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THE CARVED HUMAN FEMURS FROM TOMB 1,
CHIAPA DE CORZO, CHIAPAS, MEXICO

by
PIERRE AGRINIER

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INTRODUCTION

During the New World Archaeological Foundation's 1957 season of excavations at the site of Chiapa de Corzo, Chiapas, Mexico, I was given the responsibility of clearing a portion of the buried stone-faced platform structure within Mound 1. As a result of earlier exploratory digging in this mound, Gareth W. Lowe, then the Field Director, had noted an ancient disturbance breaking through successive south or rear walls of the early structures on which I was working. This disturbed area suggested the location of a tomb, the first to be suspected in this mound, and I was instructed to proceed with its exploration. While investigating the best method of reaching the tomb, I discovered breaks in the lime floors near the summit of the mound directly over the tomb, apparently made by ancient robbers. Clearing this anciently disturbed section, I was able to come down right upon the tomb, arriving there in the same way as did our looting predecessors. Excavation of the interment chamber, labeled Tomb 1, revealed that the original looters had overlooked many of the objects in the burial offering, including the outstanding carved human bones which are the subject of the present paper. (For previous discussion of these artifacts see Dixon, 1958, 1959; for a detailed description of the tomb and its contents see Lowe and Agrinier, in preparation.)

Once cleared, the tomb measured about 2.93 m. east-west by 1.40 m. north-south. Its walls were made of large unfired adobe bricks and reached a height of 1.05 meters. For its floor, the soil had been pounded and coated with a gray clay. Large irregular sandstone slabs once formed the roof, but had soon collapsed inward against the walls, where they provisionally smashed or covered up many of the objects in the offering, thus saving them from subsequent molestation by the grave robbers. The male occupant apparently had been fully extended on his back, his head to the east, but the skeleton was badly disturbed and scattered by post-interment events.

It is reasonable to suppose that the tomb occupant originally had been adorned quite lavishly, since scattered items of jewelry overlooked by the ancient robbers included four jade beads, a pearl, two earplugs with thin hematite mosaic mirror surfaces, and 87 small carved nacre mosaic pieces that may have formed an ornate pectoral.

Along the right side of the deceased lay the charcoal remnants of a long lance fitted with a 32 cm.-long prismatic obsidian blade capped by a shank studded with 56 shark teeth. To the right of his feet lay the stuccoed surfaces of a container of some perishable material and beside it a gray soapstone hexagonal rod. Against the west wall of the tomb beyond the left foot, protected by a layer of clay and a fallen slab of stone from the roof, lay Bones 1 and 2, both worked human femurs (Fig. 16, a). Bone 1 was finely decorated with elaborate carvings (see cast, Fig. 17, a), whereas Bone 2 appeared to be only cut and polished in a parallel form (Fig. 16, b). Nearby lay a rectangular piece of plaster with numerous carved nacre pieces lying in proximity, indicating it to be the remains of a mosaic plaque base.

On the left side of the head in the southeast corner of the tomb was a deep rectangular limestone vessel. Along the south wall and with the body were placed a number of pottery vessels, all of which had been smashed by the collapse of the roof and subsequent looting operations. Two vessels placed against the south wall about 1.40 m. from the southwest corner were tetrapods—a deep bowl with white slip and an unbridged spouted jar with wavy Usulutan design. Both of these vessels were stuccoed and carefully painted in bright red, green, purple and yellow colors forming geometrically interlocking patterns. Beneath the shattered remains of these two vessels and partly protected by a fallen slab from the roof were Bones 3 and 4, again both human femurs (Fig. 16, c). Bone 3 was highly carved in the same style as Bone 1 (see cast, Fig. 17, b), and Bone 4, like Bone 2, was cut and polished in the same general shape as its companion piece (Fig. 16, d) but otherwise was unworked except for a small drilled hole near the large end. Portions of the extremities of Bones 3 and 4 were not recovered.
Chronologically, Tomb 1 and its associated platform structure are placed in the Chiapa Horcones (VI) phase or the Early Protoclassic period, corresponding to the Arenal phase at Kaminaljuyu in the Guatemala highlands or to late Chicanel times in the Maya lowlands. A calendar date of ca. 0 to A.D. 100 is postulated for this period of Chiapas prehistory.

I am indebted to Dr. Keith A. Dixon for the making of the latex mold and plaster casts of the carved bones which facilitated drawing of the designs discussed in this paper. I wish to express my thanks to Dr. J. Eric S. Thompson and Miss Tatiana Proskouriakoff for their helpful criticism, and to Dr. J. Alden Mason for his invaluable assistance in the preparation of the manuscript. I am especially grateful to Mr. Gareth W. Lowe for his kind assistance and appreciated contributions.

I. DESCRIPTION

Following is a description of each of the four bones. Let it be remembered that they were found in pairs; carved Bone 1 and uncarved Bone 2 were found together against the west wall of Tomb 1, while carved Bone 3 and uncarved Bone 4 were located against the south wall of the tomb. The two pairs are reciprocally right and left human femurs. The interiors of all four bones were reamed out and well polished. The exteriors of all bones were also polished.

BONE 1

Bone 1 is an incomplete right human femur, 23.5 cm. long, cut at both ends. At the proximal end it has been cut down to form a spout or tube-like projection, 3.0 cm. long and 1.8 cm. in diameter (see Fig. 16, b). The whole surface of the bone has been carved except the linea aspera and narrow zones at each end. At the distal end a faint stained band 0.5 cm. wide remains, delineated by a light scratched line parallel to the orifice. This band of brown stain, probably left by a gum or resin, appears to indicate that the bone had once had a cap of perishable material or else that it had once possessed additional perishable elements such as feathers or tassels (see discussion of function below).

BONE 2

Bone 2 is an incomplete left femur (Fig. 16, b). It is undecorated but was cut and polished to the same approximate dimensions as Bone 1. It is 22.5 cm. long and the spout measures 3.0 cm. in length and 1.5 cm. in diameter. Situated on the linea aspera at the base of the spout is the nutrient foramen.

With the aid of a hand lens, very faint stains in the form of a scroll could be discerned on the surface of this bone, suggesting that the shaft once bore some kind of painted design. The middle portion of the shaft bears traces of wear as if from manipulation, and the high polish over this area has obliterated any traces of stain which might have indicated the presence here of an original design.

A stained band 0.5 cm. wide delimited by a thin scratched line remains around the edge of the distal end, similar to that of Bone 1.

Since Bones 1 and 2 represent right and left femurs and are approximately equal in size, it is possible that they were secured from the same skeleton (but see discussion below). The largest diameter of the shaft is 4.0 cm. on carved Bone 1 and 4.7 cm. on uncarved Bone 2; the smallest diameter is 2.8 cm. on Bone 1 and 2.8 cm. on Bone 2. Bone 2 bears the orifice of a nutrient canal, while Bone 1 does not; the possible importance of this fact is discussed below.

BONE 3

Bone 3 is a left femur 26.5 cm. long; both ends were broken anciently and are now incomplete (Fig. 16, d). Small sections of the carved area are missing. As with Bone 1 the entire surface is carved, but Bone 3 has an aspect of greater complexity.
BONE 4

Bone 4 is an incomplete right femur 33.7 cm. long and is the uncarved counterpart of Bone 3 which it closely resembles in size and shape (Fig. 16, d). Minute scratchings and faint patterned stains show that the bone was once decorated, possibly painted. Apparently the outlines of a scroll design had been laid out with a pointed blade, then painted in. The bone was cut at the distal end at the base of the condyles and is well polished inside and outside. Around the edges of the cut a yellowish stain remains, forming a band 1.2 cm. wide. The nutrient foramen is present toward the proximal end.

The proximal end has been drilled on the edge just above the lesser trochanter, in the depression formed by the joining of the latter and the base of the neck. The hole is 0.5 cm. in diameter; it might have had a counterpart on the other side of the neck but this part is missing. This hole may have been intended to bear a thong or cord which would suggest that it was to be held by that end.

