THE CODE OF KINGS

The Language of Seven Sacred Maya Temples and Tombs

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CHAPTER 3

Palenque: Hanab-Pakal's Tomb

Palenque sits like a jewel against the Chiapas Mountains overlooking the broad coastal plain that came to be known as Nonowal and Xicalanco to later peoples in Mesoamerica. The ancient Palenque people constructed their palaces, temples, and houses on natural and manufactured terraces that rise up the northern side of the first ridge of these forest-covered limestone mountains (Fig. 3.1). They called their city Lakam Ha, “Big Water,” and their kingdom Bak, “Bone.”

Crystalline waters laden with dissolved limestone tumble down the rocky creeks that divide the city into natural sections. Palenque's builders incorporated these streams into their city by channeling the water through aqueducts and containing walls, and by building bridges that crossed them. The most important of these streams, today called the Otolom, flows out of a valley called Toktan, “Cloud-center,” to cut through the center of the ceremonial precinct. The biggest aqueduct takes the Otolom (Fig. 3.2) on the eastern side of the palace, which served as the administrative heart of the kingdom. The valley of Toktan and the wide plazas next to it held the oldest and most important buildings in the city. K'uk'-Balam, the founder of the dynasty of Bak, came from this province and was called a “holy Toktan lord.”

One of the most famous buildings ever built by the Maya stands against the ridge that rises above the large plaza on the western edge of Toktan. Between 1949 and 1952, excavations by the great Mexican archaeologist Alberto Ruz culminated in the discovery of a spectacular tomb deep inside the pyramid. The imagery and inscriptions associated with this temple and tomb constitute one of the greatest historical legacies in the Americas.

The creator of this magnificent building was Hanab-Pakal, son of Lady Sak-K'uk' and her consort, K'an-Mo'-Balam. Born on March 26, 603, he replaced his mother as ruler of Bak on July 29, 615, when he had reached the age of twelve. During the first thirty-five years of his reign, he led several wars aimed at stabilizing a kingdom that had been twice savaged by Kalak'mul and once by Bonampak' in the twenty years before his accession. The second half of his reign began with the visit of Nun-Bak-Chak, the exiled king of Mutul (Tikal), who
3.1. Palenque lies the first terrace of rest-covered Chichén Itzá Mountains. The top of the Cross is the left, the palace the center, and the house of the Inscriptions on the right.

3.2. The Otolum passes through an aqueduct on the east side of the palace.

had been defeated 16, 659. Pakal ap because he recor commissioned. Of his public inscription
During his mit people through a career as a great prince began preparing to
The original plan to rise up to the builders went as slumping that buttress walls to three with inser-
had been defeated by Kalak'mul. The Mutul king arrived in Palenque on August 16, 659. Pakal apparently considered that visit to be the highlight of his reign because he recorded it in detail in two of the most important buildings he commissioned. Only his birth and accession dates received more attention in his public inscriptions.

During his middle age, Hanab-Pakal turned his hand from war to guide his people through a renaissance of building that remade the face of his city. His career as a great patron of the arts climaxed around 675, when at seventy-two he began preparing his own tomb. He chose a site lying against the base of a mountain (Fig. 3.3) looking north toward the Gulf of Mexico, and then spent the remaining eight years of his life overseeing the construction of the temple, the contents of the inscriptions, and the symbolism of the imagery that was to carry his memory into the future and his soul into the afterlife. In many ways, he fulfilled his ambition because he remained the most revered king in Palenque's history and one of the best-known Maya kings to the modern world.

A—THE SUBSTRUCTURE AND ITS HISTORY

The original plan for the huge pyramidal base apparently called for eight terraces to rise up to the platform of the temple on the summit, but the intentions of the builders went astray when the interior fill became unstable. To compensate for slumping that began at the time of the original construction, they added great buttress walls to the sides of the substructure, changing the eight terraces into three with inset corners. A steep, narrow stairway led upward from a wider section at the base of the pyramid. Today, another path leads to the back, where the

![Fig. 3.3. The Temple of the Inscriptions and its companion temples.](image)
pyramid merged with the mountain behind it. Stairs built into the southwest corner of the rear terraces give access to the top of the pyramid (Fig. 3.4).

Excavations of the substructure removed the remains of the great buttress walls so that the slumping begun during Pakal's life caused the entire northern side to collapse during excavations. Archaeologists reconstructed most of the terraces that are visible today, although stubs of the buttress walls remain visible.

B—THE TEMPLE

Built on its own platform atop the pyramidal base, the temple faced north with five doorways breaking its front wall (Fig. 3.5). A roofcomb once graced the top of the temple and elaborated...
temple and elaborate plaster sculpture adorned the entablature and the roofcomb. Only a few lonely fragments of these reliefs survived into modern times.

B1—The Piers

We will never know what Pakal intended for the six piers of his temple, because his son, Kan-Balam, took this very public location to show the ritual in which he became the heir and proved his divine nature. His artists used the four inner piers to depict ancestors presenting the six-year-old heir from the front of the pyramid. The image confirmed Kan-Balam’s divinity by showing the ax of K’awil penetrating his forehead and one of his legs transforming into a serpent. He is both the child heir (the ba’ch’ok, or “first sprout,” of the lineage) and the embodiment of the divinity personified in K’awil.

A skyband enframes each presentation scene to affirm the divine aspect of the event. This sky frame emanates from a monster head under the feet of the presenting adults (Fig. 3.6). On the two outer piers (b and e), the sky comes from the personified sacrificial bowl known to modern researchers as the Quadripartite Badge. On the inner pair (c and d), the sky rises from the Nine-God and the Seven-Black-Yellow God that designate sacred locations in the Otherworld. The figures on the four middle piers represent ancestors standing in the Otherworld as they present the child to the people of Palenque, but which ancestors are they? On pier b, the quetzal bird and jaguar muzzle in the headdress name K’uk’-Balam (Quetzal-Jaguar), the founder of Palenque’s dynasty. On pier e, a jaguar head with snake teeth designates Kan-Balam I, the great-great-grandfather and namesake of the child. The two center figures cannot be identified with certainty, but since they wear the net skirts of First Father and First Mother, we suspect they are the parents of the child, Hanab-Pakal and Lady Tz’ak-Ahaw. These figures, then, represent the child’s most significant ancestors—his parents,
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Bak-Chamul. This balustrade moment remembe

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his namesake, and the dynasty founder — materialized at the heir-designation so that they could present the child Kan-Balam to the public. These rituals began on June 17, 641, and culminated four days later on the summer solstice.

