

PERUVIAN CUMBROUS BOWLS

BY

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ABBREVIATIONS USED

A	Anthropos.
l'A	L'Anthropologie.
AA	American Anthropologist.
AAA-M	American Anthropological Association, Memoirs.
ArA	Archiv für Anthropologie.
AES-P	American Ethnological Society, Publications.
AGW-M	Anthropologische Gesellschaft in Wien, Mitteilungen.
AJPA	American Journal of Physical Anthropology.
AMNH	American Museum of Natural History—
-AP	Anthropological Papers.
-B	Bulletin.
-M	Memoirs.
-MA	Memoirs, Anthropological Series.
-MJ	Memoirs, Jesup Expedition.
BAE	Bureau of American Ethnology—
-B	Bulletins.
-R	(Annual) Reports.
CNAE	Contributions to North American Ethnology.
CU-CA	Columbia University, Contributions to Anthropology.
FL	Folk-Lore.
FMNH	Field Museum of Natural History—
-M	Memoirs.
-PAS	Publications, Anthropological Series.
IAE	Internationales Archiv für Ethnographie.
ICA	International Congress of Americanists (Comptes Rendus, Proceedings).
IJAL	International Journal of American Linguistics.
JAFL	Journal of American Folk-Lore.
JRAI	Journal of the Royal Anthropological Institute.
MAIHF	Museum of the American Indian, Heye Foundation—
-C	Contributions.
-IN	Indian Notes.
-INM	Indian Notes and Monographs.
PM	Peabody Museum (of Harvard University)—
-M	Memoirs.
-P	Papers.
-R	Reports.
PMM-B	Public Museum (of the City) of Milwaukee, Bulletin.
SAP-J	Société des Américanistes de Paris, Journal.
SI	Smithsonian Institution—
-AR	Annual Reports.
-CK	Contributions to Knowledge.
-MC	Miscellaneous Collections.
UC-PAAE	University of California, Publications in American Archaeology and Ethnology.
UPM-AP	University of Pennsylvania (University) Museum, Anthropological Publications.
USNM	United States National Museum—
-R	Reports.
-P	Proceedings.
UW-PA	University of Washington, Publications in Anthropology.
ZE	Zeitschrift für Ethnologie.

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The problem of this paper is the unity of a certain bowl type widespread in ancient Peru. The series studied includes 141 bowls of relatively simple shape and decoration. Because of their unimpressive character, few have found their way into museum displays, and still fewer into the literature. The bulk of the material studied is in the University of California Museum of Anthropology. Field Museum of Natural History has very kindly loaned some 15 specimens, and the American Museum of Natural History has obligingly supplied several sketches.

The bowl type which this paper seeks to establish is, for the sake of convenience, referred to as Cumbrous. This term is, in a general way, descriptive of the ware as well as the design, for both tend to be somewhat heavy and ponderous.

Our concern will be, for the most part, with decorative features, but a word may be said of the ware and of the shape of typical specimens. The vessel is usually a gently rounded, open bowl or dish with a direct rim (i.e., not outcurved or incurved). The majority may be described as hemispherical, but some, especially those from Nazca, tend rather toward the conical in cross-section.

The bottom is occasionally flattened, and one sometimes gets a definite base. This is not a southern (Nazca and Ica) trait, but is noticeable in bowls from Chancay and Ancon.¹ Bowls from Moche seem always to have a tripod² or a pedestal³ base; those from Supe⁴ often have the latter structure.

The ware itself may best be described by terms such as heavy or dull. Compared with products of the classic periods, such as Proto-Chimu or Early Nazca, it is definitely coarse and thick. It is, however,

¹ As in Strong, W. D., *The Uhle Pottery Collections from Ancon*, Univ. Calif. Publ., AAE, 21: pl. 43e, *m, p*, 1925.

² Kroeber, *Arch. Explor. in Peru*, Anth. Memoirs, Field Mus., 2: no. 1, pl. 5, fig. 5, 1926.

³ Hrdlička, *Some Results of Recent Anth. Explor. in Peru*, Smith. Misc. Coll., 56: no. 16, pl. 1, 1912.

⁴ Kroeber, *The Uhle Pottery Coll. from Supe*, AAE, 21: pl. 73l, *m, n*, 1925.

well smoothed, especially on the interior, but the exterior sometimes shows traces left by the smoothing implement. In spite of smoothing, these Cumbrous bowls are characteristically dull and unpolished, features which throw them into sharp contrast with the invariably polished products of the classical periods.

As practically all the specimens are whole, it has not been feasible to examine the paste in cross-section. However, the texture seems smooth, seldom granular on the surface as one might get were excessively coarse tempering employed. These bowls may be slipped or unslipped, usually the former. The unslipped range in color from terra cotta to light dusky orange, sometimes with dark firing clouds. A heavy white slip is distinctive of some central coast bowls, principally those of Chancay. This is undoubtedly associated with the Black-on-White style which at one period was prevalent in that region.

The foregoing evidence in itself would never serve to set these bowls apart as a type, but, taken in conjunction with a certain constancy of decorative features, the evidence is fairly impressive. The remainder of the paper will concern itself with an analysis of design, seeking by this method, to establish the unity of the series.

The interior of the Cumbrous bowl is always decorated; the exterior is always undecorated, at least unpainted.⁵ The interior decoration takes many forms, but it usually consists of stop⁶ designs which cut the rim of the bowl and which are, at the same time, pendant from the rim. Quartering and halving of the field prevail wherever the ware is found, but one occasionally meets with three or five-zoned decoration. The principal design elements are geometric—straight lines, arcs, stepped triangles, dots, zigzags, etc. These designs are frequently painted in several colors, usually three, rarely more, and are, more often than not, outlined in black. The designs are symmetrical, with minor exceptions.

Figure 1 gives a schematic representation of the entire series. Sketches and loan specimens, as well as published data, have been included. In other words, the series is complete. The general location and period are indicated on the margin of the plate. The arrangement is geographical and chronological. The sites from north to south are entered downward, and where periods are known, the earlier specimens are entered first in their rows. A numerical listing

⁵ Some few bowls, from Supe, for example, have exterior decorative impressions, Kroeber, *AAE*, 21: pl. 75*j*.

