

A PRELIMINARY SERIATION OF THE CHIMU POTTERY STYLE¹

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Alfred L. Kroeber was the first archaeologist to describe systematically a number of stylistic differences in the late pottery tradition of the north coast of Peru. He described divisions that he called the Three-Color Geometric styles, the Red-White-Black Recuoid style, the Cursive Tripod style, the Cursive Modeled style, Late Chimú Blackware, and Late Chimú Colored Ware. After defining these stylistic units, Kroeber suggested that the Cursive Modeled and Tripod styles, as well as the Three-Color Geometric unit, were related to the Middle Horizon ceramic styles of the Andean area and that the Late Chimú styles began before the Inca conquest of the north coast of Peru and persisted into the Colonial Period; the Red-White-Black Recuoid was considered to be contemporary with the earlier part of the Late Chimú styles.²

Subsequent excavations in the Virú Valley made by Wendell C. Bennett, Donald Collier, and Gordon Willey showed that the stylistic units defined by Kroeber overlapped considerably in time and reflected only in a very general way the chronological development of late pottery tradition on the north coast of Peru.³ All three found tombs in which pottery vessels of two or more different styles were associated with one another in contexts that clearly indicated that the styles were contemporary; Collier also obtained the same information in his excavations in habitation refuse.

After the investigations made in the Virú Valley, no archaeologist undertook further studies on the later part of the north coast ceramic tradition until 1964. The apparent lack of interest in this pottery tradition resulted from a combination of ideas that were prevalent in the study of Andean archaeology during the 1950's. A detailed exposition of these ideas is well beyond the scope of this study, but it would be useful to mention them briefly. One of the more important ideas was that the chronological analyses proposed by the members of the Virú Valley Project were sufficiently detailed so that further investigations of the ceramic traditions of this region would turn up relatively little information that was new. A second theme in this combination of ideas was interest in early man and preceramic cultural remains resulting in part from the pioneer work of Junius Bird in western South America and partly from the opportunities afforded by the radioactive carbon method of age determination for ascertaining the absolute ages of these ancient cultural assemblages. A third factor which has served to discourage further investigations of the late pottery styles from the north coast of Peru is the very abundance of these materials; probably no other pottery style from the Americas is so well represented on the shelves of museums and private collectors throughout the world.

In 1964, Pedro Rojas Ponce of the Museo Nacional de Antropología y Arqueología in Lima, Peru was commissioned to make drawings of late pottery vessels from the north coast of Peru which depicted individuals with cranial deformations. While making these drawings, Rojas noticed systematic differences among the figures represented on a series of vessels with spout-and-bridge-to-modeled figure themes and suggested that these differences reflected differences in the ages of the vessels. He pointed out these differences to Dorothy Menzel, and, together, they worked out a sequence based on the seriation argument that vessels which share many features are closer together in time than vessels which have only a few features in common. Unfortunately, Rojas was able to examine only specimens belonging to this shape category, and Menzel was engaged in another research project, so that neither was able to extend the seriation to other vessel forms in the ceramic tradition.

Following the superb lead provided by Rojas and Menzel, we have undertaken a study of late pottery specimens from the north coast of Peru deposited in the collections of the Peabody Museum of Archaeology and Ethnology, Harvard University and illustrated in the archaeological literature with the hope of extending the seriation made by Menzel and Rojas to other vessel categories. So far, we have been able to define seven chronologically distinct phases in this ceramic tradition, a sequence which begins during Middle Horizon Epoch 4B and ends during the early part of the Colonial Period, and in addition, an innovative sub-style which we have called the Chimu-Inca style and which dates to the Late Horizon. In order to indicate the preliminary nature of the seriation, we have named the major stylistic units in the sequence, which are chronologically distinct, and have designated temporal subdivisions of two units with numbers prefixed by the letter T.

The Taitacantin phase. The Taitacantin style was first isolated by Max Uhle in a burial at the base of the Huaca del Sol in the Moche Valley. Uhle immediately recognized that the three-color painted designs which appeared on the vessels in this gravelot were generally similar to those of the Epigonal pottery that he found in the cemetery at Pachacamac on the central Peruvian coast.⁴ The Taitacantin style, like most of the late ceramic traditions on the Peruvian coast, derives many of its design features and shape categories from the widely distributed pottery styles of Middle Horizon Epoch 2. It is a regional style, or series of closely related local styles, found on the north coast of Peru between Chimbote on the south and the Lambayeque Valley on the north which shares many features with other regional epigonal styles but which also has many distinctive traits that distinguish it from the epigonal styles of the central and south coasts. The Taitacantin style probably dates to the last epoch of the Middle Horizon and the early part of the Late Intermediate Period.

The style is presently defined on the basis of eight specimens from three gravelots that have been published in the archaeological literature; these graves were excavated at the Huaca de la Cruz in the

Virú Valley, the Huaca del Sol or Site C in the Moche Valley, and Site V-142 in the Virú Valley.⁵ In addition, seventeen vessels illustrated in the archaeological literature and one specimen in the collections of the Museo Nacional de Antropología y Arqueología, most of which lack specific grave or site provenience, are also assigned to the Taitacantin style because of the features that they share with specimens in the three gravelots.⁶

Nearly all of the specimens in the Taitacantin style are made of an oxidized ware and have matte reddish-orange surface colors and painted decoration. The designs, for the most part, are composed of linear or circular geometric elements and are carelessly executed in matte white, dark red, and black pigments that were applied before the vessel was fired. A few vessels in the Taitacantin style were fired in a reducing atmosphere and have surfaces varying from medium to dark gray in color; the reduced ware vessels typically lack painted decoration but frequently have impressed designs.