Kan-Balam’s names and titles appear among the few surviving glyphs from the texts that once graced the outer piers. Circular cartouches on the eaves above the piers displayed yet another text. We have been able to reconstruct two dates from the remnants, May 28, 678, and May 25, 690. We suspect that these two dates corresponded to dedication rituals for different phases of the building. We think Kan-Balam conducted the later ritual, perhaps to dedicate the sculptures on these very piers.
B2—THE BALUSTRADES

The balustrades on both sides of the stairs leading up into the temple depict kneeling figures whose faces turn toward the stairs (Fig. 3.7). They wear bar pectorals on their chests, fancy loincloths, ornate earflares and nose pieces, and one has a zoomorphic headdress. They are almost identical in style and iconography to the figures on the balustrades that flank the Hieroglyphic Stairs of House C in the palace, where, fortunately, the context is clearer. The surviving House C figure wears a pectoral with an eroded day sign and the number seven. The Hieroglyphic Stairway records the sacrifice of six captives on the day 7 Chuwen. The kneeling figures on the substructure of House C represent these six sacrificed lords. The day worn by the balustrade figure on the Hieroglyphic Stairs surely refers to this 7 Chuwen sacrifice.

One balustrade figure on the Temple of the Inscriptions wears the number six over a day sign, while the other has thirteen and a day sign. It happens that the sacrifice mentioned in House C was followed six days later by the arrival of Nun-Bak-Chak, the king of Tikal who had recently been forced into exile by Kalak’mul. This memorable visit fell on 13 Kaban. We think that the figures on the balustrades of the Temple of the Inscriptions and House C commemorate these momentous days on their pectorals, so that all who entered the temple would remember Pakal’s finest hour.

B3—THE TEMPLE INTERIOR

The builders created two long, high galleries on the interior of the temple (Fig. 3.8). A corbeled vault spans both of them, but the masons used curtain walls to

Fig. 3.7. B2: The balustrades from the upper section of the stairs.

Fig. 3.8. B3: The front gallery of the temple with the text panels to the right.
B4A: Panel 1 ties the accessions of eight lords to the k’atun-endings beginning with 9.4.0.0.0 and running to 9.10.0.0.0.

B4B: Panel 2 records the rituals for 9.11.0.0.0 and 9.12.0.0.0, especially concentrating on the costumes of the patron gods that were removed from bundles and shown during the ceremonies.

Fig. 3.9. B4:
The inscriptions from the temple.
The first section concludes by taking the period-ending dates up to the end of the first piktun, or 8,000-year period.

Section 2 casts Pakal's birth and accession far into the past and into the future.

Pakal concentrated on important events in his reign in the last section, including a visit by the exiled Nun-Bak-Chak of Tikal and the death of his wife. His son, Kan-Balam, recorded Pakal's death and his own accession, and ended the text by saying that he gave special care to the tomb of Pakal.

B4C: The third panel completes the first section, then ties Pakal to events in the remote past and future, and finally turns to the significant events in Pakal's last two k'atuns of reign.
divide the back gallery into three chambers. Doorways with corbeled vaults lead through the central wall into the three chambers, which are all a step higher than the front gallery. The Maya mounted huge hieroglyphic panels in the center wall between the doorways and on the back wall of the middle chamber. These panels not only gave the temple its modern name, but they form the longest continuous text from the Classic period to survive intact.

B4—The Inscription Panels

It is doubtful that members of the public ever entered into the inner sanctuary to be in the presence of these inscriptions, but scribes and tiz’at surely read the text aloud so that crowds below could hear the history of their dynasty and most revered king. The reader would have begun with the east panel, moved to the center, and then ended with the west (Fig. 3.9). The scribes divided the long text into three sections like chapters, in order to highlight the different aspects of history that Pakal wanted his people to remember. Section 1 includes all of the first and second panels and the first four columns of the third panel. It is a dynastic history tying the seatings of Palenque’s kings to the endings of the nine k’atuns (180 years) that culminated in Pakal’s life. Section 2 connects his birth and accession to mythic time in the past and future. Section 3 recounts the most momentous events in his life, concluding with his death and the accession of his son.

B4A—Section 1: The K’atun History

The focus of this section is the sequence of nine k’atun-endings, but the scribes presented the accessions of Palenque’s kings as the background to these period-ending rituals (Fig. 3.10). The text opens with the anchor date and the first of the nine k’atuns—9.4.0.0.0, or October 18, 514. Then a distance number of 13.10.3 links the k’atun-ending to the seating as king of Akul-Anab I on 9.3.6.7.17 (June 5, 501). The k’atun-ending ritual in this and the subsequent passages read yak’wa u pib u k’ul, followed by the names of the patron gods of Palenque. This passage translates as “he gave it, the bundle of the souls of the gods.” The gods named or implied in these passages were the Palenque Triad, the patron gods of the kingdom and the dynasty. Scholars call them GI, who was a form of the Maize God; GII or Nen K’awil, the “mirror god”; and GIII, who had a plethora of names, including Yahaw K’in (the Lord Sun) and K’inich T’ab Way (Sun-faced Torch Nawal). At every k’atun-ending, the reigning king gave offerings to the holy bundles of these gods.

Sometimes more than one king acceded within a k’atun. In these exceptional cases, the scribes used the thirteenth tun (Maya year) in the k’atun (twenty Maya
Fig. 3.10. The formula "He celebrated Katun 5 Ahau ending on 9.18.0.0.0.0. The year she ended it (9.18.0.0.0) was the same day as the previous K'atun-ending. Here is a summary of the K'atun history:

Years:
- Ak'ilik Ha was seated in Katun 13 Ahau ending on 9.4.0.0.0.
- He also celebrated Katun 9 Ahau ending on 9.5.0.0.0.
- He also celebrated Katun 11 Ahau ending on 9.1.0.0.0.
- He also celebrated Katun 12 Ahau ending on 9.11.0.0.0.
- He also celebrated Katun 10 Ahau ending on 9.7.0.0.0.

The text also mentions that Ak'ilik Ha's reign saw the destruction of Lakam Ha by an attack from Kukulcán (Fig. 3.11). When the scribes came to the cessation of the reign of Lakam Ha, they did not fill the blank, and so the lords died. The gods did not die from the attack. Two of them—by Kukulcán's mention, "the gods died," the gods died. The scribes also recorded that Pakal's mother did not do anything significant. In the Ek' beltik, 9.0.0.0.0 was the celestial rising of the Ek' beltik, 9.0.0.0.0. was also the K'atun 7 Ahau, and 9.0.0.0.0 had nothing significant.
rituals that her son performed during his lifetime. That the scribes specifically recorded that she did not perform certain rituals suggests that the patron gods had been damaged or destroyed by the attacks.

For his own k'atun-ending, Pakal expanded information about what was inside the pr bundles (Fig. 3.12). Each patron god had a bundle with his specific earflares (tup), necklace (uh), head cover (pixom), headband (sak hunal), and head-dress (kohaw). Presumably itz' at opened these bundles to show their contents to the gathered lords, and perhaps dancers wore these accouterments in ritual that materialized the gods from the Otherworld for the k'atun-ending rituals.