Measurements taken on various parts of the shafts of Bones 3 and 4 bear close similarities. For example, the largest diameter at the base of the lesser trochanter is about 3.1 cm. for both bones; at the middle of the shaft it measures 2.9 cm. for Bone 3 and 2.8 cm. for Bone 4. The largest diameter of Bone 3 is 3.3 cm. and of Bone 4 is 3.0 cm. The minimum diameter is 2.3 cm. on Bone 3 and 2.2 cm. on Bone 4. (Since Bone 3 is the shorter of the two, measurements taken on Bone 4 have been restricted to the corresponding length.) These measurements are close enough so that the two bones could have belonged to the same skeleton. However, as is the case with Bones 1 and 2, the uncarved Bone 4 bears the nutrient foramen on the upper third of the shaft, while the carved Bone 3 does not.

It seems that the artist had especially chosen Bones 1 and 3 for the absence of the nutrient foramen on the main part of the shaft which otherwise would have hampered his work. This observation, together with the fact that the foramina are situated in closely proximate locations on Bones 2 and 4, makes it appear logical to assume that the two carved bones originally belonged to the same skeleton, and that the two uncarved bones had been secured from a second individual.

TECHNIQUE

The principal figures of the carved bones are executed in very low relief (Fig. 17). Their contours are accentuated by deep incisions or gouging, which, by producing shadows, give an effect of higher relief, and detach the main subject from the surrounding space. This surrounding area serves alternately as a background and a foreground, sometimes rising above the main figures and sometimes running below them—a device which imparts movement to the design.

The whole work has been executed with great precision and sureness. This necessitated the use of sharp cutting instruments made of the hardest material, but even so the bone had to be fresh in order to permit the making of neat cuts, especially in the curves. I have tried to carve a dry human femur with different kinds of stone blades—flint, chalcedony, and obsidian. The bone was so hard that the blades, especially obsidian, were chipped and useless in a matter of minutes. I tried to work applying minimum pressure so as to save the blade but still enough to cut the bone. This was to no avail; either there was no scratch or the blade chipped. I therefore concluded that the only way to do effective carving was to use fresh bone. Since fresh human bones were not available, I secured a pig femur from the local butcher and found that a fresh specimen was indeed much easier to carve. Of the three different materials used in this experiment, flint instruments seemed to be the most suitable. It is quite probable, however, that more than one material was used, each one according to its property. For example, while obsidian is practically useless for the gouging, it is very useful for finishing and sharpening the details.

FUNCTION

References to the ancient use of bones similar to those being discussed here are enlightening. Landa (Tozzer, 1941: 219) states that the Maya priests used “a certain water which they kept in bones” for the “baptism” ritual. The indication that the flaring ends of Bones 1 and 2 were capped and that the spout-like ends may have been adaptations to facilitate pouring suggests that these bones were containers of liquids perhaps used in ceremonies such as that described above by Landa. Ac-
according to Morley (1947: 184) the “baptism” ceremony described by Landa was probably actually a puberty ceremony. Morley paraphrases Landa’s description of a part of this ceremony for young boys and girls as follows (ibid.: 185-186):

The priest now changed his vestments to a handsome jacket and a miter-like headdress of red and other colored feathers, taking in his hand an aspergillum for sprinkling holy water about. This latter consisted of a finely worked short stick with tails of the rattlesnake hanging from it. . . . After having pronounced a benediction, he sat down and the sponsor of the ceremony, with a bone given him by the priest, tapped each child nine times on the forehead, moistening the forehead, the different parts of the face, and the spaces between the fingers and toes with holy water, but saying nothing.

It is interesting to note that in the above quotation the aspergillum described by Landa was “finely worked . . . with tails of the rattlesnake hanging from it.” Whereas the aspergillum here is of wood, the fact that human bones were sometimes used for a comparable purpose is seen in the painted scene on the famed Chama vase from the Guatemala highlands (Morley, 1947, pl. 88). Furthermore, the mention of hanging rattlesnake tails, serving as the hyssop according to Tozzer (1941: 105), is suggestive in view of the speculation above (p. 2) that the Chiapa bones once possessed appendages of perishable materials.

The use by the Maya of a bone as a baton for the blessing or anointing of children is shown in Morley’s quotation above. It is easy to imagine that a similar role as a symbol of authority or administrative insignia may have been the function of the Chiapa bones. In this respect it is noteworthy that a comparable symbol of authority in Maya sculpture is frequently the manikin figure or scepter which is characterized by a small anthropomorphic figure above, terminating below in the head of a serpent—an arrangement which is essentially the same as in Bone 1 (see also Discussion).

Carved long bones and a skull were recovered from the Cenote of Sacrifice at Chichen Itza. According to Tozzer (1941: 120, footnote 548) they may have been originally used in a dance as a “token of victory.” He quotes Landa (ibid: 120) as saying that “if the victims were slaves captured in war their masters took their bones to use them as a trophy in their dances as tokens of victory.” I doubt that this was the case here, at least for Bones 1 and 2, since they are purposely cut in a manner (spouted) which suggests other use.

Another possible use of the bones is suggested in the literature. Brasseur de Bourbourg (1862: 105), in his translation of the Quiche drama of “Rabinal-Achi,” gives an interesting insight into the ritual importance of human bones. This passage makes allusion to the practice of carving and painting the human skull and then states a ceremonial significance of human long bones:

. . . See then the bone of my arm; see then it is a rod mounted in silver, the noise of which will resound, as excites the tumult within the walls of the great castle; see the bone of my leg which will become the beater of the teponovoz (or teponaztli, the drum of hollow wood) and the drum, and which will make the heaven and earth tremble. (Tozzer, 1941: 120, footnote 548.)

Although it may at first seem unlikely, it is not impossible that Bones 3 and 4 might have served as drum-beaters as noted above. The wide stain on the cut distal edge of Bone 4 could have resulted from a gum used to form or fasten a padded end or head had the bone been used as a drum-beater (this edge is missing on companion Bone 3). Landa (Tozzer, 1941: 93) mentions the use of “gum from a tree” (most likely live rubber) for forming this head. The highly carved nature of Bone 3 would not argue against its use as a drum-beater, since the ceremonial teponaztli or horizontal cylindrical wooden drums were themselves as a rule ornately decorated with symbolic figures. The usually implied function of the drum-beats to carry the petitioners’ pleas to the gods would justify carving mythological elements on the instruments used to produce them. A variant postulate, however, is that carved Bone 3 was a symbolic drum-beater only, and that the actual beating was done with the less precious uncarved Bone 4.

Human long bones are known to have been used as flutes. An elaborately carved ceremonial example discovered in Tehuantepec is now in the Frissell collection (Marti, 1955: 123, Fig. b). However, the Chiapa bones could not have been flutes themselves since they do not contain finger holes. They might, nevertheless, have been used as an extension of
reed or wooden tubes which held the mouthpiece and stops, a possibility supported by the presence of the tubular extension of Bones 1 and 2 which may have been designed to enter into a component part. None of the bones themselves could have served for such an extension, since they could not be fitted to one another. To my knowledge, such composite flutes were unknown in Mesoamerica.

More definite knowledge about the use of objects such as the present bones is lacking. Early carved human bones are rare, perhaps due to their perishable nature. The majority of the worked human femurs which have been found are musical instruments, usually rasps, dating from a much later period and mostly concentrated in the Valley of Mexico and adjacent regions.

CHOICE OF HUMAN BONES

Though human bones must have been ideal as far as size and availability were concerned, it is quite unlikely that the choice was influenced solely by such materialistic considerations. As noted earlier, fresh bone was needed, and to secure this from a newly deceased human being some strong motivation surpassing that of material need was undoubtedly required. It is well recognized that strong emotional and religious feelings are associated with death and everything related to death both among “primitive” peoples and in many more sophisticated societies (Malinowski, 1948: 30, 42; for the Maya attitude, see Landa [Tozzer, 1941: 129]).

Artistic execution in ancient Mesoamerica was frequently determined by religious considerations—for example, Landa tells us that the making of idols was accompanied by a great deal of ritual, fasting, and abstinence, as well as the fear of death (ibid.: 160). It was necessary for the idol to be made of cedar, and Roys suggests that this might have been due to the fact that the Maya name for cedar, _ku che_, means “god tree” (ibid.: 160, footnote 824). I am quite certain that similar considerations motivated the artist who carved the Chiapa bones. It probably was not the materialistic property of the medium that interested the artist most, but those properties that had psychological and spiritual values appropriate to the message he sought to convey. Therefore the choice of human bones was almost certainly made deliberately with the knowledge of their psychological contribution to the desired importance of the ultimate work. As the Chiapa bones were surely important ritual objects, there was ample justification for the selection by the artist or his overlord of human bones for their manufacture.