⁶ Design elements which are discrete or spaced borderwise are known in art as stop designs. Day, Lewis F., *Pattern Design*, 215, London, 1923.

at the end of the paper gives the museum number, provenience, and period. When the period is doubtful for some reason or other, the bowl is placed with the group to which it seems to adhere artistically and its doubtful character indicated in the list. The chronology followed is that established in previous papers of this series.⁷

TABLE 1
FREQUENCY OF DESIGN MOTIFS

	Chimu Area	Supe	Chancay	Ancon	Nieverfa	Cajamarquilla	Fachacamac	Cafete	Chincha	Ica	Yauca	Nazca	Arequipa	Chichiliani	Humahuaca
	7	18	21	16	1	1	2	4	1	30	4	32	2	1	1
Quartering.....	2	13	11	7	1	1	1	1	17	2	26	1	1	1	1
Halving.....	5	3	9	9	1	1	1	1	7	1	1	1	1	1	1
Three-zoned decoration.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Five-zoned decoration.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Center circle with radiations.....	2	2	2	1	1	1	1	1	1	1	3	1	1	1	1
Band around rim (decorated).....	4	2	1	1	1	1	2	1	3	2	7	1	1	1	1
Band around rim (undecorated).....	2	1	1	1	1	1	1	1	5	1	3	1	1	1	1
Lines (except block radiations).....	2	9	6	6	1	1	1	1	11	1	9	1	1	1	1
Lines compose unit.....	7	1	5	1	1	1	1	1	7	1	5	1	1	1	1
Arcs (including variants).....	3	2	10	9	1	1	3	1	15	2	22	2	1	1	1
Stepped triangle.....	2	2	5	9	1	1	1	1	10	1	16	1	1	1	1
Steps within arcs.....	1	1	1	6	1	1	1	1	4	1	15	1	1	1	1
Subsidiary arcs.....	1	1	1	2	1	1	1	1	4	2	1	1	1	1	1
Dots.....	7	8	7	3	1	1	1	1	8	3	15	2	1	1	1
Circles.....	2	7	3	1	1	1	1	1	1	1	6	1	1	1	1
Crescent, dot within.....	3	1	1	1	1	1	1	1	1	1	4	1	1	1	1
Zigzags and wavy lines.....	3	2	4	1	1	1	1	1	1	4	8	1	1	1	1
Design outlined in black.....	5	5	11	9	1	1	1	1	10	4	26	2	1	1	1
Black design on solid color.....	2	10	5	1	1	1	3	1	15	4	1	1	1	1	1
Conventionalized representation.....	3	1	4	1	1	1	1	1	6	5	1	1	1	1	1
Human face.....	2	1	3	1	1	1	1	1	1	1	1	1	1	1	1
Cat.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Bird.....	1	1	2	1	1	1	1	1	1	1	2	1	1	1	1
Fish.....	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1
Llama.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

At first sight, the various designs may not seem closely connected, but it is possible to arrange them in overlapping series. It is possible, furthermore, to demonstrate their genetic relationship by analysis into constituent elements. Table 1 lists the traits more or less common

⁷ AAE, 21:1-332, 97 pls., 1924-1927, and 24:1-46, 1927.

to the whole area. The first items deal with the plotting off of the design field. Quartering is the most common, occurring in 60 per cent of all cases. Halving is next frequent, with something like 25 per cent. An uneven number of segments is rare, but appears from Supe, Cañete, Ica, and Arequipa.

The interior of the bowl is sometimes quartered or halved by a center circle with radiations to the rim. This feature is not strong numerically, but is widely distributed. The same holds for a border or band inside the rim. It may or may not bear decoration.

Lines, aside from those radiating from a center circle, are a favorite motif and usually extend from the rim toward the center of the bowl. A number of straight lines may compose the design unit, as in several specimens from Supe and Ica, or they may be combined with other elements such as arcs or stepped triangles (figs. 26, 36).

The motif which, for the sake of simplicity, will be designated as an arc, is in geometric terms, a lunette. It is the area between the rim and an intersecting arc or pendant loop and is one of the outstanding features of the Cumbrous design complex. The arc may be solid or may contain concentric arcs, stepped triangles, or lines. Certain variations of the arc occur; the outline may be skewed (fig. 72); it may be angularized (fig. 83); it may be flattened (fig. 37); the inclusion of the latter cases cannot be challenged, as they pass by transitions into the normal arcs. Where a wide band crosses the face of the bowl, the residual areas on either side, of course, tend to appear arc-shaped owing to the contour of the vessel.⁸ For the most part, however, these automatically produced arcs are undecorated and apparently have no entity of their own. For this reason, they are not counted in the tabulation of arcs. When one gets conventionalized human representation, the arc often serves as the facial outline (figs. 6, 63).

The stepped triangle, either isosceles or right angle, is another standard motif. It is usually solid black and has from three to four steps on a side. The plain-sided triangle is rare. This is of some interest, as the painting technique would not necessitate the jogged character.

The three motifs mentioned so far, the line, the arc, and the stepped triangle, may be characterized as the fundamental design

⁸ Kroeber, *AAE*, 21: pl. 73*m*, 1925.

elements of the complex. One hundred six, or 75 per cent of the 141 bowls, show one or more of these features. In addition, at least one of these three elements is represented from every site with the exception of Chichillani and Humahuaca, two southern highland sites, each with a single specimen. That from Chichillani shows a faint suggestion of arc treatment, but its inclusion is justified because it exhibits the typical quartering. The Humahuaca bowl (fig. 138) departs even more markedly from the norm, but it is so similar to an Arequipa specimen (fig. 135) that its relationship to the series cannot be questioned.

The evidence for connection between the various regions is further strengthened when more specific traits such as steps within arcs and subsidiary arcs (fig. 49) are shown to be held in common. Numerically, these are unimpressive, but their mere presence is suggestive. In addition, dots, circles, zigzags, and wavy lines are generally distributed.