This section concludes by casting time and the k'atun-endings into the future to anticipate the endings of 9.13.0.0.0 (March 18, 692), 10.0.0.0.0 (March 15, 830), and 1.0.0.0.0.0 (October 15, A.D. 4772).

B4B—SECTION 2: TIME TRAVEL

In the second section of the text, the scribes first locked Pakal's birth and accession to the k'atun-ending 9.9.0.0.0. Then they recorded a huge distance number linking his accession to that of a remote ancestral god 1,246,826 years and 270 days in the past. This same god appears in the inscriptions of Naranjo where he operates like a supernatural anchoring ancestor for that city's royal lineage. He may have fulfilled the same role at Palenque, although no other rulers evoked his name. Pakal intended this very remote accession to give scale to his own enthronement. To give modern readers a sense of this scale, Homo erectus walked the plains of East Africa when that ancient god became an ahau.

Not satisfied with this chronological feat, Pakal started from his birth date to
cast forward in time to the day when the calendar-round date of his accession, 5 Lamát 1 Mol, would repeat for the eightieth time, which, it so happens, will occur only eight days after the end of the first 8,000-year period (pikun) after the Creation day, 4 Ahaw 8 Kumk’u. This anniversary has yet to occur. We will have to wait until October 23, A.D. 4772, to confirm his prophecy. Obviously, Pakal and his t’z’at’ did not believe that the world would end on 13.0.0.0.0 in A.D. 2012, as modern myth would have it.

**B4C—SECTION 3: MOMENTOUS EVENTS IN THE REIGN OF PAKAL**

In this section, the scribes recorded five major episodes in Pakal’s life. The first is the least understood, but it involved a complex ritual dance that took place on April
19, 653. The second episode involved rituals that took place during the visit of Nun-Bak-Chak of Tikal on August 16, 659. The third involved a conjuring on October 20, 675, in association with a very sacred mythic action conducted by GI of the Palenque gods on June 23, 3023 B.C. The fourth and fifth related his marriage to Lady Tz'ak-Ahaw on March 22, 626, and her death on November 16, 672.

Kan-Balam probably recorded the last two columns because they register Pakal's death, but then go on to note his own accession 132 days later. The very last four glyphs read yakwa hunan, Bolon-Et-Nah, u' kul kaba, u muknal K'inch Hanab-Pakal, K'ul Bak Ahaw. "He gave caring to the 9-Images-House, its holy name, the tomb of the Sun-faced Hanab-Pakal, Holy Palenque Lord" (Fig. 3.13).

This first known K'atun history was the prototype of the later K'atun prophecies of the Books of Chilam Balam, the famous books written by Yukatan scribes after the conquest. Because of texts like this one, scholars used to think that the Maya had an obsessive fascination with time, almost a worship of time itself. With rare exception, however, Maya scribes focused not on time itself, but rather on the rites enacted in association with the timeposts that gave regularity and symmetry to the passage of time. Here Pakal is less interested in the K'atun-endings for their own sake than he is in describing the actions that Palenque's ancestral kings did for the patron gods on those period endings. He talked about the actions of his ancestors in order to give meaning to his own actions, and by creating affinities between himself and a supernatural being from the remote past, he declared himself to be made of the same stuff as the gods. Time is the framework of history, and Maya fascination with its very nature came from their appreciation of the symmetries inherent in the cosmic fabric woven by the gods when they created the world.

C—THE PASSAGE DOWN

When Alberto Ruz examined the center, rear chamber of the temple, he found a slab with pairs of drill holes set into the floor. When workmen lifted the slab, they found hard-packed rubble and earth. Excavating straight down in the cen-

\[ yakwa hunan, \]
\[ "he gave caring," \]

\[ Bolon-Et-Nah \]
\[ "9-Images-House" \]

\[ u' kul kaba u muknal \]
\[ "(was) the holy name of the tomb of" \]

\[ K'inch Hanab-Pakal, K'ul Bak Ahaw \]
\[ "Sun-faced Hanab-Pakal, Holy Palenque Lord" \]

Fig. 3.13. The final phrase from the inscription panels.

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ter of the opening, they eventually found a step, and then another and another. Gradually they revealed a corbeled-vaulted staircase plunging down into the depths of the pyramid (Fig. 3.14). As they dug, they kept finding little offerings deposited in the fill by the people who had originally sealed the passageway. So packed was the rubble and so deep the stairs that it took Ruz and his crew four long, hot seasons to clear the passage.

Halfway down, the passageway made a turn, and Ruz found tunnels leading off through the pyramid to exit on the western side. At first, he thought his workmen had found secret passages that allowed priests to appear magically in the temple above, but it turned out that the stairs made a U-turn and kept going down. The little tunnels were ventilation ducts. The workmen continued digging until they reached ground level and a little below. There they found two steps and a small platform with a stone box resting on top. When they opened the box, they found the remains of five or six slaughtered and dismembered human sacrifices. A stone pipe, today called a psychoduct, ran down the stairs all the way from the slab above to a huge triangular door that stood on the northern side of this platform. The idea of the psychoduct is that the psyche or soul could move up and down the duct to communicate with the living people in the temple above.

D—THE TOMB

After the excavators documented and removed the box with the sacrificed people, Ruz turned his attention to the huge triangular slab that formed the north

Fig. 3.14. C: Looking up the passage leading down to the tomb. The psychoduct is on the right.
wall of the corridor. There was a gap between the slab and the wall. He set his workmen to clearing the hard mortar and stones that blocked the gap until one of the workmen broke through the seal with a crowbar and found vacant space behind. Using an electric light, Ruz and his colleagues peered through the gap to see a huge chamber lined with plaster sculpture and an enormous sculptured stone monument almost filling up the room. Imagine the emotion of that moment! After four years of hard work, they needed two more days to free up the door and work it open. On June 15, 1952, human beings gazed upon Pakal's tomb and came into his presence for the first time in over twelve centuries.

E—THE SARCOPHAGUS

When Ruz stepped through the open door for the first time, he saw a huge limestone block running south to north that filled the vaulted chamber (Fig. 3.15). Calcium deposits reflected the light in a magical way that is evident even in black-and-white photographs taken on that day. Ruz stood on the threshold of a unique and unparalleled example of Maya art. In terms of pottery or jade, richer tombs have since been found, but nothing to equal the sarcophagus in size or imagery is known in all the Americas. Relief carvings adorn the top and edges of the lid, the sides of the sarcophagus, and the blocks on which it stands. Together the images and text give us the most detailed and elegant exposition on Maya concepts of death, resurrection, and the afterlife.

E1—THE LID

Measuring 3.8 meters by 2.2 meters, the lid (Fig. 3.16) is visible from the door, albeit from an angled point of view. The artists oriented both the sarcophagus and the tomb crypt to the cardinal directions with the long axis running south to north. In the imagery on the lid, north corresponds to up and south to down. The elegant, articulate imagery details what happened to Pakal at the moment of his death. We will take this image apart and explain it in detail.