II. DESIGN

The designs depicted on both of the carved bones apparently represent certain mythological beings with accompanying symbolic and/or decorative motifs suggesting the unique role which they are playing in the scene. It is difficult to recognize at a glance the many different elements depicted on the bones. Originally they may have been painted in various colors in a manner which would have enabled the observer better to visualize the various design components. For purposes of this paper, the principal figures shown on the bones have been identified with the letters A, B, C (Bone 1) and D, E, F, G (Bone 3). Each figure is described below in terms of its diverse parts or “elements,” labeled with lower-case letters. At the close of the descriptive sections for each bone an attempt at symbolic interpretation is made.

BONE 1

COMPOSITION OF THE CARVED DESIGN

The design on Bone 1 is composed of two main figures, labeled A and B, oppositely located toward each end of the bone (Figs. 1; 16, a). Viewing the bone horizontally with the spout-like projection to the left, Figure A faces toward the spout. It apparently represents a water creature, probably a saurian, with human-like arms in a swimming position. Surrounding the figure are wave-like forms
advancing in the same direction as the creature represented.

To observe the second figure (B) the bone should be viewed vertically, spout downward. In that position the figure appears as a masked personage with human-like arms held in an elevating position—palms upward. Placed behind and above the right hand of Figure B in the upper left zone is Figure C, difficult to visualize coherently at a brief glance. It is composed of scrolls and what look like three bared teeth. The rest of the space behind creature B’s head is occupied by wave-like forms similar to those surrounding Figure A.

**Detailed Description of Carved Figures**

**Figure A**

The creature represented by Figure A (Fig. 2) has a long curved snout (a) bearing a curved medial double line containing a reversed ιωu element near its closed upper end. The root of the snout suggests an upper lip raised or curled up so as to expose four front teeth (b) which resemble the incisors of an herbivorous animal. They are followed by a row of three triangles (c), probably forming the remainder of the creature’s dentition. From the rear of the innermost triangular tooth hangs a forward-curving appendage (d) which occupies the empty space between the lower (f) and upper (g) jaws. Element d might represent the tongue.

Protruding from a small cavity at the base of the upper jaw is another element (e) which might be either an integral part of the lower jaw or conceivably a fang. This element is divided longitudinally by a double line. The lower jaw (f) is formed by a curved band with parallel incised lines spanning the space between element e and the triangular teeth.

The upper jaw (g) emerges from beneath the root of the snout and curves down around element e. The right section of the jaw is divided longitudinally by a double line bearing two small squarish motifs on the left part.

The nostril (h) is formed by a semicircular hole placed just above the root of the snout. The nose is indicated by surrounding curved segments.

The eye (i) is situated above the upper jaw and at the base of the supraorbital element (j). Just below the base of the latter is a semi-elliptic line indicating the pupil. The right side of the eye is bordered by four small vertical lines followed by three faint horizontal lines.

The supraorbital element or eyebrow (j) occupies the major part of the forehead (k). It is quite elaborate and on the right side forms a divided volute. Element l, a tall upright appendage on the top of the head, sug-
gests the spine or crest of a reptile or the dorsal fin of a shark or other marine animal. Situated at the back of the head between elements l and o is a fringed crescent (m). This illusive element resembles a fish-gill, but may indicate a fringed ear. A large scroll ornament (n) is located behind (to the right of) the jaws, with a volute similar to that of the supraorbital element j.

Two body sections (o, o') are visible. One, apparently the neck, is placed between the raised left hand and the head, and the other is partially obscured by the left arm. The body sections have a shield-like form with a framing band and an inner zone. The latter area of o is divided into two parts, the upper of which is a plaited design reminiscent of basketry. The lower part is free of all decoration except for a double line dividing it horizontally.

The front limbs (p) are easily identifiable. Both arms are held in a swimming position, and are decorated with a medial double line starting at the shoulder and ending at the wrist. The hands are curved inward and bear three visible fingers or claws. These are separated from the rest of the hand by a curved segment which may be a stylization or an awkward representation of the thumb. What appear to be bracelets (q) occur at each wrist, decorated with a narrow rectangular incision.

Figure B

This figure apparently represents a masked creature (Fig. 3), distinguished by the presence of a beard (a), the hair of which is represented by vertical incisions.

At the front of the mouth (b) is a rectangular element (b') which may represent teeth, but it contains no details. The same observation applies to c which is probably part of the muzzle or buccal mask element. The nose (d) appears to be very similar to that of Figure A.

The eye, represented by a narrow oval with horizontal incisions (e), is surmounted by a supraorbital element (f) decorated with a bracket and a horseshoe motif. The forehead zone (g), above the nose and the supraorbital element, is decorated with double oblique lines forming opposed T's.

Element h looks like a pointed ear; the right edge is fringed with incisions which may represent hair or fur. Below this “ear” element begins element i, which appears to be the supporting frame or “chin strap” of the mask resting on the shoulders of the figure. It extends from the tip of the beard to the base of the ear as a curving band decorated with parallel lines ending in a volute, to which are attached a horseshoe, a chevron, another volute, and two bracket motifs.

Figure B wears a headdress (j) which looks somewhat like a Phrygian cap put on back-
Figure 3. Figure B of Bone 1

wards. The front is decorated with an element (k) consisting of three parts: a flattened oval bar, a series of curved lines resembling half a rosette, and a striated form curving slightly forward.

The body of Figure B (l, l', l'') is represented by three overlapping disk-shaped sections that are framed in the same manner as those of Figure A. Only the middle section (l') shows clearly; it is decorated with two parallel lines. The lower section (l'') is covered by the volute of the central background element.

As in Figure A, the arms and hands of Figure B (m, m') are easily recognized, wearing identical bracelets at the wrists. Similar “thumb” elements are also indicated. The arms are in the same position as those of Figure A, but, because Figure B is in an upright position with the palms upward, the attitude here is totally different, being one of rising or elevation rather than one of swimming or struggling.

Figure C

Figure C is hard to identify. Located just above the right or upper hand of Figure B, this figure could represent a symbolic animal form (Fig. 4).

Element a contains three segments similar to those of element b of Figure A (the front teeth) and could therefore be teeth in the present figure also. Element b, located in front of a, could represent a stylized stub nose—it is decorated with incised lines, forming a horseshoe or bracket design. Element c, which may be the forehead, is formed by a succession of half-circles, the center of which possibly represents the eye. From that center emerges element d which connects with element e, a spiral form that could be an exaggerated ear curving against the forehead of Figure B. The remainder of Figure C, element f, is difficult to analyze but would appear to be the body of the problematical creature represented.

Background Design

"Background" is here used only as a convenient term to describe that part of the design that surrounds the main figures. Technically, it is not a background, since it does not lie entirely behind the figures but covers some parts of them. It is rather the medium in which the main figures move, and from which they appear to be emerging (Fig 1). The design produced by this medium can be visualized in two ways: 1) by observing the outline formed by the gouging, or 2) by observing the shapes formed by the uncarved portions of the matrix itself.

The central element of the background design separates Figure A from Figures B and C. Holding the bone horizontally, the dividing element appears as a large band curving upwards into a spiral volute covering part of the body of Figure B. The upper part is decorated with a horseshoe sign and a double border line.

The remainder of the background design is formed around wave-like designs, probably representing water.
SYMBOLISM OF CARVED FIGURES

Figure A

The general physiognomy of this figure more closely resembles a saurian than any other creature (Fig. 2). The fluid quality of the background design and the swimming position of the arms contribute to a depiction of an aquatic animal. Some crocodilian characteristics appear to be represented, but the almost certain mythological nature of the creature here portrayed explains the artist’s unconcern with faithfully reproducing detailed anatomical characteristics or with confining his representation to a single animal.

