# TOWARD DEFINITION OF THE NAZCA STYLE 

BY

A. L. KROEBER

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## PART I: ERRORS AND OMISSIONS IN RETROSPECT

The Gayton-Kroeber Approach of 1927
For twenty-five years there has been agreement that development took place within the Nazca (Proto-Nazca) style of ancient Peru. There has also been agree-ment-except for Tello who inverted the order-that a simpler phase of the style preceded a more elaborate one, which in turn ended in a slovenly breakdown.

But for years the only effort to specify, illustrate, and validate these phases was the brief monograph of 1927 by Gayton and myself. This was based on some 650 pottery vessels secured by Uhle in Nazca or Rio Grande Valley for the University of California. Many of these pots had general locality attributions, such as hacienda names; scarcely a dozen were ascribed to specific graves. As a whole, the 650 vessels had been purchased, either from huaqueros or from local collectors, and were thus without data as to associations.

Gayton and I devised a method that might roughly seriate these hundreds of vessels; or rather, Gayton devised and I accepted and approved the method. We divided the collection into 26 classes of shapes, and selected by inspection forty painted designs-with names largely translated from Seler (1923) -and then tabulated the co-occurrence of shapes and designs. The co-occurrences showed a definite trend, in that they lumped or clotted along a diagonal. The direction of this trend we inferred from variant forms of the same design of which one seemed "naturally" derivable from the other, but the reverse was not.

In brief, we established 4 classes. We first set apart 94 vessels from Nazca that were wholly or partly outside the Nazca style. They mostly retained some features derivative from it, but these were mixed with non-Nazca traits, in some cases with Tiahuanaco traits. The core of this group we called "Y." Of the remaining 563 vessels which were within the Nazca manner, 27 had to be omitted from the cooccurrence correlation of shape and design because of their unique or rare shapes. This left 536 vessels that fell into 25 shape classes, and on which the forty designs selected appeared 704 times-an average of 17 to 18 times each; or, about one and a third designs per vessel. In this main group, indubitably of Nazca style, we recognized three phases, of which we called the first and third, the most distinctive, "A" and "B," and the second or transitional one, "AB" or "X."

In summary, $5 \mathrm{~A}, 9 \mathrm{X}, 11 \mathrm{~B}$ shapes correlated thus with $11 \mathrm{~A}, 14 \mathrm{X}, 15 \mathrm{~B}$ de-signs-or rather, predominantly A, X, B shapes correlated with predominantly $\mathrm{A}, \mathrm{X}, \mathrm{B}$ designs as follows:

Shape and Design Correlations, 1927

| Shapes | A designs |  | $\mathbf{X}$ designs |  | B designs |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | Per cent | No. | Per cent | No. | Per cent |
| A. | 76 | 47 | 74 | 45 | 13 | 8 |
| X | 28 | 19 | 83 | 56 | 36 | 25 |
| B. | 7 | 2 | 181 | 46 | 206 | 52 |

[ 327 ]

This is not too close a correlation, but a trend is definite. A tight correlation could hardly be expected within what was obviously one style. Either shapes or designs can, theoretically, persist into periods later than the one in which they originate; or they can appear before the period in which they become most characteristic.

However, our results have met with only a lukewarm reception among Peruvianists. They have not been subjected to outright attack, but neither have they been outrightly accepted. The A, B, and Y designations have had some usage; but probably not so much as a result of our correlation tables as because they obtrude to the eye, on a little acquaintance with wares from Nazca; and there were no other names lying around, except Tello's "Pre-Nazca" for B.

Meanwhile, the present is a time of renewed interest in the Nazea style, or styles. Four or five years ago, Junius Bird began to work over the American Museum collection and came tentatively to a new classification and scheme of probable development, still unpublished. In 1952, Duncan Strong made an important expedition to Nazca with stratigraphic excavations. In the same year, Donald Collier and I undertook to work over the wholly unpublished collections in Chicago Natural History Museum which I dug for them in 1926. And meanwhile, in Berkeley, John Rowe and Lawrence Dawson were once more laying out and arranging the Uhle Nazca collection to see whether it could not be made to yield more convincing results than Gayton and I had extracted from it. I was also drawn back to concern with Nazca by a paper I wrote originally for the 1951 International Congress of Peruvianists in Lima, and which deals with a problem raised by Gordon Willey (1951) as to the relations of Chavín and Paracas, but which came to involve Nazca as well (Kroeber, 1953).

Reëxamination of the now more than twenty-five-year-old memoir by Gayton and myself has accordingly been forced by the times. Our findings then will inevitably be corrected soon by new data and new studies, and our deficiencies or limitations may just as well be pointed out and cleared away now. ${ }^{1}$

## General Weaknesses

I specify, therefore, the principal weaknesses I see, as of 1953, in the GaytonKroeber scheme of 1927.

First, the correlating of shapes and designs was sound in principle, but there was no need to limit designs to forty, especially as the basis of this sampling was not defined.

Second, some of our tabulations and pictures correlate rather badly. For instance, on shape $U$, the familiar double-spout, which we class as an A shape, we tabulate 17 occurrences of A designs, 40 of X , and 5 of B . The obvious question is, why then is the double-spout an A shape? Then, we illustrate 11 such vessels on plates 1 and 2. Four of these-la, 1b, 2d, 2e-are flatter than the rest. In the Lima,

[^0]1-21. . . . . . . . . . . . . . . Gayton and Kroeber, 1927
25-29. . . . . . . . . . . . . . . Kroeber and Strong, 1924
31-46. . . . . . . . . . . . . . . . the present paper.

New York, Chicago, and Berlin collections, lenticular, angled, and cylindricalbodied double-spouts often carry conspicuous X and B designs. There are such at Berkeley too-we happen not to illustrate them. Even on our shown heart-shaped or rounded double-spouts there are post-A designs-see 1c, 2d. It appears that we should have recognized shapes $\mathrm{U}_{1}, \mathrm{U}_{2}, \mathrm{U}_{3}$, possibly $\mathrm{U}_{4}$ and $\mathrm{U}_{5}$. Further, the cat demon painted on la is very close to our type cat demon, number 15 of figure 3 in 1927, but it is doubtful whether the cat of $1 \mathrm{c}, 1 \mathrm{e}, 1 \mathrm{f}$ can be offhand equated with number 15 of figure 3 . The idea or personage may be the same; the form differs at many points. As a matter of fact, this number- 15 cat demon is listed as an " X " design-which was perhaps the only thing to do, since it occurs on 30 examples of our A shapes, on 20 X , and on 22 B . All in all, while the totals in our tabulations do carry a certain gross or over-all weight, the illustrations indicate that the piece-by-piece situation may be much less simple.

We were of course aware that A double-spouts and X-B double-spouts differed. On page 13 we say, in the description of substyle A: "The typical double-spout jars have spherical or ovoid bodies; the spouts are short and about parallel (pls. 1c, $f$, 2a, c, e). Those with X or B design have a more lenticular form; the spouts tend to be longer and divergent (pls. 1d, 2d)." The illustrations cited conform only partly with the ovoid-lenticular distinction, and are based mainly on whether the spouts run parallel or diverging (though even here 1f and 2c diverge, although attributed to A). At any rate, it is unclear or confusing to label a plate, "Nazca A Style," and then discuss X or B style designs on some of the vessels shown. I think we were ridden by the principle of our correlation that A shapes and A designs tend to go together. The double-spout is an A shape and ought to have mostly A designs on it (though by count it does not have them), so we felt justified in treating all double-spouts as of substyle A, even when the design was not A and the shape was aberrant. As an operational procedure this is certainly vulnerable, even if we were mostly right in our classification.

## Comparison with Ocucaje

On pages 11-13 we made a comparison with Uhle's Nazca collection from Ocucaje in lower Ica Valley, ${ }^{\text {, }}$ in order to test the validity of our segregation into the three substyles A, X, B. We found for Ocucaje:

| Vessels | With Designs |  |  |
| :---: | :---: | :---: | :---: |
| 98 in 5 A shapes. | 55 A | 32 X | 4 B |
| 10 in 2 X shapes. | 6 A | 4 X | 2 B |
| 3 in 2 B shapes. | 0 A | 2 X | 2 B |

From this we concluded that the shape-design correlation was at least as high at Ocucaje as at Nazca; and second, that the predominance there of one substyle (which happened to be A), was expectable because Ocucaje was a single locality and Nazca Valley contained many localities. These inferences still seem probably valid, except for the fact that any inaccurate or spurious correlations resulting from limitations of the technique applied to Nazca would presumably be repeated when applied to Ocucaje.

[^1]We were on the right track in seeing the smaller, more uniform, and mainly grave-lotted Ocucaje collection as having significance for the interpretation of the more varied and more widely derived Nazca assemblage. But we could have done better than subjecting it to a parallel correlation test, by assuming that its obvious uniformity expressed the fact of its being a "pure style" or "pure style phase" collection-as was indeed made more likely by its having been excavated in four small cemeteries within the limited oasis of Ocucaje. Then we could have used this Ocucaje pure style lot as a lever in analysis of the larger and more varied Nazca assemblage. We might simply have begun by separating off those pieces from Nazca that were similar in design and shape to the Ocucaje ones. Another group would have consisted of vessels partly different from Ocucaje but also partly similar, and therefore presumably adjacent to them in period. One or more other groups would have appeared with still more differences from Ocucajedifferences in new shapes or designs, in elaboration of old elements, or in their slovening and degeneracy, though still within the general limits of the same style. And finally there would be the vessels emphasizing an array of features which everyone would agree could no longer properly be classed as within the Nazca style. After this stylistic analysis, starting from the fixed base or "zero point" of the pure Ocucaje phase, had been made, our correlation technique would have been more fruitfully and convincingly applied, I am now sure. We would have been driven to realize that the fact of Nazca double-spouts with non-Ocucaje shape, was significant and had to be taken into account in a stylistic study; and we would accordingly have distinguished the double-spouts into operational $\mathrm{U}_{1}$, $\mathrm{U}_{2}, \mathrm{U}_{3}$ forms, instead of trying to operate with an undifferentiated U definable only as an idea or principle but variable in actual form. And we would not have drifted into awkwardnesses of classification such as designating double-spout shapes as outright A phase while two-thirds of their designs were $\mathbf{X}$ phase.

The general moral seems to be that in attacking a stylistic problem-and since our Nazca collection in Berkeley was without excavatory data, we had before us nothing but stylistic materials-the soundest and especially the first procedure is strictly stylistic analysis of stylistic identities and variations. Such an analysis is concrete and can be cut as fine as is profitable. But we partly deviated from this principle, and failed to be as successful as we could have been in that: (1) we partly substituted concepts of shapes for observable forms of them; (2) in designs we operated with only a minority of those actually occurring ; and (3) we applied correlation technique before our stylistic observing and drinking-in had been carried far enough. That our results are, in the gross, largely right, I lay to the fact that we did bring to bear a reasonable amount of fairly perceptive stylistic experience and insight-more than we were conscious of, or at least avowed, in our desire to offer a statistical proof.

## Statistical Analysis

I continue to believe that statistical correlations can be used in stylistic analysis, but that their main function is to convince those who are, by nature or by inexperience, stylistically insensitive. Stylistic qualities and their patterns and interrelations must be taken in through the senses and digested through the subrational
process sometimes called intuition, but for which the term "perception with aesthetic feeling" is adequate. A mathematical approach, being abstract and rational, seems best deferred until the pioneering job of analysis has been pretty thoroughly done by exercise of perception. On the other hand, final proof, in the sense of formal scientific proof, has apparently to be quantitative. I believe that most qualitative data, and perhaps even stylistic ones, can also be interpreted quantitatively in the end; but certainly not so profitably at the beginning of inquiry.

For the quantitative emphasis of our Nazca treatment I must certainly assume my full share of responsibility. The period was one in which interest was turning to the quantitative formulation of culture relationships. In 1925, Strong validated his distinction of four periods of Ancon pottery by a statistical correlation. In 1926 there appeared in the Anthropologist the Clements-Schenck-Brown paper applying the Chi-square approach to intra-Polynesian relationships. In 1931 Clements, again in the Anthropologist, analyzed Spier's Sun Dance data with the coefficients of correlation and association; in 1932 Driver and I published Quantitative Expression of Cultural Relationships. In 1935, Klimek initiated the Culture Element Distribution series in the California series of American Archaeology and Ethnology, soon transferred to Anthropological Records. In 1937, Chrétien and I issued our Quantitative Classification of Indo-European Languages. In all these efforts I had at least an indirect hand or association. And of course I have never repudiated as such the quantitative approach to cultural phenomena-and do not in the least recant it now. It is only that with experience one learns better the points at which the method becomes respectively less feasible or more profitable and secure.

## First Doubts

All this was far less clear in anthropology in 1925-1926 when our Nazca paper was written and submitted for publication, first to a board of editors, and then, in May, 1926, to the University Editorial Committee.