E1A—THE FRAME

A band encircles the entire image on the lid like the frame of a picture (Fig. 3.17). Segmented skybands line the long sides, with the center segment on the east side reading k’in, “sun” or “day,” and on the west reading uh, “moon.” K’in also repeats in the northeast corner, where the artists opposed it with an ak’bal, “darkness” and “night,” symbol in the northwest corner. Thus, the two skybands...
The sarcophagus lid.

Fig. 3.16. E1:

The sarcophagus lid.

Resonate with their east and west positions by evoking symbols of the day and night. We do not understand the other partitions in the skyband very well, but we can identify Venus, crossed bands representing the crossings points of the ecliptic and the Milky Way, and a head that reads tzuk, "partition," as a reference to constellation divisions (Fig. 3.17).

On the north and south ends, three individuals emerge from quatrefoil shapes. The same three people reappear on the limestone legs of the sarcophagus. Glyph texts name all three and give their ranks (Fig. 3.17). A lord named Chak-Kan appears in the center of both ends and on the northeast leg. Yuk-Sahal occupies the western sides and the northeast leg, and Mut looks out from the eastern sides and southeast leg. Chak-Kan and Mut were Ab K’ul Hun, "Keeper of the Holy Books," while Yuk had the rank of sahal, a kind of court official. These men were secondary lords who served Pakal as administrators and court officials.

The question is, Why would secondary lords be represented on the sarcophagus of a king? We have contemplated what these men might have done to deserve such an honor from Pakal, and we suspect they were the architect and administrators who oversaw the construction and decoration of the temple and tomb.
Fig. 3.17. E1A–B: The skyband that enframes the scene, the symbols of *k'ulel*, “sacredness,” in the background of the central image, and the names and portraits of the builders and overseers of the tomb.

**E1B—THE BACKGROUND**

Various symbols, including flowers, shells, jade beads, “zero” signs, bones, and feathered ornaments, float in the background behind the depicted objects (Fig. 3.17). These materials all embody *k'u* or *k'ulel*, the indestructible, living force that imbues all things. *K'u* resides in the blood of humans and animals, and in the sap of plants, and it permeates mountains, valleys, rivers, houses, objects of office, and all things that connect with the sacred world. Here *k'ulel* denotes that the event took place in ambient sacredness.

E1C: At the Maya conne
Here i
In plate 1 marks tite B.
Yuw-Sahal, Mt. K'ab-te

E1D: A gre: body partit signs squar.

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E1C—The Portal

At the base of the lid sits the split image of a giant skeletal snake known to the Maya as the Sak-Bak-Nakan, “White-Bone-Snake” (Fig. 3.18). Since this snake connects the world of the living to the world of ancestors, it often appears at the corners of mirrors depicting the arrival of ancestors from the Otherworld. Here it represents the portal through which Pakal passed in death.

In the open maw of the snake sits another kind of portal—a sacred sacrificial plate personified into the image of an incense burner. The sign of the sun, k’in, marks the plate, lak, which holds another of the symbols called the Quadrupartite Badge. It consists of a spondylus shell, a stingray spine, and a vegetal image with a kimi, “death,” in the center. The shell symbolizes k’ukul; the stingray spine draws the blood of sacrifice; and the vegetal sign reads way, meaning “to dream,” “to sleep,” and “to transform into a nawal.” Shortly after the last Creation, this bowl of sacrifice generated the World Tree, called Waakab-Kan, “Raised-up Sky.” Here it opens the portal in the mouth of the White-Bone-Snake.

E1D—The World Tree

A great tree (Fig. 3.19) emerges from the bowl of sacrifice and rises behind the body of the dying king. The trunk carries a tzuk head to mark it as the center partition. Mirror signs define its substance as something “shiny,” while te’, “tree,” signs assure us that it is a tree. The branches terminate in beaded flowers with square-nosed, bejeweled serpents emerging from their centers. These are the personified stamens of the blossom. Ceiba trees flower in late January and early February, just at the time Maya myth says First Father raised this tree.
Today we know it represents the Milky Way as it stretches across the sky from the southern horizon to the north. The White-Bone-Snake at the base of this image represents the hole in the southern horizon that is the passageway of souls and ancestors who have been reborn. The Maya name for the Milky Way was Suk Beh, the “White Road.”

**EIE—THE BIRD**

A supernatural bird (Fig. 3.20) perches atop the tallest flower of the tree, resplendent with his long tail and personified wings. He grasps a ribbonsed symbol in his latched-beaked mouth and wears a necklace like a human lord. The cut-and-shell head ornament marks him as the nawal (animal spirit companion) of Itzamna, the first sorcerer of this creation. The Maya called this bird Itzam-Ye, Itzam-Kab, and Mut-Itzamna. The presence of the bird declares the capacity to make magic and to engage in the shamanistic journey of the trance. He makes this tree and the tomb an Itzam Nah, or “Sorcery House.”

**EIF—THE DOUBLE-HEADED SERPENT**

A double-headed snake (Fig. 3.21) with a body made of jade flower segments intertwines through the branches of the tree. Since the words for “sky” and “snake” are both *kam*, the Maya associated snakes with the sky and the umbilical cord that connected Maya lords to the sky realm. They symbolized this umbilical cord in several ways: as a rope ending in a *sak-nik*, “white-flower,” sign; as two serpents entwining to evoke the twisted form of an umbilical cord; and as arching serpents carrying the white flowers on their snouts. The snake umbilicus...
E1G—THE EMERGING GODS

Two small gods emerge from the open mouths of the double-headed serpent (Fig. 3.22). *Sak Hunal*, the embodiment of the sacred headband of kings, comes forth from the right (east) head, while the left (west) head emits *K’awil*, a god invoking the concept of sustenance, deity statues, and the divine spirit contained in such statues. *K’awil* is also the embodiment of the Vision Serpent. Together the two gods evoke the ideas of kingship and divinity.

E1H—PAKAL AS THE MAIZE GOD

Hanab-Pakal’s impossibly awkward position declares that this is the moment of greatest transformation in his life (Fig. 3.23). His upturned loincloth and akimbo jewelry rise as he falls into the maw of the White-Bone-Snake. As he falls, he travels down the tree that had its analog as the Milky Way, or *Sak Beh*. The verb describing the event of death reads *och beh*, “he entered the road.” Death is a journey down the Milky Way tree-road into the Otherworld.

This journey carried with it the promise of rebirth and resurrection. Hanab-
Pakal’s net skirt tells us he fell as the Maize God. The Creation myth of the ancient Maya survived in a seventeenth-century K'iche' document called the Popol Vuh, or “The Community Book.” This great story of creation descends from the Classic-period myth that told the story of the Maize Gods, beautiful young ballplayers who disturbed the Lords of Death with their play. They were summoned to Xibalba, the Maya name for the Otherworld, and after losing a series of trials, the Lords of Death killed and buried them in the Ballcourt of Sacrifice. To warn others who contemplated similar misbehavior, they hung the head of Hun Nal, the Maize God, in a gourd tree.