The most common vessel category of the Taitacantin phase is a single chambered whistling bottle with a lenticular cross-section, shoulder angle, ring base, and a tall, tapered spout with a pinched lip which is connected to a modeled figure by a slightly arched bridge that has a flat or slightly convex-curved cross-section. No true double spout bottles occur in the sample used to define the Taitacantin style, but they are found in both earlier and later styles on the north Peruvian coast. It seems likely, therefore, that the single chambered whistling bottles of the Taitacantin style are adaptations of double spout bottles with single chambers.

The other prominent decorated shape category of the Taitacantin style is that of a small, enclosed flask or jar with a short, straight-sided or concave-curved neck. Small pierced lugs are usually set on opposite sides of the vessel at the base of the small neck. The upper portions of these vessels are decorated with painted designs that are set off from the undecorated lower part by large black dots on a matte white circumferential band.

The remainder of the vessels used to define the Taitacantin style have unique shapes but share distinctive design or shape features with the other specimens of this style. These unique vessels include a globular bottle with a spout and ring base, a six-chambered bottle with a tall tapered spout connected to a modeled figure by a slightly arched bridge with a flat section, several double chambered bottles with tall tapered spouts having pinched rims which are connected to modeled figures by a flat bridge, bipointed jars with small necks, and a model of a rush balsa made of three bundles, with a ring base and two tapered spouts connected by a vertical lattice bridge.

Some of the distinctive features of the Taitacantin style include the use of black-painted dots on matte white grounds particularly on the lower portions of single chambered bottles and flasks, tall tapered spouts with pinched lips, circumferential black bands on the upper parts of spouts, circumferential design panels on flasks, cross-hatched squares with black-painted dots in the centers, curved bands with serrated edges

painted on the bodies of flasks, circumferential rim friezes on flask and jar necks, the use of a black pigment which was applied before firing, and the single chambered whistling bottles with lenticular cross-sections.

The Trujillo T-1 phase. The phases of the north coast ceramic tradition which follow the Taitacantin style are a direct development of it, with a few innovations occurring in each of the units. The second unit recognized in this sequence is the Trujillo style which is divided into an earlier Phase T-1 and a later Phase T-2. The Trujillo T-1 phase probably dates to Epochs 2 and 3 of the Late Intermediate Period because of its relatively early position in the ceramic tradition of the north Peruvian coast.

The Trujillo Phase T-1 style is currently defined on the basis of twelve vessels illustrated in the archaeological literature⁷ and ten unassociated specimens in the collections of the Peabody Museum of Archaeology and Ethnology, Harvard University and the Museo Nacional de Antropología y Arqueología in Lima, Peru.⁸ The majority of the pieces with adequate site provenience comes from Chanchan and other localities in the Moche Valley; it is also possible that a few vessels used to define the Trujillo T-1 phase were collected in the Chicama Valley.

Most of the Trujillo T-1 phase specimens are made of an oxidized ware which has reddish-orange to orange surface colors that are somewhat lighter in value than those of the preceding Taitacantin style. The oxidized fired vessels are typically decorated with designs painted with matte white and red pigments applied before firing and an organic black pigment that was scorched on the surface after firing. The designs executed with the scorched black pigment have been referred to as cursive style painting by Kroeber. In the Trujillo style, the organic pigment is always used in combination with the white pigment or with the red and white pigments. Both the white and red pigments of the Trujillo style are lighter in value than those of the Taitacantin style, and the white pigment is typically more thinly applied in the Trujillo style than in the preceding phase. A few vessels assigned to the Trujillo T-1 phase were fired in reducing atmospheres and typically have impressed designs rather than painted decoration.

One of the more common vessel categories in the Trujillo T-1 phase is a double spout bottle with a flat, arched bridge and short pedestal or ring base. The tapered spouts of the Trujillo T-1 bottles are proportionately longer than those of the Taitacantin whistling bottles and lack the pinched lip that was characteristic of the earlier unit. The idea that bottles should have a lenticular cross-section was retained to some extent by the potters who made Trujillo T-1 vessels, but the shoulder angle is much less pronounced in this phase and the portions of the vessel above and below the shoulder angle are much more globular in appearance than those of the Taitacantin style.

An important innovation of the Trujillo T-1 phase is a double chambered bottle in which one or both of the chambers are boxes and sometimes rest on short ring bases. There is usually a modeled figure or group of figures situated on a box which is connected to another chamber shaped like a box or an articulated spondylus shell; the second chamber, whether it has the form of a box or shell, has a tall tapered spout which is connected to a modeled figure by a slightly arched bridge with a flat or slightly convex-curved cross-section. These vessels are usually slipped with a thin matte white pigment and have red lines that are occasionally separated by wide zones of cursive style painting in the organic black pigment. Chambers that are shaped like spondylus shells occasionally have stippled surfaces and large projections from the edges of the articulated shells. The stippling in the Trujillo T-1 phase tends to be elliptical in form and 3-5 mm in length.

Another innovative vessel category of the Trujillo T-1 phase is a ring-shaped vessel with a modeled figure and tapered spout projecting from one side of the ring and connected to each other by a slightly arched bridge with a flat cross-section. These specimens are usually oxidized fired and have painted designs executed in red and fugitive black on a thinly applied white slip.

The remaining shape categories in the Trujillo T-1 phase persisted from the preceding phase with slight modifications of proportion, size, and location of painted design. Most of these shape categories are represented by one or two vessels. They include four single chambered bottles with a modeled figure connected to a tall spout by a flat bridge; double chambered vessels which are modeled to resemble various kinds of fruits or vegetables; double chambered whistling bottles, one chamber of which is a modeled bird while the other is globular and has a short ring base; a modeled balsa made of three bundles with a more upturned bow than the one found in the preceding phase, the balsa being provided with a ring base, a modeled figure and a spout connected by a flat bridge; and a double spout and bridge bottle which has a cylindrical body set on a short ring base.

Perhaps the most prominent of the new impressed designs that appear in the Trujillo T-1 style is a man with a large crescent-shaped headdress, which is similar to one illustrated by Bennett.⁹ This figure occurs usually in a circular design panel which is outlined with an impressed line and has a stippled background.