As before suggested, the design may be painted in one, two, or three colors—black, red, and white—in addition to the ground color. Seventy-five bowls, or over 50 per cent of the total number, have the design outlined in black. Excepting the bowls painted in black only, one finds that 75 per cent are outlined in black. Excepting the sites which yield only black monochrome designs and hence no outlining (Chincha, Cañete, Chichillani), one finds black delineation from all regions but Humahuaca. Here there is a suggestion of outlining, but the sketch figured by von Rosen⁹ does not allow of definite interpretation.

There is a decided preference for the geometric, and conventionalized representation occurs in a scant 19 cases, scattered from northern Peru southward into Bolivia. The tabulation seems to suggest that conventionalized human faces center in the north and animal figures in the south. It remains for further data, however, to confirm or refute this suggestion.

The above material may be summarized as follows:

1. There is a constant adherence to the device of quartering or halving the design field.
2. There is an impressive recurrence of three motifs, the line, the arc, and the stepped triangle.

⁹ von Rosen, E., *Popular Account of Archaeological Research*, fig. 237, Stockholm, 1924.

3. Various other design elements such as the step within an arc, the subsidiary arc, the dot, the circle, etc., occur widely.

4. Finally, it is possible to arrange the designs in continuous, overlapping series.

The foregoing discussion demonstrates, I believe, the unity of the series and reveals common elements of bowl design for the entire Peruvian coast, giving, moreover, definite suggestion of highland adherence. These resemblances cannot be explained on the principle of limited possibilities, because the possibilities of interior bowl decora-

TABLE 2
DESIGNS CHARACTERISTIC OF SOUTH AND NORTH

	Chimu Area	Supe	Chanca	Ancon	Nieverla	Cajamarquilla	Pachacamac	Cafete	Chincha	Ica	Yauca	Nazca	Arequipa	Chichillani	Humahuaca
	7	18	21	16	1	1	2	4	1	30	4	32	2	1	1
Subsidiary steps.....												13			
Quartering by arcs (4 arcs, 4 pairs, or 4 and subsidiary arcs).....				2				1		9	2	18			
Diametric band.....		6	6			1									
Two arcs.....	2	2	9	7		1	1	1					1		
Steps, straight lines same unit.....		2	5	1								1			
Scroll (not interlocking or conventionalized).....	1	5													
Interlocking scroll.....			5				1								
Solid arcs.....			5	1				3							
White design on solid color.....		11								1					

tion are many. Various combinations of motifs, colors, and arrangement might occur. The arrangement alone might be all-over, centered, or bordered, with many variations of each. Cumbrous bowl decoration is not at all obvious, or it would certainly appear in other regions of the world where interior bowl decoration has been developed. In the Southwest region of the United States, for example, bowls are plentiful, but the decoration differs fundamentally from that of the Cumbrous type.¹⁰ There is no resemblance in color, arrangement, or

¹⁰ A striking exception to this is found in Kidder, A. V., Pottery of the Pajarito Plateau, Mem. Am. Anth. Assoc., 2: pl. 26, figs. 3, 6, 1915, in which one gets a close parallel to the Chanca interlocking scroll. Figure 8 of the same plate is, moreover, suggestive of the Cumbrous arc. These isolated cases are the more noticeable as they vary so markedly from the norm of Southwestern material.

final effect. And this is the more marked as Peru and the Southwest share simple motifs such as the stepped triangle. Cumbrous bowl decoration, as a type, is the more distinct when brought into comparison with bowl decoration from other areas.

Table 2 lists traits which show a tendency to group either in the north or south. Subsidiary steps, or steps appended either side of an arc (figs. 107, 130), are confined to Nazca. Likewise, the arc as a quartering agency is noticeably stronger in the southern sites.

On the other hand, certain traits tend to cluster in the north. They are—the diametric band (figs. 19, 39); preference for two arcs instead of four; the combination of steps and straight lines (fig. 13); the simple scroll (fig. 22); the interlocking scroll (figs. 28, 29); solid arcs; and white monochrome painting.

One can draw distinctions still finer and characterize each well represented site. When more than one period is represented, there is usually a corresponding stylistic variation.

Chimu area.—A few specimens of northern, but locally doubtful provenance, are grouped under this heading. Undoubtedly, they constitute the least uniform and the least typical lot. In general, these specimens are of the Middle period; there are no Proto-Chimu specimens which conform. The following are included: two Middle period bowls from Chicama which are figured by Hrdlička,¹¹ two Peabody Museum specimens, presumably Middle in period, from either Viru or Chicama;¹² one bowl, period uncertain, purchased at Trujillo and figured by Kroeber;¹³ two black-on-white bowls from Site A, Moche, which are definitely Middle in period. As before mentioned, these are far from typical, but certainly bear some relationship to the series. All are halved or quartered; some show the center circle with radiations; others show arc variants and conventionalization.

Supe.—Here, all specimens are from the Middle period. Supe has no true arcs and specializes in scrolls and monochrome white on red or terra cotta. The simple line unit (fig. 7) and the diametric band are also frequent. The latter often contains a running scroll pattern (figs. 20-24).

Chanccay.—Two Middle styles (Three-Color-Geometric and Epigonal) and a Late style (Black-on-White) yield typical specimens.

¹¹ *Op. cit.*, pl. 1.

¹² Kroeber, Moche, AAE, 21: pl. 69a, b, 1925.

¹³ *Op. cit.*, Field Mus., pl. 11.

The former are represented by 12 bowls and the latter by 9. The Middle and Late styles overlap, being associated in graves of one cemetery; but the Late style is also found pure in other cemeteries.

There is a definite stylistic distinction between the two Chancay periods. The Middle period makes use of the step-line unit, the interlocking scroll, the center circle with radiations, and the arc as a human face outline. In the Black-on-White style, attention shifts to the solid arc variant and the center band. The step and interlocking scroll persist, but feebly. The tendency toward solid black designs is quite in keeping with the general Black-on-White style and probably is a concomitant of it.

Ancon.—Thirteen typical bowls are Middle Ancon and three Late Ancon. The periods here are not set off quite as sharply in style as at Chancay.