I began to feel minor dissatisfactions with our results even while the paper was in press-its appearance was delayed to February, 1927-while revisiting the Nazca collections in the Museo de Arqueología Peruana during my June to November trip to Peru in 1926.

One of my notebooks there contains nine pages of sketches of Nazca shapes and designs or design elements classified into " $A$ " and " $B$ "-some 50 shapes and more than one hundred designs-and, I think now, somewhat more soundly classified than in our more limited and rigid published schema.

Through the years, as I saw and resaw Nazca pottery, and discussed it with Peruvianists, I became more and more aware of the imperfections of our joint effort of a quarter-century ago. Especially did I come to feel that instead of comparing Ocucaje with Nazca in validation, we should have used it as the touchstone to initiate analysis. ${ }^{3}$

[^2]Now, with Donald Collier and myself co-authors in the preparation of a report on the Nazca collection which I excavated for Chicago in 1926, with the aid of a splendid series of photographs available in my absence from Chicago, it is obviously incumbent on me to clear away the differences from the quarter-centuryold co-authorship of Gayton and myself. Hence the present setting forth, which is part recantation and part reconcilement.

## Qualifications on the 1924 Ocucaje Presentation

There is another venture into Nazea-my first one-on which I have to offer some present-day qualifications: my and Strong's Uhle Pottery Collections from Ica, of 1924. The Nazca ceramics described in that monograph are mainly the lot from Ocucaje in Ica Valley already referred to. Our task in this case was concerned not primarily with the Nazca style, but with all the seven styles and style phases recovered by Uhle in various parts of Ica Valley. Our treatment therefore was discriminatory between styles-such as Nazca, Epigonal, Middle and Late Icanot between phases within the Nazca style. See the tables on pages 101 and 103, which contrast Nazca with the others. It must be remembered that it was Ica-in fact at the lower Ica river oasis of Ocucaje-in which Uhle first found Nazca ceramics in situ, in graves, in 1900-1901. Only collectors' trade pieces had previously come into scientific museums; and Uhle in his first reports still called Nazca "the new-found style of Ica."

Much the larger part of Uhle's Nazca finds in Ica Valley were made in four small cemeteries at Ocucaje; and they happened to be nearly uniform in their substyle or phase. Strong and I did include in our plates and counts a few somewhat aberrant Ocucaje pieces-about which more in a moment-though we also did prudently separate off as "Proto-Nazcoid" a lot from Uhle's grave-or cemeteryOcucaje A.

But we erred more widely when we included with the nearly homogeneous Ocucaje assemblage some pieces discovered by Uhle in his site "e" at Santiago in the main part of Ica Valley upstream from Ocucaje. In this general area he found chiefly Middle and Late Ica remains-his little Epigonal collection was again from Ocucaje-but at Santiago site "e" he dug up a series of broken vessels, in previously disturbed grave soil. Of these, several that had been reconstituted by 1924 were included by us in our description and pictures, even though they were manifestly not of quite the same phase of Nazea style as the run of the ware at Ocucaje. For a preliminary or summary treatment, this slip may be forgiven; but thirty years later, it needs correction.

The Santiago or site " S " pieces illustrated but definitely requiring to be separated off from the Ocucaje collection are: Kroeber and Strong, 1924, plate $28 \mathrm{a}, \mathrm{k}, \mathrm{l}$ from Se and plate 28d from Sa. A glance at these, especially the first three, validates their differentiation. Their very shapes are without parallel in the rest of the plates. As long ago as 1926, in one of my books of memoranda made in

[^3]Peru, I noted that the 3 Se pieces must be excluded from the Ocucaje Nazca collection.

Next, there are the few aberrants within Ocucaje. The collection from Ocucaje was assembled from one grave at site A, 5 at B, 2 at C, 23 at F. The contents of these thirty-one graves are uniformly homogeneous, with the following exceptions.

1. The vessels from graves F3 and F9, in plate 27 b , h, n, x, 28e, o, conform in part to the other F graves, but also contain pieces done in a different phase of the style. (See pl. 35 of the present monograph.)
2. The jar of plate 28 p, being from "near grave F6," not from within it, cannot be used to help prove a style, though I believe it belongs in Ocucaje style A.
3. For a time I was inclined to doubt graves Ca and Cb , plates 27 e , v, 28i, but no longer see reason for their disqualification.
4. The small site A which I pointed out as puzzling in my Peruvian Archaeology in 1942.4 Strong and I had shown 5 pieces from it and called them "Proto-Nazcoid." Returning from Peru in 1942, and realizing as we had not realized in 1924 that 29 f was negatively painted and very similar to Tello's Paracas Cavernas negative bowls, I went with great expectations to reëxamine the 15 catalogue numbers from Ocucaje A, only to find them heterogeneous (or indeterminate) in style, and so regretfully wrote site A off as mixed, owing to burials made at different periods or perhaps to previous pot-hunting; so that I wrote: "Uhle did not segregate his [A] findings by graves." This, fortunately, now turns out to be an error ; and 8 of the 15 numbers from A are all from one grave, as my colleagues Rowe and Dawson discovered, and pointed out to me, by going back to Uhle's manuscript field report preserved in the Museum. In this, Uhle says: "4489-4494 and 4496 and 4789 [sic, correct] are all from the grave which contained the mummy 328 ." This mummy, catalogued in the skeletal collection as 12-2835, Rowe has opened and will report on. Uhle's statement, which differentiates the 8 specimens cited as constituting a grave-lot (A1, it might be called), from the 7 outside the grave, failed to be copied into the Museum catalogue, which was an error of oversight under our rules of entering everything that pertained to grave provenience and association. Whatever is of late period from A, like the 29 e bowl, is now shown to be from outside the grave. The assured grave contents prove all to be Nazca A or earlier. In fact, the grave evidently dates from the Paracas-Nazca transition. The solidly black bowl (4492, present fig. 7b) I mentioned in 1944 as "possibly Paracas Cavernas." The negative bowl 29f (4493) has precise Paracas parallels, and 4494 (present fig. 5a) is similar and also negative. On the other hand, 4489, now 73864 in Peabody Museum at Harvard, (illustrated below as pl. 31a), an E-shape bowl painted with hummingbirds, is straight Nazea A. The unpainted, incised, rough bird-jar 29d, 4496, has Nazca analogues from my 1926 excavations. Bowls 29c and g, 4490 and 4489, have Nazca colors and shapes, but are certainly somewhat unusual in pattern, as Strong and I felt them to be in 1924. Finally 4491, shown below as figure 7a, is a B-shape bowl, somewhat abnormally high and round-bottomed,

[^4]with a zigzag or facing triangles design more geometric than Nazca A tends to run, but within its range. In short the 8 vessels of Ocucaje grave A1 are partly regular Nazca A, partly Nazca A but near-unique in some feature, and partly blackware and negative ware as it occurs in Paracas Cavernas-but the Chavinoid strain in Paracas is absent! ${ }^{6}$

In comparison with later or mixed Nazca sites, Ocucaje A1 can therefore be counted with the Nazca A material from Ocucaje sites B, C, F. But in internal analysis of Nazca A, it must be kept apart as evidently somewhat earlier. If the pottery from Ocucaje B, C, F, Cahuachi A, Aja B is reckoned as Nazca A, the 8 pieces from the grave in A look like incipient Nazea A.

After deduction of the foregoing, and of a few other vessels near rather than actually in graves, there remain about 111 ceramic pieces or fragments in the purestyle Ocucaje grave-lot collection, from twenty-eight graves. Of these, Strong and I illustrated 48. This is a number sufficiently large to define a style by, especially as shapes are definite and nearly all pieces were painted with designs. It is these 100 -odd vessels that I now feel Gayton and I might profitably have used as the initial comparand in analyzing the 500 -odd vessels from Nazca.

## Bearing on the Ocucaje Collection of the 1926 Excavation for Chicago

As soon as I began recently to see photographs of the ceramics in my own Nazca excavations for Chicago Natural History Museum, nearly twenty-seven years after I had dug them up, it became evident that in Nazca also there were pure-style sites, and that I had struck two or three of them that matched exceedingly closely with Uhle's Ocucaje collection as just "purified." Not wishing to anticipate the full report on the 1926 excavations in which Collier is to be co-author, I refrain from publishing any illustrations here. Moreover, it will be better in the end to have all our Nazca ceramics in Chicago illustrated and described together in one volume. However, I shall give here a brief account of the matching lots from Nazca.
These are from Majoro Chico A, graves 18, 20 ; from Aja B, graves 1-9; and from Cahuachi A, thirteen graves (numbered 1-15, less 8 and 14, numbers not used). The ware in the Aja B graves was badly broken, and textiles were lacking. The Cahuachi A graves were in soft sand, much of their pottery was intact, and textiles were numerous: O'Neale (1937), has described them in Field Museum Memoirs.

I present first a classification by shapes of vessels (table 1). This is essentially complete for the cemeteries and graves in question, though as sherds are matched in Chicago, a few more vessels or major fragments may be added to present columns for 1926. The Uhle Ocucaje collection is as counted after its "purging," as just described. I have kept the Gayton-Kroeber designations of shapes by letters, though I have reworded some of the phrases descriptive of them, to give them better fit to the specific Nazca A forms which alone we are concerned with at the moment.

It is evident that Uhle's vessels from Ocucaje-Ica are closely paralleled by mine from Nazca. The proportional frequencies of the several shape classes are very

[^5]similar. The main difference is that the higher bowls (shapes $\mathrm{F}, \mathrm{H}$ ) and two classes of jars ( $\mathrm{P}, \mathrm{Q}$ ) are represented at Ocucaje and nearly lacking in the three comparable Nazca cemeteries. (If this is confirmed, it might mean that Ocucaje is on the whole a bit later within phase A than the three Nazca cemeteries, since A in general is characterized by frequency of low bowls, and the trend to B is toward higher and higher vessels.)

TABLE 1
Comparison of Shape Frequencies

| Shape and description | $\begin{gathered} \text { Uhle } \\ \text { Ocucaje } \end{gathered}$ | $\stackrel{1926}{\text { Cahuachi A }}$ | ${ }_{\text {Aja B }}{ }^{1926}$ | $\begin{gathered} 1926 \\ \text { Majoro Chico } \\ \text { A, } 18,20 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| Inside-painted bowls |  |  |  |  |
| A Plate bowl.. | 12 | 11 | 5 | 5 |
| Outside-painted bowls |  |  |  |  |
| B Low gambreled bowl. | 13 | 3 | 2 | 2 |
| D, E Low-flaring and flat bowls. | 33 | 17. | 10 | 7 |
| F, H Flaring bowls. | 12 | 1 |  |  |
| Total outside-painted. | [58] | [21] | [12] | [9] |
| Other shapes |  |  |  |  |
| U Double-spout. . | 9 | 2 | 3 | 1 |
| V Head-and-spout. | 1 | . | . |  |
| X Human figure vase. | 1 | 2 | .. | 1 |
| P Bulbous jar, height 86-103 per cent | 6 | . | $\cdots$ | . |
| Q Lipless jar, sides sloping in...... | 4 | $\cdot$ | $\cdots$ | $\cdots$ |
| .. Three-handled: K-S, pl. 28i..... | 1 | 2 | 1 | $\cdots$ |
| T Two-handled, unslipped, incised, or scored, pl. 28f. | 4 | 2 | 4 | . |
| Pan's pipe................ | 1 | 1 | . | . |
| Other. | 3 | . | 2 | . |
| Total classified. | 100 | 41 | 27 | 16 |

What is most convincing, however, is that pieces unique at Ocucaje recur at one or more of the A sites in Nazca. Thus, the human figure vase, class X (pl. 25a); a three-handled jar of quite specific form and painting (pl. 28i); and two-handled (T) incised pots or jars (28f).

## Resemblances in Designs

The similarity extends to design. In table 2 the Ocucaje column refers to frequency of subjects on the $\mathrm{B}, \mathrm{D}$, and E shape low-bowl outside designs as illustrated in Kroeber-Strong plates 25-29 after these have been "purged" of the atypical grave lots discussed above.

Or again, on red-rimmed, inside-painted plate bowls of class A, compare the Uhle Ocucaje fish and fruit designs of Kroeber-Strong's plate 28 g , h , q , with the following themes from Cahuachi: fish, single or paired, 2 ; kinked fish, 3 ; two birds with fishes, 1 ; two birds, 1 ; bird with flower, 2 ; flower alone, 1 ; beans, 1 .