The Trujillo T-2 phase. The third phase of the late ceramic sequence on the north coast of Peru shares many shape and design features with the Trujillo T-1 unit. It is presently defined on the basis of thirty-four vessels published in the archaeological literature¹⁰ and thirteen unassociated pieces in the collections of the Peabody Museum of Archaeology and Ethnology and the Museo Nacional de Antropología y Arqueología.¹¹ The majority of the vessels with site provenience come from the Moche Valley, but others are said to have been found in the Chicama, Pacasmayo, and Lambayeque valleys to the north and at Chimbote

to the south. At present, it is not clear whether the pieces found to the north and south of the Moche-Chicama area were merely trade objects from the central area or whether they were actually manufactured in these regions. The vessels assigned to the Trujillo T-2 phase probably date to Epochs 3 and 4 of the Late Intermediate Period on the basis of the relative position of the unit in the ceramic sequence of the north coast.

Both oxidized and reduced fired wares occur in the second phase of the Trujillo style. The oxidized fired specimens have about the same ware characteristics as the pieces of the preceding phase; the pigments used on the vessels of this unit are also similar to those of the Trujillo T-1 phase. The reduced fired vessels of the Trujillo Phase T-2 tend to have slightly darker surface colors than those of the earlier phases of the north coast ceramic sequence.

The most common shape category represented in the Trujillo Phase T-2 sample is that of a globular bottle with a pedestal or ring base and tall tapered spouts connected by a highly arched bridge, the flat surface of which may be oriented parallel or perpendicular to the upper surface of vessel body. The shape is derived from the double spout bottles of the preceding phase but differs from the earlier examples in a number of ways. The profile of the vessel body is more globular, and the shoulder angle is absent or persists merely as an impressed line at the point of maximum diameter. The tapered spouts of the Trujillo T-2 vessels are proportionately shorter and slightly thicker than those of the Trujillo T-1 vessels; the walls of the spouts on Trujillo T-2 bottles may be straight or very slightly concave as opposed to the straight-sided spouts of the earlier unit. The bridges which connect the two spouts of the vessel are typically concave-curved in cross-section. The horizontal bridges used on these vessels are slightly wider on the average than those of the preceding phases. Many of these vessels have modeled lugs or heads at the base of each spout, and some have a modeled head located at the highest point of the bridge.

Double chambered vessels in the form of a box and articulated spondylus shell persist from the preceding phase of the Trujillo style; however, those of second Trujillo phase tend to be somewhat smaller than the earlier examples. The bottom of the chamber shaped like a spondylus shell also differs from the earlier vessels in that it is typically more incurved. Another set of differences exists in the shape of the spouts and bridges; the bridges of the Trujillo T-2 specimens are concave-curved in cross-section and the spouts are slightly shorter and may have slightly concave sides. The stippling used on the spondylus chamber is also somewhat smaller than that used in the preceding phase of the style.

An important innovative vessel form that appears in the second phase of the Trujillo style is a single chambered bottle with a short pedestal or ring base and a modeled neck; vessels of this shape category are typically reduced fired or smoked blackware. Lugs or modeled heads or animals are often placed on each side of the human face that is fashioned on the neck of the bottle. For convenience, we have referred to this shape category as "tin woodman" from an amusing resemblance to the famous character in "The Wizard of Oz."

Another innovative vessel category that made its appearance during the Trujillo T-2 style was the stirrup spout bottle. Stirrup spout bottles occur only rarely in this phase and are characterized by moderately short tapered spouts, rounded stirrups, and the absence of modeled lugs or adornos at the base of the spouts. All are smoked blackware.

The models of rush balsas of this phase have tapered spouts and bridges that are concave-curved in section. The bows of the rafts are usually more upturned than those found in either the Trujillo T-1 or Taitacantin phases. Finally, the cursive style painting found on the Trujillo T-2 specimens is oriented vertically, in contrast to the horizontal arrangement of the painted lines in the preceding phase of the Trujillo style.

The remainder of the vessels assigned to this phase are of shapes which are unique or quite rare in the sample but have their antecedents in vessel forms of the preceding phase. These shape categories include a double chambered bottle consisting of two cylinders, one with a modeled figure and the other with a tapered spout; a canteen with a moderately short neck and an impressed design consisting of a man with an elaborate crescent-shaped headdress; a four-chambered bottle with a spout and modeled figure connected by a concave-curved bridge; modeled representations of fish with a single tapered spout; modeled bird or feline heads set on a teardrop-shaped bottle which is connected to a globular bottle with a short pedestal or ring base and a tapered spout; and the modeled representation of a monkey.

Some of the characteristic features of this phase which serve to distinguish it from those which precede and follow it are the use of moderately tall tapered spouts that may have straight or slightly concave sides; bridges that are typically highly arched and have concave-curved cross-sections; the use of elaborate cursive style painting on oxidized fired specimens; and globular vessel shapes which lack shoulder angles.

The Lambayeque phase. The fourth phase of the north coast ceramic tradition is defined on the basis of seven specimens from Grave 2J at Lambayeque Site One.¹² In addition to the published specimens from this gravelot, forty-eight vessels illustrated in the archaeological literature¹³ and sixteen pieces in the Peabody Museum and Museo Nacional de Antropología y Arqueología collections are assigned to this phase because of the features of design which they share with gravelot specimens.¹⁴ The majority of the vessels with provenience that are assigned to this phase comes from the Lambayeque Valley, principally because of the work of Bennett; however, other specimens in the Lambayeque style as it is currently defined come from the Piura, Pacasmayo, Chicama, and Moche valleys.