The Middle period exhibits the Cumbrous decoration complex in its most generalized form. There are arc, step, and line units and a tendency for steps to occur within arcs. The ensemble impresses as being quite close to Epigonal Ica.

The later period, although scantily represented, exhibits no marked differences. One late bowl (fig. 59) uses the same motif as is found on a Chancay Three-Color-Geometric jar. Another late specimen has four solid arcs. In view of the general similarity of Ancon and Chancay pottery, one would expect much closer agreement than is actually the case. There is not one instance of the typical Chancay interlocking scroll and only one case of a solid arc. For the Late period, this might be attributed to the paucity of numbers, but the Middle period is quite as well represented numerically as is that of Chancay.

South central coast sites.—Material from this region is noticeably meager. The few specimens show the usual straight line, arc, and step motifs. One of the two bowls from Pachacamac is after Uhle.¹⁴ It is of the interlocking scroll type and, from the picture at least, is indistinguishable from Chancay examples. The other Pachacamac bowl is from the American Museum of Natural History (B-472) and shows the typical arc, step, and step within arc elements.

Cañete is a central coast valley whose chronology is not decisively placed, but the material drawn upon is relatively early. The four sketches shown are of bowls in Field Museum. While they are not

¹⁴ Pachacamac, pl. 7, fig. 6, 1903.

thoroughly typical, they do employ the arc and stepped triangle. Several other Early Cañete bowls, not figured here, suggest the complex, and might conceivably be regarded as variants.

Ica.—Ica is represented by 30 bowls from the Nazcoid, Epigonal, Middle, Late, and Inca periods. None of the Nazca style from Ica can fairly be included in the type.

Nazcoid (1 case) and Epigonal (7 cases) yield the most typical specimens. All have arcs and several have, in addition, step and line elements. There is a noticeable similarity between the Epigonal Ica bowls and those of Middle Ancon.¹⁵

One finds stylistic divergence beginning with Middle Ica. Artistically, there is deterioration. Step designs continue. The arc also continues, but in modified form. It becomes angular—like an isosceles triangle with the base on the rim of the dish. This arc variant is sometimes filled with lines parallel to the sides and crossing each other at right angles (figs. 82, 83). This cross-hatching feature is foreshadowed by an Epigonal design (fig. 72).

A yet more radical variation of the arc occurs in Middle Ica. The outline is omitted and a triangular area built up of rows of superimposed dots or diamonds. Lines are more frequent than in the Epigonal. They occur, 5 or 6 to the unit, and run in a short distance from the rim. Several bowls show no specific affiliation with the earlier style aside from halving and quartering. This is accompanied by several new motifs—conventionalized cat figures, small rectangles, and L-shaped units. All this seems characteristic of the Middle and Late Ica geometric or textile-like style.

The five representatives of the Late and Inca periods show quartering by lines. One has the familiar center circle with radial lines. All have conventionalized animal figures—three of fish and one of a bird. One bowl from this late era has an unoutlined arc variant built up of small diamonds. As a whole, these Middle and Late Ica bowls are manifestly far afield from the typical Epigonal forms.

Yauca.—Yauca is a site south of Ica from which we have four bowls. Two are quartered by arcs and have, moreover, subsidiary arcs. The other two (figs. 100, 102) are not particularly characteristic. All of the Yauca specimens have wavy lines.

Nazca.—Bowls showing typical decoration are abundant in the Late Ica period from Nazca. Definite evidence of the complex appears

¹⁵ Ancon, for example, is the only northern site which has subsidiary arcs and steps within arcs.

earlier in certain Nazca Y-Epigonol pieces, and various other specimens of the same period are strongly suggestive of the complex. A Nazca Y bowl shown in plate 14*f* of Gayton and Kroeber¹⁶ has a step and line design on the outside. Plate 14*e* of the same paper shows a rim segmented by lines and skewed arcs. Two Field Museum bowls (170483, 170485) which are classed as Nazca B, verging on Y, are quartered by stepped triangles. However, as they are four-color, and as the outside rim is circled by a fret design, they are not included in the series.

Quartering appears as early as Nazca A. One gets two wide lines crossing at right angles and dividing the bowl into four sectors. The triangular sectors thus formed are sometimes filled with human faces. A Nazca A bowl of this type from Ica is figured in plate 28*o* of Kroeber and Strong.¹⁷ The general character of these early Nazca bowls, however, does not conform to the type under consideration, and they have not been included in the series.

The Late Ica group from Nazca has a considerable number of bowls which cover almost the entire range of the complex. One gets quartering, but, surprisingly enough, no halving. The center circle with radiations is present, but rare. Arcs, steps, and lines are more than plentiful. The latter sometimes run in from the peak of the arc instead of cutting the rim. About half the specimens have steps within arcs.

In addition, there are several special features which seem particularly associated with this Late Ica period at Nazca. Wavy lines are abundant. Subsidiary steps, or steps attached on either side of an arc, are confined to Late Ica at Nazca. Another device which is practically limited to this area and age is the filling of all free space with series of dots, circles, lines, etc. (figs. 125, 126).

Highland.—The University of California Museum has little highland material and provides only two Arequipa bowls for the series. One of these has the rim cut by five arcs, and the other exhibits an aberrant form of the center circle with radiations (fig. 135).

Of the other highland specimens, one is from Chichillani, Bolivia,¹⁸ and was obtained from a sketch furnished by the American Museum of Natural History. It is quartered by the figures of four llamas and

¹⁶ AAE, 24, 1927.

¹⁷ AAE, 21, 1924.

¹⁸ If this is to be identified, as seems likely, with the Chinchillani of Bolivian maps, it is near the Chilean border, slightly south of a line due east of Arica.

by four rounded "V" elements which segment the rim. These V-shaped objects are faintly reminiscent of arcs, and the bowl unquestionably falls within our series.

The remaining dish (fig. 138), a "ground" find from Quebrada de Humahuaca, near Jujuy, Argentina, is figured by von Rosen.¹⁹ It is in no way typical, but bears a strong resemblance to one of the Arequipa specimens (compare figs. 135, 138).

Material from the inland districts is rare at best, but in time more will undoubtedly come to light. It would be exceedingly interesting to be able to trace an unbroken distribution of bowl decoration from coastal Peru into the Andean region.