TABLE 2
Low Bowls, Outside Design Frequencies, Shapes B, D, F

| Design | Uhle Ocucaje | 1926 Cahuachi |
| :---: | :---: | :---: |
| Mammals. | 1 | . |
| Fishes. | . | 1 |
| Birds. | 8 | 7 |
| Birds, vertical. | . | 1 |
| Toads.. | 1 |  |
| Snake (?) heads (?) | . | 3 |
| Double-ended snake. | 1 | . |
| Spiders. |  | 1 |
| Trophy heads. | 1 | 1 |
| Fruits. | 4 | 2 |
| Flowers (?) | 1 |  |
| Stars. | . | 1 |
| Slings. |  | 1 |
| Steps, Step-frets | 2 | 2 |
| Diamonds. | 2 | . |
| Boxes.. | 1 | . |
| Checkers. | 1 |  |
| Ovals.. | . | 1 |
| Double spirals. | 1 | . |
| Feet. | 1 | . |
| Stripes. | 1 |  |
| Other. | 1 | 1 |
|  | 27 | 22 |
| Paneled. | 8 | 9 |
| ?. | 2 |  |
| Not paneled. | 17 | 13 |
|  | 27 | 22 |

## Provincial Relations of Ica and Nazca Valleys

It seems clear from the foregoing that the type of Nazca ware first discovered by Uhle at Ocucaje in Ica is not a merely local specialization but that it recurs in Nazca Valley in essentially identical torm. Some minor variations between the products of adjacent valleys are expectable in principle, in this early, pre-imperial period of the history of Peru; but the parallels just adduced show that such differentiations as may ultimately be established will be rather small and secondary. Nazca A, as defined by its pottery, is ruled out as a primarily provincial culture type characteristic of its valley. It is the culture of a period, shared by two or possibly more valleys, or at the very least by lower Ica Valley and by the central or Nazca part of the Rio Grande drainage. When descriptions of the Cahuachi A and Aja B ceramics and their grave associations shall have been added to those of Cahuachi textiles by O'Neale and a fuller inventory of Uhle's Ocucaje B, C, F ware, the A phase of Nazca culture will be reasonably well and reliably defined.

And that in turn means that the process of authentic unraveling of the story of the development of Nazca culture as a whole will be theoretically possible through a combination of two procedures: first, the subtraction of A elements and features from the total mass of Nazca materials; and second, the segregation of this remainder into groups varying from the most similar to A to the most different. Such a segregation in turn will be subject to check against publication of remains from various post-A pure-type lots of graves such as Strong, as well as I, has excavated in the region, or as others may uncover with record of proveniences; and above all, to check against the results of Strong's excavations of stratified refuse, as the most direct evidence of successions. However, while refuse stratification furnishes the firmest skeleton of relative chronology, the details of vessel shapes and painted patterns, as well as of textiles, building techniques, and so on, are generally better provided by systematic excavations, especially of individual graves. And patient stylistic analysis of the large Nazca collections-there are several thousand vessels available in public museums, even though they mostly lack data on individual provenience-is bound to reveal some significant forms and features that happen not to occur in the necessarily limited materials recovered in stratigraphic and grave-lot excavating. In short, the ultimately fullest interpretations are the product of the joint and complementary use of the three methods of stratigraphy, association, and stylistic definition.

## Relations of Phases within the Nazca Style

The Nazca A ceramic style is vigorous but somber, severe, and basically simple in its expressions. There is also no doubt that Nazca B, more or less as Gayton and I have presented it, is brighter, lighter, and more complicated in its treatment, as well as showing new shapes and new design themes and forms. ${ }^{7}$ As I have always seen it, A is the initiating and formative phase of the Nazca style, B its culmination -the auge, as they say in Peru. X , or AB -it would have been the better label to retain-is merely the transition from A to B ; one might legitimately stretch or contract or even omit it, if one chose. If $\mathbf{X}$ is retained as a phase, it is more easily defined by a series of characterizing concrete features of detail than in terms of a namable or expectable stage of stylistic life history. The formation and the culmination of a style are designable aesthetic events. But whether one makes B abut directly on A , or inserts AB , or a series of $\mathrm{AB}_{1}, \mathrm{AB}_{2}, \mathrm{AB}_{3}$-these are choices rather of interest and convenience. Conceptually, A and B are the dominating polarity.

True, with enough finely analyzed data in hand, it will presumably prove possible to recognize successive stages of A and of B. And Y I would define as still containing Nazca-style ingredients, though sloppily conceived and executed; but beginning to be mixed with occasional elements and patterns originating outside the Nazca tradition. With enough materials and analysis, Y would expectably subdivide into two or more stages, with successively less and less Nazca in it. When the Nazca ingredient, finally, is so diluted or altered that it is no longer apperceived on inspection (though historical analysis may reveal it as still persistent in transformation)-then we are "outside" or beyond the Nazca style and within Coast Tiahuanaco, Huari, Ica Epigonal, or Middle Ica.

[^6]This suggested outline of the history of the Nazca style is not drawn directly from the joint paper of 1927, but is based rather on subsequent inspection and reinspection of Nazca wares and published illustrations, on letting the perceptions sink in, and on gradually converting them into a historic formulation. At the same time, it arrives at much the same results, in an all-over way, as our 1927 findings; and where I differ from these in detail it is because I now believe that we framed our correlational categories prematurely, and sometimes too narrowly or too rigidly, and consequently arrived at results which, while mainly right, erred in a fair number of particulars.

For instance, I would now define painted B designs-B in the sense of what is post-A and pre-Y-by the following themes.

## Partial Listing of Characteristic B-phase Designs

Women's yellow faces in series, long eyed, hair lock on cheek (1927, fig. 3, no. 18, but there attributed to X ).

Complementary interlocking fish (or snakes) (1927, fig. 3, no. 26).
Jagged staff deity (1927, fig. 3, no. 33).
("Degenerate") deity head, standing alone (1927, fig. 3, no. 22, attributed to X; Seler figs. 237-241).

Jagged staff scepter or mace, as distinct from jagged staff deity.
Jagged staff (pointed, bearing two rhomboids, or one) used as ray from head.
Ray from head, end bent over on itself.
Ray, end partly curled.
Pointed ray flanked by two rays with bent-over ends ("fleur de lys"; Seler, fig. 212).
Jagged staff ray similarly flanked (Seler, fig. 221).
Cactus-spinelike short black lines, as emphasized by Bird; straight or forked.
"Demon" heads repeated or strung (Seler, fig. 212).
Same, radiating (Seler, fig. 229).
Same, reduced to octopuslike figure, with one eye (Seler, fig. 216).
In series (Seler, figs. 252-254).
Three-dot faces in sliced circle, surrounded by trapezoids (Seler, fig. 214).
Similar faces, hollow design (outlines only, no color fill) (Seler, figs. 178, 208).
Full-length human figure, frontal, with conical cap (Seler, figs. 122-124).
Full-length men with staves, profile (Seler, fig. 131).
Full-length profile hunters, dancers, etc.
Seler, being interested in significance and not in chronology, in his work emphasizes meaning-what kinds of spirits, animals, plants were represented. He did not at all attempt to unravel the sequences of phases within the style. For stylistic analysis, minute features like the curvature of rays, almost comparable to brush strokes, seem the surer criteria, and many of the traits just listed here are of this type. Seler's interpretations seem to me remarkably probable, on the whole. The collections available to him were large and representative, and his monograph serves well for convenient reference.

## Summary and Caution

To summarize, I am trying to rejustify the main stages of the Nazca style, or its pivotal polarities, more exactly than Gayton and I defined them in 1927, by widening the basis of associations dealt with, and especially by more directly utilizing pure-style lots as an entering wedge or lever. The result is a reaffirmation in
fundamentals of the classification and sequence submitted then, with a considerable number of modifications in detail, and perhaps less seeming rigidity of scheme.

I will only touch on one new difficulty which reëxamination and newly available materials seem to forecast. Truly pure lots of graves are not too common, even in small cemeteries in Peru. The thirteen graves I opened at Cahuachi A were uniform, and so were the nine at Aja B. But at Uhle's Ocucaje F, two graves of twenty-three were later A or X, instead of the straight A discussed here. At Majoro Chico A, only grave numbers 18 and 20 were straight A. Soisongo C had two A graves, three probably B, four of period Y, and four contained insufficient grave goods for placement. It will be recalled that the 500 or so vessels which Uhle got in thirty-odd contiguous Mochica tombs by digging into the Huaca de la Luna at Moche, and which I assumed to be contemporary in describing them, have recently been found by Rowe to represent three of the five phases into which Mochica is now subdivided. It is evident that wholly uniform substyle cemeteries are likely to be the exception rather than the rule, and that no cemetery can be assumed as dating entirely from one style phase, without fairly full yield and the most careful scrutiny. In other words, associations within graves remain and probably will long remain one of our most important channels to the sharper understanding of Peruvian prehistory.

## PART II: REVISED CLASSIFICATION OF NAZCA STYLE VESSEL SHAPES

## Purpose

By now it will be plain that our 1927 effort on the Nazca style has long been due, or overdue, for revision. In Part I, I have indulged in a sort of Russian style selfcriticism as regards general principle. In the present Part II I shall review in detail each of the shape classes we then set up and the evidence bearing on it, suggesting also further classes or subclasses where it seems necessary, or merging of extant ones. This part of the present monograph will therefore be constructive, or reconstructive, and I trust will contribute to the widening and firming of the basic classification of Nazea ceramic shapes, which is one prerequisite to any precise understanding of the style and its course. The identification, classification, and validation of painted design features is at least equally important, but done systematically it will be a long job, and I leave it to other hands.
It occurred to me several times that it might be simpler to start fresh and make a wholly new classification. The longer I worked over the material, the more strongly did I come to feel that though the faults of our 1927 grouping were innumerable, they were special faults, or that they lay in short-sightedness or shallowness of procedure such as is almost inevitable for novices, as we certainly were, in dealing with a rich and complex style like the Nazca. In the large, our old classification holds up right well. I would not really know how to construct a basically better one; though after nearly three decades of added experience I can of course correct and improve our old pioneering attempt at a hundred points.

I will therefore now proceed to examine the shape classes one by one, in the general order in which we arranged and lettered them, with one exception. Bowls and plates, our old groups A to H , make the most difficulties, the differences between classes being finer; so I save them for the last.

## Goblets and Vases

We recognized 4 "goblet" and 4 "vase" shapes in 1927. Both are normally higher than wide. Goblets always flare or spread somewhat from bottom up; and 3 of our 4 goblet classes show greater or less pinching-in, usually rather sudden, around the middle. Vases, as we typed them, were basically cylindrical, to which property 2 of the 4 shapes added a bit of bell-mouth flare above, and 2 a widening toward the bottom, which we called "bulbous." Our classification of vases was more successful than that of the goblets. This is reflected in the fact that we labeled 141 vessels as vases, only 71 as goblets, and that 2 of the latter classes were quite small.

The following is a description of the 4 goblet types as represented in the outline key of 1927 figure 2:

I, "angled goblet" ( 30 vessels) : lower half cylindrical, upper half a straight cone frustum.
J , "goblet" (24): a wide cylinder gently constricted in the middle.
K, "double-curve goblet" (10) : similar to last but narrower and with a second slight narrowing toward the lip.

L, "conical goblet" (7): a simple cone frustum, higher than broad at the mouth.

GOBLET I
We assigned the "angled goblet," I , to period B , with A designs numbering $0 ; \mathrm{X}$, $16 ; B, 28$. It is an actual type, but in its full form it is late $B$ and $Y$ only. It is well exemplified by plates 16 f and 15 d , which we designated as Y and therefore as outside our shape classification. Of these two, 16 f is the more squat, 15 d more like figure 2 I in silhouette, though its lip is quadrilaterally wavy or petaled. Our attributed exemplification of shape I by 9 d as within the Nazca style, I would not today hold to. The base of 9 d has four rounded angles or bosses, its surface is

TABLE 3
Angled Goblets, Shape I

| Measurements | 8724 | 8725 | 8726 | 8731 | 8553 | 8410 | 8409 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Height. | 107 | 130 | 80 | 82 | 87 | 148 | mate |
| Rim D. | 120 | 146 | 105 | 124 | 127 | 161 |  |
| Waist D. | 71 | 80 | 63 | 72 | 80 | 106 |  |
| Base D. | 83 | 83 | 65 | 68 | 78 | 104 |  |
| H/rim D per cent. | 89 | 89 | 76 | 66 | 68 | 92 |  |
| Base/rim per cent. . | 69 | 57 | 62 | 55 | 61 | 65 |  |
| Waist/base per cent | 86 | 96 | 97 | 106 | 103 | 102 |  |
| Waist angle. | $158^{\circ}$ | $158^{\circ}$ | $155^{\circ}$ | $158^{\circ}$ | curved | $\begin{gathered} 162^{\circ} \\ \text { rounded } \end{gathered}$ |  |

blackish, its painted decoration is in a band around its waist as in 15d, and the design in this band strikes me as Y rather than A-B Nazca. ${ }^{1}$ Finally, 1927 figure 11b on page 31 is listed by us as an "angled goblet( $\%$ )," but the main justification here is in the question mark. The specimen is an F or H bowl, with $\mathrm{H} / \mathrm{D}$ ratio of 75 per cent, a spread in profile of $17^{\circ}$ from vertical, and it flares continuously in its lower part instead of rising vertically or tapering as an I goblet would.

