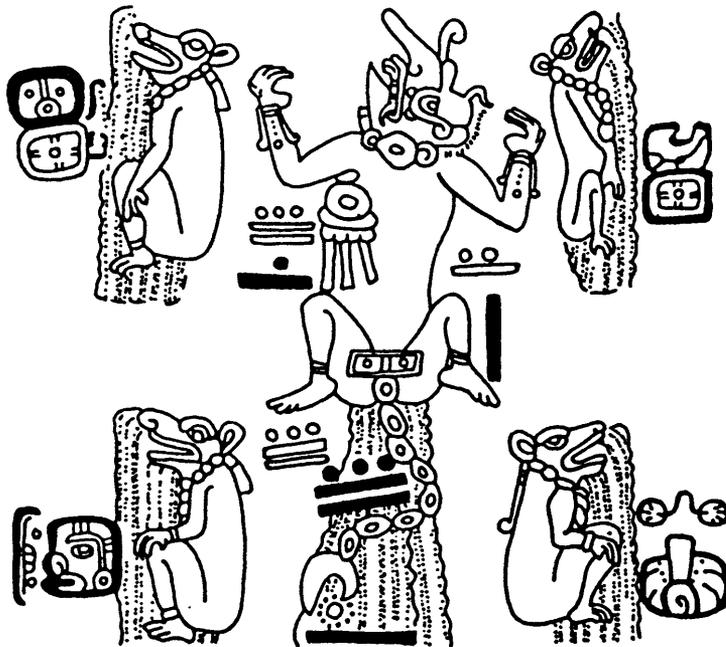
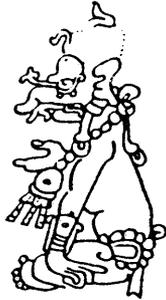


Figure 9. In the center: "Chac," the god of rain. In the four extremes appear the "Uoob," frogs, companions of "Chac," with the glyphs of the cosmic directions. (Madrid Codex 31a)<sup>24</sup>

His throne is in the clouds, and he appears as "God H" with his four frog companions, the "Uoob." The frogs are fertility symbols and represent the four directions. Each one is accompanied by the glyph of its cosmic direction. "God H" is giving birth to water. The seeds of life are sent down to the earth. The bars and dots next to him are his numbers: 5 (—), symbol of Imix, the interior earth; 6 (—•), symbol of

rain and storms; 7 (☉), symbol of the jaguar, the lower world, the night, evil; and 13 (☉☉☉), the most important symbol--water. The day of "God H" is "Chicchan," the celestial serpent which also refers to the underworld and darkness.

The rain god, "Chac," is sometimes represented as "God B" (see ill.).



God B



The glyph of God B

He may be accompanied by a vulture which is carrying a serpent in its mouth or shown riding a canoe, for he likes to go fishing and to go on journeys (Figure 10).