It is evident that the artist who carved Bone I was not interested in giving an accurate representation solely of either a saurian or of an ophidian. His concern was apparently to combine those symbolic elements which best fitted the idea he wished to represent. That the form of a particular creature, as a mythological being, could be altered to fit the needs of a different pictorial message will be seen below as well as in the later discussion of Bone 3. The practice of combining anatomical aspects of different animals in a single figure was quite common in Mesoamerican iconography, especially with those creatures which were mythologically related.

But despite the complexity of the design in Figure A, the dominant creature suggested is nevertheless that of the crocodile. The crocodile (or alligator) occupies a major place in the cosmography of Mesoamerica. It was the glyph for the first day of the sacred almanac of 260 days which was used for ritualistic purposes in pre columbian times. In the Maya almanac this glyph is called Imix:

Imix, therefore, was the earth monster, the crocodile, whose back formed the surface of the earth; the water lily was probably his symbolic form; abundance was his aspect, and the earth his domain. It is surely not chance that the first day of the series belongs to the provident, bountiful earth, object of the deep love of all Maya, be they of the mountains or the plains, the uplands or the forest. (Thompson, 1950: 73.)

Seler (1904: 40) speaks of “... the words imix, imox, by which the Tzental-Zotzil called the first day sign . . .”

The Aztec equivalent of Imix was Cipactli, the earth crocodile, first-day sign of the Tonalpohualli or sacred almanac of the Aztecs. It is portrayed in most of the Mexican codices; see Fig. 5, a-d for typical examples. The body as

Figure 5. CHARACTERISTIC REPRESENTATIONS OF THE “EARTH MONSTER” IN MESOAMERICA

a-d: Mexican representations of Cipactli (d shown in water). e: Zapotec Cipactli, Idolo de Yogana, Oaxaca. f, g: Mayan Imix signs from Palenque, Chiapas.

a, c: Codices Fejervary-Mayer and Laud (García Granados, 1942: 423). b: (Codex Nuttall, 1902: 5). d: (Ibid.: 75). e: (Leigh, 1958: 9, Fig. 35). f, g: (Thompson, 1950, Fig. 40 [1 and 4 respectively]).
Figure 6. Characteristic Representations of the “Dragon” in Mesoamerica

a, b: Detail of stela at Kaminaljuyú, Guatemala (b showing detail of the sash). c: “Dragon” on Stela 2 at Izapa, Chiapas. d: Detail of Stela D at Tres Zapotes, Veracruz. e: Detail of stela at Tonalá, Chiapas. f: Detail of stela at El Mesón, Veracruz. g: Detail of a stone yoke design, Gulf Coast, Veracruz. h-j: Representations of Serpent Head X at Kaminaljuyú.

a, b: (Kidder and Chinchilla, 1959: 46, Fig. 7). c: (Stirling, 1943: Pl. 49, b). d: (Ibid., Pl. 14, c). e: (Satterthwaite, 1943: 136, Fig. 1, f). f: (Covarrubias, 1957: 180, Fig. 78). g: (Ibid.: 177, Fig. 76). h-j: (Kidder, Jennings, and Shook, 1946: 224, Fig. 97, b, e, f).
represented in the codices is always distinguished by a row of spines on the back (note Fig. 5, d). Representations of Cipactli in water are found in numerous codices, such as the Vaticanus B, Borgia, Fejervary-Mayer, and Nuttall (Seler, 1923: 648, 649, Figs. 669, 674-676; Waterman, 1916, Figs. 5, 8, pp. 330, 333; García Granados, 1952).

In Oaxaca, the Zapotec counterpart of Cipactli was called *pichijlla*, signifying crocodile (Seler, 1904: 38); it is the name of the first day of the year. While studying the Zapotec day signs from pottery, inscriptions, and wall paintings of Monte Alban, Howard Leigh (1958: 2) noticed that "Of all the day signs, Cipactli (the first) is by far the most frequent, one might say in the proportion of 100 to one." This statement confirms the importance of Cipactli in the Zapotec area.

The long curved nose, the jagged teeth, the incomplete upward-curling lower jaw, and the association with what is probably a water background are characteristics of Figure A that identify it with the Aztec Cipactli and also demonstrate that it is allied with the Classic Zapotec and Maya characters (cf. Figs. 2; 5, e-g). More striking comparisons with Figure A, however, are available from the earlier cultural levels, as is natural in view of the early date of the carved bones. Carved figures thought to date to the Preclassic and Proto-classic in Veracruz, Chiapas and Guatemala (Fig. 6, a-f) so closely parallel Figure A in major features that there can be no doubt that a common "dragon" concept is involved in all instances. (The term "dragon" is preferred here to that of "Cipactli," since there is no evidence that the figure served here as a day sign, though the possibility should be considered.) And the basic dragon concepts were perpetuated in the Early Classic at Kaminaljuyu and Veracruz (see below, and Fig. 6, g-f). These early representations, unfortunately, help us little in understanding the role of the dragon figure in its contemporary society. In analyzing Figure A further, therefore, we must continue to draw upon historical references to later mythologies.

Other characteristics such as the fin-like appendage topping Figure A and the gill-like semicircle on the back of the head suggest a fish origin. Seler (Thompson and Richardson, 1939, Vol. 4: 63-64) mentions similar cases.

In some pictures, the cipactli is not drawn like a crocodile, but as a fish, with shark-like clawed tail and the indispensable row of spines on the back and sometimes a ventral row. Here the idea of the earth rising in peaks, swimming in the water (surrounded by water) has found . . . another expression, but one fundamentally allied.

The portrayal of the earth monster with fish attributes would not be surprising since the Imix sign (the Mayan equivalent of Cipactli) "seems to be especially connected with fish" (ibid.: 80).

A most obvious peculiarity of Figure A is the presence of a long curved snout divided by a double line, a feature which does not conform to any of the attributes of a crocodile or other reptile. On the contrary, this proboscis with a medial division does strongly suggest the trunk of the tapir, a water-loving mammal common in the forested regions of Central America. Also, the square-edged front teeth of Figure A do not belong either to saurian or ophidian anatomy but rather appear to be the incisors of an herbivorous animal. As such, they might logically also be another stylized tapir element. A remark from Thompson (1950: 74) gives us a clue to the possible significance of this combination of tapir and crocodile attributes: "... the Kekchi earth gods, who live under the earth and whose speech is the echoing thunder, have an unspecified association with tapirs and are the lords of the wild animals." The concept of the tapir being a god of the air who brought rain, water, thunder, lightning, and sunbeams is discussed by Seler (1904: 45), who also suggests that the tapir (tzimin) furnished the model for the long-nosed Mayan rain god Chaac with which the name is occasionally connected (Thompson and Richardson, 1939, Vol. 4: 29).

To my knowledge, the conspicuous volute placed in back of the mouth of Figure A (element n) does not find its equivalent in the representation of Cipactli, but a similar ornament is common to the earlier dragon forms and is also associated with the Mayan Serpent X (Fig. 6, h-f). Note that a long snout similar to that of Figure A is also a constant element of the Serpent X figure. It is thus conceivable that Figure A, combining features of several mythological creatures, actually is the prototype of the later variant figures of Imix and the Serpent X.
Figure 7. "OLMEC" FELINE REPRESENTATIONS

a, b: Rock carvings at Chalcatzingo, Morelos. c: Engraved celt from La Venta, Tabasco. d: Detail of sculpture on Monument 19 at La Venta, Tabasco. e: Relief on boulder at San Isidro, Piedra Parada, Guatemala. f: Jadeite celt. g: Design on jade earplugs from La Venta, Tabasco.

a, b: (Piña Chan, 1955: 69, Pl. 19). c: (Drucker, Heizer, and Squier, 1959: 141, Fig. 35, e). d: (Ibid.: photo Pl. #49). e: (Covarrubias, 1957: 64, Fig. 25). f: (Ibid.: 73, Fig. 53). g: (Drucker, 1952: 160, Fig. 46, b).
Figure B

I do not see any serious reason to doubt that this figure represents a masked personage with feline features (Fig. 3). The most prominent feline in Mesoamerica is the jaguar, an animal that figured importantly in the sculptured art of Mesoamerica from early to late times. In the earlier representations, the jaguar attributes are frequently presented in mask form including a beard, protruding buccal element, and conventionalized eyebrow. Jaguar features were particularly stressed in the art of the Olmec culture. The role of the Olmec-related jaguar symbols has been discussed by many authors, including Covarrubias (1957), Drucker, Heizer, and Squier (1959), and Vaillant (1947). Drawings of early examples comparable to that of Figure B are shown in Fig. 7 (cf. also Figure E of Bone 3, Fig. 11).