I reassembled most of the 30 I goblets we listed in 1927-a few were misplaced or had been misnumbered in listing. I found 7 that fairly well fitted the type. These were all definitely late B-really B-Y transition. They all show a definite sharp turn or bevel between side and bottom-nearly a right angle. The bottom seems quite flat, though actually gently rounded; the side at first rises nearly vertically. Somewhere in the lower half of the total height, there is an outward bend, resulting in the remainder of the side flaring about $22^{\circ}$ from vertical ( $18^{\circ}$ $25^{\circ}$ ). Another way of putting it is that the silhouette bends out in an obtuse angle of around $158^{\circ}$. In 3 of the 7 cases the lower part of the side sloped inward from the vertical, so that the vessel showed a slightly constricted waist.

The proportions are given in table 3.
As for design, 6 of the 7 were zoned; 8725 carried horizontal stripes. The lower zone was quartered across the bottom twice, carried women's yellow faces once. The upper zone in 8724 and 8731 carried rectangular panels alternately filled with different simple geometric units.

[^7]In Y graves at Nazca I excavated a few goblets similar to these, but with the angle at the waist more pronounced and less obtuse-around $110^{\circ}$ for the arc, $130^{\circ}-135^{\circ}$ for the chord, in one case; $130^{\circ}$ and $150^{\circ}$ in another.

The one other sizable group (besides scattering forms, errors of numbering, etc.) that emerges in our 1927 listing for " I " consists of 9 concave flaring bowls of generic F-H type. Four of these were late B in design; all of these had quartered bottoms. The H/D ratios were $71,73,76,60$ per cent for $8577,8702,8551,8567$. Five of the 9 bowls were middle B in design: 8560, 8568, 9162 two-zoned; 8638, 8802 one-zoned, with a pair of deity heads or deities. The H/D ratios were 61, 70, $66,67,64$ per cent; the shape also that of F-H bowls. ${ }^{2}$ Such bowls of course resemble angled goblets in that both groups flare with concave profile; and the height ratios at least overlap. The real difference is that in F-H bowls the flare is sinuous, the attractiveness of the shape residing in its curvature; whereas the I goblets basically seek an angled silhouette. A further difference is that F and H bowls begin in Nazca A and have their main development there, though they carry on into B; whereas the I goblets begin in late B and reach their climax as a form in Y .

In the present paper, plate 40a, discussed in Part III, is somewhat hesitantly assigned to shape I.

GOBLET L
I will temporarily pass over the plain "goblet" J because of its relation to the vase group, and go on to the "conical goblet" L, which again seems mainly a Y-period shape, plus at most late $B$. It is illustrated in plate $39 \mathrm{e}, \mathrm{f}$, of this paper. This is a rarish type: we listed only 7 examples, and we illustrated none. In 1926 I excavated at least 2 in indubitable Y association, and 1 in equally indubitable B context; but this last was of less pronounced shape, with the height only slightly exceeding the maximum diameter: 108 per cent; whereas the 2 Y pieces run around 130 per cent.

I have remeasured and examined the 7 Uhle pieces from Nazca. They run pretty uniform in height: $123-145 \mathrm{~mm}$. The H/D percentage averages 110, and seriates as $97,99,100,107,110,127,129 .^{3}$ Vessel 8395 is somewhat convex in profile; the others all show slight departures toward the concave somewhere in their cone shape. The designs are in sloppy late B or in Y style: from the time of transition from Nazca to post-Nazca, in short; which is also just where my 3 excavated pieces fall. We were therefore correct in classing L as a B-period shape, though we did not add that it also ran over into Y which we were not classifying.

[^8]
## GOBLET K

The "double-curve goblet," K, to which we credited 10 specimens in the Uhle Nazca collection, was also without photographic illustration of any of its 10 assigned exemplars. The type sketch, 1927 figure 2 k , is tall and slender (ratio about 170), and the name "double-curve" is appropriate, since both the lower and the upper half of the generically cylindrical silhouette bulge a bit, with a mild con-

TABLE 4
Shape K: Double-Convex Goblets

| Cat. no. | $\underset{(\text { in } \mathrm{mm} .)}{\mathbf{H}}$ | $\underset{\text { per cent }}{\mathrm{H} / \mathrm{D}}$ | Roll-in (in mm.) | Waist pinched in from max. diam. (in mm.) | Max. D in upper $1 / 2$ exceeds lower $1 / 2$ max. by: (in mm.) | $\begin{gathered} \text { No. } \\ \text { zones } \\ \text { of } \\ \text { painted } \\ \text { designs } \end{gathered}$ | Design |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8566. | 117 | 96 | 1 | 2 | 26 | 2 |  |
| 8908. | 85 | 99 | 0 | 2 | 20 | 1 | Fine execution |
| 8748. | 102 | 107 | 0 | 3 | 14 | 3 | Bottom quartered |
| 8501. | 120 | 128 | 2 | 7 | 7 | 3* |  |
| 8903. | 93 | 129 | 6 | 8 | 1 | 2* $\dagger$ | Fine execution |
| 8664. | 140 | 149 | 9 | 3 | -5 | 3* | Arrows |
| 8662. | 137 | 136 | 1 | 7 | -10 | 2 | Trophy heads, arrows |
| $8957 \ddagger$ pl. 39c . . | 137 | 134 | 2 | 4 | -11 | $3 \S$ | Pastel tints, clear |
| 8473. | 157 | 139 | 0 | 13 | -16 | 1 |  |
| 8474** pl. 39a. | 151 | 137 | 3 | 7 | -14 | 1 | Turned over rays, blood |
| Mean....... | $\ldots$ | 125 | 2.3 | 5.6 | $12.4 \dagger \dagger$ |  |  |
| Range from: | $\begin{array}{r} 151 \\ 85 \end{array}$ | 149 96 |  |  |  |  |  |

[^9]striction or concavity between, and with the upper convexity carried on into a slightly constricted mouth; which last feature is anomalous in the Nazca style. ${ }^{4}$ As compared with the drawing, the 2 measured Uhle Nazca specimens ${ }^{5}$ are shorter. 127 and 138 per cent in H/D.

A reëxamination of the University's 10 K goblets (see also pl. 39 c , d , this monograph) yields the results shown in table 4, which confirm the class. There is always a pinching in at the waist; and there is almost always a rolling in, or contraction of diameter, at the rim-slight, but conspicuous. On the other hand, as between the upper and lower bulges, this varies from an excess of 26 mm . ( 21 per cent) for the upper to 16 mm . ( 10 per cent) for the lower diameter. The vessels have been seriated for this feature. Evidently what is significant for the class is not where the maximum diameter comes, but that there is a reduced diameter in the middle.

[^10]The proportion of height to diameter is also not too important, varying from 96 to 149.

All 10 vessels I would rate as larger B in style. There are no A designs present. In quality, none are poor, and most are good. We had the period right in 1927: table 1 lists 0 A designs, $8 \mathrm{X}, 8 \mathrm{~B}$.

TABLE 5
Goblet J and Vases M-P: Means of Percentage Ratios

| Shape classes | H/max. MD | $\underset{\text { bott. }}{\mathrm{H} / \max .} \mathrm{D}$ | $\begin{gathered} \text { Conc. } 1^{*} \\ \text { min. } \end{gathered}$ | $\begin{gathered} \text { Conc. } 2 \\ \text { min.or } \max . \\ \text { D/MD } \end{gathered}$ | Conc. 3 <br> $\min . \mathrm{D} / \mathrm{MD}$ | D bott./MD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| J, goblet (24), 4 illus.... | 123 | (133) | . | 86 | . | 92 |
| $\begin{aligned} & \text { M, "small vase" (30) } \\ & 5 \text { illus................ } \end{aligned}$ | (159) | 144 | . | $\dagger$ | . | 111 |
| N , cylindrical vase (47), 8 illus. | 203 | (217) | 83 | $86 \ddagger$ | $77 \ddagger$ | 98 |
| $O$, bulbous $I$ vase (28), 1 illus. | (186) | 154 | . | . . | . . | 121 |
| P, bulbous II vase (36), 7 illus. | (128) | 114 | 96 | . | . | 113 |

* Concavity means the maximum distance in mm. between the side of the bowl and a ruler laid from the rim to the side.
$\dagger$ 9f, 10 h , fig. 11 d run: $95,100,100$.
$\ddagger$ For 3 vessels only: 11b, 11c, 11 d .


## GOBLET J AND VASES M-P

The last of our goblets, J, the unqualified type, is a valid class, and so, on the whole, are the four vase classes M-P, to which J is related. As a group, these shapes are rare in Nazca A, at any rate in the Nazca A represented by Uhle's Ocucaje and my Cahuachi A and Aja B. But they are extremely abundant in Nazca B, and characteristic of it. Thus, J, "goblet," 24 examples; M, "small vase," 30 ; N, "cylindrical vase," 47; O, "bulbous I vase," 28; P, "bulbous II," 36 ; total, 165 vessels out of 563 pre-Y, or between a quarter and a third of the collection. We were thus correct in assigning 4 of the 5 types-J, M, N, O-to Nazca B, and the fifth-P-to Nazca X. At any rate some rather low P's occur already in Asee $25 \mathrm{~h}, 28 \mathrm{~m}, 28 \mathrm{n}$-but apparently none of the four other classes are A.

The name "small vase" for M seems in need of replacement, and the cylindrical vases N break into two subtypes. Other than that, it remains chiefly to consider the similarities and differences between the 5 classes.

In table 5, I present first of all the means of ratios of crucial measures for the 5 types.

## WAISTED GOBLET J

The "as such" goblet J has a definite waist smaller by measurement than either top or bottom diameter ( $75,85,89,91$ per cent of mouth). The bottom diameter is smaller than the mouth ( $82,91,94,100$ per cent). In this feature the $J$ goblet is like a bowl, especially like the F shape. It is differentiated from F by somewhat less spread from bottom to top; by the fact that F bowls only rarely (and other shapes never) are actually constricted in the middle, though they normally show
concavity ; and especially by greater height for the goblet. In both F and H bowls the height is at most 81 per cent of the diameter and thence down to 56 per cent. Our 4 illustrated J goblets ( $9 \mathrm{e}, 9 \mathrm{~g}, 9 \mathrm{i}, 10 \mathrm{~d}$ ) average 123 per cent. This distribution is bimodal: 105,109 , and 138,139 , so 2 subtypes may be involved. Goblets 9 g and 9 i , the squatter pair, are B in design; 9 e and 10d seem advanced B. The 2 shorter also have the relatively smaller base diameters, 82 and 91 per cent; they thus flare more; the 2 others are more nearly cylindrical. It looks accordingly, so far as the small numbers can be trusted, as if at least two stages of J goblet were recognizable; the presumably earlier one, J1, differentiated from the F and H type of bowl by being taller, though still somewhat suggestive of F-H silhouette; the later stage, J2, approximating the vase shapes, with a height ratio comparable to that of the $P$ bulbous II vases.

The bowl 28j, which is from Ocucaje F, grave 2, long troubled me. It is like F and yet unlike. First of all, it is too high for F-90 per cent. Then, the bottom rounds quite sharply into the sidewall, much as in the J class. Finally, there is actual waist constriction as in J .

In indubitable Nazca B association at Ocongalla West site B, I found in 1926 3 vessels, in graves $3,4,12$, which resemble $28 j$. Here are the percentage data (subject to correction on final measurements):

|  | Grave 3 | Grave 4 | Grave 12 | Plate 28j |
| :---: | :---: | :---: | :---: | :---: |
| H/MD. | 102 | 90 | 87 | 90 |
| Waist/MD.. | 82 | 84 | 75 | 82 |
| Bott. D/MD | 91 | 107 | 77 | 86 |

The most constant feature is the waist/mouth proportion. It averages 81 per cent as against 86 for the J goblets illustrated in 1927. The height ratio, 87-102, is also not too far from the $105-109$ of the more squat J1 subtype. ${ }^{7}$ I am tempted to set up a subtype J3: near-bowl goblet, or near-goblet bowl.

Tentatively, I suggest "waisted goblet" as generic designation for such J types as may be established. Two further of Uhle's Nazca examples are shown in plate $39 \mathrm{a}, \mathrm{b}$ of the present paper and discussed in the corresponding text of Part III.