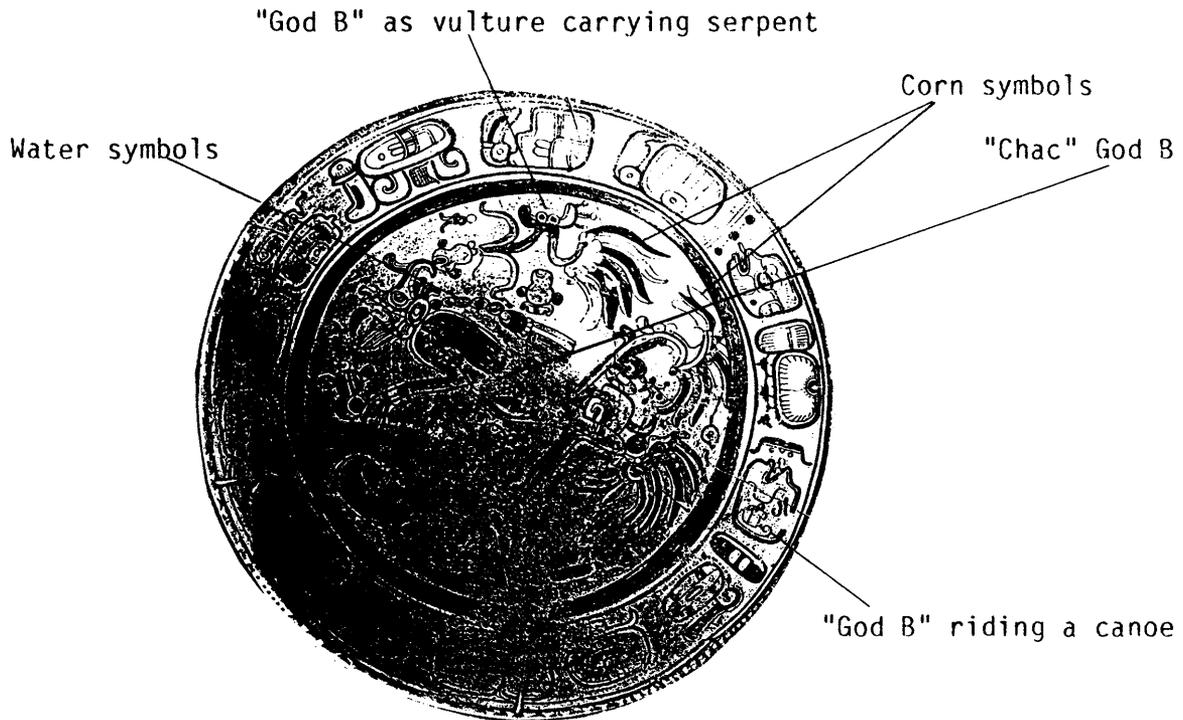


Figure 10. Tripodal plate. Mexico, Maya style, Campeche, <sup>25</sup>late classical period, A.D. 600-900, pottery, 45 cm. diam.

When he is decorated with corn symbols, we are reminded of his closeness to the earth. He incorporates the idea of resurrection and rebirth as encircled serpent when he alternately devours and is devoured. As he is mostly concerned with life, "Ik" is his day and is present in his glyph. The sun as the element of fire is "Kukulkan" as "God G" (see ill.).



God G



The glyph of God G

He often carries a torch or is seen with a lizard or salamander, which are symbols of fire. His color is red. His name is "Kinich Ahau" when he represents the face of the sun. In his appearance as "Kinich Kamo," the enormous power of flight and heat are united in a firebird. The concentration of this power is expressed in his headdress, which is made up by two spirals, tied together and ending in feathers. As fire, "God G" can destroy and give life. As bird, he bridges the gap between the sun and the earth, between God and Man.

In their untiring effort of getting closer to the gods of the universe, the Mayans worshiped "Yaxan Chuen," who is "Kukulkan" as "God C." According to the Books of Chilam Balam, "Yaxan Chuen" is the countenance that "Ah Uuc Kin" (Lord 7--Sun or Lord of the Underworld and the Sun) displays in the heaven. Irene Nicholson, in "Mexican and Central American Myth"<sup>26</sup> describes "Yaxan Chuen" as hanging from the sky on a

rope. I like to speculate that this rope is "Kuxum Suum," the umbilical cord of the universe, which in ancient times--when the earth was living in balance with the universe--held earth and sky together.<sup>27</sup> The snake-like antennas on the head and the upper back of "God C" (see ill.) refers to this close contact between God and Man.



God C



The glyph of God C

In his aspect of universal god, he has also been called Venus, the star god and the god of the great waters (oceans). It is interesting to notice that this god of the universe was the patron of the Mayan artists. Their art was an integral part of the universe. It was through art that man could communicate with the gods. "God C's" day is "Chuen."

Back on earth we find "Kukulkan" as "God D" (see ill.).



God D



The glyph of God D

He is the son of "Hunab Ku," the "Great Hand" (creator). He is also called "Itzamna" and is the guardian of the underworld and the god of wisdom. "Itzam" means surface of the earth. "Itzamna" is the life-giving light. He keeps the balance between day and night as he is swallowed by the earth crocodile at night and is reborn as the rising sun, "Lakin Chan," or the "Serpent of the East"<sup>28</sup> in the morning. The upsidedown Ik-glyph in his earring forms the flame in his torch. As the heat of the sun, he is a great healer called the "Bird of the Solar Face and Eye."<sup>29</sup> The codices show him as an old man with a long nose, toothless, or with only one tooth. The Mayans honor "Itzamna" as the founder of their culture because he invented writing. Always a friend of man, "God D" introduced maize and cocoa into the human diet and discovered the usefulness of rubber. A snakelike figure in front of his headdress and the feathers at the back of it remind me of his nature as the flying serpent. He said of himself, "I am the dew of the heavens, I am the dew of the clouds." He is the provider of water and thus takes the seat of 13-Ahau-Katun, 13 being the symbolic number for water.

At times "Kukulkan" appears as a handsome young maize god, sitting on the ground or standing with both feet on the earth. His name is "Yum Caax," "Ghanam," or simply "God E" (see ill.).



God E



The glyphs of God E

His long oval-shaped, flattened head looks like an ear of maize and represented the ideal of masculine beauty. The glyphs represent youthful faces decorated with corn and water symbols. "God E" is the god of the harvest and the fields, the protector of the fruit of the earth. He plants the corn and goes on journeys, carrying his burden (bundle) on the back. The torch in his earring creates the heat necessary for ripening the corn. His headdress is full of corn decorations and displays the "Kan" sign in its center. "Kan" is the young maize god who presides over the fourth day of each uinal. He joins "God E" in caring for ripeness and abundance and asking for food offerings.

