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A CULTURE
SEQUENCE FOR
THE NORTH
COAST OF PERU

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THE CUPISNIQUE CULTURE

GEOGRAPHY

Cupisnique pottery was first discovered by the author, who found it only in sherds, which were very numerous, in the Cupisnique Valley (map 1, No. 2), located between the Jequetepeque and Chicama Valleys on the North Coast of Perú. The name Cupisnique was selected to designate the pottery style and the culture. Cupisnique culture graves in the Chicama Valley are located at the following sites: Palenque, Barbacoa, Salinar, and the haciendas of Sausal, Gasnape, Roma, Santa Clara, Casa Grande, and Salamanca y Mocollope.

Outside of the Chicama Valley isolated Cupisnique finds have been made in Pacopampa, Pacasmayo, Piura, Lambayeque, Chao, and Santa. The specimens from the various non-Chicama sites, although similar to the Cupisnique style, differ in distinct and peculiar characteristics.¹

CULTURAL AND CHRONOLOGICAL POSITION

Previous to the discovery of the first Cupisnique cemetery at Barbacoa, in 1939, the occasional specimens of the style, in pottery or stonework, which were found in the Chicama region, were classified as "Chavín" after the Highland temple site of Chavín de Huántar. The stone sculpture at this site bears a stylistic relationship to the Coastal finds. It is the opinion of the author, however, that the Cupisnique culture had its origin on the Coast rather than in the Andes. He believes that the important site in the Nepeña Valley was the principal religious center in primitive Perú from which the feline motif in decorative art radiated throughout all Perú.

It should be emphasized that, in considering these particular forms of the feline motif, we are probably dealing with the symbols of a religious cult which was embraced by various peoples. The characteristic local expressions of the feline motif as seen in the art of Paracas, Pacopampa, and Chongoyape are an evidence of this.

¹ A type of pottery discovered in the Virú Valley, resembling Cupisnique, has been called "Virú-Cupisnique" by the author. It appears likely that this type is a fusion of the Salinar culture and Cupisnique influence.

It should further be noted that, while most Cupisnique cemeteries yield grave artifacts which are characterized by the many forms of the cat representation, the feline theme is entirely absent in the cemetery of Santa Ana, which belongs to the Cupisnique culture but is a variant in some respects as the pottery is orange rather than dark in color. Thus it would seem that some of the tribal groups of the North Coast did not accept the feline idea from Nepeña during the Cupisnique times.

To conclude, the Cupisnique culture can be placed in the North Coast sequence as antecedent to Salinar, which was in turn followed by Mochica (Proto- or Early Chimu). Sculpture, ceramics, and the carving of small objects in stone and bone were advanced in development. The sculptural art is of particular merit. Metals were unknown, and the presence of small plates or disks of gold in some of the Salinar-Cupisnicoid tombs can probably be attributed to Salinar influence.² Settlements at this time were small groups of houses which may represent some sort of joint family arrangements. The Cupisnique culture contributes strongly in culture elements to the formation of the Mochica culture.

CULTURE

SUBSISTENCE ACTIVITIES

There is no evidence concerning actual agricultural practices or techniques, but several domesticated food plants were known at this early period. Ceramic representations of plants, as well as the original foodstuffs, have been found buried with the dead. These include peanuts, yuca, a cultivated species of caigua, and gourds. It is surprising that maize,³ potatoes, and other products common to the region in later archeological periods have not been discovered.

In addition to horticultural produce the Cupisnique people added llama and deer meat to their diet. The remains of shellfish and edible land snails testify to the importance of these as a food. Fish were, undoubtedly, another important food item.

It seems reasonable to believe that they domesticated the llama and the dog, as skeletons of both of these animals have been recovered from human graves.

ARCHITECTURE

The few known ruins in the vicinity of Cupisnique and elsewhere in the Valley of Chicama show three types of construction: (1) those of stone that the author considers most ancient; (2) those of conical adobes that pertain to a probable later period; and (3) a subtype of combined stone and adobe.

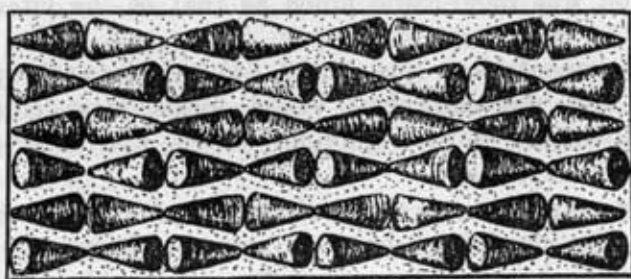
² Gold objects have been found in association with Chavin-like cultures, or cultures related to the Cupisnique, at Puerto de Supe and Chongoyape; although they have not, as the author states, been found with Cupisnique proper.—EDITOR.

³ Maize and beans have been found with the related early Ancón-Supe culture to the south.—EDITOR.

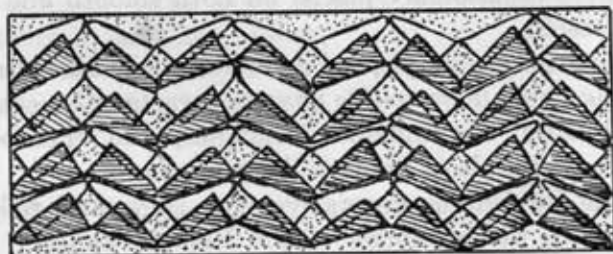
The sole pottery vessel of Cupisnique style depicting a house probably corresponds to the stone-adobe subtype. This vessel (pl. 61, *b*) shows a house of simple rectangular plan with a gabled roof. The rectilinear figure seen on one side seems to be a doorway.

On the Pampa de los Fósiles and at Hacienda Sausal (Barbacoa and Palenque) there are remains of walls constructed of fairly large, irregular stones set in mud and fitted with stone spalls.

Adobe structures of the period are built up of conical or odontiform adobes. Walls of adobe were built up by placing rows of conical adobes point to point (fig. 19, *a*) and then by filling the angles and interstices with clay mortar. In the construction of walls of great thickness, a double row of adobes was laid point to point. On these another layer of adobes was alined in reverse in such a manner that their pointed ends touched the bases of the lower row, and likewise fitted base to base with each other. The conical adobes always had their flat bases toward the outside, in order to form a flat surface for the wall. The adobes were laid on a slight incline, so that a transverse cut shows the rows as a series of undulating faces (fig. 19, *b*). The walls were given a uniform surface by coating them with clay plaster. Both solid circular and pyramidal constructions were initiated in this cultural period.



a



b

FIGURE 19.—Arrangement of conical adobes in Cupisnique structures. (Redrawn from Larco Hoyle, 1941, fig. 191.)

CLOTHING AND ORNAMENTS

The Cupisnique people wore a simple loincloth, leaving most of the body uncovered. The headdress consisted of a cap with an attached covering for the back of the neck. The bone ear ornaments mentioned below, necklaces of stone and bone beads, and bone rings were common adornment. Necklaces of beads usually had a central piece with magnificent engravings. Some of the dead were found with rings on two, three, and even five fingers.

ARTS AND MANUFACTURES

Ceramics.—Notwithstanding the technical skill displayed in the finished product, the pottery does not attain perfection. A coarse-grained clay and temper were used in making even those vessels which have highest quality. Precise formulas apparently were not followed in the mixing of clays and tempers, so that results were not uniform. Open-kiln firing, a method which appears to be associated only with red or orange-colored pottery, was not employed. Their closed kilns resulted in an imperfect (or reduced) baking of the clay. Only in the last cultural stage of the Cupisnique do red, maroon, dull purplish red, and cream-colored ceramics appear.

Impressions of molds on Cupisnique vessels show that pottery of this period was mold-made much as that of the later Mochica Period.

Ceramic representations (pls. 61, 63, 64) include: anthropomorphs, zoomorphs, and phytomorphs. Vessel forms most common are stirrup-mouthed jars, bottles, globular vessels, and truncated cones. Even houses are depicted.

Designs were incised on the unfired, dehydrated vessel surfaces much as in the carving of bone or stone. Afterward, color was sometimes applied (red, maroon, cream, and black) in the undecorated zones between the incised lines. Contrasts between smooth and rough surfaces were also utilized in pottery decoration. Roughening was accomplished by punctating, scraping, simple hatching or combing, and cross-combing the surface. Small bumps or protuberances were occasionally placed on both smooth and rough surfaces of the vessels.

Geometric motifs are simple, and include and combine straight parallel lines, angles, simple or double chevrons, rectangles, combined and divided diagonally, herringbones, triangles, and rhomboids. Star figures and leaves are also a common design element.

Much of the Cupisnique decorative style suggests a religious symbolism similar to the art forms of the Nepeña Valley. In fact, to eliminate from Cupisnique these Nepeña-like elements would seriously deplete the total range of decorative motifs. The Cupisnique representations of the Nepeña type are, however, noticeably modified.