Ignoring the prohibition of her father to go near the skull, the daughter of a Xibalba lord went to the ballcourt and spoke to the head, which promptly spat into her hand and made her pregnant. After escaping from her angry father, she went to Middleworld and found shelter with the grandmother of her unborn children. There she gave birth to a second set of twins named Hun-Ahaw and Yax-Balam, who grew up to be summoned to Xibalba in their turn. They, however, outsmarted and then defeated the Lords of Death through a dance of sacrifice. They then went to the ballcourt to resurrect their fathers.

Once the Maize Gods were reborn, beautiful women dressed them, dwarves helped them to wake up old gods who would help them in creating the world, and old gods called the Paddlers took them in a canoe to the place of rebirth. There they emerged from a crack in the back of the Cosmic Turtle that we know today as Orion’s Belt, and they directed their helper gods to build the first hearth and kindle the first fire. When the new cosmos was properly centered, they raised the Wakah-Kan and stretched out the ecliptic as the sky umbilicus. Once the gods finished making human beings, we were connected to the sky by that same umbilicus.

On the sarcophagus, Hanab-Pakal falls as the Maize God, but on his chest, he carries the Cosmic Turtle (Fig. 3.24), where he will be reborn as a hedge against the possibility that he might not survive the trials of Xibalba. His son
Kan-Balam represented the generation of the Hero Twins. Like them, he played the ballgame as a way of bringing his father back to life as a revered ancestor.

The symbolism also acknowledged this eventuality. The flaming ax of K'awil emerges from Pakal's forehead to mark him as divine. Living rulers can hold K'awil as an object or wear it as part of their headdresses, but only dead kings and the child on the piers above wear the K'awil ax through their own foreheads.15

E2—The Texts

The inscriptions on the sarcophagus lid (Fig. 3.25) begin on the east side with a phrase reading "they closed the lid, the sarcophagus of the Maize God [Pakal]." The text continues by recording the deaths of the same kings whose accession and k'atun rituals fill the panels in the temple above. The scribe used the same formula for every passage: first comes the date, then the verb och beh, "he entered the road," and finally the name. In order to anchor the chronology, the scribes divided the same nine k'atuns registered in the history above (9.4.0.0.0 to 9.13.0.0.0) into thirds by inserting the dates 9.7.0.0.0 and 9.10.0.0.0 into the sequence of deaths.

This death sequence gives us the names of eight generations of kings before Hanab-Pakal:

Akul-Anab I died on 9.4.10.4.17 (December 1, 524).
K'an-Hok-Chitam I died on 9.6.11.0.16 (February 8, 565).
Akul-Anab II died on 9.6.16.10.7 (July 23, 570).
death of Ah-Ne-Ol-Mat

dead of Hanab-Pakal I

dead of Lady Olmal

Fig. 3.25. E2:
The inscriptions around the edge of the sarcophagus lid.

death of Kan-Balam I

9.10.0.0.0 k'atun-ending and the second one-third of the history

9.7.0.0.0 k'atun-ending and the first one-third of the history

dead of Akul-Anab II

dead of Lady Sak-K'uk'

dead of K'an-Hok'-Chitam

dead of K'an-Mo'-Balam

dead of Akul-Anab I

closed the coffin of the Maize God

a statement specifying Pakal as the child of Sak-K'uk' and K'an-Mo'-Balam

birth and death of Hanab-Pakal

ancestral Vision Serpent

The ancient Tz'utujil text tells us that Pakal was seated on a throne of nobles and that the entire tomb was closed after his death.
Kan-Balam I celebrated the k’atun-ending 9.7.0.0.0 (December 7, 573). He died on 9.7.9.5.5 (February 3, 583).
Lady Olnal died on 9.8.11.6.12 (November 7, 604).
Ah-Ne-Ol-Mar died on 9.8.19.4.6 (August 11, 612).
Hanab-Pakal I died on 9.8.18.14.11 (March 9, 612).
Lady Sak-K’uk’ celebrated the k’atun-ending 9.10.0.0.0 (January 27, 633). She died on 9.10.7.13.5 (September 12, 640).
K’an-Mo’-Balam died on 9.10.10.1.6 (January 1, 643).

The last four glyphs on the west side record “the child of” Lady Sak-K’uk’ and K’an-Mo’-Balam, the people on the north and south ends of the sarcophagus. While the child is not named, the context is clear—Hanab-Pakal was the protagonist of the text and his birth and death dates are just around the corner facing the entry door. He was the child intended in this parentage statement. The text goes on: “8 Ahaw 13 Pop, he was born; 6 Etz’ nab 11 Yax, four were his tun seatings and then he entered the road, Sun-faced Hanab-Pakal, Holy Lord.”

The final three glyphs (Fig. 3.33) in the text read u tz’akabi u kabi u mam Tz’at ?? Na Kan, “they succeeded, they oversaw it, the grandfathers [i.e., ancestors] of the Tz’at Snake.” Tz’at is one of the variants of itz’at, the Maya term for nobles as knowledgeable, wise, and literate people. Here the text implies that there was a special Vision Serpent called the Tz’at Na Kan that acted as the conduit for noble ancestors who enabled the succession of the dynasty. Moreover, the Tz’at Na Kan may also have been a real object embodied in the psychoduct that connects the inside of the tomb to the temple above.

F—THE SACROPHAGUS SIDES

The ancestors mentioned in the last clause of the text line the sides of the sarcophagus, surrounding their descendant who lies in the center. The artists presented each figure in the same way—emerging from a crack in the earth along with a tree. The overall composition was a marvel of subtlety and detail. The costumes and other elements consist of a set of constants and variables that the artists arranged around the center pivot of Pakal’s body. The system they used was simple in its application, but it resulted in a marvelously rich and complicated pattern that reveals a lot about how the Maya thought about the world.

F1—THE IDENTITIES

We know who the ten figures are (Fig. 3.26) because they are named by the glyphs next to them and in their headdresses. The earliest king, Akul-Anab I,
repeat the parents of the dead king. Wearing a quetzal bird in her headdress, Lady Sak-K'uk', the mother, sits always on the eastern side of the ends. She wears a nāl ("ik") pectoral in both portraits and emerges with a cacao (kakaw) tree.