Because of its relative position in the north coast ceramic sequence, it seems likely that the Lambayeque phase dates to Epochs 5 and

6 of the Late Intermediate Period. During this period, there seem to have been stylistic differences between the Lambayeque Valley on the north and the Moche Valley on the south. In Lambayeque, the pottery of this phase is largely an oxidized ware with tan-orange to tan surface colors, though a few reduced fired specimens have been reported. Designs which emphasize excision and the use of the fugitive black pigment also seem more common in the sample from Lambayeque than in the samples from the valleys to the south. The oxidized fired pottery of the Moche Valley has surface colors which range from orange to tan-orange and which are slightly more brown or tan in value than those of the Trujillo style. It also appears that reduced fired or smoked blackware vessels were becoming more popular in Moche than they had been in the earlier phases. The apparent regional differences between the Moche and Lambayeque valleys at this time suggest that the Lambayeque phase, as it is defined in this paper, preceded the initial expansion of the Kingdom of Chimor which occurred during the middle part of the fourteenth century.

A common shape category in the Lambayeque phase is a double spout and bridge bottle with a short ring base. The spouts are tapered and typically somewhat shorter than those of the preceding units with concave sides. The ring bases often bear excised designs, particularly on specimens from the Lambayeque Valley. The body of the vessels from Lambayeque apparently retain the globular shape of the double spout and bridge bottles characteristic of the preceding phase, while the bottles from the Moche-Chicama region to the south have composite profiles or a pronounced shoulder angle. Modeled heads or lugs are commonly used at the base of each spout, and a modeled human head with an elaborate head-dress is frequently placed on the highest part of the bridge.

Another common shape category in this phase is the tin woodman bottle. The spouts on the Lambayeque phase specimens are typically somewhat taller than those of the preceding phase and have a more pronounced concavity in their sidewalls. Modeled animal heads or lugs are usually placed on both sides of modeled face on the spout. Occasionally, the handles on the specimens consist of two coils rather than a single flattened strip. All of the tin woodman bottles of this phase are smoked blackware.

The model rush balsas of this phase are typically much smaller than those of the preceding phases and consist of a single bundle with a modeled torso. The modeled figure and vessel are often situated on another vessel, such as a circular flask or a large modeled fish.

Another innovation occurs in the shape of the double chambered bottle with a modeled torso and head. In the Lambayeque phase, these vessels are typically reduced fired and bear impressed decoration on the bodies of the two chambers. The spout situated on the rear chamber is tall and concave-curved; it is connected to the modeled torso by a wide bridge which may be flat or very slightly concave in cross-section. The chambers themselves have a lenticular cross-section and were made in two-piece vertical molds which joined at the sides of the chamber. The face which appears above the torso is moderately large and has a slight indentation in the middle of the head; the eye-brows have the form of

large V. The head of the modeled figure is connected to modeled arms holding a basket or cradle above the surface of the front chamber.

Other innovative shape categories in the Lambayeque style include thin cylindrical canteens with pedestal or ring bases and short flaring necks, globular single spout bottles with ring bases decorated with modeled faces, and modeled animals with a spout and bridge arrangement. The remainder of the shape categories have their antecedents in the vessel forms of the preceding phase and are generally similar to them.

Some of the innovations which serve to distinguish the Lambayeque vessels from those of other units include excised ring bases, concave-curved spouts, wide bridges which may be flat or slightly concave-curved in section, two-coil handles, double chamber teardrop bottles with a modeled figure on the front chamber, the increased importance of dark gray or black pottery, the use of the organic black pigment on natural ground color, the lack of either the matte white or matte red pigments, circular stippling as opposed to the elliptical stipples that were characteristic of the earlier units, the models of single bundle rush balsas used independently on a pedestal or situated on another vessel category, and globular bottles with modeled faces and tall concave-curved spouts.

Chimu Phase T-1. The fifth phase is defined on the basis of sixteen vessels published in the archaeological literature¹⁵ and six un-associated double chambered bottles in the collection of the Peabody Museum of Archaeology and Ethnology and the Museo Nacional de Antropología y Arqueología.¹⁶ Most of the specimens used to define this phase lack specific site provenience but are said to come from the vicinity of Trujillo in the Moche Valley or from Chimbote at the mouth of the Santa Valley. It is likely that this phase dates to Epochs 7 and 8 of the Late Intermediate Period, because it seems to precede immediately the appearance of Inca influence in the Chimu pottery tradition. It is reasonable to suppose that the pottery of this phase was being manufactured and used during the period of conquest by the kings of Chimor.

The most common vessel form in this phase is the double chambered bottle with a modeled human head on top of the front chamber which is connected to a straight-sided spout by a flat or slightly arched bridge with a lenticular cross-section. As in the preceding phase, the mold marks occur on the sides of each chamber, suggesting that a two-piece vertical mold was used in the manufacture. Each of the chambers has a hemispherical design panel with one or more impressed figures on a stippled background; in this phase, the stippling is circular and tends to be much smaller, ca. 1-2 mm in diameter, more widely spaced, and have less relief than in the earlier units. The head still retains the indentation in the middle of the head and is thicker in cross-section than earlier pieces. The face differs from those of the earlier phases, because the eyebrows or hairline is represented as a straight horizontal

line rather than a v-shaped line. Hair is occasionally represented by a series of incised lines on each side of the face. The arms of the figure represented are typically indicated in relief on the double chambered bottles of this phase and the cradle has disappeared, whereas on the earlier specimens the arms and cradle were modeled separately. All the vessels of this shape category are made of smoked blackware.

The tin woodman bottles of this phase are derived from those of the preceding unit. In this phase, they are much less carefully made, so that the mold joints are clearly visible on the sides of each specimen; as with the double chambered bottles, two piece vertical molds were used in the manufacture of the tin woodman bottles of this phase. The spouts are straight-sided and proportionately greater in diameter than those of the preceding phases. Arms are typically represented in relief on each side of the face--an innovation that occurs during this phase. Another difference is that the tin woodman bottles do not have pedestal or ring bases in Chimu Phase T-1.