## TAPERING VASE M, FORMERLY "SMALL" VASE

The "small vase," M, was shown schematically in the 1927 key figure as a straight cylinder rising from a rounded bottom to a height of 175 or 180 per cent of its diameter. I recall no quite straight unbroken lines of such all-over length in Nazca pottery. Smallness per se is also scarcely a criterion of shape, except for such distortion as any extreme miniature is subject to being warped to. But this shape $M$ is defined by the five illustrations in 1927 , plates $9 \mathrm{f}, 10 \mathrm{e}, 10 \mathrm{~g}, 10 \mathrm{~h}$, figure 11 d . It has an over-all likeness to the $J$ waisted goblet just discussed, but with two inversions. The basal diameter is usually greater than that of the mouth; and there is often no actual constriction at the waist (except for the one quite nominal exception of 9 f , and this is counterbalanced by the convexity of 10 e ). M is also somewhat more slender than J.

[^11]The greater basal than upper diameter of M allies it to the 2 "bulbous" (viz., bottom-bulging) vase types $O$ and $P$ which are to be considered in a moment. The relation to these is analogous to the relation of goblet J to bowl F .
$\mathbf{M}$ is a valid class as soon as actual examples are examined-see the examples in present plate $40 \mathrm{~b}-\mathrm{f}$. But our old name for it and its key sketch failed to bring out its characteristics.

I examined and measured a random selection of about half the 30 vessels we had assigned to M. For these 14, the H/D ratio averages 138 per cent, with a range of $116-157$ per cent. The 2 with the highest ratio $(8959,8491)$ are much the tallest of the lot, with heights of 176 and 170 mm ., whereas the dozen others ranged between 152 and 135, or around $51 / 2$ to 6 inches, whence no doubt our designation "small."

Twelve of the 14 have their greatest diameter somewhere in their lower half; 2 are exceptional $(8408,8900)$ in that the maximum (or equal) diameter is at the rim. Three of the 12 have an over-all convex profile, tapering to the rim. The rest, plus the 2 with rim maximum, show a concave profile. The concavity, however, is shallow enough in 5 cases to result in no minimum diameter below the rim; 4 times there is such, but the minimum is only $1-4 \mathrm{~mm}$. less than the rim; only in the 2 with rim maximum is the constriction as much as 8 and 5 mm .

All 14 pieces bear B design; 6 are two- or three-zoned. We had the class as B in 1927, with $3 \mathrm{~A}, 20 \mathrm{X}, 29 \mathrm{~B}$ designs.

I can find no wholly satisfactory descriptive name for $M$, but suggest "tapering vase."

> n, cylindrical vase

N , "cylindrical vase," is indeed such; and it is the tallest and slenderest shape in the Nazca style. It is illustrated by 10b, c, f, i, 11a, b, c, d. Contrary to M, the mouth tends to be larger than the base: 6 cases out of 8 , with a mean ratio of 98 . The mean H/D ratio is 203 ; or 217 if the basal diameter is compared with the height.

When the base exceeds the mouth, as in 10 b , the shape is nearly indistinguishable from $P$, except for being more slender, that is, less bulbous below.

Most of our illustrations, like 10f, 10i, 11a, show a long, elegant, straight, and even silhouette, with a slight bell-like flare at the top.

However in 11b, c, d, there is a more ornate form, which in profile shows three bulges and two concavities, and four zones of painted design. The uppermost design zone comprises the second constriction plus the (incomplete) flare to the lip, and is the widest. The three lower zones of design correspond respectively to a bulge, a concavity, and another bulge. The coördination is skillful, and its complexity lends an air of richness of ornamentation; which was no doubt the aim. The design zoning occurs also in 11a, but without bulges in silhouette. The $\mathbf{N}$ vases of plate 10 are single- or double-zoned only, instead of fourfold.

I did not in 1926 excavate any of the convex-concave profile jars like 11b, c, d, though I puchased a few.

Although the smooth and the wavy outline N cylinder vases are obviously related, they differ so sharply that it is warranted to distinguish subtypes: $\mathrm{N}_{1}$ and $\mathrm{N}_{2}$. Presumably $\mathrm{N}_{2}$ is the later; because all other A-phase and B-phase tall vessels
are single- or double-curved in silhouette, like $\mathrm{N}_{1}$; whereas local bulges, bosses, or swellings are characteristic of the following $Y$ phase, as in 15d, 15f, and probably 9 d . The fact that the bulges of $\mathrm{N}_{2}$ are reënforced by the multiple design zoning strengthens the significance of the distinction between $\mathrm{N}_{1}$ and $\mathrm{N}_{2} .{ }^{8}$

0 AND P, BULBOUS-CONVEX AND BULBOUS-CONCAVE VASES
Shapes $O$ and P , the bulbous vase types I and II, I would rename bulbous-convex and bulbous-concave. They are valid classes, though the one (10a) and two (5a, 5b) examples of them which we illustrated (out of 28 and 36 attributed, respectively) are few for substantiation.

Both types are largest in diameter somewhere in their lower halves; the mouth diameter is smaller, though only moderately so. In both, the height normally exceeds the width, and perceptibly so. The difference between them is that 0 shape is convex from bottom to top; P is also mainly convex in profile, but before the mouth is reached there is a slight concave constriction, above which the lip spreads again a bit.

Strong and I pictured 5 P vessels, 3 from Ocucaje B and F (25h, 28m, 28n) which are straight Nazca A as defined in the first part of the present paper, and 2 from Santiago in Ica ( $28 \mathrm{k}, 281$ ) whose context is at least mainly post-early-A. The three first run 93, 92 , 102 per cent in H/D ratio ; the two latter, 126 and 127 per cent. This difference suggests that the form P originated in Nazca as a relatively squat form in phase A and grew taller in late A or X . Our 2 figured pieces from Nazca Valley fit this inference: 5a, 102 per cent, looks as if it had A-phase painting on it; $5 \mathrm{~b}, 145$ per cent, B-phase.

There is corroboration in 3 vases newly illustrated in the present monograph and discussed in Part III: plates 31f and 34a from Ocucaje graves B4 and F6 are Pa ; but 35 c , from Ocucaje F3 (later than the rest of F ) is a tall and banded Pb form.

Still further corroboration comes from my 1926 excavations for Chicago at site Ocongalla West B. The data are in preparation for joint publication in full by Donald Collier and myself, so they will be only summarized here. Graves 8,9 , 10,12 contained full B-phase material only; among them, 11 characteristic P-shape vases, whose H/D proportion ranged from 124 to 156 per cent and average 135 per cent. ${ }^{9}$ This is in marked contrast with the 92 to 102 per cent range and mean of 97 for the four A-phase pieces, 1924 plates $25 \mathrm{~h}, 28 \mathrm{~m}, 28 \mathrm{n}, 1927$ plate 5 a . But the mean height of 135 per cent for the 11 Ocongalla West B phase-B pieces accords well with the 133 per cent mean of the 3 phase-B or post-A pieces, $19275 \mathrm{~b}, 1924$ $28 \mathrm{k}, 28 \mathrm{l}$.

It is thus clear that $P$, like $N$, subdivides into two subclasses: $P_{1}$ or $P a$, about as high as wide, and centering in Nazca $A ; P_{2}$ or Pb , about a third higher than wide, centering in Nazca X-B.

[^12]The same Ocongalla West B site also gives additional facts on the bulbous I or O type. Graves 3, 7, and 10, also full B-phase, contained 50 vases ranging from 112 to 142 in H/D and averaging 125 per cent. ${ }^{10}$ Three of these show a turning of the convex profile into a slight concavity just below the rim, but without actual constriction, that is, diminution of diameter ; 2 are convex right up to the rim.

Shape O has no known antecedents in pre-B period.
While we are with this Ocongalla West B site, I might add that its B-period graves $3,4,7$ contained 3 head jars of type $Y$, with H/D proportions of 125, 108, 130 per cent, ${ }^{12}$ which, so far as their shape is concerned, are P with a nose pinched out into a projecting little elevation on one side. The painting-on of eyes, mouth, facepaint, perhaps hair, then completes the "head jar." When I first looked over their photographs, while concentrating on shape and ignoring painting, I actually labeled them "P." A designation of shape Pn (the " $n$ " for "nose") would be as correct as shape $Y$, besides suggesting their relationship. Indeed, as no shape $Y$ jars are known in Nazca-A contexts, it seems probable that their antecedents were the squat Pa vases of A , and that these had developed by peak-B times into two forms: the tall Pb and the not quite so tall Pn with modeled-on nose and paintedon facial features.

We had the period-ascription of classes O and P roughly but not exactly right in 1927.

|  | A designs | $X$ designs | $B$ designs |  |
| :--- | :---: | :---: | :---: | :---: |
| O bulbous I........ | 2 | 28 | 21 | "B" |
| P bulbous II........ | 0 | 2 | 3 | "X" |

We had too few P designs to judge; the encircling bands and stripes to which they are addicted were not in the list of forty designs with which we operated.

## Jars

In the class of jars, we distinguished in 1927, apart from the specialized doublespout and head-and-spout forms, 4 shapes:

| Q | lipless jar...............2 examples | 2 shown in $5 \mathrm{e}, \mathrm{f}$ |  |
| :--- | :--- | :--- | :--- |
| R | wide-mouth jar.... | 13 examples | 0 shown |
| S | narrow-mouth jar. . | 23 examples | 4 shown in $4 \mathrm{f}, 6 \mathrm{~d}, \mathrm{e}, \mathrm{f}$ |
| T | handle jar........ | 8 examples | 6 shown in $4 \mathrm{c}, \mathrm{d}, \mathrm{e}, 6 \mathrm{a}, \mathrm{b}, \mathrm{c}$ |

JARS R, S, T
While $\mathbf{Q}$ is lipless, shapes $R, S, T$ agree in that all of them have a neck and collar, and are obviously interrelated. The key sketches in 1927 figure 2 illustrate the relationship well, except that the wide-mouth jar chosen as example is unusually low in its collar; though it does seem to be true that wide mouths do tend to have somewhat lower collars. $S$ and $T$ are one shape, except for the addition in $T$ of a pair of lug handles. These, however, are far enough up on the shoulders so that they ordinarily do not extend beyond the maximum diameter. ${ }^{13}$

[^13]When the illustrated specimens of the three classes $R, S, T$ are merged and seriated, as below, it is evident that the $R$ jars are not only proportionally widermouthed but wider across the neck, and that the height of their collars or lips tends to the lower range of this feature. In proportional total height or squatness, $\mathbf{R}$ falls into the midst of the $S$ and $T$ series, and these in turn show little distinction inter se, except for some tendency of the handled jars to average slightly higher, and both a little wider and higher in the collar or lip.
Mouth D/max. D: $\mathbf{S}$ T $\mathbf{T}$
H coll./H: $\mathbf{T} \quad \mathbf{R}(\mathbf{S}, \mathrm{R}, \mathrm{S}, \mathrm{T})(\mathrm{T}, \mathrm{S}, \mathrm{T}, \mathrm{T}) \mathbf{S}$

TABLE 6
Seler's Jar Shapes, Seriated

| Fig. no. | Rim/max. ${ }^{*}$ | H/max. D | H/coll. H | Phase |
| :---: | :---: | :---: | :---: | :---: |
| 246. | 21 | 71 | 14 | BB |
| 310. | 27 | 84 | 10 | B |
| 117. | 29 | 83 | 16 | B |
| 124. | 36 | (86) | 15 | B |
| 35. | 41 | 94 | 20 | X |
| 199. | 41 | 89 | 19 | B |
| 90a. | 41 | 107 | 15 | X |
| 357. | 45 | 101 | 17 | BB $\dagger$ |
| 95. | 50 | 92 | 19 | B |
| 50. | 52 | 100 | 19 | X |
| 238. | 55 | 90 | 9 | BB |
| 180. | 58 | 85 | 8 | A |
| 227. | 59 | 97 | 28 | BB |
| 323. | 60 | 90 | 15 | ? |
| 63. | 68 | 94 | 9 | A |

* 8 jars with $R /$ max. $D$ under $49=$ shape-class $S$, mean 35 . 7 jars with $R / \max$. D above $50=$ shape-class $R$, mean 57 . $\dagger$ Erroneously attributed to Chancay, following misprint in Uhle's Frihkulturen.

The three classes thus are distinguishable, but are closely related. R and S differ in that in $R$ the neck has a diameter of 50 per cent or more of the body diameter; in $S$, less than this ratio. $T$ jars are essentially $S$ jars plus a pair of small lug handles, without addition to the maximum diameter. "Two-handled small-mouthed jars" would be a more exact designation for them than merely handled jars. They are far more closely related to the small-mouthed unhandled than to the threehandled jars with constricting cambered mouth just referred to in the footnote.

[^14]Seler has 12 drawings of R and S shapes; he shows no handled T's. I have measured, percentaged, and seriated his $R$ and $S$ shapes in table 6 .