Her husband, K'an-Mo' Balam wears a macaw with a jaguar eye in his headdress, while he emerges with a manē ("chi") tree. His name contains a title that reads Choh Ahau, in lieu of the emblem glyph. However, his name on the edge of the sarcophagus does contain the Palenque emblem glyph, so that we know he was not a foreigner. Choh may well record the district of his birth. 21

F2—AN ORCHARD OF ANCESTORS

The figures on the sarcophagus constitute a forest growing around the coffin of the king, but it is not a wild forest. Instead the ancestors emerge with fruit trees that the Maya grew and tended around their houses. This metaphor of the ancestral orchard was not invented by Pakal’s artists just for his sarcophagus. Instead they amplified an idea that had been in Maya art for far longer. One of the most informative examples occurs on a pot now in Berlin’s Museum für Völkerkunde (Fig. 3.27). The scene depicts a Maya funeral and the rebirth of the deceased lord as a cacao tree. The bundled corpse of the recently dead man lies on a bench inside a tomb built into a flower mountain called Hok'al Witz, “Leaving Mountain” or “Departure Mountain.” 22 The bench sits in a water basin to signify that death leads to the Watery Underworld, and figuratively, to the Primordial Sea.

The glyph on the left leg of the bench reads och beh, “he entered the road.” Above his waist, another glyph reads k’al, “finished,” with the sak-nik sign for his

Fig. 3.27.
Dead ancestors are reborn as trees.

The deceased wrapped in a burial bundle lies on a bench in his grave inside Hok'al Witz. A monkey and jaguar, his nawals sit on the mountain flanking a moon sign and the glyph for the white-flower soul. Mourners dressed as the Maize God lament his death.

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address, he wears the headband that he had on when he was alive. The soul floating in the cartouche above. The glyph on the right leg depicts the turtle carapace from whence he will be reborn. His body is bundled in wrappings with his feet and head sticking out. A spider monkey and jaguar, probably his native, crouch on top of the mountain, flanking an ancestor cartouche with his sak-nik soul inside. Mourners dressed as the Maize God wave their lamentations in dramatic expressions of their grief.

The opposite side of the pot details resurrection and rebirth. We are still at Hok' al Mountain, but now the tomb is sealed, and the corpse has turned to bone. Three tree people rise above the tomb, their heads down and their fingers elongated like roots gripping the stone. The center tree is cacao. An owl grasping a snake in its talons perches in the left tree, which has spiky fruit. An iguana sits in the right tree, which is identified only by a vine, perhaps a strangler fig, climbing its trunk. Two of the three tree people wear its headbands, and all three have name glyphs on top of their heads. The two flankers we cannot identify, but the name of the central tree corresponds to the owner of the pot. His name includes information of great interest—he was yun Itza Ahau, "the child of the Itza lord." The "child" is the man in the tomb, who has been reborn as a cacao tree.

We do not know if the Maya conceived of the relationship between ancestors and trees as simply metaphorical, but if it operated on a literal level, then the living were surrounded by ancestors reborn as the fruit trees that inevitably surround Maya houses. This is exactly the point expressed by the Palenque sarcophagus imagery.

F3—The Distribution of Elements

The most subtle aspect of the sarcophagus composition lies in the way the artists distributed the costume elements among the ten figures (Fig. 3.28). Some elements remained constant. Everybody wears personified wings and three panaches of feathers in their headdresses. All have a stuffed jaguar tail and jade flower with ribbons emerging from the top of their headdresses. They all have jade-cylinder belts tied over their cotton undergarments. All of them wear jade headbands fastened over stepped haircuts, although the women wear their hair much longer than the men. And as we have seen, all carry their names in their headdresses.

The variables include the capes, wristlets, pectorals, and effigy gods worn by the figures, their gestures, the directions they face, the fruit on their trees, and of course their position in the Palenque dynasty. Some distributions are obvious. For example, both the women and Hanab-Pakal's father wear capes; everyone else is bare chested. Other distributions are more subtle and treat Pakal's body as a pivotal center around which various elements were arranged. The artists treated the long sides and the short sides as separate units of six and four figures, respectively. They then distributed all of the variables evenly within each of these.
The distribution of elements among the ten figures on the sarcophagus sides.

G—T.

The cof agus (Fi cavity. F Pakal's t
units, but since they never repeated the same distributional pattern, every figure on the sarcophagus sides appears to be unique.

This compositional device tells us something about the way they were thinking. Since they knew no one would ever be able to walk around the sarcophagus, even when the tomb was open, they ignored reading order as an organizational principle, except in the text on the lid. Writing, after all, requires reading order to be intelligible. In the imagery, they were free to choose other ways of creating meaningful patterns. They elected to use Hanab-Pakal's body as the central pivot around which they arranged all the elements that constituted the imagery of the ancestors. But they did it in a way that evoked the inherent symmetry of the cosmos as well as the infinite variability that resulted from the work of the divine itz'at who had created the world.

The Maya still adhere to these principles. We learned this from a wonderful story that Gene Stuart told us when she was writing her part of The Mysterious Maya. She had been working with Chip Morris, a specialist on weaving in the Chiquipas highlands, about the tradition of weaving and the work of master Tzozil weavers. In her article, she quoted Chip's description of a very special huipil: "The weaver has created a huipil which describes the whole universe in a way so subtle that even fellow weavers won't notice, but so repetitious that the gods cannot help but see. She has described the complex relationship of time and space, and placed the gods of fertility in positions of power in order that all life may flourish."

Later when she was talking to us about the sarcophagus, she made a leap of understanding that linked the seventh-century tomb to the twentieth-century huipil. With excitement alight in her voice, she described the huipil to us and then said that Chip had asked the weaver why she had made the design so complicated, especially since no one could see the whole design when the huipil was worn and folded into her waistband. "Ah ha!" the woman said. "God can see the pattern." In astonishment, Gene realized that the woman placed herself at the center of the cosmos when she pulled the huipil over her head, just as Pakal put himself in the center of his orchard of ancestors. Both artists created messages with a complexity that exceeds casual comprehension. Both generated art works that were never meant to be seen fully or at all—because their audiences were not human. Yet both put a person at the center of the cosmos, as if human comprehension of the subtle symmetry of the cosmos honored the gods who had created it.

G—THE COFFIN AND THE BODY

The coffin is a two-meter-long, body-shaped cavity in the center of the sarcophagus (Fig. 3.29). A thin stone cover with stone plugs in its four corners sealed the cavity. Red paint covered all the interior walls of the coffin as well as the bones. Pakal's body lay extended on its back, head to the north, arms at his sides. His
found in other inscriptions for the presence of sahaleb at Tikal, but subordinate ranks were rarely depicted there. Thus, these robed figures could represent visitors from the western zones or local lords.

45. William Coe (1990: 518–521, Fig. 168B) documented four pits set in a square in front of the stairs leading up to Structure 33-2nd. He suggested that stelae had once been set in these pits, but the arrangement in a square is not a likely pattern for stelae. Freidel and Suhler (1995) identified these pits as the site of a scaffold structure. We agree with their analysis. See Karl Taube (1988a) for a full discussion of scaffolds in Maya imagery.

46. Peter Harrison has spent years thinking about how they accomplished their aim. Each successive king who built a new palace in the Central Acropolis used Toh-Chak-Ich'ak's Palace as the pivot for a geometry controlling the placement of new buildings. As they added their own residences to the complex, the Central Acropolis grew into the administrative heart of the kingdom and the royal lineage that ruled it. See Harrison (1994) for a full description of his ideas concerning the internal geometry detectable in the Central Acropolis.