Perhaps the most common vessel form of this phase is the stirrup spout bottle. The stirrup spout vessels occur in a variety of forms and shapes. The spouts are straight-sided and typically have a modeled lug or adorno at the base of the spout. The stirrups frequently have a square or rectangular cross-section and bear a band or impressed decoration consisting of small birds on each side of the stirrup.

The most distinctive features of the Chimu T-1 phase are straight-sided spouts which occasionally have pinched lips, the increased abundance of stirrup spout vessels, hemispherical design panels, the depiction of hair on modeled human heads, the representation of body parts in relief rather than modeling, bridges that are flatter and narrower than those of the preceding phase, and an apparent increased use of smoked blackware vessels. The vessels of this phase seem to be much less carefully made than those of the preceding phases, so that fewer of them are illustrated in the literature or exist in museum collections.

Chimu Phase T-2. Chimu Phase T-1 marks the end of the Late Intermediate Period. A number of innovations in shape and decoration appear during the second Chimu phase; many of these innovations have their antecedents in the ceramic tradition of the Cuzco basin in the south highlands of Peru and in innovative styles of the central Peruvian coast and other localities, which are currently not known. Specimens assigned to this phase have been found on the central coast of Peru, at Machu Picchu in the south highlands, in the Piura Valley on the far north coast, and in the region between Lambayeque and Chimbote. In addition to vessels that were manufactured on the north Peruvian coast and then traded to other regions, large numbers of local imitations of Chimu pottery vessels have been found on the south and central coasts of Peru. The nature of the innovations as well as the distribution of Chimu Phase T-2 pieces and local copies of them indicate quite clearly that this phase dates to the Late Horizon.

It is possible to distinguish two large stylistic units in the Late Horizon pottery of the north coast of Peru. One unit is composed of vessels that are derived from those of the preceding phase and lack the innovations that have their antecedents in the ceramic traditions of other regions. This unit is presently defined on the basis of sixteen unassociated specimens from the north coast of Peru that have been published in the archaeological literature.¹⁷ The second, and larger, unit consists of vessels that exhibit innovative features which have their antecedents in other regions, local copies of vessel shapes that are typical of other regions, particularly the Cuzco basin and perhaps the central Peruvian coast, and vessels which have both features from the north coast and from other regions combined in novel ways to produce distinctive shapes that essentially lack antecedents in any area. At present, we are referring to this unit as the Chimu-Inca style, and it is defined on the basis of sixty-five specimens, mostly without specific provenience, that have been illustrated in the archaeological literature.¹⁸

Double chambered bottles with a modeled human head persist from the preceding phase of the style; however, the vessels which date to the Late Horizon incorporate a number of new features. The chambers are more spherical or globular than those of the earlier phases and were made with two-piece vertical molds that join at the center of the vessel rather than on the sides. The design panel on the front of the chamber with the modeled head is usually divided in half by a broad band which surrounds the joint of the two halves of the mold. Typically, the decoration consists of chevrons made of serrated lines. The spouts on the rear chamber vary considerably in height but are typically much wider proportionately than those of the preceding phases. On some of the specimens, the spouts have straight, parallel sides, while on others the rim is flattened in imitation of some Inca shape categories. A secondary adaptation of this shape category involves the replacement of the human head on the front chamber with a bird head.

The stirrup spout vessels of this phase have slightly flaring spouts with straight sides; it is possible that the spouts of this phase may be slightly taller in proportion than those of the earlier vessels with stirrup spouts. As in the preceding phases of the north coast ceramic tradition, there is considerable variation in the shapes associated with stirrup spouts. Vessels with this shape feature may be made of both redware and smoked blackware; both are about equally common in the sample. The two Inca style features that are often associated with stirrup spout vessels are the use of a pierced lug at the base of the spout and the use of flattened rims which imitate those of the aryballoid jar. The decoration on globular bottles with stirrup spouts or cupcake-shaped bottles is frequently limited to a circumferential band on the upper part of vessel; this band may be continuous or divided into halves or quarters of approximately equal length.

Perhaps the most common of the innovative vessel forms is a small double chambered bottle with a tall straight-sided spout set on each chamber. On some specimens, both spouts are functional; however,

the more common pattern is that one of the spouts is surmounted by a small modeled figure. The two spouts are connected by a flat bridge that may be set horizontally or vertically. The spouts may have parallel straight sides or may be flattened at the rim, imitating Inca vessel forms. The small modeled figure which rests on top of the spout is usually a small bird and occasionally a small monkey. On a few specimens, the modeled animal rests on a platform rather than directly on the spout; however, this feature becomes much more common during the early part of the Colonial Period. The decoration on the vessels is frequently impressed and occurs in narrow circumferential bands around the body of each chamber.

Other innovative shape categories that appear on the north coast during the Late Horizon include oxidized and reduced fired imitations of aryballoid jars, bottles with modeled faces and tall necks imitating those found on aryballoid jars, single chambered bottles with closed double spouts connected by a hollow bridge that has a functional spout, plates with flat bottoms and straight sides which flare slightly, and small globular bowls with a short collar and vertical handles. In addition to the innovative shape categories, there seems to have been an increased emphasis on the manufacture of elaborately modeled vessels during this period.

Chimu Phase T-3. The most recent phase described in this paper dates to the early part of the Colonial Period and is defined primarily on the basis of five specimens published in the literature¹⁹ and several specimens in private and museum collections.

On the basis of the relatively small sample used to define this phase of the Chimu style, it seems that the majority of the shape categories which persisted into the early part of the Colonial Period have their antecedents in the innovative styles of the Late Horizon rather than in the ceramic tradition that was native to the north Peruvian coast. For example, double chambered bottles with double spouts and aryballoid jars were fairly common vessel shapes during the early Colonial Period, judging by the number of them that appear in the sample, while the double chambered bottles of the native ceramic tradition are completely lacking.