In modeled pottery, the Cupisnique sculptor reproduced animals, god or demon forms, plants, and dwellings. In his work can be observed the first evidences of naturalistic representation of North Peruvian prehistory. Notable examples are the earliest known facial portrait jar of Perú and a scene composed of a mother nursing an infant (pl. 64, *c*). Much of the elaborate, sculptured funerary ware of the later cultures of Northern Perú undoubtedly were of Cupisnique origin.

Carving in stone and bone.—The Cupisnique craftsman excelled in the carving, sculpturing, and polishing of small objects of stone, shell, and bone. He developed techniques to control very hard rock, such as porphyry, granite, turquoise, lapis lazuli, and quartz. Out of these materials he made beads, amulets, small figures, rings, earplugs and ear pendants (pl. 62, *top*), various receptacles, and mortars. Working with turquoise, which was a scarce medium, he flaked the stone and set the flakes into a thick layer of plaster. Softer media, such as slate and anthracite, were also used; the latter was made into amulets and mirrors, which were ground and polished to a smooth surface, which was sometimes convex to reduce an image.

Bonework includes rings (pl. 62, *bottom*), which were skillfully carved with religious or demonic motifs, beautifully worked beads, earplugs and pendants, combs, spatulas, and needles. Animal bones, especially llama bones, and bird bones were used to make these artifacts.

The techniques developed by the Cupisnique artisans for this exacting and elaborate carving in such durable materials as the very hard varieties of rock are not known.

Textiles.—Balls of cotton yarn and fragments of carbonized cloth have been found in the tombs. The textiles are coarse and open, imperfectly woven, and done in a simple but uneven interlacing technique. Stamps made of pottery are a Cupisnique artifact, but there is no evidence to show that these were used to decorate textiles. It seems more likely that the stamps were used to decorate the human body. Several of the stamps present traces of red paint adhering to them. The bone needles were undoubtedly used to sew the textiles in making clothing.

Metals.—In no Cupisnique Period excavations has metal of any sort been discovered.

BURIAL AND RELIGION

Disposal of the dead was clearly associated with the religious ideas centering around the feline deity. In Cupisnique, a large percentage of the offerings to the dead are sculptured, modeled, or incised representations of the gods, particularly the feline. This is in contrast to the later cultures, especially Salinar, of the North Coast, in which

the seemingly highly religious background of the grave offerings was replaced by other themes.

The feline deity or a feline cult is widespread in Perú. When the cat demon appears in the Cupisnique culture it is conceived of anthropomorphically and is represented walking erect on its hind feet as a man. In some cases, cat and human representations appear on the same modeled face: half of the countenance feline and the other half humanized-feline, highly stylized.

The condor and the serpent appear to be other minor Cupisnique divinities.

Burial procedure was more or less uniform, with some variation in the arrangement of the body.

Graves.—The graves were irregular holes excavated directly into the earth. The shape of the grave depended upon the position and the degree of flexure or extension of the corpse. Some graves were circular, others elongated or elliptical. In some graves, the dead had been covered with angular rocks. Depth of the graves varied from 32 inches (80 cm.) to 6 feet (2 m.).

Disposition of the body.—The flexed position was the most common (pl. 69, *top*), the head being turned either to the left or right or doubled forward on the chest; the skeleton was found either on its side, on its back, or face downward; the legs were tightly flexed and usually drawn up together near the chest, but in the case of those individuals placed on their backs, the legs were sometimes spread apart and flexed on each side of the body. Some skeletons were only slightly flexed.

No definite orientation to the cardinal points was observed for either graves or the bodies found within them.

Coloring of the bones.—The bones were commonly colored with a red powder composed of clay with traces of lead and mercuric oxides. The coloring of the skeleton is not complete, although in some instances the bones are so nearly covered with the red pigment as to suggest that some of the burials were secondary. In some cases, the skull was covered with a double cloth beneath which was a thick layer of the red powder. Double burials in a single grave have also been found.

Red seems to have been the funeral color of Cupisnique as it was for the North Coast until the rise of the *Chimu* Empire. In one Cupisnique grave, a small quantity of green powder was found.

Grave offerings.—It is not known whether the dead were clothed for burial, but in the majority of cases artifacts and jewelry were placed with or on the body.

Many grave objects, including pottery vessels, are of a purely ceremonial or religious nature, although some graves contained pottery marked by fire as though in cooking. Vessels were placed at the sides of the body, and sometimes in the hand.

Remains of foods were found in the graves, and shells had often been placed in the dead man's hand.

The various objects and ornaments of stone and bone described above were all recovered from graves.

Dog skeletons are found in graves.

THE SALINAR CULTURE

INTRODUCTION

The first cemetery of the Salinar culture was discovered by the author at the site of the same name in 1941. Previously, four pottery specimens, acquired by the Museo Arqueológico "Rafael Larco Herrera" at Chiclín as a part of a much larger collection, had been set aside as being sufficiently distinctive to be a separate style. More pottery vessels of this new style were obtained by the museum from an "huaquero," and this led to the discovery of the Salinar cemetery in the upper Chicama Valley. The name of the type-site was applied to this heretofore unrecognized prehistoric culture.

GEOGRAPHY

Salinar is located on the Pampas de Jaguey Hacienda, only a few kilometers from the Cupisnique site of Barbacoa. It is a vast cemetery, 228 graves having been encountered within its limits to date. Within the cemetery, graves of the Mochica culture were found superimposed over Salinar burials, and Salinar graves were found which intruded through earlier Cupisnique interments.

As with burial grounds restricted to Cupisnique, Mochica, or Virú cultures, Salinar is situated out of the cultivated land on the sterile slopes of the hills bordering the valley.

Other Salinar type cemeteries have since been found to the northwest, east, and southeast of Hacienda Sausal. A few isolated graves of the culture have also been located between Sausal and the original Salinar cemetery.

In the Virú Valley, east of the port of Guañape, a typical Salinar cemetery was isolated, and in the same valley, adjacent to Hacienda San Ildefonso, some curious "hybrid" vessels were recovered which have resemblances to both the Cupisnique and Salinar styles. Three vessels from the Santa Valley are known which appear to be variants of the Salinar style; however, the provenience of these particular specimens is open to some doubt.

At present, the area in which Salinar-type finds have been made centers between Hacienda Pampas de Jaguey on the north and Hacienda Sausal on the south, a sector on the right side of the upper Chicama Valley. The only other important location for Salinar is Guañape in the Virú Valley.

CULTURAL AND CHRONOLOGICAL POSITION

The Salinar culture of the North Coast of Perú constitutes an important chronological and evolutionary step between the Cupisnique and Mochica cultures. In it we can observe the course of development of the ceramic and pictorial arts from one stage to the other. Except for the carved bone spatulas, which were done in a manner reminiscent of Cupisnique, only two feline representations were found among all the Salinar artifacts. These were pottery vessels. For some reason, as is the case with the Cupisnique culture site of Santa Ana, the Salinar peoples did not incorporate the feline motif into their decorative art. Its absence makes it likely that the feline symbolism was not a part of their religious beliefs.

In the evolution of social aggregations of the North Coast of Perú, Salinar takes its place among the cultures of limited geographical spread and political dominance which existed before the formation of the great organized regimes. But the people of Salinar contributed many valuable cultural elements to the formation of the first great civilization of the north, the Mochica.

CULTURE

SUSTISTENCE ACTIVITIES

Maize, which was not found in the Cupisnique culture, has been recovered from Salinar graves. Squash and gourds are also recorded for Salinar. Pottery representations of the *lúcuma* and the *pepino* indicate their former use as foods.

There are, however, no life representations or any other evidences that give a clue to types of agricultural practices that might have been employed by these people.

There are various sea shells, including clams and choros, in the graves, and there are shells of land snails. Skeletons of birds found with the dead suggest that they also served as food. Artifacts of llama bone are known for this period, and it is likely that this animal was eaten.

CLOTHING AND ORNAMENTS

There is considerable emphasis on headgear in Salinar clothing. Judging from pottery representations, there was a cap that was adapted to the form of the head. The cap was belted with a coiled strip of cloth or fibers. This coil or belt for the cap crossed, in some cases, in the front, with the two ends fastened upon the head. Sometimes the ends hung down over the back. There were also conical caps similar to the present-day "chullo"; and still others of a rectangular form, like a mitre, with a visor attached.

The hair was usually combed in bangs, down to the eyes in front and cut back into a step in front of the ears. On the sides and back

it was usually trimmed off at the level of the neck but sometimes hung down to the shoulders. A variation was a headdress where the hair was tied at the top, giving the head a conical appearance.