CHAPTER 3: PALENQUE

1. The name of the city itself was Lakam Ha, but Bak, the name of the kingdom, could mean "bone," "seed," or "heron." The people of Bak may have intended all three meanings in the symbolism of their city.

2. Alberto Ruiz (1973: 229–240) documented this transformation. When he removed the remnants of these great buttressing walls, the entire substructure slumped (Ruiz 1973: Fig. 24) and had to be reconstructed.

3. These locations appear on offering plates and inside the entries to the Otherworld (Freidel, Schele, and Parker 1993: 268–270). On the Tablet of the Cross, Pakal stands on the Nine-God Place after his death, and the founder of Copan was associated with this pair of places in the earliest buildings of the Acropolis. See George Kubler (1977) for a study of the distributions and contexts of these two glyphs.

4. We used the surviving data from the lunar series and the 819-day count to reconstruct two possibilities for the initial series date: 9.12.16.12.6 and 9.12.18.2.17. A distance number of 123.0 leads from this date to a now-missing date earlier or later than the initial series—we cannot tell which. We believe the later of the two initial series alternatives is more likely reading, because that date is only fifty-nine days before Kan-Balam dedicated the Group of the Cross. We chose to subtract the distance number because we feel the text connects two dedication events—one in Pakal's lifetime and the final sanctification of his burial structure. If the scribes intended the other alternatives, the dates would be December 10, 688, and December 13, 676.

5. All time periods in the Maya Long-Count calendar ended on the day abaus. Since there were thirteen possible numbers that could go with abaus, the same number repeated every thirteen turns. Thus, a name of day of a k'atun-ending, such as 8 Ahaw, repeats thirteen turns later.

6. Another attack by Kalak'mul occurs in the text on the Hieroglyphic Stairway of House C.
7. Connecting a calendar-round date to a tun-ending, especially ones corresponding to a k'atun or its subdivisions, fixes it into an enormously long cycle. As Thompson (1950: 184) observed, a date, such as “6 Ahau 13 Muan, the end of 14 katus, cannot recur with the same numbered k'atun for 949 baktuns, or 375,000 years. Any calendar-round date noted as a k'atun-ending without the specification of the number cannot recur as the ending day of any k'atun for 949 k'atus, or 19,000 years.” Any calendar-round date linked to a specified period-ending date must be moved into the future or past by those lengths of time if they are to be moved in the Long Count. Obviously, this temporal structure fixes the position of dates without the possibility of doubt—after all, the whole of written human history, much less Maya history, is less than 19,000 years.

8. The date 13.0.0.0.0 4 Ahau 3 K'ank'in will occur on Sunday, December 23, 2012.

9. Nikolai Grube (personal communication, 1995) suggested a reading of this glyph as e-te, and pointed out that ebi appears in modern Chol as a word for “image” or “likeness.” He suggested that this “nine images” refers to the nine stucco figures in the tomb. We like his idea and point out that Pakal also used nine k'atun-ending to frame the history he recorded in the inscriptions of this temple.

10. These books record myths of Creation, histories of various types, and long passages called the k'atun prophecies. These prophecies are in fact the histories of what happened during long sequences of k'atus beginning with 9.13.0.0.0 8 Ahau 8 Wo and continuing until well after the conquest of Yukatan by the Spaniards.

11. We draw our descriptions of the excavations and sequence of events from Albert Ruz's (1973) monograph describing and interpreting his work in the Temple of Inscriptions.

12. See Ruz (1973: 548–552) for a detailed description of these excavations.


14. Several people have come to this same conclusion independently. Dorie Reents identified the imagery of Pakal falling as the Maize God in MacDuff Everett's book The Modern Maya (1991: 25). Enrique Florescano (1994: 98) came to the same conclusion, as have other scholars.

15. There are only two known examples of a king transformed into K'awil: Pakal as he falls has the ax through his forehead, and on Copan Stela 11, the dead king Yax-Pasah has the ax penetrating his forehead as he stands in the porch of the Otherworld. The Ceremonial Bar that he holds has white flowers in place of the serpent heads. Both of these images depict kings in death.

16. The reading for this phrase is still under debate, although the meaning is clear. The verb has two proposed readings: Stuart suggested a value of pat, “formed” or “made,” while we prefer a reading of kat, “closed.” The second part of the verbal glyph reads baju, a word glossed in Chol as “smooth” or “planed” in reference to the lid. The phrase is either “formed the lid” or “closed the lid.”
The next two glyphs also have two proposed readings. MacLeod (personal communication, 1993) has suggested that the word for the sarcophagus box is u kuch tunil, “his carrier” or “his bench stone.” Alfonso Lacadena (personal communication, 1995) argued instead that its name is yamay tunil, “his cornered stone” or “his table stone.” Since both readings have rich bodies of supporting evidence and mean approximately the same thing, we cannot decide between them at the present time.

The last glyph in the phrase reads nai, the word for “ear of corn” and a name of the Maize God. Since the text names him as the possessor of the stone, the name must refer both to the god and to Hanab-Pakal as the god.

17. Hanab-Pakal was born on 9.8.9.13.0 (March 26, 603), and he died on 9.12.11.5.18 (August 31, 683).

18. A text on the Hieroglyphic Stairs at Tamarindito reads i‘e‘at winik as a term for the nobility.

19. Heinrich Berlin (1958) figured out the relationship of the names to the figures soon after the tomb was opened.

20. Until recently, we knew nothing about this earlier Hanab-Pakal, but the Mexican archaeologist Arnoldo Gonzalez supervised excavations in Group IV at Palenque that discovered a limestone head with a long inscription including the names of several important sahalob. Two of these sahalob tied on their headbands under the authority of Hanab-Pakal, so that we know now that he held administrative authority, even though he never ruled.

21. Chob has a wealth of meanings that might fit the context here. In sixteenth-century Tzotzil (Laughlin 1988: 191) chajol is “blood relationship” and “genealogy,” while in Chorti, choh is “thick growth” and chob te means “wood.” In Yukatek, chob is “dripping and flowing water.”

22. Boot, Looper, and Wagner (1996) proposed this reading based on the identification of the mountain as k’u. The glyphic name of this mountain consists of the number five, ha, prefixed to the flower to spell hok, a verb meaning “to come out or leave.” They demonstrated that this particular designation applies to the mountains where people were buried and to houses in which they resided. The Maya apparently thought of both activities as “leaving” or “coming out.”