Combining this Seler series with our own for $R$ and $S$, and adding $T$, we have these means, minima, and maxima.

|  | Mouth Ratio |  | H/D Ratio |  |  | H coll./H Ratio |  |
| ---: | :---: | :---: | :---: | :---: | :--- | :--- | ---: |
| $9 \mathrm{R} \ldots \ldots$. | Mn 58 | $50-68$ |  | Mn 88 | $79-100$ |  | Mn 17 | $8-28$

It is again evident that we have basically one form except for the width of mouth. This mouth width varies from a fifth to two-thirds of body diameter (2168 per cent). This range is too great to ignore in classification; but as there is no marked gap in distribution within it, our arbitrary segregation: $R=>50$, $\mathrm{S}=<50$ is probably as convenient as any other, especially since the handle T shapes prove to be all of near-S profile.

I also rated the 15 Seler jars in terms of estimated degree of development of painted design within the B phase, on the chance that this might coincide with a development in vessel shape. My scale was: "A"; "X" for early B, X, or possibly A; "B" for definitely B; "BB" for elaborate or extreme B quality. There were 4 pots with BB design, on the $S$ jars lowest ( 21 per cent) and highest ( 45 per cent) in M/D ratio, and on 2 around the middle range ( 55,59 per cent) of the $R$ jars; but the " $X$ " and " $B$ " ratings run scattering. The outcome was therefore inconclusive. Only the 2 or 3 A or possibly A vessels fall at the top of the widemouth range-58-68 per cent. With this finding the Ocucaje A-period R jar in plate 28 p agrees: ${ }^{14} \mathrm{M} / \mathrm{D}$, 65 per cent; H/D, 79 per cent; H/collar H, 14 per cent. All the as yet identified A-phase painted pieces are therefore wide-mouth R. The $S$ shape is mainly later ; ${ }^{15}$ and presumably $T$ as a painted form developed later ; ${ }^{10}$ but the R form was maintained into late B .

Our 1927 shape-design correlation came out as per this tabulation:

|  | A designs | $X$ designs | $B$ designs | Total |
| :---: | :---: | :---: | :---: | :---: |
| Wide R (13). | 3 | 8 | 0 | 11 |
| Narrow S (23). | 9 | 27 | 8 | 44 |
| Handled T (8) . | 2 | 3 | 1 | 6 |
| Total.. | 14 | 38 | 9 | 61 |

This hardly left us any choice other than putting all 3 shapes into $X$, although the only series of any size are the 44 designs on the 23 S jars. R and T together had

[^15]only 17 cases of design (of our selected 40) on 21 jars. As a matter of fact, as just shown, jars run from early A through late B. My Nazca diggings have led me to believe that in the early A period most jars remained unpainted, or with a bit of modeling or incising ; and hence their seeming rarity, since plain vessels have rarely been collected.

Some $S$ jars with $B$ design, like $6 e$, f, depart from the near-globular shape of most R, S, and T vessels toward a more flattened or even semilenticular shape. This holds also for Seler's figures 310, 117, and especially 246, whose H/D ratios are $84,83,71$ per cent. Whether it would be desirable to set up a distinct subclass of $S$ for them remains to be seen. The flattening of the body is similar to that in $U$ double-spouts painted with full B design; and the same lower-case letter (such as Sf, Uf for "flattened") might be used for both subclasses. They appear to be far more common than the rod-handle or spout of 4 e .

## LIPLESS JAR Q

The Q or lipless jars are allied to $\mathrm{R}, \mathrm{S}, \mathrm{T}$ in general proportion, but their constricting slope merely ends. They leave off the spreading collar, or the neck plus collar, of R, S, T. As might be expected, they seem to run a bit lower: 67 per cent for 5 e, 82 for $5 f$. The latter is just higher than the lowest $S$ and $R$ jars with 71, 73, and 79 per cent. This overlap in height tends to confirm the basic relation to R, S, T. The key sketch in 1927 figure $2 q$ is somewhat too high, with a proportion of about 96 per cent. But the ratio of $\mathrm{M} /$ body D is correct: figure $2 \mathrm{q}, c a$. 54 per cent; plate 5 e, 54 per cent; plate $5 \mathrm{f}, 59$ per cent.


Fig. 1a-c. Unpainted lipless jars of period A from Ocucaje; a, b, shape Q; c, pseudo-Q.

TABLE 7
True Q Jars, Nasca and Ocucaje

| Cat. no. | H | D | M | $\underset{\text { per cent }}{\mathrm{H} / \mathrm{D}}$ | $\underset{\text { per cent }}{M / D}$ | Design |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Nazca, group } 1 \\ 8801 . . . . . . . \end{gathered}$ | 149 | 191 | 79 | 78 | 41 | Largest, two-headed cat-deity design; centipede body containing 8 paneled fruits. Note small mouth of vessel |
|  |  |  |  |  |  |  |
| 8964. | 96 | 139 | 70 | 69 | 50 | Pl. 5f. 5 heads, multiple eyes; allied to "lacework" trophy heads |
| 8425. | 113 | 164 | 87 | 69 | 53 | Pl. 5e. Thorns, blood from mouth |
| 8616. | 137 | 170 | 95 | 87 | 56 | "Lacework" trophy heads |
| Nazca, group 2 |  |  |  |  |  |  |
| 9102. | 109 | 109 | 78 | 100 | 72 |  |
| 8963. | 97 | 104 | 76 | 93 | 73 | Mate of next. Lacework trophy heads |
| 8962.............. | 97 | 100 | 74 | 97 | 74 | Pl. 9m. Mate of last. Lacework trophy heads |
| 8864. | 92 | 116 | 87 | 79 | 75 | 2 jagged-staff deities |
| Ocucaje, unpainted |  |  |  |  |  |  |
| F4-4701, fig. 1a... | 117 | 131 | 96 | 89 | 73 |  |
| F7-4717, fig. 1b... | 113 | 130 | 96 | 87 | 74 |  |

TABLE 8
Pseudo-Q Bowl Jars, Nasca and Ocucaje

| Cat. no. | H | D | M | $\underset{\text { per cent }}{\mathrm{H} / \mathrm{D}}$ | $\underset{\text { per cent }}{M / D}$ | Description |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nazca, painted |  |  |  |  |  |  |
| 8834. | 85 | 114 | 90 | 75 | 79 | Flat bottom; very heavy |
| 9025. | 87 | 139 | 110 | 63 | 79 | Flat bottom |
| 9045. | 73 | 115 | 88 | 63 | 77 | Nearly flat bottom |
| 8826. | 102 | 123 | 86 | 83 | 70 | Heavy |
| Ocucaje, unpainted |  |  |  |  |  |  |
| F10-4713.. | 75 | 132 | 102 | 57 | 77 |  |
| F19-4770, fig. 1c. | 107 | 156 | 111 | 69 | 71 | For shape, cf. pl. 46g, 16-7851 |

The nominal frequency of $Q$ is 12 out of 563 pre-Y Nazca pieces at Berkeleybetween 2 and 3 per cent. This is about the same as the frequency of $R$, half that of S , and somewhat greater than T. The 4 classes together number 56, or just 10 per cent of the total collection.

Plate 9 m is probably not to be put into $Q$; we left it in "Miscellaneous." It constricts toward the top and there is no marking of the lip, but the basic form is different from $Q$.

The Nazca occurrence of painted-shape $Q$ centers in period B. But there are in the Ocucaje collection 4 Q-shape vessels of Nazca phase A: 4701, 4717, 4731, 4770,
respectively from graves F4, F7, F10, F19,-the 2 first being mates of a pair! Three of them are drawn here in outline in figure 1a, b, c, and discussed in Part III. They are all without painted design, though they are polished and slipped or washed. The situation for $Q$ then is similar to that for $S$ and $T$ : the shape occurs in $A$, but was still unpainted, and therefore did not get into collectors' assemblages.

However, it is necessary to distinguish between true-Q and pseudo-Q jars. The former slope nearly straight upward and inward to the mouth, like a cone frustum; it is this trait that caused us to apply the name lipless to them. The pseudo-Q jars curve into the mouth, are convex in the whole of their profile, average lower than the true-Q, and could be described as bowls as properly as jars.

The 8 painted pure-Q vessels from Nazca are seriated in table 7 by their M/ max. D ratio. It appears that they fall into two groups: first, mouth ratio 41-56 per cent, absolute D 190-139; second, mouth ratio 72-75 per cent, absolute D 116100. Both our 1927 illustrations are of first type; our figure $2 q$ sketch of the shape class is of second type. Number 8962 we showed in plate 9 m as of miscellaneous class $Z$, though it is listed in $Q$ in the summary of numbers of that class.

The designs of both groups are $\mathbf{X}$ or $\mathbf{B}$, and mostly conspicuous full-B. This is automatic in view of Nazca $A$ not painting the shape when it was made. The stylistically earliest design in the group is the "centipede-body" deity on 8801, the largest vessel of the shape in the collection. This might be A or later archaizing.

Two of the Ocucaje unpainted jars belong here in shape, and are added in table 7.
The 4 bowl-shaped vessels classified as Q in 1927 are here listed in table 8 in order of their $M /$ max. D ratio; together with 2 period-A unpainted Ocucaje vessels. The Nazca specimens are fairly uniform in size and proportions, differing most in relative height. Two of them are notably heavy ware; 2 are definitely flat-bottomed, not rocking at all on a table; and a third is nearly flat.

The design in all 4 Nazca pieces is of late type, either geometric or, if Nazca-like, rough or slovenly.

8834 : background black; a zone of small geometric design, two plain bands.
9025 : white zone, with alternately red and black double-facing steps.
9045: four full-face trophy heads, laid in line within a zone.
8826: background yellow; a geometric zone, four plain bands.

## Other Shapes

## U, DOUBLE-SPOUT

The double-spout or $U$ shape has been discussed in the first part of this paper. We were evidently right in 1927 in classing it as basically an A-period shape, in the sense that it is definitely characteristic of A , but we erred in omission by not separating off at least as a distinctive subclass the later lenticular and other forms.

The detailed history of the double-spout within the course of the Nazca style remains to be worked out. I will only suggest now that the form was relatively most frequent in A , became less common in B , and had about or wholly gone out in Y. At any rate, my seven full-B graves at Ocongalla West B contained only 1 example (170777) among 56 restorable vessels; which contrasts with 5 among 68 vessels in about twenty A graves at Cahuachi A and Aja B.

In saying that shape $U$ is relatively less frequent in late than in early Nazca, I
am excluding altogether those lenticular vessels with long tapering spouts spreading at nearly right angles, like plates 20d, 19d, which bear straight Coast Tiahuanaco painting. These may be post-Y; at any rate, I do not know of any having been reported in a straight $Y$ grave context.

A few notes on variant U-shape notes may be worth while.
A typical high-B-painted lenticular vessel, probably made in two parts, is shown in Means, 1917, plate 2:5. An extremely flat lenticular U with long and very spreading spouts is in Muelle and Blas, 1938, plate 4a: the painted design still is Nazca, but very late, almost with a Tiahuanacoid effect.

Double-spouts with cylindrical body and with stepped rectangular body are illustrated in our plate 1 a and 1 b ; 2 e is double-conical or rather double-frustum. ${ }^{17}$

The design is occasionally in echelons of small figures. Of such, our 2 d seems late (trophy heads); Muelle and Blas's 5b (birds) may be Nazca A. Their 5a has a near-cylindrical body with spouts rising from its periphery, much like Kroeber and Strong's 28 e from Ocucaje aberrant grave F3. The spouts have somehow a suggestion of Paracas about them, though I cannot pin down any trait of these spouts to a parallel with any specific Paracas piece, Cavernas or Necropolis. The design on the Muelle and Blas 5 a is also strange.

I offer this tentative classification of the two dozen double-spouts figured by Seler:

## Seler's Double-Spouts

A. Standard $A$-period spheroidal shape, resembling that of an ox heart. This shape was retained into X and B , as shown by the painted design; though B also used other shapes.

1. With A-period design : Seler figs. 1a, 9, 62, 64, 304, 383.
2. With probably A design, or A-X: $25,70,283$.
3. With X, X-B, or B design: 39, 42, 91, 201 (flattened spheroid), 202.
$B$. Shapes other than standard $A$, designs full B-period.
4. Body shows a turn or bevel near or below middle: 40, 46d, 229, 231 (upper slope concave!), 233 (high spouts).
5. Low spheroid, flat bottom: 214.
6. Body high, narrow, conical bottom: 27e.
C. Body beveled, design Nazca A.
7. Spouts suggest Paracas: 339.
D. Body beveled, spouts long and spreading.
8. Design Tiahuanacoid or pseudo-Tiahuanacoid: 427.

Our 1927 illustrations I would now group tentatively as follows.
Possibly very early or formative Nazca A: 2c (flat-bottomed).
Nazca A: 1d probably; 1e, 1f, 2a, 2 b ; 2e (double-frustum) probably formative A.
Nazca X or B: 1a (low cylinder), 1c (low spheroid), 1d (almost lenticular).
i: 1b (stepped rectangle).
Coast Tiahuanacoid: 19d, 19e (blackware, incised), 20d (in New York).