The principal innovations which distinguish vessels dating to the early Colonial Period from those of the Late Horizon are the use of new design elements such as trees or Maltese crosses, and the use of clear glazes in combination with painted and impressed decoration. The double chambered bottles with two spouts have proportionately taller spouts with concave-curved sides and a pedestal on top of one of the spouts.

The seriation presented in this study is a preliminary one based in large part on the examination of unassociated specimens published in the archaeological literature and in the collections of the Peabody

Museum of Archaeology and Ethnology, Harvard University. It is a first attempt to build on observations of differences in a single vessel form that were made by Pedro Rojas Ponce. The chronology proposed here will undoubtedly be refined and the units defined more precisely as further research is carried out, particularly on specimens with grave associations.

It is already possible, however, to make a few general statements about the development of the late pottery of the north coast of Peru. The three earliest phases described in this paper are derivatives of the pottery styles of Middle Horizon Epoch 2. The innovations that occurred during the first two phases were minor ones which do not drastically alter the nature of the style. In the third phase, however, two significant changes occurred. The first was the revival of stirrup spout bottles, a vessel form that was characteristic of the north coast ceramic tradition from the end of the Initial Period to Middle Horizon 1. The second change that occurred was of a different kind than the first in that reduced fired pottery was beginning to become increasingly more popular than in the preceding phases of the style. These innovations were accompanied during the fourth phase by a deliberate rejection of slip-painted decoration on oxidized fired vessels. With these three innovations, the ceramic tradition of the north coast was significantly changed. These trends continued in the style until the Late Horizon, when foreign vessel shapes and design features were again incorporated into the local ceramic tradition and gradually began to replace the native shapes and designs towards the end of this period and during the early part of the Colonial Period.

NOTES

Abbreviations:

PMAE - Peabody Museum of Archaeology and Ethnology, Harvard University
 MNA - Museo Nacional de Antropología y Arqueología, Lima, Peru

¹This paper is the product of two interrelated research projects that were carried out at Harvard University during the 1966 spring term. Scheele examined more than six hundred Chimu pieces in the collections of the Peabody Museum of Archaeology and Ethnology and made the key observations that allowed us to extend the seriation of Menzel and Rojas to other shape categories. He also found that many of the shape categories and pieces in the collection could not yet be fitted into the seriation presented in this paper. Patterson examined pieces published in the archaeological literature and discovered that relatively few shape categories in the Chimu style have ever been illustrated. The paper was largely written by Patterson and has profited considerably from the comments of John H. Rowe, Dorothy Menzel, John Belmont, Gary S. Vescelius, Junius B. Bird, Lawrence E. Dawson, Patricia J. Lyon, and Christopher B. Donnan.

²Kroeber, 1926, pp. 29-41

³Bennett, 1939, pp. 19-81; Collier, 1955; Willey, 1947.

⁴Uhle, 1913, p. 116, fig. 20, nos. 3-5.

⁵Bennett, 1939, figs. 9b, 10d; Kroeber, 1925, pl. 62a, b, d; Willey, 1947, figs. 1a, b, d.

⁶Bennett, 1939, figs. 9f, g, 10c; Kelemen, 1943, pl. 155d; Kroeber, 1925, pl. 62c; Kroeber, 1926, pl. V, figs. 1, 3, 4, pl. VI, fig. 7, pl. VIII, figs. 4, 5, 6, pl. XIII, fig. 1; Wassermann-San Blas, 1938, nos. 415, 441; Collier, 1955, frontispiece, 36a; Strong and Evans, 1952, pl. IV, J; MNAA, cat. no. DC/16910.

⁷Amano, 1961, carátula 58; Bennett, 1939, fig. 9e; Kroeber, 1926, pl. III, pl. V, fig. 2, pl. VIII, fig. 3; Fuhrmann, 1922b, Bild 66, 51; Schmidt, 1929, figs. 215; Wassermann-San Blas, 1938, nos. 228, 248, 480; Tello, 1938, lám. 82-1.

⁸PMAE, cat. nos. 30/4985, 30/4984, 30/4986, 30/5040, 30/5018, 30/5419, 75596, 39799; MNAA, cat. no. 1/388.

⁹Bennett, 1939, fig. 9e.

¹⁰Bennett, 1939, figs. 10e, 20g; Fuhrmann, 1922a, Bild 55 (same as Schmidt 220-1); Fuhrmann, 1922b, Bild 40, 42, 68; Kelemen, 1943, pl. 157c; Kroeber, 1925, pls. 60b, 62e, 62f; Kroeber, 1926, pl. IV, figs. 1, 2, 3, 4, 5, 6, pl. IX, figs. 4, 6; Putnam, 1914, pl. XXIV, nos. 1, 16, 17; Schmidt, 1929, figs. 157-2, 217-2, 220-1; Tello, 1938, lám. 81-3, 112-2, 132-1; Wassermann-San Blas, 1938, nos. 53, 54, 168, 219, 475, 484, 486.

¹¹PMAE, cat. nos. 30/2881, 87781, 87782, 30/5422, 30/4983, 75585, 30/4881, 30/4883, 30/4351, 30/4357, 43189, 75605; MNAA, cat. no. 1/392.

¹²Bennett, 1939, figs. 19a-d, f, 20c, 20e.

¹³Fuhrmann, 1922a, Bild 65 (same as Schmidt 217-4); Fuhrmann 1922b, Bild 26, 27, 70, 71, 72; Kroeber, 1926, pl. VI, no. 3, pl. IX, nos. 1, 2, 3, pl. VII-2; Kroeber, 1930, pl. XXII-2, XXI-4; Wassermann-San Blas, 1938, nos. 408, 445, 519; Tello, 1938, lám. 68-2, 81-2, 84, 184-2, 189-1, 54-1; Schmidt, 1929, figs. 217-3, 217-4; Bennett, 1939, figs. 19e, g, i, 20a, b, d, f; Kroeber, 1925, pls. 60h, 69e, 68c, 69j; Putnam, 1914, pl. XXII, nos. 20-22, pl. XXIV, nos. 2-5, 7, 8, 10, 12, 15, pl. XIX, no. 23, pl. XXI, no. 7; Kelemen, 1943, pl. 155a.