There is no evidence for face painting, but three vessels show individuals with incisions beside the eyes, nose, and mouth, which suggest that the Salinar people adorned the face with skin incisions, or which may indicate a beard, mustache, etc., etc.

Clothing covering the body is never well depicted. Some figures which do not show the genitalia may be the individuals covered with a long shirt of some sort. However, from fragments found on actual bodies of the dead, it is certain that clothing was worn.

They wore both circular and tubular ear pendants, finger rings, nose pendants, and necklaces of stone, shell, or pottery beads. These beads were cylindrical, spheroid, or truncated-conical in form. They also wore necklaces composed of bell-like pieces of pottery and pottery phalli. Bracelets were composed of small, cut snail shells.

ARCHITECTURE

No actual buildings have been identified as belonging to the Salinar culture, but two pottery vessels give considerable detail upon house types. One of these shows a round tower supported by step-designed pillars. A decorative frieze of continuous loops, which are perforated in the center, surrounds the tower. The roof is flat. The second house is four-sided and pent-roofed with an open front (pl. 66, c). The stairsteps, or stepped symbols, are the vertical supports on each side, and they are fastened together with beams. A cross-piece, circular in cross section rests upon these beams, and in turn, holds up the roof. The roof slopes toward the rear of the house. A great central upright in the front-center of the house helps support the crosspiece.

From these two ceramic representations, the development of a quite definite architectural style is observed. It is, unfortunately, impossible to know what materials were employed.

ARTS AND MANUFACTURES

Ceramics.—On first view, Salinar ceramics (pls. 66, 67) seem rather crude and simple; but closer inspection shows a marked technological improvement over Cupisnique pottery. The paste was carefully prepared with sifted ingredients. Firing usually resulted in an even red color throughout. This indicates the employment of pottery ovens permitting abundant oxidization during baking.

Ninety-three percent of the ware studied has a dull, natural red surface resulting from the firing; the remaining 7 percent is black, dark red, purple, or dark brown, and has a petrous appearance as does the Cupisnique pottery. The darker vessels have been bur-

nished with a smoothing implement, and some of the red vessels were apparently coated with a film which upon firing resulted in a surface finish similar to that of the transitional Cupisnique or Cupisnique-Salinar pottery.

Molds were used in manufacture, and handles and spouts were attached to the vessels later.

Bottle forms are the most common, although there are others. The principal shapes and their variations are given below:

I. Stirrup-mouthed vessels.

A. Human representations.

B. Zoomorphic representations upon truncated-conical or semi-globular forms.

C. Globular pitchers, truncated-conical or conical.

D. Stirrup-mouthed vessels with triple conduits.

II. Bottle-shaped jars with cylindrical spouts and flat, semicircular handles.

A. Anthropomorphic, entire body.

B. Zoomorphic, entire body and animal-head representations.

C. Globular forms.

D. Globular forms, elongated.

E. Truncated-conical, double truncated-conical, and conical forms.

III. Jars with spout and bridge handle, with a sculptured figure, upon globular or truncated-conical pitchers. (In this type appear the same variations as listed for the two types above.)

Among the bottle forms there are some with a short, broad spout which may be classified as "porongos." They have a globular or truncated-conical form and cylindrical, semicircular handles. There are also little or miniature globular ollas, truncated-conical vessels, and some with human heads and forms.

Surface decoration of the pottery was by both incising and painting. The Salinar potter effected the incising while the clay was wet and soft. The old feline motifs, so prominent in Cupisnique, have disappeared in Salinar decoration. The geometric motifs, however, continue, and are a little more developed and perfected than in the earlier period. Incisions are used to aid in anthropomorphic and zoomorphic delineations; and the roughening of the vessel surface, and the addition of small nodes or protuberances are additional techniques of nonpainted decoration.

Both red and white pigments were used to decorate the Salinar pottery, and were applied after partial dehydration and before firing. As noted above, most of the vessels do not have a slip or a base. The paint, usually white, was applied with a thick brush. The same geometric and other simple designs executed in incising were also made with paint. The stepped symbol, loops, stars, wavy lines, parallel arched lines, and volutes constituted the principal motifs of the Salinar artist. Paint was frequently used to bring out details of modeling as well as to draw independent designs. It is interesting to note that in this period are, seemingly, the beginnings of the ceramic paint-

ing art that was later to crystallize in the Mochica culture with its expertly drawn red and white designs.⁴

Although anthropomorphic sculpturing and modeling of Salinar pottery have not attained to the Mochica level of style, the bird figures, animals, plants, and houses show a continued advancement in technique. In the human figures, as in most of the representative pottery of the region, the form of the body is subordinate to the vessel shape. Because of this, heads are out of proportion, so that greater capacity can be gained for the vessel. In making the features, the hair is done with incised lines; the eyes made by placing a dot in the center of a simple incised circle, by an incised diamond, or by deeply indenting a small sphere of clay; and the nose is usually a small protuberance with holes in the sides. The mouth is a long incision, or double incision, with small pieces of clay inserted or with indentations to serve as teeth. The ears are represented as very large. Breasts and genitalia are indicated in a disproportionate size. Some attempt was made to give anatomical proportions to the lower extremities; but the arms are thin and poorly made. Fingers are very crudely executed with incisions.

In the sculpturing there is a tendency to depart from naturalism and stylize certain features; yet, in the animals and birds the artist undoubtedly tried to capture natural qualities and attitudes. Some of these are: cats, monkeys, rats, owls, parrots, doves, hummingbirds, and other birds, unidentified.

Plants include the cactus, lucuma, and pepino.

The appearance of pornography in modeled ceramics, because of its important position in Mochica art, should be especially noted. The scenes depict natural coitus, and there is no perversion.

Carving in stone and bone.—A few bone spatulas (pl. 68, *top*), with incised designs somewhat similar to those of Cupisnique carved upon them, appear to be the only tie to the outstanding carving of the earlier period. These artifacts do not have the same perfection, nor do they treat the design motifs as in Cupisnique.

Sculptured stone has not been found in connection with Salinar. Beads of turquoise, and other stones, are of the most simple shapes and unadorned.

Textiles.—The fragments of cloth from the graves which have not disintegrated are of a tight warp and of a textile type commonly called "lawn." The weave is simple interlacing of one or two strands, which are well twisted and uniform. The material has not been identified, but is probably wool or cotton.

Needles, both of bone and of wood, were presumably used in sewing garments.

⁴ See Bennett, this volume, for reference to the "White-on-red" style, pp. 92, 97.

Metals.—Thin, hammered gold objects and jewelry are found in Salinar graves. This is the first appearance of metal in the culture sequence of the North Coast of Perú. Most of the gold was beaten into thin sheets, and rudimentary openwork forms were made. However, the technique of soldering gold was known.⁵

A ring, a nose ornament, and circular, oval, and trapezoidal fragments of gold were recovered from the graves (pl. 68, *bottom*). All objects weighed less than 2 gm. each.

In one tomb a small ovoid sheet of metal was found, covered with a greenish oxide. This suggests that the Salinar artisans had mixed copper with gold, or that they had used an impure gold. Unfortunately, this fragment is so small that it would have to be destroyed to make a quantitative chemical analysis.

BURIAL

A very definite mode of burial was practiced. Bodies were interred at full length with the legs extended and slightly crossed (pl. 69, *center*). Usually, the individual lay on his right side and was supported in this position by pottery vessels and rough stones. Arms were extended at the sides, or, in some instances, the left hand was placed over the pelvis. Sometimes the legs were slightly flexed. The degree to which this pattern of arranging the body was followed is indicated by the fact that only 2 percent of all burials recorded had the bodies placed on the left side.

The outline of the grave was an elongated ellipsoid. Often the bodies were placed along the side wall of the grave and were then covered with great slabs of stone leaned against the wall, forming a sort of crude sarcophagus. Or, as a variant of this, the wall of the grave was undercut and the body and accompanying funerary offerings placed in the niche and sealed off with stone slabs.

Occasionally, two individuals were placed in a single grave. In these cases they were extended side by side usually back to back, with one at a slightly higher level (6 inches or 15 cm.) than the other.

From one to three pots were placed in the grave with each body. They were put either at the head, thorax, shoulders, legs, arms, or feet.

Red powder was found in most of the graves but not as small bundles of powder as in Cupisnique. It was scattered in chunks or lumps within the grave or was placed in special receptacles. In color, it is not as vivid a red as that found in the Cupisnique graves, being more of a dark red or sometimes a purplish red.

The dead were covered, or partially covered, with cloth, and adorned with necklaces and bracelets. In the mouths of some of the

⁵ This is one of the earliest evidences of soldering from Perú. See Root, volume 5, *Handbook of South American Indians*.—EDITOR.

skeletons were found the small oval or circular sheets of gold, possibly placed there for magical purposes. It is to be noted that this custom was accentuated in the Mochica culture.