24. Since we first published our analysis of the history of Palenque and the life of Hanab-Pakal in 1974, there has been controversy over his dates and his age at death. The first estimate was published by the physical anthropologists Davalos and Romano (1955: 107), based on observations and studies made in the 1952 season, soon after the tomb was opened. Romano reconfirmed his findings in a report to Alberto Ruiz in 1975. A second estimate came from an unpublished report by biologists Balco and Villalobos that was cited in an article by Ruiz (1977: 293). In 1989, Romano (1989: 1419-1422) published for the first time the process that he and Davalos had used in their first examination and how they came to their conclusions. The principal evidence cited for age was Ruiz’s reading of the dates on the sarcophagus and commentary on the condition of the teeth. He reiterated his earlier conclusions as to the age and declared that no other interpretation was possible. Fashlich (1971) supported the aging of the teeth as middle-aged because of the relative lack of wear.

For our part, we have always maintained that the arithmetic involved in analysis...
ing the inscriptions dates of Hanab-Pakal is incontrovertible, whether or not our proposed interpretations of specific events are overturned. To prevent ambiguity, Palenque's scribes tied Hanab-Pakal's birth, accession, and death dates to the Long Count and to named k'atun-endings that recur only every 375,000 years. And as we discussed above, they also tied his birth and accession dates to the end of the first pikun, which will occur in A.D. 4772. Thus, if his dates are to be changed, they must move at least 375,000 years into the past or future.

As Schele (1992) put it:

The last argument against the chronology is that in some way the epigraphers do not understand what the Maya intended to say—that, for example, two people are being named as one person, that the history is a fabrication, or that some special way of dealing with time was being used. Concerning these possibilities, I can only say that each of these propositions requires that all of the inscriptions data that use the same calendrics or historical glyphs must be thrown out with the Palenque data, including all knowledge about the Maya and the Mesoamerican calendar in pre columbian, colonial, and modern contexts. This includes the entirety of Tatiana Proskouriakoff's "historical hypothesis" and all of the histories that have been published for all Maya sites. Palenque's history and the readings of the inscriptions associated with Pakal, in fact, lie at the heart of a matrix of knowledge that involves all we think we know about the Maya calendar and history. We cannot selectively decide to disbelieve the inconvenient part of this matrix without tossing it all out the window.

This debate has usually been couched as a conflict between "scientific" and "non-scientific" research methodology. Some have asserted that our interpretations of the inscriptions are simply wrong, while others have declared that even if they are correct, they must yield to the "scientific" interpretation of the bones. This alternative considers the inscriptive histories as nothing but propaganda to be discarded as misleading or downright lies. We think that the debate should be reframed as a challenge to the techniques employed to age ancient populations and the way resulting interpretations can be used.

Recent evaluations of the debate on Pakal's age make the following points. Javier Urcid (1993), an anthropologist who has worked with the skeletal repatriation program of the Smithsonian Institution, criticized the technique attributed to the biologists Balartina and Villalobos because no experimental data has ever been published by which other scientists could evaluate the method. Hammond and Molleson (1994), a team composed of an experienced field archaeologist and a physical anthropologist who worked in the Spitalfields project in London, dismissed the method as too subjective. Both these reviews assert that the age estimates that have been published cannot be evaluated because no data or criteria of evaluation were included in the reports.

Both reviews also discussed the validity and reliability of the best aging techniques available today for use with ancient populations. The primary problems they described included the absence of comparative data from control groups that have known ages documented by nonphysical anthropological methods, such as written records. In Urcid's assessment, many of the aging methods available are not able to detect advanced age. Hammond and Molleson point out that new studies suggest
that people who survive to advanced age in any population naturally have "young bones" compared to their contemporaries. Aged survivors with "young bones" will look younger than they actually were, and their skulls will retain open cranial sutures and more of their teeth. These survivors do not age as rapidly as the other members of the same population, so they might look younger to physical anthropologists assessing their age from skeletal remains. Moreover, the statistical methods used to estimate age inevitably underrepresent the extremes, so that ages of the very young and the very old tend to get skewed toward the mean.

The Fastlicht (1971) observation of moderate tooth wear for Pakal represents the clearest set of evidence supporting the age as estimated from the remains. Frank and Julie Saul (personal communication, 1996) have told us that they agree with this assessment. However, Allen Christenson (personal communication, 1996), a dentist with extensive forensic experience in the Smithsonian collections, has told us that "wear is not a factor in elite dentition as they likely had a diet with more boiled atole which caused little wear. Individuals with inlays [elites] often have little or no wear. The more accurate test is radiographic examination of incisal pulp chambers." Urcid pointed out that the "amount of dental wear varies greatly among populations and even individuals within the same populations, because of differences in diet, occlusion, or use of teeth as tools."

Hammond and Molleson, the authors of one of these evaluations, concluded, "We should not dismiss the epigraphic evidence for Pakal's proclaimed age at death in favor of any anthropological age determination, even were Pakal's remains able on reexamination to yield more data than were held to be relevant four decades ago."

25. See Ruz (1973: 198 and Figs. 220–221) for his discussion of this object.
26. Magdiel Castillo first pointed out this affinity in a seminar at the University of Texas.
27. This is our translation of Ruz (1973: 207–208). Also see Ruz (1968 and 1973: 206–208) for his commentary on the use of red paint on precolumbian bones.
28. This information comes from Rebecca Storey's (n.d.) study of the bones of Copan.
29. Grube and Schele (1993) analyzed the texts involving the staining of bones with red paint and the cutting of bones. The use of bone relics and red paint in tombs is widely distributed in Maya and Mesoamerican archaeology, but it has only been recently discovered in Maya inscriptions.
30. Sedat and Sharer (1994) describe a reentry stairway and corridor built into an early tomb in the Acropolis at Copan. Reentry tombs are also known at Caracol and reentry events are abundantly documented at Tikal.
31. Other examples of this rare Vision Serpent tell us more about what it meant to the designers of the tomb. On El Pilar of House D, the maize god wears the jeweled leaf on his ear as a way of signifying that the Te'lat Nakan rides in his hand as he dances with a woman dressed as First Mother. See Freidel, Schele, and Parker (1993: 276–280) for a more detailed discussion of this dance and the symbolism associated with the maize god and resurrection. This image recounts part of the Creation myth. The jeweled leaf also occurs in the corners of the quatrefoil cartouches holding the inscription on the outer piers of the Temple of the Sun. The message in these alf portals describes the arrival of the patron gods of Palenque into the pib na, "underground house," inside the Cross Group temples. Thus, they can be conceived as the view down the gutter of the Te'lat Nakan. The Te'lat Nakan also appears on Copan Stela 7, but the context is unclear.

32. This con Kan-K'aw the serpent base of the temple in th

CHAPTER 4

1. He is also first identifed with Images of the Snake where the They have inscriptions are good ones.
2. Matthew corresponded pointed out sukpi, and 1991) pointed out "sukpi, for cycles, bundle us, identificat
3. William F. the historical sion of the
4. Under the Court Arc the various led by Dav sculpture, works of the founder is aceristic of the Late Pr with one o imports fro
5. David Stu of the ma...