¹⁴PMAE, cat. nos. 30/4358, 75598, 30/4361, 75602, 30/5077, 9960, 75597 (two vessels), 75587 (two vessels), 34134, 87895, 30/4878, 34230, 34188; MNAA, cat. no. 1/389.

¹⁵Fuhrmann, 1922a, Bild 8; Fuhrmann, 1922b, Bild 69; Kroeber, 1930, pl. XXII, fig. 4; Putnam, 1914, pl. XXI, nos. 17, 18; Schmidt, 1929, figs. 154, 214; Kelemen, 1943, pl. 158b; Wassermann-San Blas, 1938, nos. 167, 189, 190, 205, 216, 249, 485, 488.

¹⁶PMAE, cat. nos. 8693, 64098, 84196, F/773, 30/30/81; MNA, cat. no. HL/20419.

¹⁷Bennett, 1939, figs. 22b, 21g, 21h; Fuhrmann, 1922b, Bild 49; Kroeber, 1925, pl. 68p, q; Kroeber, 1926, pl. VI, fig. 5, pl. IX, fig. 5; Kroeber, 1930, pl. XXI, fig. 5; Putnam, 1914, pl. XIX, nos. 26, 27; Schmidt, 1929, figs. 219-1, 220-2; Kelemen, 1943, pl. 156c; Tello, 1938, lám. 189-3; Wassermann-San Blas, 1938, no. 29.

¹⁸Bennett, 1939, fig. 22a; Fuhrmann, 1922a, Bild 46, 47, 48; Fuhrmann, 1922b, Bild 2, 10, 65, 79, 81, 82, 83, 84, 99; Kroeber, 1925, pl. 60j, k, f, pl. 68e, f, h, i, l, o, s, pl. 69d; Kroeber, 1930, pl. XXI, fig. 3, pl. XXII, figs. 3, 6; Putnam, 1914, pl. XV, nos. 1, 2, 3, 4, pl. XXII, nos. 6, 16, pl. XXIII, nos. 9, 14, 16, 17, pl. XXIV, nos. 13, 14, pl. XXV, nos. 1, 2, 3, 4, 5, 6, 9, 10; Schmidt, 1929, figs. 179-1, 185-4, 216-2, 220-3, 220-4; Kelemen, 1943, pl. 155b, c; Tello, 1938, lám. 73-2, 105-3, 108-2, 115-2, 167, 186; Wassermann-San Blas, 1938, nos. 95, 161, 162, 163, 164.

¹⁹Fuhrmann, 1922b, Bild 41; Kroeber, 1925, pl. 69m; Schmidt, 1929, fig. 212-2; Tello, 1938, lám. 34-3, 75-1.

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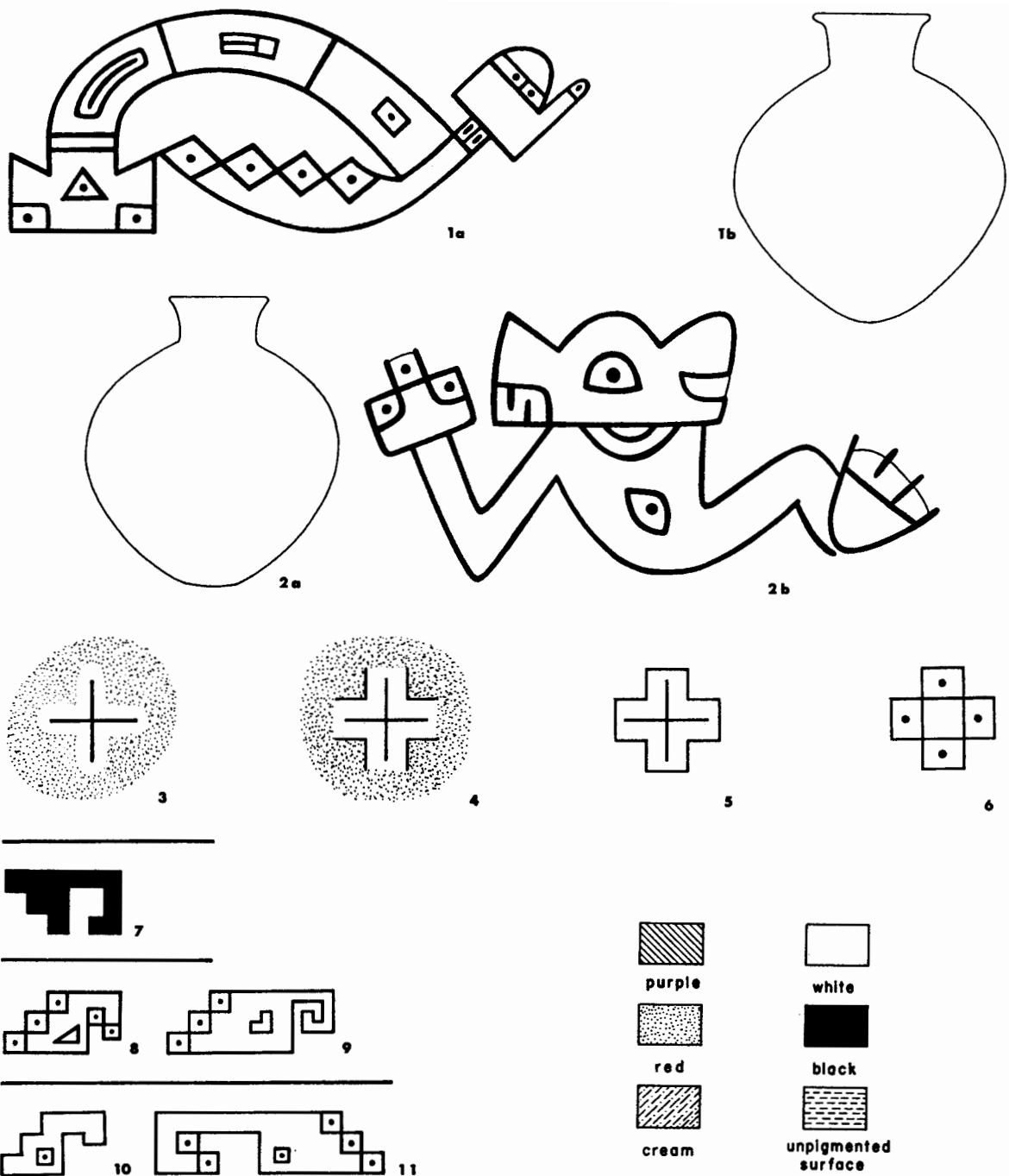