In addition to pottery, other funerary offerings include: gourds that had been filled with meat, pumpkin seeds, maize, mollusks, land snails, birds, dogs placed at the feet of the dead man, conical pieces of white chalk, mortars, fragments of rough quartz, and round stones, usually white in color.

The burial form of Salinar antedates the Mochica burial type in which the dead person is placed in the grave at full length but on the back. It is likely that the stone-slab tombs of Salinar are the precursors of the Mochica stone-lined box tombs. It should be mentioned that the burials of Salinar-Cupisnique type, found in the Virú Valley, are not of the Salinar type but the flexed type of burial which characterizes Cupisnique proper.

Salinar bodies follow no very definite orientation in the graves with reference to the cardinal directions; however, the majority of them are oriented within the arc of 35° to 65° west of magnetic north.

SHAMANISM

The first representation of shamanism or medical practices for the North Coast of Perú are recorded in Salinar. One vessel shows a seated individual with another person before him who is reclining on his back. The seated individual has placed his hands upon the patient in much the manner of the Mochica shamans who are shown in the pottery of that period (pl. 67, *d*).

THE MOCHICA CULTURE

GEOGRAPHY

The Mochica territory includes that part of the Coastal belt of North Perú lying between lat. 7° 36' and 9° 20' S., and between long. 78° 51' and 79° 28' W. It embraces the rich valleys of Chicama, Santa Catalina (Moche), Virú, Chao, Huamanzaña, Santa Ana (Lacramarca), and Nepeña, an area of approximately 6,585 sq. km. (about 1,600 sq. miles).

Mochica pottery has been found north of Chicama, in the Valley of Jequetepeque, only in small quantity. In the region of Pallasca, in the Sierra of the Department of Ancash, there are vessels and stone objects showing Mochica influence. These would indicate that Mochica influences, carried by conquerors or traders, reached well into the interior.

CULTURAL AND CHRONOLOGICAL POSITION

The cultural elements of three periods—Cupisnique, Salinar, and Virú Negative—all contributed to the make-up of the Mochica culture.

In analyzing the Mochica ceramics, the author sees evidence of four progressive periods. The first two are represented only in the Chicama and Santa Catalina Valleys; and the last two are found in all of the North Coast valleys of the Mochica territory. It is the author's opinion that the Mochica style originated in the Chicama Valley.

Throughout the four Mochica ceramic periods are seen the rise, evolution, and decadence of the arts. Beginning in naturalism, the trend is toward stylization, followed by a rejuvenation, and then a degeneration.

During the final stage of decadence, there appeared a new culture and people in North Coastal Perú. These people, of whose origins we are not sure, left behind a pottery of slightly modified Tiahuanaco style. Their influence appears impressed upon the various institutions and ways of life of the previous Mochica.

A fusion of this Tiahuanaco style with the Mochica left a hybrid pottery (Kroeber's Cursive), which is the true Middle Chimú style because it links the Mochica with the Late Chimú.

CULTURE

SOURCES OF INFORMATION

This summary is based principally on observation of over 30,000 ceramic vessels, many of which are realistically modeled and painted to represent a wide variety of cultural activities, and on a study of many other Mochica artifacts of metal, stone, wood, and bone. These objects are in the Rafael Larco Herrera Museum of Chiclaín, Perú. The summary also includes information obtained by the author during many archeological excavation and reconnaissance trips in the North Coast area. The ethnology of present-day groups, both of the Coast and Highlands of this region, supplements the archeological data.

SUBSISTENCE ACTIVITIES

Agriculture.—The Mochica people were advanced agriculturalists. Their agricultural activity is evident today not only in the rich valleys that they dominated but also in the marginal areas that they brought under cultivation through great irrigation works. In all the valleys there are canals and aqueducts, some of which are still utilized today. The canal of La Cumbre, 113 km. (about 75 miles) long, is fed from the headwaters of the Chicama River and irrigates the fields adjacent to the site of Chanchan. In order to cross ravines which interfered, numerous aqueducts were built, following the plans of canals that were traced for the purpose of irrigating new lands. The most important are those of Ascope (pl. 72, *top*) in the Chicama Valley, Mampuesto in the Santa Catalina Valley, and Tambo Real in the Santa Valley. The aqueduct of Ascope, which was constructed by sedimentation, has a length of 1,400 m. (about 4,500 feet), a cubic

content of about 785,000 cu. m. of earth, and a weight of more than two million metric tons. This Mochica aqueduct is one of the master engineering works of ancient Perú.

The Mochicas employed a system of straight furrows and small leveled plots with retaining earth banks for irrigating crops on the flat lands, and curvilinear furrows for irrigating sloping terrain. For fertilizer they used bird guano from the islands.

The principal plants cultivated were maize, beans, peanuts, potatoes, yuca (manioc), sweet potatoes, ulluco, aji, maize, pumpkins, gourds, chirimoyas, custard apples, pacaes, granadillas, lúcumas, pepinos, coca, and cotton. In addition, other plants were used for medicinal purposes, including varieties of cactus, habillas, ashango, maicheles, and many other curative herbs.

Hunting.—The Mochicas hunted to obtain meats to supplement the plant foods. Nets and the *estólica* (spear thrower) and dart were used to kill deer; the blowgun and spear thrower for birds, such as doves and wild ducks; and maces or clubs for sea lions. The domesticated llama and guinea pig were eaten. The Mochicas gathered land snails and hunted iguanas as additional foods.

Fishing.—The Mochicas fished in the ocean from large balsas, much like those now seen on Lake Titicaca. They also had smaller balsas similar to the small totora balsas, or "caballitos," still used today by the native fishermen of the Coast. The construction of these little craft appears to have remained unmodified through many centuries. The principal fishing equipment included nets with gourd floats, unbarbed fishhooks of many sizes, and wooden harpoons used for large fish. Pottery representations indicate that the Mochicas caught fish ranging in size from the shark to the anchovy. From along the rocky beaches, they collected shellfish, many species of which have either since disappeared locally or were brought in from farther north in Mochica times. *Spondylus pictorum* and *Strombus galeatus* are examples of the latter.

Food preparation.—The Mochicas prepared various dishes of meats mixed with vegetable foods. In a container consisting of two gourds fastened together with a cord they placed doves or guinea pigs over maize. They cooked guinea pigs on small spits over hot coals. They ate from gourd, pottery, and silver food containers with sticks sharpened at both ends or with pottery spoons. Large, bell-shaped vessels were receptacles for kitchen refuse.

Chicha was a fermented maize drink and was served in gourd, pottery, or silver containers.

Domestication of animals.—The llama and the dog were the principal domesticated animals. In addition, the Mochicas captured young deer, pumas, monkeys, and parrots in order to have them as household pets.

ARCHITECTURE

General architectural knowledge also evolved from Cupisnique into Mochica. The Mochicas did not build great cities of the order of Chanchan, but their structures are handsome and reveal considerable knowledge of architectural principles. They attained esthetic harmony by studying the strength and nature of their building materials.

Construction was principally with rectangular, mold-made adobes. These were developed from the odontiform adobes of the earlier periods. Rough stone was used for wall foundations. In large buildings, or in walls built along the sides of roads, semicircular, bread-shaped adobes were used. Roofs were made of straw, cane, matting, and totora, supported with algarroba beams. Algarroba timbers were also used as a framework for the great masses of adobe in the solid pyramids.

Dwellings were usually small and consisted of rooms connected by rectangular doors, some of which were arched at the top.⁶ Houses frequently had patios and terraces, and some had small entrance rooms. Roofs were gabled, with an open space between the two slopes at the peak, so that the houses not only provided shelter against the rains but were also well ventilated.

Palaces were erected on outstanding sites or on the tops of pyramids. They were approached by broad stairways. Both exteriors and interiors of the palaces were decorated with symbolical figures executed as frescoes and polychrome murals in relief. Adobes with decorative geometric stucco motifs were used in the building of palaces and temples.

Forts, located at strategic points in the Mochica territory, are solid structures. Often they are surrounded by massive high walls. The stairs, in contrast to those of the palaces, are narrow and steep, to prevent free access. The smooth walls are inclined, sacrificing artistic harmony to obtain strategic efficiency.

Temples were built upon the great solid pyramids and were decorated with complicated polychrome friezes of a religious character.

The principle of the column was known and frequently employed. On the Tambo Real Hacienda (pl. 72, *bottom*), in the Santa Valley, a monumental column 26 feet (8 m.) high stands on the center of a great pyramid.

The Mochicas knew and controlled the techniques of clay covering, plastering, and stuccoing for wall finish.