A Preclassic carved monument found recently in Kaminaljuyu depicts a carved bearded figure wearing a mask and an elaborate headdress (Fig. 8) who bears a great resemblance to Figure B. Obvious elements from this stone figure that are similar to those of Figure B are: a beard clearly defined with striation showing the hair, a distorted mouth, a stub nose, and a curved cheek element passing from below the eye, around the mouth, and ending beneath the beard. Also, the supraorbital elements of both creatures are decorated with a horseshoe element, reversed on the Kaminaljuyu sculpture. The decoration of the chin strap or mask frame on Figure B finds its partial counterpart on the Kaminaljuyu mask at the ear position where the two volutes are joined to form a crescentic element bridged by another band bearing the two bracket motifs. The scroll work behind the head of the Kaminaljuyu sculpture is very similar to some of the background elements of Bone 1.

Ix was the name ascribed to the jaguar god of the underworld who presided over the fourteenth day of the Mayan sacred almanac. This day was characterized by a lack of important activities due to the malignant influence of the jaguar god. Hunting, however, was favorable on this day, since the jaguar was the lord of the beasts (Thompson, 1950: 67, 82).

Besides being a mythological creature of the underworld the jaguar was also closely related with water and more specifically with the rain god, "... especially on comparatively early archeological horizons" (Rands, 1955: 361). "Jaguar features in 'Olmec' art have been considered the prototype of Monte Alban's Cocijo and the Teotihuacan-Aztec Tlaloc figures" (ibid.). It is quite probable that at a certain point in the evolution from jaguar to Tlaloc the two personages had a merging identity, resulting in the blending of two concepts. This combination of identity could have persisted in certain cultures until late periods, as may be deduced from an observation by Thompson who, in discussing the book of Chilam Balam of Mani as recorded in the Codex Perez, illustrates the difficulties involved in the interpretation of ancient expressions. The expression concerned in this passage is Balam haab—balam in Maya means "jaguar," and haab, besides being the word for "year," has also the meaning of "rain"—at least in several Mayan languages (Thompson, 1950: 297). Combined, the expression becomes obscure.

We have no exact information as to what a balam rain may be. The balams are the guardians of the villages and milpas in the beliefs of the Yucatec Maya of the present day and are closely associated with the winds, but... they are coupled with the usual rain gods in prayers, almost as though balam and chac were synonymous... (Thompson, 1950: 298.)
Interpreting a passage of the Codex Borgia of the Mixtec, Covarrubias (1957: 59) postulated that the jaguar earth god and the rain god Tlaloc were the same person. Considering its apparent association with water a somewhat similar situation may be the case with Figure B, which may represent an early transitional period in the development of the rain god concept as found later in various Mesoamerican and Mexican cultures.

The geometrical motifs on the chin strap or mask frame (i) of Figure B are the clearest examples of a number of forms on the bones which may have a glyphic significance (see Fig. 15). Three of the motifs on the mask frame—the chevron, the volute, and the pair of brackets—are duplicated in similar form on a small carved stone recovered from a ceremonial sherd dump (Cache 1) on the floor of a Mound 1 structure dating to the same general period as Tomb 1, where the bones were found (Dixon, 1958, Fig. 2; 1959, Fig. 6). The reoccurrence of these motifs at Chiapa de Corzo and the frequent presence of nearly identical forms as affixes of Maya hieroglyphs (Thompson, 1950: Figs. 1-36, passim) sustains the supposition that they are ideographic symbols and not merely decorative frills. The headdress element (k) may also have a glyphic significance; the base of this element is suggestive of the bar representing number five in the Mayan numeral system.

Figure C

Figure C (Fig. 4) could represent a very stylized animal. I find the rabbit to be the closest model for such a form. This identification is purely suggestive; the form is perhaps so stylized as to be misleading. To my knowledge most of the rabbit representations belong to late periods, mainly in the Aztec sources. I therefore find it very difficult to offer any strong line of comparison. An early origin of the rabbit representation is possible. Its original symbolic and religious significance, however, is very obscure.

Tochtli, rabbit, was the Nahuatl name for the eighth day sign, and may have been also a symbol for Venus. Lamat, although its real meaning is uncertain, was the Mayan name for the eighth day which also was the day of the planet Venus.

The association of Figure C with a celestial body seems to be supported by the fact that it is located in the upper part of the entire design of Bone 1, when holding the bone vertically as if to view the feline Figure B.

As suggested by the position of the raised right hand of this feline creature, Figure C could also be viewed as an offering.

A relationship between the two ideas above proposed—that Figure C symbolizes a celestial body and represents an animal offering—is possible.

Background

As mentioned previously, the background carving can be visualized in two ways. This may have been done intentionally so as to represent two closely associated elements: water and clouds. The long tapered shapes formed by the gouged area could represent flowing water, while the surrounding part and the central motif could be identified as clouds.

While belonging to the ungouged cloud-like area, the voluted part of the central motif partly disappears, as if sinking, under the opposite edge of the same area to reappear merging with the jaguar body. Was the artist's intention purely esthetic, or was he concerned with conveying a symbolic meaning as well, such as a cyclic concept of sky and water?

Comment

The probability that the design of Bone 1 has a strong aquatic significance is supported by the well-known mythological relationship of the saurian-ophidian and feline forms with water, as well as the suggestive quality of the background design. A more detailed analysis of the secondary elements such as the chevron, horseshoe, bracket, etc., might show some additional water affiliation.

As has already been discussed, the shape of the artifact, Bone 1, suggests that it was a container. This possibility is upheld by ancient references concerning the use of such objects in certain religious rituals involving the pouring of water contained in bones (see p. 3). It is interesting to note that if this proposition is true, the organization of the design would prove to have been planned in consideration with the use of the bone. When the bone is held horizontally, the saurian creature is swimming toward the spout-like end; but when it is held vertically, the same figure is plunging and its movement is accentuated by the water background, the central
part (in front of the snout of Figure A) falling like a droplet just above the spout. Is this a symbolism connected with a liquid content and the pouring of it? (For other examples of water pouring from a monster’s mouth, see Thompson, 1942, Fig. 5, p. 395, “Monstruos celestes mayas.”)

It is further to be noted that in the pouring action, when the bone is held vertically, spout downwards, the feline creature assumes its most logical upright position, holding its arms in an offering or elevating movement. It is quite probable that the over-all design symbolizes a sky-rain-water concept and that the bone was used as part of the priesthood paraphernalia in connection with a water or rain ceremony or in purification rites.

**BONE 3**

**Composition of the Carved Design**

The Bone 3 design is composed of three obvious figures, with indication that a fourth was once present. Viewing the design as presented in Fig. 9, the dominant figure is the humanoid creature with long stringy hair (Figure D). Holding its arms in a swimming position, it is facing toward the right at the proximal end of the bone. Figure E is a masked creature similar to Figure B of Bone 1. Figure F, at the lower left in the drawing, looks like another saurian creature, facing to the right. The original presence of a Figure G is postulated on the basis of a single identified hand located adjacent to the head of Figure D. This hand was not apparent until a careful second cleaning of the bone was made recently. The background, from which the figures emerge, is composed of wave-like forms similar to those found on Bone 1.

**Detailed Description of Carved Figures**

**Figure D**

Figure D (Fig. 10) is the most realistic creature on either bone design and appears to be emerging from the background medium. It has a human face (a) which is characterized by a stub nose, a delineation of the eye socket, and a thick upper lip that is curled up, exposing the upper teeth. Starting from the temporal is a curved double line that joins the lower jaw, forming a sort of accentuation of the zygomatic arch. The mandible appears bare (b), the ascending ramus forming a hook at the posterior part. The humanoid ear (c) is ornamented with a large ear-spool having a slightly beveled flange. The hair (d) is divided in three parts—the forelock hangs like bangs over the forehead and the remainder appears as two long wetted strands. A short scroll is placed on the hair near the temple.