Plate II. Ica 1 felines (figs. 1, 2); Ica 1 black and white cross variants (figs. 3-6); step frets (figs. 7-11): Pinilla (fig. 7); Ica Epigonal B (figs. 8, 9); Ica 1 (figs. 10, 11).



Plate III. Pinilla phase vessels (figs. 12-14): Burial E-10, Ocucaje (figs. 12, 13); Burial E-7, Ocucaje (fig. 14). Ica 1 vessel from Burial C-2, Ocucaje (fig. 15; see plates IV and V for remainder of grave lot). Changes in jar shapes, Ica Epigonal A to Ica 1 (figs. 16-18): Ica Epigonal A (fig. 16); Ica Epigonal B (fig. 17); Ica 1 (fig. 18).

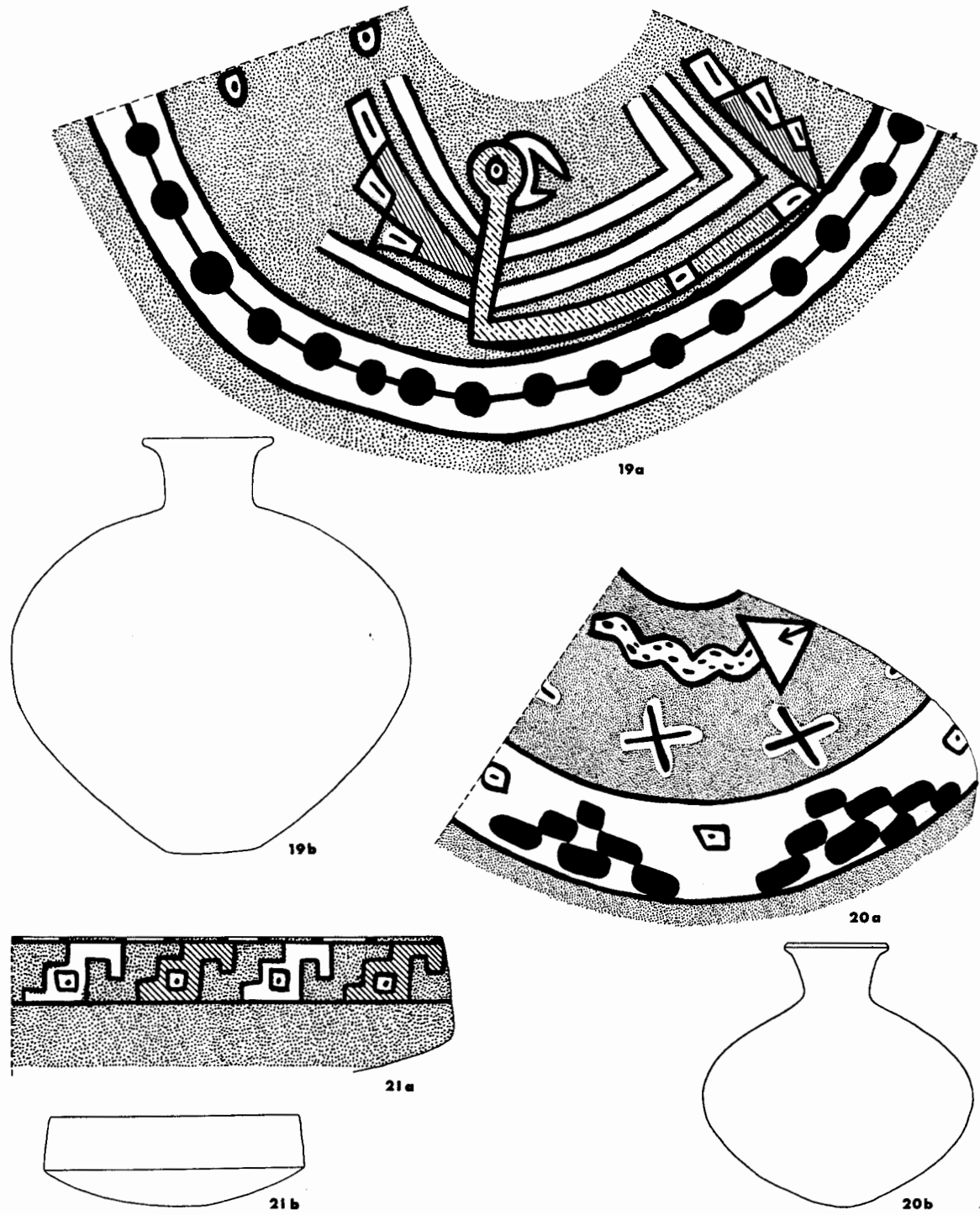


Plate IV. Ica 1 vessels from Burial C-2, Ocucaje (see plate III, fig. 15, and plate V for remainder of grave lot).