This completes the series. It should be apparent that, despite the relative uniformity, an appreciable amount of local variation can be detected.

SUMMARY

The foregoing data may be summarized as follows:

1. A bowl decoration complex was shared by all of coastal Peru and probably by the highland region as well.
2. When the complex continues through several periods at a site, the basic elements remain uniform, but certain stylistic changes are apparent.
3. We have few bowls from the Chimu area, none of which are thoroughly typical and none of which are early.
4. Material from the central coast is scant, but there is a close resemblance between Middle Ancon and Epigonal Ica, despite the intervening area.

As regards historical development, the situation is far from clear. Dr. A. L. Kroeber has very kindly supplied the chronological basis for table 3. To this table have been added the specimens attributed to each period. Numbers standing free represent specimens which can be assigned definitely; those in parentheses indicate specimens which probably belong in the period. The chronology of Supe, Chancay, Ancon, Ica, and Nazca is reasonably certain, but the other sites have not been so thoroughly equated, and this uncertainty is indicated by the dotted lines.

Assuming, however, that the chart is approximately correct, it becomes apparent that there is a definite bunching on, and immediately following, the Tiahuanaco horizon. With the exception of Chancay and Nazca, the complex tends to dwindle out in the later

¹⁹ *Op. cit.*, fig. 237.

periods. At Chancay, the style may have been given impetus and new character by the Black-on-White technique, although, in that case, one might normally expect the same to hold for Ancon, which shared this style. The specimens from Late Ancon are, however, too few in number to make the absence of a trait significant.

It is impossible with the few data in hand, to essay anything in the way of historical reconstruction. Such meager evidence as there is might seem to hint at a southern origin. We have precedence for quartering in the early periods of Nazca and Ica; the bowls from this region share the general basic elements but have, in addition, strongly specialized traits such as wavy lines, subsidiary steps, etc. Yet the significance of the early appearance here is partly nullified by the fact that we have no bowls at all from early northern and central coast sites. In fact, aside from Proto-Chimu,²⁰ Nazca is the only early style yet discovered.

As historical reconstruction is not feasible, all that can fairly be said is that the complex which is characteristic of Cumbrous bowls is Epigonal or Tiahuanocoid in feeling and in period of first appearance. It is, perhaps, one heretofore neglected element of the general Tiahuanocoid complex. Further data, especially from the highland districts, will do much to clarify the situation.

The fact that an intrusive type of ware could impress itself on a series of distinct local styles and persist practically unchanged in essentials for what must have been several centuries, is a matter of some interest. Something in the dynamics of Peruvian coastal culture enabled it to assimilate successive styles such as those of Tiahuanaco and Inca and to recast them, but in such a way that the intrusive type persisted in its essentially distinctive features.

²⁰ Which is probably later than Early Nazca. Kroeber, Field Museum, *op. cit.*, 20.

Explanation of Table 3

Numbers standing free represent bowls which can be assigned definitely to a period. Numbers in parentheses indicate specimens which probably belong within the period but because of incomplete data, etc., cannot be accurately placed.

So little is known of the chronology of Yauca and the highland region that these sites have been entered without any attempt to equate them chronologically. As a consequence, the number of specimens is entered below the site name rather than on the chart.

Five Nazca bowls were designated by the collectors (Kroeber and Schenck) as "Epigonal or Late Ica." On the time chart, these have been grouped arbitrarily with the Late Ica bowls as this seems the period into which the characteristic Cumbrous bowls fall at Nazca.

TABLE 3
OCCURRENCE BY PERIOD

Beginning of Tiahuanaco influences	End of Tiahuanaco influences	Inca influences	1530 A.D.
<u>Tiahuanacoid</u> 2+(5)			Chimu Area
<u>Middle</u> 18			Supe
<u>Epigonal and 3-Color</u> 6+(6)	<u>Late Chancay</u> 7+(2)		Chancay
<u>Middle Ancon</u> 12+(1)	<u>Late Ancon</u> 3		Ancon
<u>Proto-Lima</u> 1			Nievería
		<u>Cajamarquilla</u> 1	Cajamarquilla
		<u>Late</u> (2)	Pachacamac
<u>Early Cañete</u> 4			Cañete
		<u>Late Chincha</u> 1	Chincha
<u>Nazcoid</u> 1	<u>Epigonal</u> 7	<u>Late Ica</u> 2+(2)	<u>(Inca)</u> 1
	<u>Middle</u> 17		Ica
			Yauca 4
<u>Nazca Y-Epigonal</u> 2+(2)		<u>Late Ica</u> 7+(21)	<u>(Inca)</u>
			Nazca
			Arequipa 2
			Chichillani, Bol. 1
			Humahuaca, Arg. 1

For explanation see opposite page.

EXPLANATION OF FIGURE 1

Unless otherwise indicated, the numbers below refer to specimens in the University of California collection. AMNH stands for the American Museum of Natural History; FM, for Field Museum. When material has been illustrated, reference is cited. All references are to plates in papers of this series (AAE) unless the author's name is given. When known, site and period are indicated.

Fig.	Spec. No.	Published		
1a	4-2550	21:66 <i>h</i>	MOCHE, Site A	Middle Period
1b	4-2551		MOCHE, Site A	Middle Period
2		Kroeber, 1926, pl. 5, fig. 5; pl. 11, fig. 4	Bought at TRUJILLO	
3		21:69 <i>b</i>	VIRU or CHICAMA	Probably Middle
4		21:69 <i>a</i>	VIRU or CHICAMA	Probably Middle
5		Hrdlicka, 1912, pl. 1	CHICAMA	Probably Middle
6				
7	4-7056	21:78 <i>d</i>	SUPE, San Nicolas	Middle Supe
8	4-7163	21:75 <i>j</i>		
9	4-7373			
10	4-7367			
11	4-7867	21:73 <i>n</i>		
12	4-7374	21:73 <i>o</i>		
13	4-7356	21:73 <i>k</i>		
14	4-7375			
15	4-7067	21:78 <i>k</i>		
16	4-7379			
17	4-7059 <i>a</i>	21:78 <i>f</i>		
18	4-7211	21:73 <i>l</i>		
19	4-7310			
20	4-7126			
21	4-7121			
22	4-7366	21:73 <i>m</i>		
23	4-7364			
24	4-7363			
CHANCAY				
25	4-6638		Site is not known for figs. 30, 31, 35. Remainder are Site C.	Figs. 25, 27, 29, 33, 34, 36 are 3-Color or Epigonal. Figs. 26, 28, 30, 31, 32, 35 are probably the same.
26	4-6544			
27	4-6509	21:84 <i>c</i>		
28	4-6543			
29	4-6583	21:84 <i>a</i>		
30	16-917			
31	16-1161			
32	4-6606			
33	4-6605	21:83 <i>a</i>		
34	4-6618	21:83 <i>c</i>		
35	4-7052			
36	4-6577	21:83 <i>b</i>		