The body sections of Figure D (e) are identical with those of Figure E where they are more plainly seen (described below). Two cir-
cular dots on the lower part of the first section are partly obscured by the hair strands and earplug. The comparable portion of body section two has been damaged, and that of the third section is covered by the right arm. The left end of a horizontal bar is visible below the horizontal dividing band in the first and third disks. To the second or middle body disk are attached the arms (f, f') in a swimming position. As in Bone 1, each arm is decorated by a medial double line and a bracelet. The back of the right hand bears an oval enclosure containing two small brackets. The left hand has been broken off.

**Figure E**

Except for a few details, Figure E (Fig. 11) seems to be a counterpart of the masked Figure B on Bone 1. Many of the same elements are present, such as the open mouth (a), the muzzle elements (b, c), the distinctive eye (d), the supraorbital element (e) with the horseshoe decoration, and the mask frame or chin strap (f). Two elements of Figure B are lacking here—the ear and the beard (cf. Fig. 3).

The headdress of Figure E is composed of two volutes decorated with horseshoe motifs (g). It is topped with a plume-like element (h) placed in the center. The element (i) in front of the headdress, actually separate from Figure E, has a base decorated with two bracket motifs and four cursive elements above spread in fan-like fashion.

The body of Figure E is composed of three overlapping disks (j, j', j''), each of which is divided into two zones, the right one having a striated plaited pattern and the left one a band and two small circles or dots. The body disappears under the background medium and seems to emerge on the other side as the body of Figure D (more apparent on the bone itself than in the drawing). The disks of Figure D bear the same design as those of E and are directed the same way. I think that both figures share the same body, Figure E being the tail and Figure D the head, since the latter has arms and the former does not (see discussion below).

**Figure F**

The appearance of Figure F (Fig. 12) may be confusing at first sight but, after a detailed analysis, certain similarities to the crocodilian Figure A of Bone 1 can be detected. I think that we have here a top-view representation of
the same creature. Some of the features such as the snout, the arms, and the supraorbital element have been omitted, either due to the difficulty of representing them on a plane, or to a portrayal of a different aspect of the creature. Certain elements can be recognized, such as the front teeth (a), the nostrils (b) and the rippled section above them (c), the long head appendage (d) and the large scroll ornament (e), and, between these two latter elements, the fringed crescent section (f). A carved boulder representing a dragon from the not-far-distant site of Tonala, Chiapas, offers the closest parallel in type with Figure F (Ferdon, 1953: Pl. 22, a-d; Figure 13, a, b, in this paper). A somewhat comparable example of the aerial view of the "crocidilian" or dragon representation, of a later period, is seen on Altar T at Copan (Fig. 13, d).

Fig. 13, c, illustrates the way in which the principal elements of Figure A of Bone 1 correspond to their top-view counterparts in Figure F of Bone 3. A certain variation can be observed in the Figure F presentation. The central double line on the long head appendage is fringed on both sides with short oblique incisions. The body is composed of four overlapping divided disk-like sections (Fig. 12, g) bearing a Tau sign on each disk half. Along the body axis are four overlapping wing-shaped appendages (h), striated longitudinally.

Two distinct techniques used on Figure F deserve description. First, the nostrils are created by drilling obliquely to connect each orifice. This unique procedure was undoubtedly resorted to in order to indicate that the orifices are those of the nostrils and not of the eyes, as first glance indicates (the eyes of this figure are not visible as a result of the aerial view). Second, the wing-shaped elements have been so deeply undercut on the left edge that the designs on the body sections of that side actually descend beneath the "wings." This undercutting undoubtedly was done by the artist to indicate that the wing-like appendages should be viewed as being raised or standing out from the body.

Figure G

Of Figure G (see Fig. 9) only one hand remains, apparently holding a long slender object, possibly a standard. The hand is held with the fingers curved towards the palm. A faint decoration remains on the back of the hand, consisting of a curved line and two small squares. A bracelet and the wrist are still visible.

Background Design

The background medium, allowing for the difference in design organization and in the space disposable, is essentially the same as on Bone 1, combining gouged and flat motifs with emphasis on the latter and on volutes.

Symbolism of Carved Figures

Figure D

The lipless bare lower jaw, with the alveolar partitions indicated by short double lines, is the most prominent characteristic of Figure D (Fig. 10) and probably connects it with death; the delineation of the eye socket and of the zygomatic arch emphasizes this impression. On the other hand, the short scroll protruding from the ascending ramus as well as the scroll on the head, though they may be simple decorative motifs, may also be symbols of water.
The swimming position, the spiral background, and the apparently wet locks of hair, in any case, are sufficiently eloquent to assure a water relationship. In view of this consideration, I think that Figure D probably represents death in connection with water. In the Mayan sacred almanac Eb was the day of the malignant rain deity. Its glyph combined the symbols for death and water (Thompson, 1950: 81). I have already mentioned that Figures D and E may be sharing the same body. This combination could therefore symbolize a dual concept in connection with water. On the one hand there is the feline creature which with its attributes would symbolize a benevolent

Figure 13. Comparative Views of the "Dragon" Figure

a, b: Carved boulder at Tonalá, Chiapas. c: Corresponding elements on Figures A and F. d: Carving of crocodile seen from above, Altar T, Copan, Honduras.

a, b: (Ferdon, 1953: Pl. 22, a-d). c: Carved femurs from Chiapa de Corzo. d: (Seler, 1923: 652, Fig. 683).
aspect of an earth-water association resulting in germination, fruitfulness, and general well-being. On the other hand the death creature would represent the malignant influence resulting perhaps in drought, flood, or hail and famine. The evolution of human welfare, as it may be symbolized in creature E, was seemingly subject to the adverse influences represented by Figure D. This latter figure is endowed with the use of arms, therefore directing the course of events affecting Figure E. The feline figure seems to represent the tail, depending for better or for worse on the whim of the leading death creature.

Figure E

Figure E (Fig. 11) obviously represents another aspect of the Figure B feline creature discussed in connection with Bone 1. As noted previously, the chin strap or mask frame is almost identical and the facial features are very closely related except for the absence of the ear and the beard. These omissions may indicate a certain difference of personality between the being on Bone 1 and that on Bone 3.

Figure B differs markedly from E in the shape of the headdress, which here strongly suggests the vegetation of the maize plant as portrayed on the headdress of the young maize god (Morley, 1947: Pl. 29, c) or as supporting the Ik sign (Thompson, 1950: Fig. 12, #10). This maize attribute imparts to the creature an idea of growth and fertility which is not incompatible with the identification of the feline creature as an earth divinity. Also, Seler (Thompson and Richardson, 1939, Vol. 1: 148) felt that the symbol of the god of fruitfulness and of growth should probably be assigned to the jaguar, because the Maya word “... Balam ‘jaguar’ is the customary designation for the earth god, according to Schultze Jena, who adds that Ix is a propitious day to pray for rain and for maize of good quality (Thompson, 1950: 82).

I think that it is safe to assume that Figure E symbolizes earth and vegetation in association with water.

Attention should be drawn to the design of the body sections of Figures D and E, three of which show clearly two dots and what appears to be a horizontal bar above them. This would be the number 7 in the bar-and-dot numerical system (or, if the “bar” is fortuitous, the number 2). The portrayal of this symbol, together with an adjoining mat design in the body sections, is highly suggestive of the Piedra Labrada Stela 1 (Coe, 1957: 600, Fig. 2), where the same elements appear in association (Fig. 15, a). Although Coe (ibid.) doubts the calendrical significance of the numeral 7 on this stela, it is certainly of some historical importance, be it numerical or chronological, and the same is true of the repetition of the number and mat motif on each of the body disks of Figures D and E.

Figure F

I have previously attempted to demonstrate that Figure F is a variant of Figure A on Bone 1, seen from above, though considerably altered (cf. Figs. 2; 12; 13, c). As I have suggested on p. 17, the purpose in representing here a differing aspect of the dragon being may have been to convey a distinctive message to the viewer.