[^16]This Coast Tiahuanacoid form is somewhat anticipated in body form by the late Nazca lenticular shape, but is not anticipated (or only slightly) in its tapering, spreading, and hump-bridged spouts. The precise shape of Tiahuanacoid body seems also not to occur in Nazca B-only the principle of an upper and lower half. I would infer that the Coast Tiahuanacoid double-spout was not a gradual derivative from the Nazca B lenticulars, but a mutation to a deliberately new form, probably elsewhere than at Nazca-Ica, though it probably did take over the doublespout idea from Nazca. As for Muelle's interesting suggestion that the new form was arrived at through metallurgical technique and retransfer of the effects to ceramics, the final validation of this of course depends on the fortune of discovery of appropriate archaeological association; but the hypothesis continues to appeal to me as probable.
V, HEAD-AND-SPOUT JAR

Shape V. head-and-spout jar, is represented by 8d, 8e, 8 f which I take to be Nazca B , and by 9 j , which we classed as B in 1927 but which I now construe as A . This last is not a true head-bridge-and-spout, but a small spout rising out of the much larger head of a whole human figure, to which a strap-handle has been added reaching back down to the body; this handle is flat, but it does not really bridge anything. A vessel like this is obviously not strictly equatable with the $B$ head-and-spouts. It might be classed as a related subtype, or even as a variety of $\mathbf{X}$.

Plate 25b, of period A from Ocucaje F10, has the spout rising out of the body of the vessel, and connected with the head by a bridge. It is therefore a true head-and-spout by definition or in principle, as 9 j is not. But its proportions, profile, and painting differ markedly from $8 \mathrm{~d}-\mathrm{f}$, and show definite similarity to 9 j . It might therefore be constituted into another subclass.

Seler illustrates half a dozen V-shape pieces, plus 2 whose drawing is incomplete or ambiguous (figs. 212, 348), and 1 (317) which is a drawing of Uhle's 25b from Ocucaje. The 6 first group as follows:

> 21,22 , human (man'si) head on bird body. 211 , woman's head on woman's body. 222 , woman's head on cylinder-plus-cone body. 347 , 349, fisherman's head on spherical body.

Of these, $21,211,222$ are B, 22 uncertain, 347,349 probably A.
Two American Museum head-and-spouts are shown in our 20a-b and 21f. The first is a well-modeled, finely painted, and polished figure of a woman; both head and cloak-covered body, corresponding to 8d-f, are obviously of B phase. The other has a man's modeled head and simply painted body and arms on the spherical vessel body, and might be A.

## w, FLARING RIM VASE

The flaring rim vase, $W$, is one of the smaller Nazca style classes, represented by 7 examples in the 563 vessels. The illustration 8 c is closely duplicated by 20 c from New York. The outstanding feature is the enormous vase collar, wide, high, and spreading, and always set on top of a low flattened spherical trophy head, which
has a modeled nose, like the Y vessels $7 \mathrm{~d}-\mathrm{f}$. The collar is nearly as high as the head in 8 c , higher in 20 c . It is almost as wide-across the vessel's rim-as the head is wide. The period of both vessels is obviously B.

A W shape which I excavated at Ocongalla Zero in 1926 (Chicago, 170423) has its collar 43 per cent of the total height, 80 per cent as wide as the body. The collar carries the complementary interlocking snake pattern, dating the vessel as B .

## X, FIGURE VASES

$\mathbf{X}$, the figure vase, has our dozen examples held together by the abstract idea of a human body rather than by any particular form of body. For instance, 9a, b, c are almost certainly A-to judge by 25a, Ocucaje F6-4708, and by vessels I excavated in 1926-although in 1927 we labeled 9a, b, c as style B. On the other hand, $8 \mathrm{a}, 8 \mathrm{~b}$, which we also classed as B , are actually such. I would also now class as $\mathrm{B}, 15 \mathrm{a}$, a fish-tailed man, which we put into Y. Muelle and Blas's Muestrario lb seems indubitably A .

In general, phase A represented men, phase B women. This holds for $9 \mathrm{a}, \mathrm{b}, \mathrm{c}$ as against 8a, b. The A-period 25a and Muestrario 1a also represent men. The male figures have the opening of the jar the size of the head; in the female ones 8 a , b, the head projects from a great collar or basket about as big across as the body of the vessel.

Seler shows one male seated figure, 149, which is much like our 9a, b, c and presumably also Nazca A. He illustrates four seated female figures: 205, 206, 209, 210, which I would adjudge B; for one thing, they have almond eyes. (This is in addition to a figurine of a naked tattooed woman, fig. 208, and a painting of one as seen from above, fig. 207, with full modeled head in the center of a shallow bowl of apparently Aw shape.)

Seler's figures 347-349 show fishermen with nets, done probably in A style. Two of these are shape $V$, with bridge and spout; the third, 348, is not clear and may be $V$ or $X$.

It will undoubtedly be necessary to distinguish subclasses of shape $X$, and in part these will correspond to periods. Xm and Xw for men and women figures may be indicated, Xa and Xb for phases of style, $\mathrm{Xe}, \mathrm{Xf}$ for effigies, full figures, and so on. If necessary, combinations of these could be used, like Xma or Xby.

## y , HEAD JARS

Our shape Y, head jars, manifests some heterogeneity because we have allowed the concept of a head to overshadow the actual shapes. However, several of these shapes repeat often enough to constitute valid subclasses. We counted 22 exemplars of $Y$ shape, of which we illustrated 6 in 7a-f. I divide this group of 6 into 4 subclasses.

Shape Y1, as already discussed under $P$ (bulbous II vase), is essentially a $P$ vase with modeled nose and sometimes with modeled conical bosses for ears. Eyes, eyebrows, mouth, hair, and face decoration are shown by painting. The profile of the vessel above the head is slightly concave and always carries painted design, but this is rarely elaborate. While the H/D proportion averages less than in straight-P vases of the same phase, the difference is modest. In 1927 we classed all Y shapes as B in style. The $3 \mathrm{Y} 1=\mathrm{Pn}$ vessels I excavated at Ocongalla West B (as mentioned above under P) were in indubitable B associations. There is at
least nothing in $7 \mathrm{~d}, \mathrm{e}, \mathrm{f}$ to conflict with this attribution; and Uhle's A-period graves from Ocucaje and mine from Cahuachi, Aja B, and so on, contained no Y1 head jars. The main type, Y1, is thus clearly B in period.

Seler shows a number of shape-Y1 pieces: figures 138, 143, 144, 145, 146, 147, $148,151,153,154$. Of these, 153,154 clearly represent trophy heads, as Seler says. The others presumably represent heads of living people.

Shape Y2, in our 7b, 8796, is a modification of wide-mouth jar R by addition of modeled nose and ear projections and painting appropriate to picturing three trophy heads of as many colors, treated like medallions. While this appears to be a type-I was shown a miniature at Nazca-7b is unique in our Uhle collection. The illustration shows the white trophy face, with rectangular dark red painting bordered in black below the eyes. A second face is light brown-orange. Here the paint is white-bordered black and encloses the eye; it is cleft from below, and falconid. The third face is dark purplish red; the painting is again below the eye and consists of a black-bordered orange triangle, equilateral and laid on its side, point toward nose. These three styles of eye paint on the same vessel of course prove that the three paint styles can scarcely have generic diagnostic value for time period. The three faces stand out from a black background; the neck collar or lip is dark red.

Y3 is a modification of lipless jar Q by addition of a modeled nose, and might be called Qn. We did not show an illustration, but Seler has several, 140, 155, 156, 157, 158, of which at least the last 4 are trophy heads.

Y4 is a head-jar type with bulging turban, or mass of gathered hair, across which is painted a sling worn as headband: 7a; also Muelle and Blas 2a, and Seler 141, 142. I excavated for Chicago a somewhat similar pottery head placed with a beheaded corpse in A-style associations; and the 3 figured pieces show nothing that conflicts with their also being A-period. The sling is a favorite A motif, but rare afterward.

There are head vessels of other forms of which only 1 piece has been figured, so that I do not know if they represent further subclasses or are sporadic uniques.

Our 7c is spherical without opening except for a round hole in one side about where the ear would come. The nose is modeled. This may be related to shape Y3.

Seler's figure 138 is a rather crude piece that is somewhat of a cross between Rn and Y 4 .

## Bowls and Plates

Open bowls are the most difficult vessels to classify for shape in the Nazca style. That is why consideration of them has been kept to the last.

In 1927 we recognized 8 shape classes among the 176 Uhle Nazca bowls. These are, with their letter designations, descriptive names, illustrated exemplifications, and number of pieces ascribed by us to each class:

| A | round-bottom bowl. | 3g, h, 21d | 20 |
| :---: | :---: | :---: | :---: |
| B | point-bottom bowl. | 5 d | 18 |
| C | conical bowl. | 4a, b, 21c | 35 |
| D | shallow bowl. |  | 9 |
| E | angular bowl. | 2 f | 25 |
| F | cup bowl. | fig. 11c | 30 |
| G | straight bowl. | 5c | 5 |
| H | flaring bowl. | 3a-f, fig. 12a | 34 |

There is at least one feature characteristic of all or most exemplars of each class. This is usually the particular trait which is denoted by the name we gave the class. The total characteristic shape of each class, however, always comprises several traits: the proportion of height to width, the shape of the bottom, the slope and the curve of the sides, the side (in or out) on which design is painted. In the range of open bowls, 8 classes are a good many to operate with, and when the going got thick with transitional forms, with hybrids such as a round bottom but flaring side, we tended to classify vessels by their one name-giving feature and to disregard all others. Such a procedure cuts through entanglements, indeed, but at the cost of forsaking a "natural" classification, which has as its first principle the consideration and balancing of all features, or as many as practicable; at any rate until it becomes clear which features legitimately override others. A balanced or natural classification would have given us more than the 8 classes we established, but would have justified them better; and the greater number of classes would almost certainly have over-grouped into fewer than 8 basic classes. All this is of course much easier to recognize a quarter of a century later, and for a first attempt we might have done much worse. We ought, however, to have added descriptive definitions of our types. Our names are brief and one-featured, the 1927 key sketches in figure 2 are quite small, and we showed only fifteen photographic illustrations for the 8 classes-indeed only three for the 5 classes $\mathrm{B}, \mathrm{D}, \mathrm{E}, \mathrm{F}, \mathrm{G}$ !

Using the ascriptions of particular bowls listed on our 1927 page 44, I found some of our bowl classes obviously heterogeneous, and others intergrading. I have saved such shape classes as could be saved, but have had to break others up and remake them. At that I am not wholly satisfied with my new classification: for instance, F and H still overlap, and their uncompromising separation would either be arbitrary or would leave an unclassified residuum. Bowls just are the most difficult shapes in Nazca. And all Nazca ware is given to flowing modulations of form in comparison with Mochica, where representations are innumerably varied but these are all contained in 6 or 8 basic vessel shapes.

I would make a primary division between bowls painted inside and those painted outside. There are very few painted both in and outside; so the dichotomy is simple as well as conspicuous. Painted design of course is, strictly, not part of shape; but it predetermines it to some extent. At any rate, it is a feature that works, pragmatically. I therefore begin by distinguishing "plates," painted inside, as a class, from "bowls," painted outside.
plates: classes Ac, Ar, Aw
All our 1927 cited illustrations of classes A and C (3g, h, 21d, and 4a, b, 21c) are plates, by my present definition. I therefore began by keeping $A$ and $C$ as designations. But only 8 of our 20 A vessels proved to be inside-center-painted; 4 others we had put into class B because their bottoms were more pointed; and our class C consisted of 4 inside-rim-painted and 31 not painted inside at all.

I therefore start wholly fresh, with shape A defined as a shallow bowl or "plate" painted on its inner or upper side.

Next, I subdivide into:
Ac, center painted, bottom rounded, with Nazca A design
Ar, rim painted, bottom tending to the conical, B- or Y-style design
Aw, whole inside painted as unit, smallish vessels, $B$ or Y style
Acr can be used if necessary when rim painting is added to center painting, as in 8466 . But when the center of A-phase bowls is painted with a definite design, and to this there are added merely pairs or triplets of thin lines, usually white, across the rim, then this addition is so subsidiary in effect that I would disregard it and call such plates Ac. They occur in my Cahuachi A and Aja B 1926 collections, but very rarely in Uhle's Nazca material.

## Class Ac

We had 7 of these in our old class A; the last 4 of the following list we had put into shape class B . The signs mean: b , a bevel or angle outside, where center and rim meet; $b+$, bevel marked; $b-$, bevel mild; rd, side rounded. The ratio H/D averages 38 per cent, with range from 28-45. The style of painted design is indubitably Nazca A.