CHANCAY—Continued

Fig.	Spec. No.	Published		
37	4-6444		Site A	} Figs. 37, 38, 39, 42, 43, 45 are Late Chancay. Figs. 40, 41, 44 are probably the same.
38	4-6524	21:82f	Site C	
39	4-6490f		Site B	
40	16-1016		La Niña	
41	16-1015		La Niña	
42	4-6480a		Site B	
43	4-6694	21:82g	Site C	
44	4-6649		Site C	
45	4-6431		Site A	

ANCON

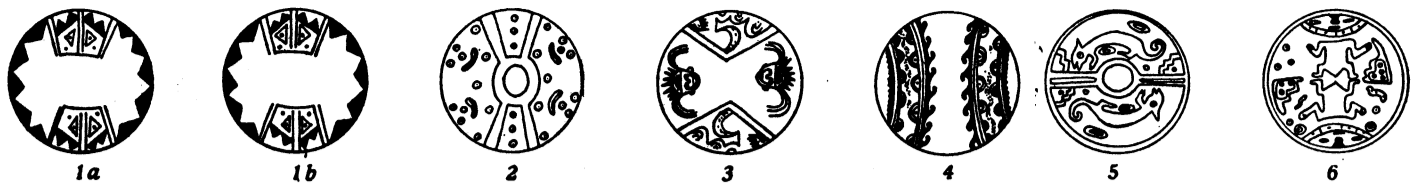
46	4-6151		} Site P except fig. 50 for which site is not known.	} Figs. 46-49 and 51-58 are Middle Ancon. Fig. 50 is probably the same.
47	4-5920			
48	4-6100			
49	4-5996			
50	16-916			
51	4-6049			
52	4-6117	21:47i		
53	4-6048			
54	4-6021			
55	4-6180			
56	4-5919	21:44r		
57	4-6047			
58	4-5730		Site T	
59	4-5598	21:43m	Site B	} Late Ancon
60	4-5589	21:43e	Site A	
61	4-5908	21:43p	Site P	
62	4-9197	21:96a	NIEVERÍA ²¹	Proto-Lima (Str. A)
63	AMNH 3417		CAJAMARQUILLA	
64	AMNH B-472		PACHACAMAC	
65		Uhle, 1903, pl. 7, fig. 6	PACHACAMAC	"Pre-Inca" (Late?)
66	4-3751h	21:fig. 7f	CHINCHA, Site C	Late Chincha
67	FM 169618	}	} CAÑETE, Cerro del Oro	} Early Cañete
68	FM 169619			
69	FM 169742			
70	FM 170252			

²¹ A Cumbrous bowl from Nievería is figured in Uhle, M., Über die Frühkulturen in der Umgebung von Lima, Int. Cong. Am., 1908, 16: fig. 19, 1910. This bowl has quartering, wavy lines, arcs, steps, and steps within arcs. Unfortunately this reference was not encountered in time to permit its inclusion in the figure and tables here presented. It is thoroughly typical of the Cumbrous complex and serves well as a link between the northern and southern coastal sites.

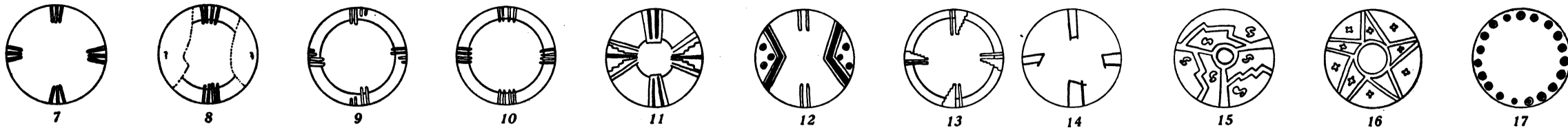
				ICA	
Fig.	Spec. No.	Published			
71	4-4495	21:29e and Uhle, ²² 1913, pl. 11, fig. 3		A	Nazcoid (Nazca Y at Nazca)
72	4-4470	21:30g and Uhle, <i>ibid.</i> , fig. 5, fig. 8		E	Epigonal
73	4-4545	21:30l		E	
74	4-4486			E	
75	4-4552			E	
76	4-4478	21:30m		E	
77a	4-4538	21:fig. 11	Ocucaje	E	
77b	4-4547	21:30h		E	
78	4-4604a			C	
79	4-4603a	21:31c		C	
80	4-4603			C	
81	4-4603b			C	
82	4-4602c			C	
83	4-4602a			C	
84	4-4602b			C	
85	4-4318o		Chulpaca	M	Middle Ica
86	4-4580d		Ocucaje	C	
87	4-4580c		Ocucaje	C	
88	4-4318e		Chulpaca	M	
89	4-4580e			C	
90	4-4580g			C	
91	4-4580h			C	
92	4-4581	21:35b	Ocucaje	C	
93	4-4580a			C	
94	4-4613			C	
95	4-4560			G	Probably Late Ica
96	4-5304		Site T		Late Ica
97	16-874				Probably Late Ica
98	4-5236		Site T		Late Ica
99	4-5392		Site T		Inca

²² Uhle, M., Zur Chronologie der alten Culturen von Ica, Jour. Soc. des. Am. de Paris, n.s. 10, 1913.