I have taken element d of Figure F to be the equivalent of the head appendage (spine or crest) found on Figure A, Bone 1. The addition of oblique incisions along the central double line imparts to the appendage a certain semblance of a feather ornament. Representations of feathers with the shaft indicated by Each of the three personages in this relief has a floral motif attached to the front of his headdress (Piña Chan, 1955: 24, 25; Photos 15, 16; Pl. 19). The assumption that the jaguar is an earth divinity is supported by its association with the water lily. “The jaguars are closely connected with the earth in Lacandon tradition and in Maya art, for the jaguar god is often adorned with water lilies, a symbol of the earth” (Thompson, 1950: 74).

The word hix which has survived in Kekchi to designate the jaguar is also a name for the earth god, according to Schultze Jena, who adds that Ix is a propitious day to pray for rain and for maize of good quality (Thompson, 1950: 82).
double incised lines, some with indications of barbs as well, have been noted in Mayan sculpture by Proskouriakoff (1950: 48, 49, Fig. 16, IV-D1, D3). However, the incisions along the double line of element \( d \) are pointing in a direction opposite to that of the barbs of natural feathers. Nevertheless, and though not in the line of my reasoning, the possibility of an early representation of the plumed serpent is worth considering. Caso and Bernal (1952: 155-158, 161, 162) theorized that the appearance of the plumed serpent in the Valley of Oaxaca dates back to Monte Alban I. The discovery at La Venta of a stone monument portraying a plumed serpent (Monument 19) also evidences the Preclassic origin of this concept (Drucker, Heizer, and Squier, 1959: 197-200, Fig. 55, Pl. 49).

The wing-shaped appendages (h) found along the back of Figure F, as we have seen, have been deeply undercut along their left edges to impart to them an impression of being upraised. These elements may be spines, the most logical interpretation if the creature really represents a saurian. However, logic in that sense would not apply if the Mesoamerican artists based their representation of the dragon form not on logical, zoological, and anatomical factors but upon the symbolic and cosmological import assigned to specific and perhaps unrelated body parts.

The presence of the Tau or “T” sign on each half of the body sections (g) of Figure F is a major variation from Figure A. I take the Tau motif here to be a probable equivalent of the Mayan sign \( \text{Ik} \).

The Mayan name \( \text{Ik} \) corresponds to the second day of the 260-day ritual calendar. In Maya iconography God B is always represented by the Ik sign. God B is the god of rain who is also by extension a god of life, germination and fruitfulness. This Ik sign, however, should not be considered as a personal name since it is sometimes pictured on other gods. Its meaning may be “giver of life” (Thompson, 1950: 73). The presence of the Ik sign on Figure F probably indicates its benevolent nature.

The association of the Ik sign with a dragon monster would therefore be appropriate, since this creature symbolizes the earth and the abundance it brings forth.

Figure F seems to be undulating in a water or cloud medium. This impression is given by the lapping of the background over the body at one place in contrast to the lapping of the body over the same medium at another place (e, and h). Other suggestions of the pervasive water motif are also present on this figure. For example, the dentition of the being is supplemented by a pair of fangs in a form reminiscent of the representations of Tlaloc, the conventional rain god throughout much of Mesoamerica.

I should also like to call attention to a certain parallel between elements c and e of Figure F and a sign occurring on the headdress of the “God with Buccal Mask” portrayed on some Oaxacan urns belonging to the transitional period of Monte Alban (Fig. 14). This “glyph” is thought to represent a vase with water from which three leaves emerge; in Fig. 14, a, it is also decorated with ribbons ending in “chalchihuites.” The headdress sign appears to connect its bearer with Cocijo, god of water, according to Caso and Bernal (1952: 154). While the parallel drawn here may be fortuitous it is possible that an equivalent meaning is involved.

Another interpretation of Figure F could be that of a fish representation. The overlapping body segments (g) could represent fish scales, the fringed crescent elements (f) the gills, the lateral appendages (e) the pectoral fins, and

![Figure 14. Speculative Water Symbolism](a,b: Possible water symbols from Oaxaca. c: Elements c and e of Figure F. a, b: (Caso and Bernal, 1952: 155, Fig. 265). c: Carved femur from Chiapa de Corzo.)
the wing-shaped elements (h) on the back could be the serrated dorsal fins of some fish.

**Figure G**

The remaining hand which has been described as Figure G does not afford enough ground for discussion, other than that it appears obvious that a fourth personage existed in the space to the right of Figure D.

**Background**

The background of Bone 3 is essentially the same as that of Bone 1, being composed of two forms, the channeled areas produced by gouging and the flat raised surfaces surrounding the design. Both forms probably represent water and rain or clouds, hence also the sky.

**Comment**

As in Bone 1, the design on Bone 3 is apparently concerned with earth and water and their product, life. The result of this relationship has been symbolized in the combination of two creatures in one (Figures E and D); Figure F may thus represent the earth itself while Figure E might then represent the force which brings abundance forth, dependent upon Figure D which symbolizes the malevolent aspect of the elements.

The mythological figures are represented undulating between apparent sky and water elements, a scene which may symbolize the changing aspects of a principle such as seasonal drought and precipitation, or even birth, death, and rebirth or the cycle of plant life.

**THE PROBLEM OF ARTISTIC EVALUATION**

It is difficult to comment upon an art manifestation for which there is no known equivalent. The carvings of the Chiapa de Corzo bones suggest the presence of an ancient stylistic development somewhat distinct from the rest of Mesoamerican art, and it is to be hoped that more discoveries of this type will one day facilitate a definition of that style.

If we accept the premise that a style is the form of expression which best fitted the psychic aspiration of the people who created it, then we can have an insight into the cultural atmosphere concerned. For example, the main quality of the design of the carved bones is dynamism. This salient trait is undoubtedly a reflection not only of the religious aspect but also of the whole culture represented by the makers of the bones as well.

This is the kind of reasoning which, derived from a systematic study of a regional art style, could lead to a better understanding of some of the various factors determinant of ancient Mesoamerican cultural processes. Such line of inquiry, however, necessitates the overcoming of cultural biases, one of the milder and more frequent forms of which is the use of superlatives based on our own concept of the beautiful.

There is a prime fallacy which often detrimentally influences one in evaluating unfamiliar art forms. That is to judge such works according to one's own aesthetic values, with sometimes an unadmitted feeling of one's own "superiority" and broader knowledge of the arts. Following an evolutionary line of thought, we too often take for granted that our culture realizes a culmination in artistic experience and that this therefore gives us the power of better discernment. This is not necessarily the case. "There has been no progress that is specifically aesthetic between the art of stone ages and the art of today" (Read, 1955: 19). The subtleties involved in our present-day esthetic theories were most probably also felt by the ancient artist, instinctively or otherwise. As for skill he had nothing to envy the modern; his rudimentary tools were not a handicap. Tools are extensions of the hand and, manipulated by the expert, are felt as such. The association is so close that the resistance of the medium being worked only enhances the creative drive of the craftsman and tightens the hand-tool association. Therefore, we cannot judge the ancient artist by his technique or skill alone any more than we can the modern one. These traits alone do not determine the value of a piece of art; we have contemporary engravings executed with perfect technique, but which nonetheless do not reach above mediocrity.

Concerning the carved bones, there are two other tendencies against which we have to be warned. First, there is the interest produced by the esoteric quality of the elements and the objects as a whole. This in the mind of an unaware person can be easily mistaken for esthetic sensation and provoke a hasty artistic judgment. Secondly, there is the uniqueness of the objects which makes them stand out in
our minds; this might be a criterion for museology but hardly for art.

Esthetic experience implies the presence of at least two components: the objective part represented by the work of art and the subjective part represented by the observer. The nature of esthetic reaction thus depends to a great extent upon the system of values of the observer. Those values in turn depend upon the current environmental, economical and cultural factors plus the psyche of the individual. It is difficult to interpret ancient art without considering these factors.

We do not evaluate or feel the significance of drought and flood in the same way as the ancient Mesoamerican agriculturist. To him these disasters—"those unaccountable and adverse influences," as Malinowski says (1948: 12)—were primordial aspects to which there was no rational remedy. It was natural that he should turn for help to the gods, who, as far as natural disasters go, embodied all his hopes and his fears. The meaning of the sculptured representations of such gods is difficult for us to grasp because they are now detached from the emotional ambient in which they were born. For us the gods are dead; only their inscrutable remains are left to us. If we want to give some measure of life to these remains we have to go back to their origins and try to recreate the past. It is evident, however, that the process will be but a cold approach since we will comprehend analytically that which was meant to be felt synthetically.