ROADS

Sections of roads are still in existence on the pampa of Chicama and in the valley of Santa. These roads were 9.80 m. (about 33 ft.) wide

⁶ Special attention should be called to the arch form mentioned above. There are examples of it in Mochica temple and tomb construction. Although known at this time, the arch was rarely used.

and ran the length of the territory, even through the most precipitous regions. Minor branches extended back from the main roads. Small rectangular platforms at intervals along the roads are presumably foundations for buildings which housed messengers.

The road width of 9.80 m. (about 33 ft.) should be noted. A pyramid of this period is 98 m. (about 330 ft.) square at the base. This consistent factor, discovered in many other measurements, suggests that the Mochica unit of measure corresponded to 98 cm. (about 3.3 ft.).

DRESS AND ORNAMENTS

Clothing and jewelry of men were far more elaborate than that of women. Women, as a rule, wore only a large shirt, or *camisa*, and, rarely, simple ear pendants.

Men wore a breechclout, an underskirt, a sleeveless undershirt, a decorated overskirt hanging nearly to the knees, and a very showy, short-sleeved outer shirt that came down a little above the fringe of the underskirt. Both inner and outer clothing were tied around the waist with a belt decorated with artistic motifs. The Mochicas went barefoot but painted their feet and lower legs to resemble boots. Headdresses are sumptuous, but varied. Some are relatively simple, being a circular band or turban. Others are more complicated and are harmoniously combined in three parts: the cap with neck covering; the chin strap; and the turban proper, that surrounds the head like a crown and is adjusted over the other two parts. The turban was made of the finest cloth, of various colors and decorated with figures, or of treated feline or monkey skins. Stuffed birds, and pieces of gold, silver, or copper wrought in the shape of animals, ceremonial knives, and disks adorned the headdress. The final result as seen on dignitaries such as war leaders, rulers, or priests was very impressive.

These turbans were distinctive of rank, office, or profession, and serve to identify the interpreters of messages, the messengers, fishermen, agriculturists, priests, governors, and military chiefs.

As jewelry they wore great ear ornaments of gold, silver, copper, or of bone or wood with inlays of turquoise, mother-of-pearl, and lapis lazuli. The ear ornaments are simple circular and tubular forms, tubes with ridges or rosettes at the end, and varieties of pendants. Discoidal and other varied forms of nose ornaments were worn by nobles through a perforation in the nasal septum. Necklaces are of geometrically shaped beads, series of little idols, fish, stylized felines, fruits, and seeds. They were made of semiprecious stones (turquoise, lapis lazuli), quartz, rock crystal, gold, silver, copper, bone, shell, wood, and pottery. The central pieces of the necklaces were large beads representing human or mythological beings. The Mochicas also wore finger rings and covered their fingernails with thin sheets of gold.

Although most of the actual textiles have decayed, it is known that the Mochicas knew and used llama or vicuña wool and brown cotton. Zoological, botanical, and geometric motifs were used in the decoration of fabrics; in addition, they attached gold and silver disks to their garments. Feathers were also used to adorn clothing and turbans.

They painted the face and body with geometric figures, and they made incisions in the skin of the lips and cheeks to represent foxes, iguanas, felines, serpents, birds, and simple linear arrangements. No evidence of tattooing has been found.

TRANSPORTATION

The llama, the only domesticated beast of burden, carried cargo in bags, saddle-bags, and large baskets. There is also ceramic representation of llamas carrying mutilated persons.

Ocean travel along the coast was in the great balsas and in the smaller "caballitos" of totora. These craft were propelled with long paddles of wood or planed-off sections of Guayaquil cane.

MANUFACTURES

Ceramics.—The Mochica potter carefully selected his clays to obtain a uniform paste. First, the potter modeled a thick-walled clay model (pl. 71, *a*), which was fired. Over this he made the molds, which were cut vertically into two parts, following the groove down the sides of the model. From these negative casts (pl. 71, *b*, *c*) were obtained two positives, which were joined to form the vessel. The spout, handle, and base were made separately and added to the main body of the vessel. The junctures were obliterated; and the completed vessel was polished, painted, and exposed in the open air to dry before firing. Pottery was fired in open ovens, producing complete oxidization.

For paints, they used colored clay mixed with silicious materials that when fired produced a brilliant surface. Polishing was done with spatulas of bone. In special cases they inlaid the pots with turquoise, slate, and bits of gold and silver.

Textiles.—The Mochicas prepared thread by hand on a spindle having a whorl. Textiles were woven on hand looms. The few existing specimens of cloth and the pottery representations show the great variety of fabrics used for clothing and their rich decoration. Both open-mesh and close-weft weaving was employed. The thinner cloth served as underclothing and the more tightly woven for the outer garments. The textile industry was in charge of the women.

Preparation of skins.—Hides were prepared both depilated and with the hair. Judging from the appearance of the treated skins, they used lime and alum to treat and bleach them, obtaining a smooth,

consistent, and flexible finish. Complete small animals and birds were stuffed for turban ornaments.

Work in gourds.—The gourd, an important article for domestic use, was decorated with incisions and inlays.

Metals.—The Mochicas obtained gold, silver, copper, and lead (pl. 71, *e, g, h*). The quantities of these metals which are found suggest that they not only got native metals but may have known techniques of extraction of ores. Pure lead, perhaps from silver-lead ore, has been found in tombs.⁷ They alloyed gold with silver and with copper. They also gilded silver and copper with a gold amalgam that was put on by the means of fire. A sheet of copper is gilded with a very fine layer of gold hammered over it. In soldering, they used alloys of silver and gold to solder silver, and alloys of copper and gold to solder gold.

Sheets of gold as fine and delicate as note paper have been found in Mochica graves. Cascabels were made on stone molds, and metals were polished with stone burnishers.

GOVERNMENT

The remains of urban constructions, the expansion of agriculture through the great irrigation works, the outstanding architectural monuments, and the network of roads throughout the Mochica country attest to a life organized by mature governmental methods. In the high degree of artistic and technical attainments, it is suggested that governmental influence was directed toward great material achievements and the diffusion of cultural knowledge.

The Grand Señor, or Supreme Ruler (Cie. quich),⁸ considered of divine origin, was dominant throughout the Mochica territory. His visage is encountered on funerary ceramics in archeological sites throughout the Mochica valleys. Sometimes these vessels represent him in full youth; at other times he appears in the sober majesty of the adult ruler. The Cacique (Alaec) was the regional governor, and his effigy is encountered only within the valley or sector of his particular administration. The Grand Señor, Cacique, was the military chief as well as civil ruler. Representations of this man with great feline teeth indicated his divine origin and religious functions.

Commoners approached the rulers with attitudes of great reverence, their hands placed together and head inclined toward the ground. When invited to a banquet by one of the chiefs, the guest always sat on a lower level while the host ate upon a throne covered by a sun shelter. Women never appeared at such social functions.

⁷ The presence of cinnabar (mercuric ore) in Mochica graves shows that this mineral was known. The author considers it not unlikely that the Mochica controlled techniques by which they freed mercury from the cinnabar and used this metal in the extraction of gold ore.—AUTHOR. See Root's discussion of metallurgy in prehistoric Perú, volume 5, Handbook of South American Indians, in connection with this.—EDDIE.

⁸ This name and that of the divinities, mentioned subsequently, are taken from a vocabulary of the historic Mochica collected by Father Carrera

The rulers presided at festivals, hunted and fished as a diversion, and were conducted on magnificent litters, attended by a great retinue, to different parts of their realm. During such visits or journeys they maintained contact with all parts of their domain by means of messengers.

The rulers were severe and unmerciful in the administration of justice. Delinquents were punished with mutilation: cutting off the upper and lower lips, the nose, and the feet. In serious cases, they stripped the guilty of his clothing, skinned off his face, and stoned him to death. Afterward the body was abandoned to the birds of prey. Such sanctions were apparently carried out in public with great display.

WARFARE

The war chiefs were both protectively and gorgeously attired. The helmet or headdress was amply quilted in order to deaden the blows of the mace. The great ear ornaments were probably not only a mark of rank but also a protection for the side of the head and face. Warriors wore a breechclout, skirt, shirt, and bracelets of metal that protected the wrists. The common warrior usually wore a semicircular or conical helmet of great thickness, and carried a mace that had a sharp metal point on the handle end. He also hurled darts with the *estólica*, or spear thrower (pl. 71, *g*). A semicircular knife was used in close combat. Blows of the mace were warded off with a small circular or quadrangular shield fastened to the wrist of the left arm.

Armies made use of scouts, who moved ahead of the vanguard of the troops. These soldiers are represented on the pottery as keeping watch from the peaks of hills. War trumpets were made of the *Strombus galeatus* or of pottery. Dogs were carried with a special harness into battle in order to distract the enemy in the clamor of the battle (fig. 20, *a*).

Prisoners were conducted naked from the field of battle (fig. 20, *b*), and were sacrificed to the gods by being thrown from the mountain tops (fig. 20, *c*). Their bodies were afterward quartered and taken home as trophies.