Studying the Mayan hieroglyphs has led me to look at a very complex pantheon of gods, which is the stage of the Mayan cyclic reality. In this very intimate relationship between man, nature, and the gods lies the answers to the mystery of Mayan thought. Or should we honestly say more questions? For, in an ever changing universe, every answer leads to new questions. The Mayan gods are very tangible as they are manifested in nature, particularly in the elements. Isn't it controversial that they are full of mystery at the same time? They cannot quite be reached by the human mind. They have many faces but one essence which is the divine. The heart of all change, they are filled with lucky and unlucky destinies which create balance. The hieroglyphs are mirrors of the gods, which turn in your mind. The glyphs are for those who want to learn. The longer you look at them, the clearer your vision becomes. They are like paintings that need to be stared at before you can see them. As representatives of the meaning of life and independent from the sound of the Mayan language, these glyphs have not changed over the ages. They are as permanent as the Mayan thought.

Much truth about the Mayan hieroglyphs remains in the dark. However, a Mayan prophecy states that before the year 2000, a white English-speaking man will reveal the mystery. My paper is a mere attempt at hypothesis which was preceded by gathering information from books and exhibits and talking to scholars of the Mayan culture. The path of study led me through total confusion, dreams, thinking, and rethinking to the temporary completion of this research and the desire to start searching again, some day, when I hope to go to Yucatan, where most art of this ancient mystery remains.

## ENDNOTES

<sup>1</sup>Richard Luxton, The Mystery of the Mayan Hieroglyphs: The Vision of an Ancient Tradition (New York: Harper and Row, 1981), p. 59.

<sup>2</sup>León Portilla, Time and Reality in the Thought of the Maya (Boston: Beacon Press, 1973), p. 60.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid., p. 118.

<sup>5</sup>Ralph Roys, The Ritual of the Bacabs (Norman, Oklahoma: University of Oklahoma Press, 1965), p. 64.

<sup>6</sup>Portilla, Time and Reality, p. 69.

<sup>7</sup>Ibid., p. 138.

<sup>8</sup>Ibid., p. 57.

<sup>9</sup>Ibid., p. 141.

<sup>10</sup>Ibid., p. 112.

<sup>11</sup>Ibid., p. 23.

<sup>12</sup>David Kelly, Deciphering the Mayan Script (Austin, Texas: University of Texas Press, 1976), p. 24.

<sup>13</sup>J. Eric S. Thompson, The Rise and Fall of Maya Civilization (Norman, Oklahoma: University of Oklahoma Press, 1954), pp. 158-161.

<sup>14</sup>Portilla, Time and Reality, Figure 2, p. 3.

<sup>15</sup>Adrian Recinos, Delia Goetz, and Sylvanus G. Morley, Popol Vuh: The Sacred Book of the Ancient Quiche Maya (Norman, Oklahoma: University of Oklahoma Press, 1978), pp. 174-176.

<sup>16</sup>J. Eric S. Thompson, Maya Hieroglyphic Writing (Norman, Oklahoma: University of Oklahoma Press, 1960), pp. 314-316.

<sup>17</sup>Ralph Roys, The Book of Chilam Balam of Chumayel (Norman, Oklahoma: University of Oklahoma Press, 1967), p. 88.

<sup>18</sup>Luxton, Mystery of Mayan Hieroglyphs, p. 225.

- <sup>19</sup>Portilla, Time and Reality, p. 39.
- <sup>20</sup>Luxton, Mystery of Mayan Hieroglyphs, p. 225.
- <sup>21</sup>Peter David Joralemon, A Study of Olmec Iconography (Washington, DC: Trustees for Harvard University, 1971), ill. 92, p. 13.
- <sup>22</sup>Recinos et al., Sacred Book, p. 109.
- <sup>23</sup>Portilla, Time and Reality, pp. 4-12.
- <sup>24</sup>Ibid., Figure 20, p. 67.
- <sup>25</sup>Roland Buri, "The Stiftung Altamerikanischer Kulturen in Zurich," du, The Art and Culture Magazine, (July 1985), figure 18, p. 43.
- <sup>26</sup>Irene Nicholson, Mexican and Central American Mythology (New York: Peter Bedrick Books, 1967), p. 128.
- <sup>27</sup>Luxton, Mystery of Mayan Hieroglyphs, p. 71.
- <sup>28</sup>Portilla, Time and Reality, p. 32.
- <sup>29</sup>Ibid.

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