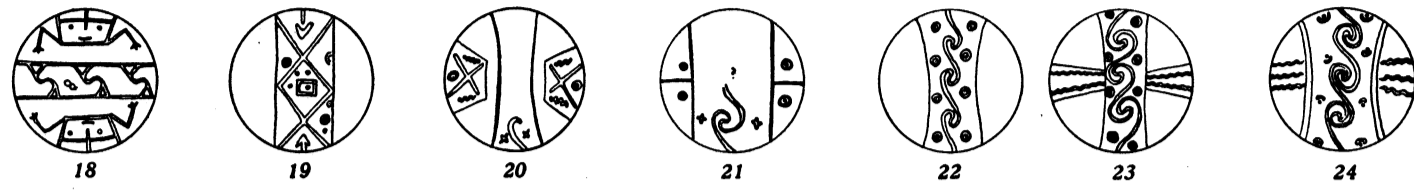
Fig.	Spec. No.	Published				
100	4-8183	}	YAUCA			
101a	4-8180					
101b	4-8181					
102	4-8182					
103	FM 170618	}	NAZCA	Epigonal		
104	FM 170155			Probably Nazca Y-Epigonal		
105	FM 170459			Probably Nazca Y-Epigonal		
106	FM 170583			Epigonal		
107	4-8763			Probably Late Ica		
108	4-8765			24:18f	Late Ica	
109	4-8764			.	Late Ica	
110	4-8540			24:18e	Late Ica	
111	FM 170127				Epigonal or Late Ica	
112	FM 170128				Epigonal or Late Ica	
113	AMNH 41.0-886				Probably Late Ica	
114	FM 170433				Late Ica	
115	AMNH 41.0-885				Probably Late Ica	
116	FM 170612				Epigonal or Late Ica	
117	FM 170129				Probably Epigonal or Late Ica	
118	FM 170606				Epigonal or Late Ica	
119	4-8766			24:18d	Late Ica	
120	4-8761				Probably Late Ica	
121	FM 170437				Late Ica	
122	4-8772				Late Ica	
123	4-9005			}	Probably Late Ica	
124	4-8768					
125	4-9026					
126	4-8767					
127	FM 170620					
128	FM 170809					
129	FM 170939					
130	FM 170941					
131	FM 171002					
132	FM 170938					
133	FM 170808					
134	AMNH 41.0-768					
135	4-8062		Bought at AREQUIPA			
136	4-8063		Bought at AREQUIPA			
137	AMNH B-7497		CHICHILLANI, BÓLIVIA			
138		von Rosen, 1924, fig. 237	QUEBRADA DE HUMAHUACA, ARGENTINA			



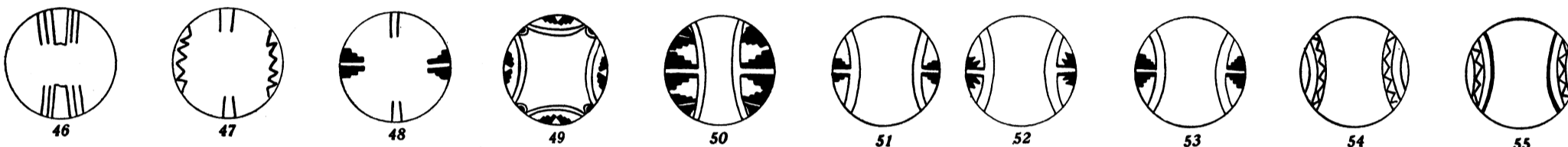
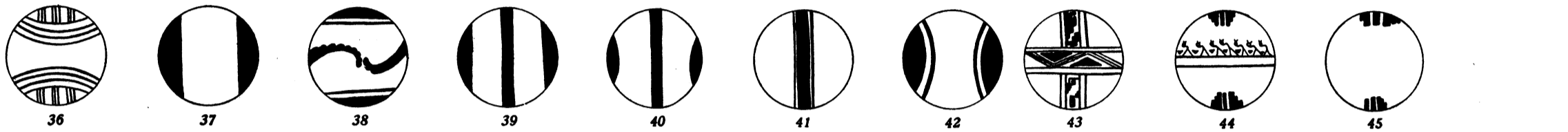
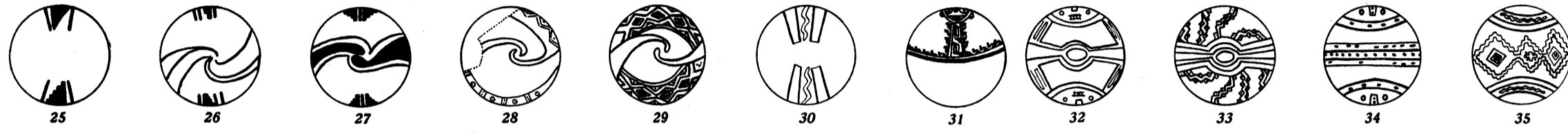
1a-6 North Coast (generally Tiahuanacoid)



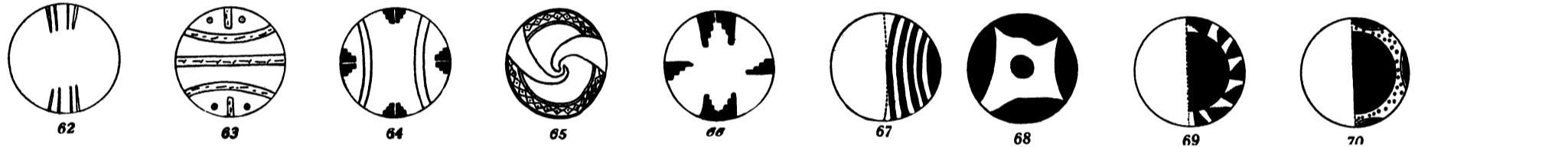
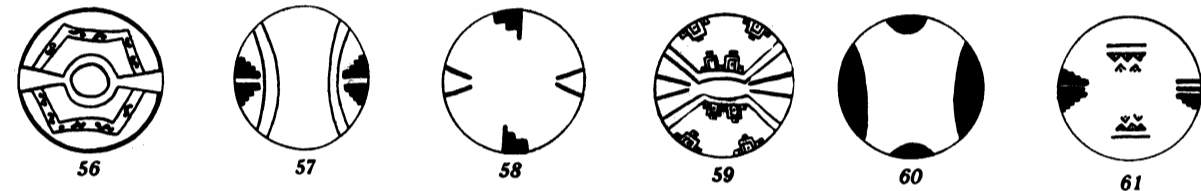
7-24 Supe (Middle Period)