LIFE CYCLE

During childbirth the mother, in a sitting position, was sustained by a man with the midwife assisting. A mother carried her small baby on her back in a manta or in a small cradle made of wood or wild cane, in which the baby was held by a net which allowed it freedom of the legs. Children were given pottery toys representing animals, humans, and utensils. They were also amused with rattles and whistles. As children, they were schooled in a specific art or industry.

It is observed that there are very few ceramic representations of children; they appear only with their mothers or other adults. Tombs of children are rarely encountered. The children were buried with their

toys some of which are excellent miniatures of regular pottery vessels.

In general the children ran naked, although some of them wore a very simple shirt.

Women had full care of the children and conducted other domestic work. They also helped the men in more arduous labors. The men engaged in construction work, irrigation, tilling the fields, working in the mines, and in the opening of roads. They fought wars, hunted,



FIGURE 20.—Mochica life scenes from ceramic paintings. *a*, Battle scene, note dog; *b*, warriors with nude captives; *c*, prisoners thrown from cliffs. (Courtesy Rafael Larco Hoyle.)

and fished and were also concerned with the institutions of religion and government, and the system of ideographic writing and the transportation of their messages.

BURIAL

The dead were placed on their backs, at full length, and with one or both hands over the sacral region. Graves were elongated excavations sometimes lined with stones, cane, or adobes. Pottery, food, and other offerings were placed in niches and around the body. Pottery was the principal votive offering. Vessels representing dignitaries, foods, divinities, animals, life scenes, or utensils were placed around the body.

Apparently, the Mochicas believed that, when the flesh decayed, life was maintained in the skeleton or bones. Thus, their art depicts scenes of dancing skeletons; and in some tombs there have been found hollow canes that led from the mouth of the dead to the surface of the ground, presumably with the idea of offering the deceased food and drink by this device.

In the mouths of the dead, in accordance with their status, were placed sheets of gold, silver, or copper wrapped in a piece of cloth.

ESTHETIC AND RECREATIONAL ACTIVITIES

Art.—The Mochica artist was inspired by life around him, which he observed in detail and represented with great fidelity. Both in modeling and painting he captured a range of human emotions, including nobility and vice, religious sentiment and eroticism.

Modeling and relief work dominated ceramics (pl. 70). Red and cream colors were added to modeled pieces to vivify the sculpturing.

Their painted scenes lacked perspective, composition, and individual treatment of motifs. The pictures do, however, show great movement and give a complete idea of the scene represented. Zoomorphs, phytomorphs, anthropomorphs, and cursive and geometric figures were the common elements of their art. In their geometric motifs they employed many of the elements common today in the native art of the North Coast of Perú. Their portrait vessels (pl. 70) are outstanding.

Their artistic abilities were also expressed with great skill in bone, wood, and stone (pl. 71, *i*), and they have left behind true objects of jeweler's art, wrought in metals.

Festivals.—The Mochicas had festivals comparable to those held today by the Indians of the Coast and Highlands. They masqueraded as animals or strange beings, and executed warlike and religious dances to music. They also reproduced dramatic scenes. Some of their pottery shows scenic representations of battles of the god with demons.

Music.—For musical instruments, the Mochica had the flute, panpipes, drum, tambourine, straight and coiled trumpets, pututos

(trumpets made of *Strombus galeatus*), and whistles. They had cascabels and jingles of silver, copper, or pottery, and maicheles (seeds that when rattled make a strident sound) for noise or music. These various instruments were used to accompany single or group singers. Some of the panpipes seem to indicate a seven-note scale and knowledge of semitones.

Narcotics.—Coca was reserved only for the great chiefs and persons of high rank. There are no representations of women taking coca. As today, coca was chewed in quids carried in the cheek. Lime, contained in a little gourd and mixed with coca by means of a long pointed needle, was used to release the stimulating alkaloid from the coca.

RELIGION

Mochica religion centers around feline symbolism, and it seems reasonable to believe that in this period we have, with a new elaboration and sophistication of animal worship, a continuation of the old feline deity of the North Coast. In Mochica art, the feline deity was anthropomorphized, and developed into a Supreme Divinity (Ai apaec), shown as a man with great fangs, a wrinkled face, and catlike whiskers spreading from the nose. The Supreme Divinity ruled the destinies of the world, but lived like people and could reveal himself both as a man and as a god. That he is a human embodiment of divinity is shown by vessels with four faces, on which human and feline faces are back to back and where the cat eyes are those of the Divinity.

Numerous vessels show this Divinity receiving sacrificed human beings who are thrown from a high cliff. The Divinity sits at the foot of the cliff receiving the blood of the victim as a precious offering. The Supreme Divinity is also shown as an agriculturist (pl. 70, *b*), shelling maize; as a fisherman (fig. 21, *a*), sailing the sea in a "caballito" (small balsa) (pl. 70, *g*); as a doctor; as a musician; and as a hunter. He is also pictured holding up the rainbow in the form of a two-headed serpent, and as a god of war whose intervention is necessary for victory. He furthers human propagation, as is shown by scenes in which, in the moment of coitus, two of his aides, anthropomorphized birds, prepare a concoction which is poured upon the genitals. The Supreme Divinity also takes the form of foods, animals, and even telluric and meteoric elements. As a personification of Good, he fights the demons (fig. 22, *b, c*), anthropomorphic vampires (pl. 70, *c*), crabs, fish (fig. 21, *b*), sea-demons, a strombus-shell dragon, a demon of the stones, a two-headed dragon with one head set in the tail, and a serpent with ears. In these fights he is always victorious.

There is also a court surrounding the Supreme Divinity. An anthropomorphic lizard is the servant; a dog is the faithful friend; a cormorant attends the Divinity while fishing, propelling the balsas; an anthropomorphic owl is a medicine man; an anthropomorphic falcon

is the shield bearer; and an anthropomorphic marine eagle is the messenger who fetches the blood of the sacrificed. The anthropomorphic buzzards and falcons attend the Divinity when he returns wounded from his contests with the demons.

There is also a zoophytomorphic figure, which presides over agricultural scenes in which the Divinity takes part and which symbolizes the union of water with plants. It has a frog's body and a feline's nose and extremities. Yuca and lima beans grow from the body.



a



b



c

FIGURE 21.—Mochica scenes from ceramic paintings. *a*, Aiapaec fishing; *b*, anthropomorphic fish demon; *c*, Supreme Divinity reading bean ideographs. (Courtesy Rafael Larco Hoyle.)

The great political chiefs were also high priests, and judging from their clothing in religious scenes, probably formed a true caste.

The great number of pottery vessels depicting religious scenes or beings indicate that the life of the Mochica people was strongly interwoven with religious beliefs and feelings, based on nature worship.



FIGURE 22.—Mochica fantasies from ceramic paintings. *a*, Hummingbird warrior, symbolizing bravery; *b*, *Strombus galeatus* demon; *c*, two-headed demon. (Courtesy Rafael Larco Hoyle.)

SHAMANISM, MEDICINE, AND SURGERY

The specialists in the curing of disease were of high lineage and were connected with the religious institutions. They are shown attired as chiefs, with feline attributes. Women also seem to have entered the medical or shamanistic profession, and are shown dressed in a long tunic that covers them from head to feet.

They believed in magic and witchcraft in the curing of illness, but they also were familiar with curative herbs. These include: *habillas*, used as a purgative; a variety of cactus that produced drunkenness; *ashangos*; and numerous other, unidentified herbs.

In curing, the sick man lay on his back, and the specialist sat beside him praying, chanting, and shaking gourd or pottery rattles. The curer also listened to and manipulated the patient's body. The shaman is always portrayed as carrying a small box of curatives.

In surgery these people knew amputation, cutting off the feet, legs, arms, hands, lips, nose, and male genitalia. For the removal of tumors (pl. 70, i) they used circular knives. In amputating arms and legs, they took great care and precision, cutting the bone at a level higher than the flesh incision in order to leave a healed stump.

A femur and ulna have been found which show a perfectly healed fracture, implying that they knew how to set bones. In pottery there are representations of simple orthopedic devices designed to aid those who had lost legs or feet.

There is evidence of the following infirmities: Idiocy; harelip; goitre; clubfoot; endematoses of the face, eyelids, and feet; uta; Pott's disease; luetic facial paralysis; generalized syphilis;⁹ mixedema; blindness; sarcoma; and smallpox.

Other evidences from the bones themselves indicate osseous tumors and syphilitic softening of the cranium.

A fractured skull was found with cicatrices of healing; but there are no evidences of trephination.

There are interesting examples, in pottery, of what may be "Siamese" twins of two types: those united posteriorly and those united in front.

There are many ceramic representations of isolated penises and of erect penises on individuals. All appear without prepuce, indicating that the Mochica, in general, practiced circumcision.