The bulk of pre columbian art production was intended to be an embodiment of supernatural and religious power enhanced by the esthetic aspect. Art represented a psychic need which found its reward in the style of the religious iconography. For that reason the distinction between religious and esthetic values was probably not categorical and, though the priesthood and the artist were most certainly aware of the difference, the aim was probably to create an overlapping of the two values, thus identifying the esthetic effect as an attribute of the divine or mythological representation. This does not mean that the people did not know how to recognize purely esthetic objects, such as ornaments and much pottery form and decoration. But the gods were the overlords of all aspects of human destiny, and their appropriation of the esthetic effects in religious art emphasized their power over the people. That is probably why the "great art" of ancient America was an outdoor one, participating in the daily life of the people, unlike our present-day art which is an art of museums and non-participation.

III. DISCUSSION

In view of the fact that after extensive investigations no similar work of art has been found at Chiapa de Corzo or neighboring sites, either in bone or other material, it is quite probable that the four worked bones found in Tomb 1 were not the achievement of a local resident. Either the work or the artist must have been imported. As Franz Boas tells us (1951: 18), "virtuosity in technique and artistic productivity go hand in hand." The artistic technique and mastery of design evidenced in Bones 1 and 3 not only reflect long years of development but also considerable production and contact with other challenging masterpieces. No such tradition is found in the recovered artifacts from Chiapa de Corzo. The fine-ware pottery offerings of several tombs in Mound 1 consist only of imported vessels, emphasizing the point that the early residents here depended mainly on import for their artistic desiderata. The fact that the two fine-ware vessels associated with the carved bones appear to be imported from Guatemala or El Salvador at least suggests that the bones also might have had a southern source.

It has been observed that the Chiapa carved bones "combine elements of at least three interrelated art styles, early Monte Alban, Olmec-La Venta, and Izapa" (Dixon, 1958: 61; 1959: 110). All three influences are apparent, but that of Monte Alban is least obvious and that of Olmec-La Venta the strongest. The buccal mask elements and open-mouthed "swimming" figures of the bone designs alone
DISCUSSION

suggest the early art forms of Monte Alban. There is very little real resemblance of the carved bone designs to the Izapa style except for decorative details, such as the chevron, flattened U, and the inverted U; the “serpent” represented on Stela 2 (Fig. 6, c) bears no more resemblance to the Bone 1 dragon figure than do examples from elsewhere, such as those illustrated from Kaminaljuyu, Tonala, and Veracruz (Fig. 6, a, b, d-j). The Bone 1 jaguar-mask figure has a very similar parallel on the Kaminaljuyu monument (Fig. 8), but the resemblance of it and its Bone 2 counterpart to widespread examples of similar type attributed to the Olmec culture (Fig. 7) indicate that an artistic concept of wide-flung distribution is involved. The almost certain earliness of the many known Olmec anthropomorphic jaguar-mask portrayals and the close similarity of the bone Figures B and F to these representations support the probability that the Chiapa bones are the product of an art tradition somewhat earlier than that of the Early Protoclassic period of the tombs in which they were found. It is possible that the objects were heirlooms.

It is equally obvious, of course, that the Chiapa de Corzo carved bone designs are not thoroughly Olmec, even though the jaguar-mask figure is the dominant feature of all Olmec art. The jaguar-mask concept is particularly prominent at the site of La Venta but a crocodilian or “dragon” figure (not to be confused with serpent) is depicted there only once, and only once elsewhere at other Olmec sites (Tres Zapotes, Stela D; see Fig. 6, d).

The rudimentary dragon mask appears five times on one of the earliest Kaminaljuyu stelae, in a form closely resembling that of Bone 1 (see Fig. 6, a, b). This stone pertains to the Miraflores phase, dating approximately to the fifth century B.C. (Kidder and Chinchilla, 1959: 46). The Kaminaljuyu broken monument shown in Fig. 8, with the jaguar attributes, appears to be of this same approximate period also. On the other hand, the characteristic or “classic” Olmec occupation of La Venta (Complex A) is stated by its excavators to have occupied approximately the period between 800 and 400 B.C. on the basis of radiocarbon dates (Drucker, Heizer, and Squier, 1958:267). The Olmec sculpture at San Isidro Piedra Parada on the Guatemala

Figure 15. Possibly Ideographic Motifs of the Carved Bones

a: Stela 1, Piedra Labrada (Coe, 1957: 600, Fig. 2).
b: Bone 3, Figure E, elements g,h (headdress).
c: Bone 1, Figure B, element k.
d: Bone 3, Figure F, element c.
e: Bone 3, Figure E, element j.
f: Bone 1, Background central element; Figure B, elements f,i; Bone 3, Figure E, elements e,g; Figure F, element e.
g: Bone 1, Figure B, element i; Bone 3, Figure E, element f.
h: Bone 1, Figure B, element i; Bone 3, Figure E, element f.
i: Bone 1, Figure B, element i; Bone 3, Figure E, elements f,i.
j: Bone 3, Figure E, element i.
k: Bone 3, Figure D, right hand; Figure G (?)
l: Bone 1, Figure A, element a; Bone 3, Figure F, element g.
It is logical to suppose from all the above that the jaguar-mask concept originated in the north where it is most abundant, and that together with other Olmec traits (including skilled stone carving?) it moved south, becoming manifest in the previously non-Olmec Kaminaljuyu culture sometime towards the end or decline of the classic Olmec culture in its home area. Contemporary in Guatemala with these arriving traits appears the dragon figure, also for the first time.

The two mythological figures, anthropomorphic jaguar and dragon, appear separately portrayed at Kaminaljuyu, Izapa, and Tres Zapotes, but to our knowledge appear as a clearly combined or dual being on a definitely early level only on the carved bones from Chiapa de Corzo and on the jade earplugs (Fig. 7, g) from Tomb C at La Venta (Drucker, 1952: 160, Fig. 46, b). The latter objects have been assigned to Phase IV or the final Olmec period at La Venta, ending around 400 B.C. (Drucker, Heizer, and Squier, 1959: 267, 274).

While the evidence is admittedly scanty, the above discussion at least suggests that bearers of the Olmec jaguar-mask symbol, with its cosmological or ideological significance, moved south from their probable homeland in the Gulf Coast region sometime before the fifth century B.C., and that at some time before the time of Christ the jaguar-mask symbol had become fused with the perhaps partly parallel concept of the dragon or crocodile-serpent monster into a dual mythological being. The "Plumed Serpent" which became a common Central American art motif in later times typically had forearms and undoubtedly descended from a variant of this early dragon-monster prototype (Lothrop, 1926, Vol 1: 146-162). Presence of very early feline and "dragon" forms in South America, of course, makes it impossible to be precise about this development.

The mythological figures, as well as other basic motifs on both carved bones (Fig. 15), became elements of the subsequent Maya hieroglyphic system, but the area of transition is unidentified. In relation to Maya sculptured art, the Chiapa bones do represent a pre-monumental style which, while it is reflected in the conglomerate and undated style of the Izapa sculptures, to even greater extent reflects common Preclassic mythological concepts that appear to have influenced to greater or lesser degree all ensuing Mesoamerican high cultures.

A fuller understanding of the cultural and historical significance of postulated developments hinted at above can only be obtained through additional investigation, including that of other archeological sites with significant art traditions located intermediate between the Gulf Coast and Guatemala Highland extremes presently discussed.

The Chiapa carved bones are conclusive evidence that the Preclassic Chiapa de Corzo inhabitants were familiar with general Mesoamerican iconographical concepts which are better known to us from other areas. Implicit in this is that these people were also participating in a related theology, since there can be little doubt that the various design figures of the carved bones had deeply religious meanings.
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Figure 16. Views of the Chiapa Carved Bones
Figure 17. Plaster casts of the Chiapa carved bones.

a: Cast of Bone 1.

b: Cast of Bone 3.
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