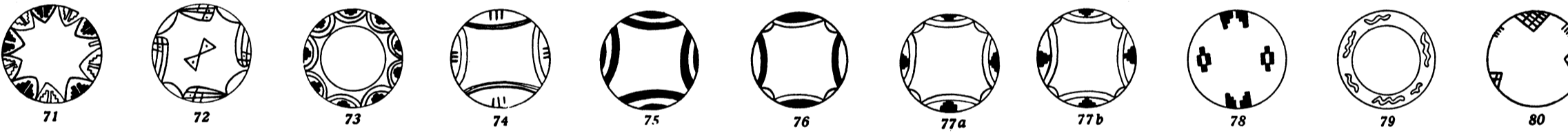
25-45 Chancay
25-36 Three Color and Epigonal
37-45 Black-on-White



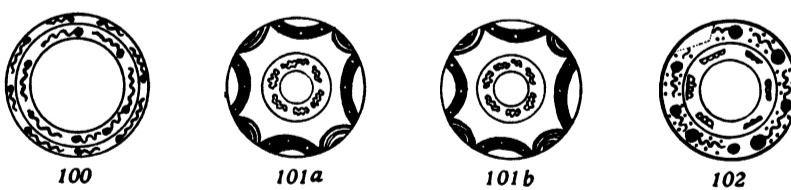
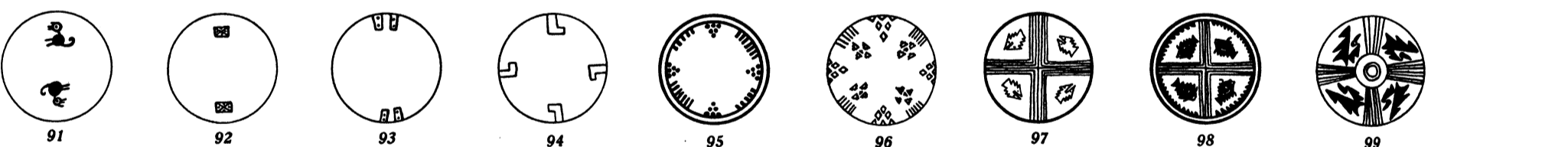
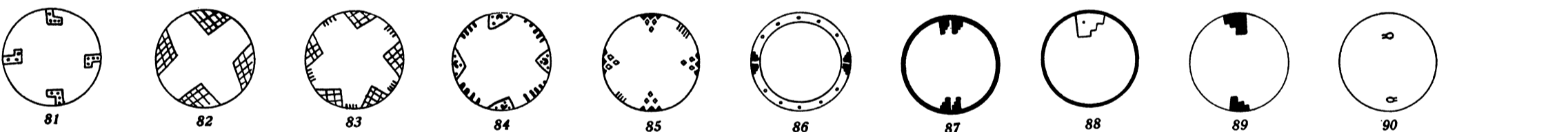
46-61 Ancon
45-58 Middle Ancon
59-61 Late Ancon



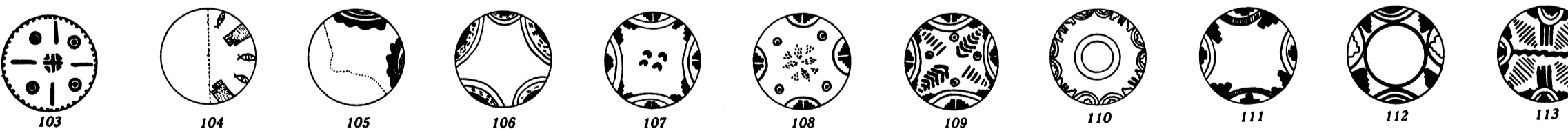
62-70 Central Coast
62 Nieveria (Proto-Lima, Strain A)
63 Cajamarquilla
64-65 Pachacamac
66 Late Chincha
67-70 Early Cañete



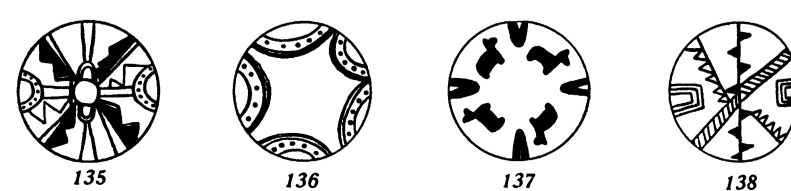
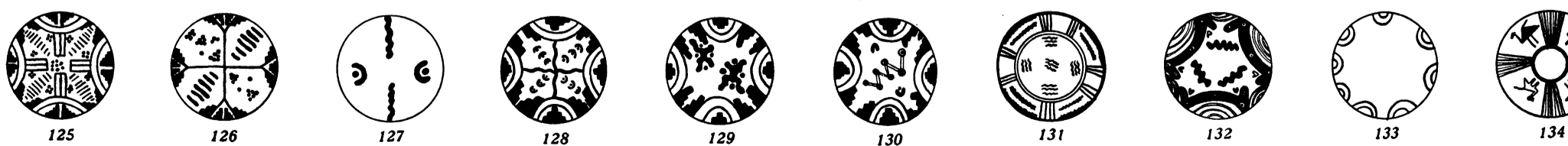
71-99 Ica
71 "Nazcoid" (=Nazca Y)
72-77b Epigonal
78-94 Middle Ica
95-98 Late Ica
99 Inca



100-102 Yauca



103-134 Nazca
103-106 Nazca Y-Epigonal
107-134 Late Ica



135-138 Southern Highland
135-136 Arequipa
137 Chichillani, Bolivia
138 Humahuaca, Argentina

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