SEXUAL PERVERSIONS

In Mochica pottery there are many representations of sexual aberrations. These include: Male onanism; female masturbation with aid of an artificial instrument; fellatio; pederasty; cunni-linctus;

⁹ See volume 5, Handbook of South American Indians, for fuller discussion of prehistoric pathology in this region.—EDITOR.

lascivious acts between one man and two women; lascivious acts between two men and one woman; and unnatural positions in coitus.

Some of these ceramics are definitely made with humorous intent; others may carry moral implications, such as scenes which depict the physical and moral destruction of a sexual pervert. There seems to be no particular reason why the vessels were placed in graves; for instance, accompanying an infant of a few months, a vase was found representing fellatio.

IDEOGRAPHIC SYSTEM

The Mochicas had an ideographic system. Beans were indented with straight, curved, broken, and parallel lines, points, circles, crosses, etc. in kidney-shaped spaces. Many beans repeat the same design, as if conventional meaning were intended. These beans were carried in bags by messengers, like the *Inca* runners, traveling over roads. Anthropomorphic deer, falcons, hummingbirds, dragonflies, and centipedes symbolize the messengers. Anthropomorphic foxes, vizcachas, and felines symbolize the interpreters and scribes. Pictorial representations of these beans occur on pots and textiles, the bean being sometimes stylized, sometimes humanized (fig. 21, c).

This ideographic system spread throughout ancient Perú, reniform ideograms (inspired by the lima bean) being found on textiles and ceramics of the Paracas, Nazca, Tiahuanaco, and Lambayeque cultures.

The author has found numerous analogies between the Peruvian and Mayan ideographic systems, which he is now presenting in detail to the archeological profession.



PLATE 61.—Cupisnique pottery. *a*, Feline representation with slight anthropomorphic resemblance; *b*, house with roof sloped in two directions; *c*, bottle with anthropomorphic (?) head at top. (Courtesy Rafael Larco Hoyle.)

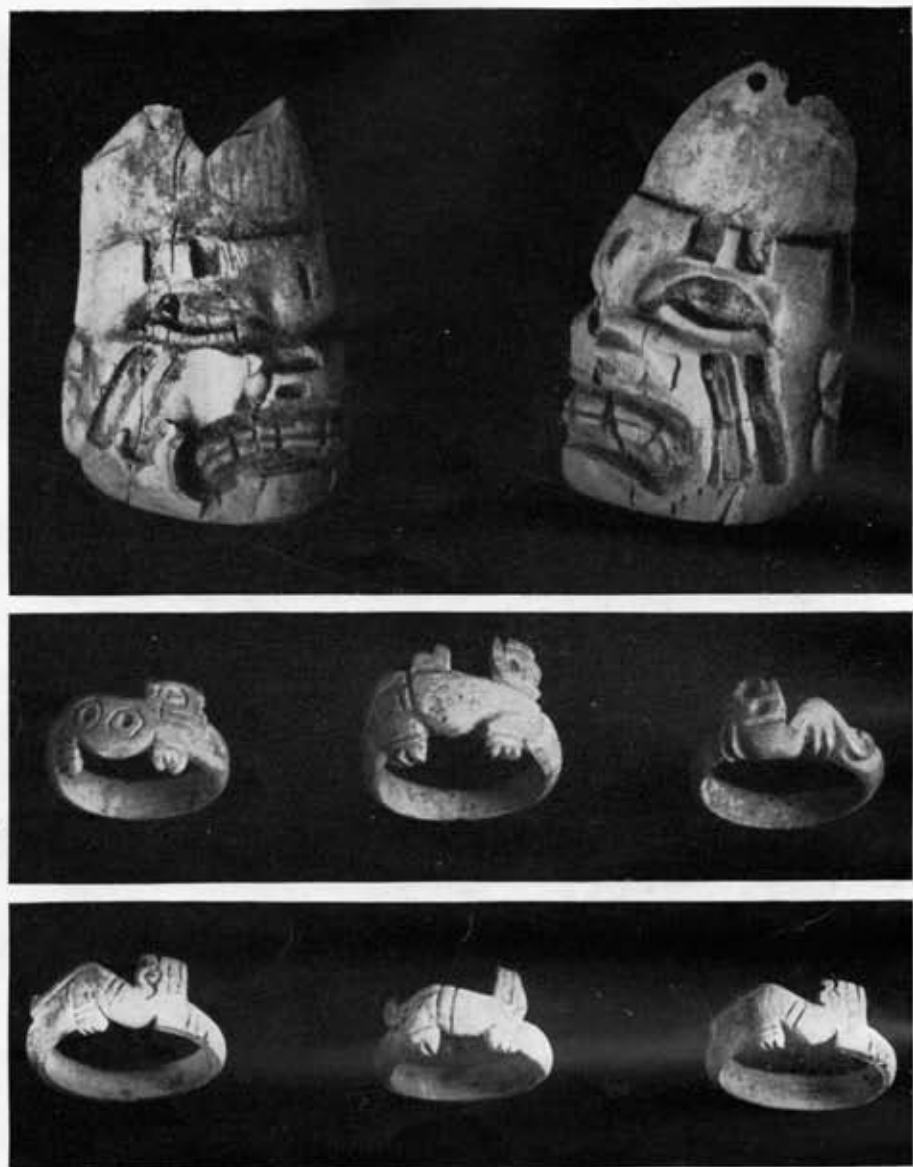


PLATE 62.—Cupisnique ornaments of shell and bone. *Top:* Ear pendant of shell which had been inlaid with turquoise. *Bottom:* Bone rings. (Courtesy Rafael Larco Hoyle.)



PLATE 63.—Cupisnique pottery. *a*, Fox; *b*, mollusk representation, probably *Spondylus pictorum*; *c*, roughened surface with protuberances; *d*, red ware jar, representing feline serpent, minor divinity of Cupisnique. (Courtesy Rafael Larco Hoyle.)



PLATE 64.—Cupisnique pottery. *a*, The feline serpent; *b*, geometric bottle form; *c*, woman nursing child (a unique example); *d*, feline god. (Courtesy Rafael Larco Hoyle.)



PLATE 66.—Salinar pottery. *a*, Dog or feline; *b*, monkey; *c*, four-sided, pent-roofed house; *d*, anthropomorphic head-and-spout with flat bridge-handle; *e*, woman; *f*, unidentified bird; *g*, stylized owl head; *h*, dove; *i*, owl. (Courtesy Rafael Larco Hoyle.)

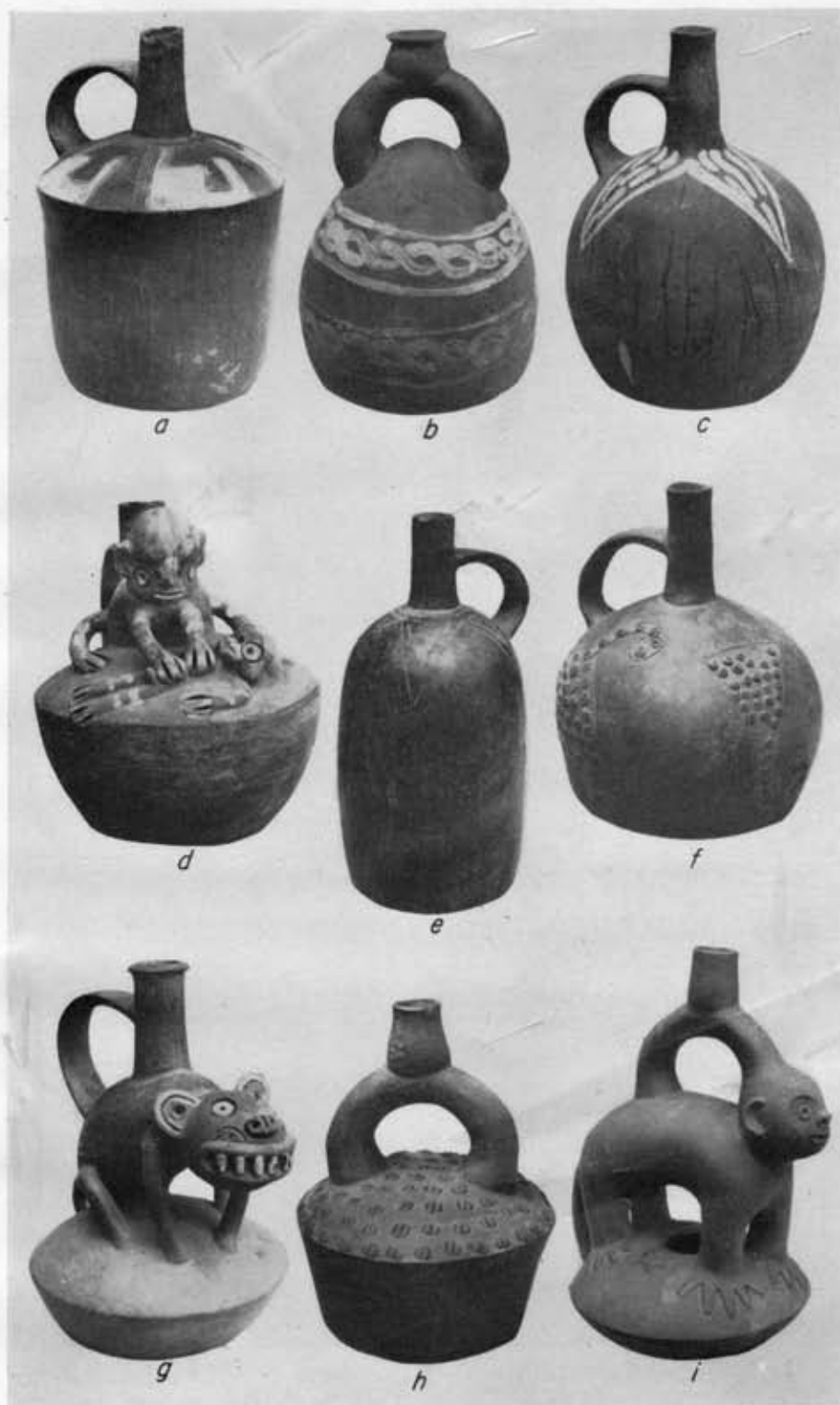


PLATE 67.—Salinar pottery. *a*, Single-spout jar with flat handle and incised and painted stepped design; *b*, incised and painted decoration; *c*, single-spout jar with flat handle and white design; *d*, fantasy shaman-attending a patient; *e*, incised vessel; *f*, roughened, noded, and incised surface; *g*, feline; *h*, noded vessel; *i*, monkey. (Courtesy Rafael Larco Hoyle.)

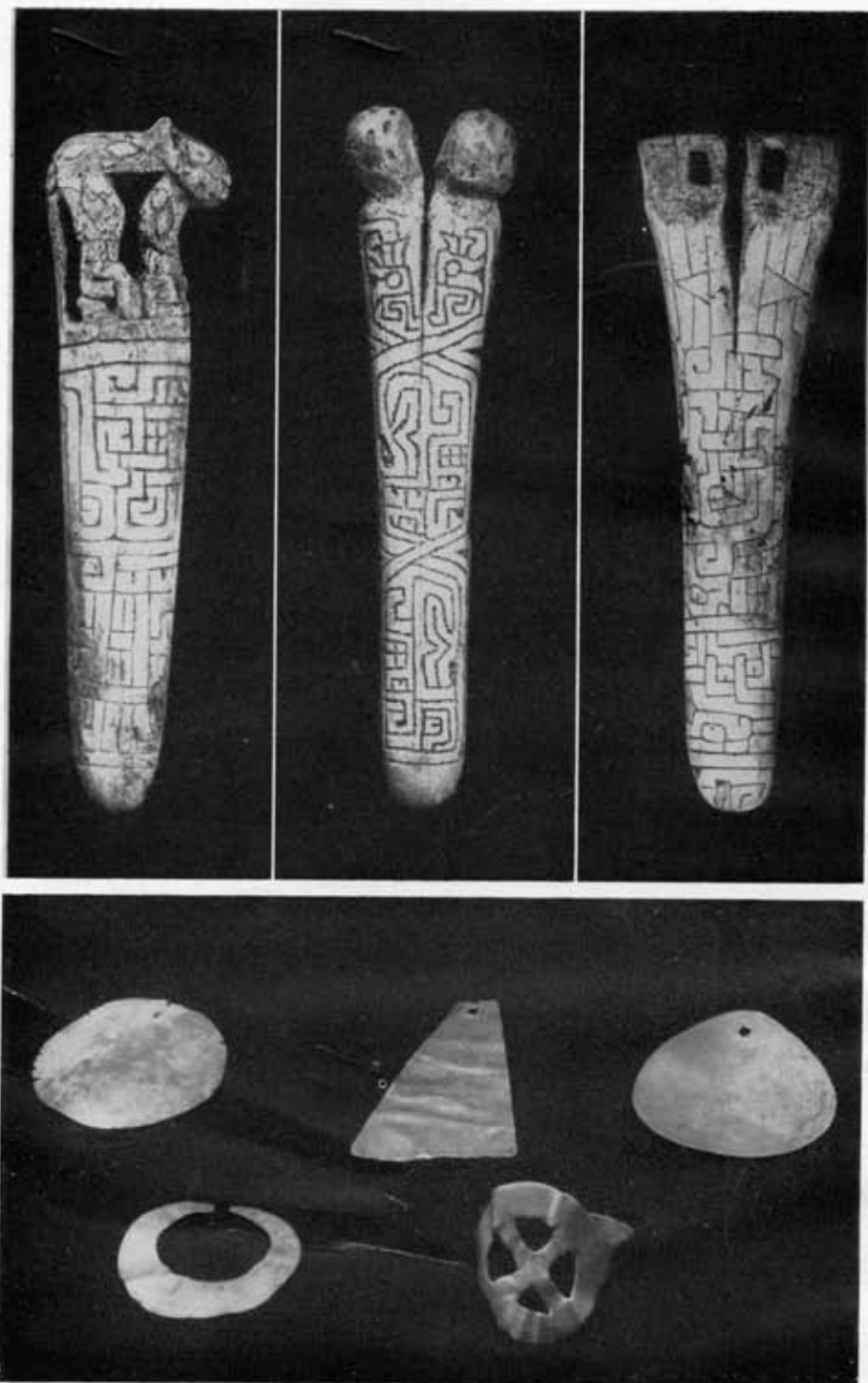


PLATE 68.—Salinar Period bonework and metalwork. *Top:* Three bone spatulas incised in a style suggestive of Chavin or Cupisnique. *Bottom:* Nose ornament, ring, and sheets of beaten gold. (Courtesy Rafael Larco Hoyle.)

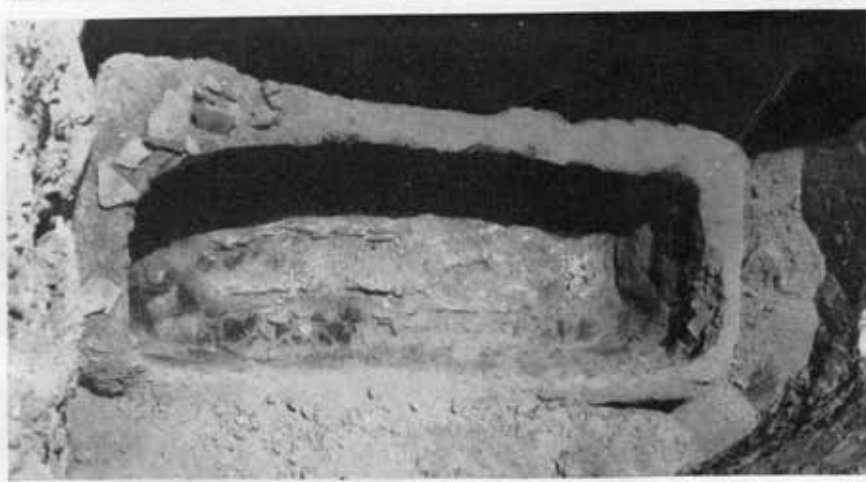


PLATE 69.—Burial types of the North Coast of Perú. *Top:* Cupisnique. *Center:* Salinar. *Bottom:* Mochica. (Courtesy Rafael Larco Hoyle.)



PLATE 70.—Mochica pottery. *a*, Excellent and unusual relief sculpture; *b*, Al apace, the Supreme Divinity, as an agriculturist, shelling corn; *c*, the Supreme Divinity conquers a demon vampire; *d*, death's head of Al apace; *e*, removing a tumor; *f*, representation of a face pockmarked by disease; *g*, the earthly divinity sails the seas; *h*, portrait study. (Courtesy Rafael Larco Hoyle.)



PLATE 71.—Mochica craftsmanship. *a*, Pottery model, used in making a pottery mold; *b*, *c*, two sides of a mold made from a model; *d*, warrior carved in bone, red with mother-of-pearl inlays; *e*, copper casting, a warrior attacked by a dog; *f*, wood sculpture with mother-of-pearl inlays; *g*, spear thrower wrapped with gold; *h*, head ornament of beaten gold; *i*, stone box with engraved figures. (Courtesy Rafael Larco Hoyle.)



PLATE 72.—Mochica construction and architecture. *Top:* Aerial view of aqueduct of Ascope. *Bottom:* Adobe column at Tambo Real. (Courtesy Rafael Larco Hoyle.)