TABLE 9
Center-Painted Plates, Class Ac

| Cat. no. | Bevel | D | H | $\underset{\text { per cent }}{\mathrm{H} / \mathrm{D}}$ | Design in panel | Background |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9156. | b | 190 | 85 | 45 | "Heart," etc. | W |
| 9155. | b | 151 | 63 | 42 | High fish | W |
| 9093, pl. 36b. | rd | 155 | 60 | 32 | Root, etc. | W |
| 8704, pl. 36c. | b- | 169 | 67 | 40 | Face | W |
| 8653. | b | 164 | 66 | 40 | 7-point star | W |
| 8652. | $\mathrm{b}+$ | 179 | 75 | 42 | "Fruits" | W |
| 8651, pl. 3h | b+ | 159 | 55 | 35 | 2-headed condor | R |
| 8466*. | b+ | 174 | 70 | 40 | "'Beans"'; rim bars | R |
| 8592, pl. 36e. | b | 178 | 58 | 33 | High fish | W |
| 8523, pl. 36f. | b | 217 | 60 | 28 | 4 tuna fish | W |
| 8431, pl. 36d. | b | 162 | 66 | 41 | 5 beans | W |

[^17]Eleven Ac plates out of 500 -odd Nazea vessels is 2 per cent-a very low proportion compared with what I got in my digging at Nazca, which was around 8 per cent of all mendable recoveries, and toward a quarter of all style-A vessels. I conclude that plates break easily in the grave and that buyers are not much interested in them, so that huaqueros mostly do not bring them in. In other words, there has been an adverse selection in collections assembled at second or third hand as Uhle's Nazca one was. On the other hand it contains a higher proportion of double spouts, around 7 or 8 percent, than my excavation yielded.


Fig. 2a-f. Gambreled profiles (except b, sphere segment, GG) of plates of class Ac from Nazca-interior-painted designs shown in plate 36a-f.


Fig. 3a, b. Gambreled profiles of plates whose interior-painted designs are shown in plate 31b and fig. 4a; Ocucaje, period A.

It will be seen that while this class of plates is determined by its circular field of design painted on the concave or upper side, the shape outside is usually beveled; and the exterior profile is essentially that of outside painted class B, gambreled bowl. The plates do run somewhat flatter: height 28-45 per cent of diameter, mean 35 per cent, where the bowls are 37-49 per cent, mean 44 per cent; but this is a proportional difference only, and there is overlapping between the two classes.

The 6 class-A plates from Nazca, whose design-painted interiors are shown in the present plate 36a-f, have their exterior profiles drawn in figure 2a-f. It is at once evident that 5 of the 6 have the bevel or gambrel characteristic of outsidepainted B-shape bowls; but one, figure 2b, is simple hemispherical or shape GG.

From Ocucaje are B5-4649 shown in plate 31b and in profile in figure 3 a of the present paper ; F17-4760, design in figure 4 a and profile in figure 3 b ; and F3-4688, design in figure 4 b .


Fig. 4. Sprouting bean(9) design on interior of period-A plates from Ocucaje.

## Class Ar

Rim-painted plates are perhaps descendants of the center-painted ones, by shift of the area used as decorative field. At any rate, none of them are clear Nazca A, and some are late B or even Y. Four of the following we had in 1927 in class C; I have extracted them and added 9048 from our former Nazca Y period group 2 (Tiahuanacoid), and 8665, to make table 10.
Neither in proportion nor in contour of profile is this a wholly coherent class. The profiles of two of the group, plate 38e, f, are shown in figure 12a, b, and are discussed in Part III in the text for plate 38.

TABLE 10
Rim-Painted Plates, Class Ar

| Cat. no. | D | H | H/D per cent | Style |
| :---: | :---: | :---: | :---: | :--- |
| 9008, pl. 4a...... | 203 | 61 | 30 | Profile conical |
| 9032, mate...... | 209 | 63 | 30 | Profile conical |
| 9048, pl. 14e..... | 223 | 64 | 29 | Cf. 9008 |
| 8426, pl. 4b..... | 191 | 76 | 40 | Bottom flattish, profile concave, flaring |
| 9023, pl. 38e..... | 227 | 91 | 40 |  |
| 8665, pl. 38f..... | 154 | 85 | 55 | Shape I in profile |

## Class Aw

This is a small group of small, shallow plates, of uniform convex curvature, painted all over their inner or upper side. The style phase of the design is B or Y . Three of the 5 are quartered-a design frequent on the outside or bottom in class C1. The 2 others carry a plain star or star-rayed face. See table 11.

TABLE 11
Center-and-Rim-Painted Plates, Class Aw

| Cat. no. | D | H | H/D per cent |  |
| :---: | :---: | :---: | :---: | :---: |
| 8600. | 122 | 38 | 31 | Quartering |
| 8601. | 122 | 38 | 31 | Quartering |
| 8433. | 122 | 43 | 35 | Quartering |
| 8432. | 138 | 47 | 34 | 8-pointed star, W on $\mathbf{R}$ |
| 9000. | 123 | 36 | 29 | Face with 24 rays |
| Mean. | $\ldots$ | . | 32 |  |

BOWLS
Of our 7 old shapes of bowls painted on the outside, 2 are unquestionably valid as we grouped them into classes B and E. I have here tried to define these classes more clearly, and I retain them. Both have sides that are nearly straight in profile. I treat these two classes first.

However, groups D, F, H, and the residue of C (after the inside-painted plates we formerly put into it have been subtracted)-all these flare with concavity somewhere in their profile, and are intergrading and difficult classes. They will be reviewed after classes B and E.

## Straight-Sided Bowls, <br> Shape B: Gambreled Bowl

The term "gambreled" is by analogy with a two-pitch obtuse-angled roof slope called gambrel.

The core of this group consists of our former "point-bottom bowls," after transfer from it to Ac of 4 inside-painted plates. The shape is adequately represented by our old (1927) figure 2 b , and by plate 5 d , though this is atypical in its bottom being painted, which is why it was tilted up to be photographed. The form is characterized by a sharp edge-angle or bevel. Below this, the bottom of the bowl is a gently sloping cone, more or less rounded. Above the bevel, the side of the bowl slopes upward much more steeply, sometimes nearly vertically, actually vertically, or even a bit inward. The side may be straight or somewhat convex, never concave. The diameters of the top of the side (the rim) and of its bottom (the bevel) are sufficiently close that the side is more or less like a ribbon stood on edge. This makes it an easy field to paint on. There is little distortion from top to bottom through shrinkage of the field. Beyond that, the bandlike field is narrow up and down, but long around the vessel. It lends itself well, therefore, to repetition of small units. Variety is easily achieved by inverting these, alternating their color or repeating it in threes, and so on. By "paneling" I designate vertical black or white lines separating the units of design. Sometimes the units stand free without such dividers; occasionally they stand continuous, in contact.

I present first, in table 12, a condensed descriptive tabulation of 12 non-Ac bowls which we classed as B in 1927. I omit, however, 8738, which is deliberately doublepointed instead of circular, and is obviously Nazca-Y in period.
TABLE 12
Shape B, Gambreled Bowls

| Cat. no. | Diameter at: |  |  |  |  | $\begin{aligned} & \text { Width } \\ & \text { design } \\ & \text { band } \end{aligned}$ | Color* |  |  | Painted designs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Rim | Band | Max. | H | per cent |  | $\begin{aligned} & \text { Back- } \\ & \text { ground } \end{aligned}$ | $\begin{aligned} & \text { Panel- } \\ & \text { ing } \end{aligned}$ | $\underset{\substack{\text { Out- } \\ \text { lines }}}{\substack{\text { a }}}$ |  |
| 8602. | 188 | 176 | 189 | 87 | 46 | 48 | B | W | W | $91 / 2$ fruits, altern. R, Br. |
| 8436. | 149 | 140 | $\ldots$ | 69 | 46 | 39 | R | W | W | 7 pods |
| 8439. | 170 | 150 |  | 81 | 48 | 47 | B | . | W | 7 pods, altern. R, Y |
| 8654. | 138 | 141 | 144 | 66 | 48 | 38 | B |  | .. | 8 pairs of geometric units, altern. inverted |
| 8692. | 160 | 162 | 167 | 75 | 47 | 37 | B | W |  | $91 / 2$ horizontal S-curves, altern. W, R |
| 9092. | 150 | 138 | $\ldots$ | 73 | 49 | 40 | . | W | W | 12 radiate-striped triangles, altern. $\mathrm{R}, \mathrm{Br}$. |
| 8655. | 127 | 113 | $\ldots$ | 54 | 43 | 36 | W |  | B | $81 / 2$ maize ears, YRG sequence |
| 8736. | 150 | 116 | $\ldots$ | 56 | 37 | 39 | W | Br | B | 12 fruits, altern. inverted |
| 8832. | 152 | 131 | $\ldots$ | 56 | 37 | 34 | W | .. | B | 22 hatched B diamonds, on end, continuous |
| 8765. | 170 | 163 |  | 69 | 41 | 37 | W | .. |  | 24 altern. R, B disks on line |
| 9004. | 138 | 135 | 135 | 58 | 42 | 28 | W | . | B | Staggered rectangles of crosshatching |
| 8558 | 172 | 170 | 175 | 74 | 43 | 26 | W | . | B | 6 complementary pairs step-fret; |

* Color abbreviations: B(lack), W(hite), R(ed), Y(ellow), G(ray), Br(own).

The first 6 of these dozen bowls are clearly A phase, the next 3 almost certainly the same. The last 3 however seem post-A, the final piece in the list ( $8558, \mathrm{pl} .5 \mathrm{~d}$ ) being in fact late B in design.

The mean percentage ratio of $\mathrm{H} /$ rim D of all 12 bowls is 44 . The mean absolute height of the design band is 37 mm .; this is in most cases somewhat more than half of the total height of the bowl. But since the design band usually slopes somewhat, the lower edge of the design, which practically coincides with the bevel, comes roughly about halfway the total vertical height.

The last piece in the list shows a drop of design-band height (width) to about a third of total bowl height. This may be a function of its late period.

From Ocucaje, 26f, g, i, 27c, j belong here. The H/D ratio of these is, in the same order, $50,41,48,58,38$ per cent: mean 47 per cent.

Also from Ocucaje are B3-4632, figure 11a of the present paper, and A1-4491 in figure 7a.

## Shape E: Flat Non-Flaring Bowl

Class E is what we called "angular" bowl in 1927 but illustrated only by figure 2 e . Its distinctive quality seems to be that the side slopes up in a nearly straight line -concavity or bulge is slight. This straightness gives the sides the effect of forming an angle with the base; especially so when the bottom is rather flat, as it tends to be in this class.

From Ocucaje there is quite a list of illustrated pieces easily assignable to class $\mathbf{E}$.

Class E Bowls from Ocucaje

| 1924 | H/D per cent | 1924 | H/D per cent |
| :---: | :---: | :---: | :---: |
| 26 c . | . 52 | 271. | . 58 |
| e. | . 50 | p. | . 45 |
| h. | 51 convex | q. | 48 |
| j. | 41 | u. | 40 |
| 27a. | 55 | v. | . 41 |
| d. | . 57 | W. | . 52 |
| e. | . 41 | 29c. | . 45 |
| f. | .. 47 | g. | . 46 |
|  | 39 | Mean | . 48 per cent |

To resolve all doubts, I finally reassembled all 25 E-shape bowls as we had listed them from Nazca in 1927, and seriated them by H/D ratio in the adjoined list (table 13). Mr. Dawson kindly measured them while I noted shapes and painted design.

This proves to be a homogeneous group and a valid class. Not only is it typical of period A; it seems confined to A. The diameters run from 96 to 207 mm . The mean $\mathrm{H} / \mathrm{D}$ ratio is 50 per cent, with range from 37 to 68 (for no. 8925; the next lower being 3 bowls at 62 per cent). The side is convex five times, straight five, slightly concave fifteen times. Concave means that a ruler laid along the side shows a sliver of daylight between. I have entered this eye-judgment of convexity or concavity in the seriation for height. From H/D 50 per cent up, there are 2 straight-sided, 9 concave.

I also classified the group for relative flatness or roundness of bottom-again by eye-on a scale: FF, F, (F), (R), R, RR. For this feature the correlation with
height is even stronger. It will be seen from the list that all the flat-bottomed bowls but one have a $\mathrm{H} / \mathrm{D}$ percentage ratio from 45 down, all the round-bottomed ones from 48 up . Also the extreme forms, FF and RR, tend to come toward the ends of the range.

TABLE 13
Shape E Bowls from Nazca Seriated by H/D Per Cent

| Cat. no. | H/D per cent | Side | Bottom |
| :---: | :---: | :---: | :---: |
| 8818. | 37 | C | FF |
| 9087. | 37 | (C) | F |
| 8571. | 38 | 0 | FF |
| 8572. | 39 | 0 | FF |
| 8817. | 43 | (C) | F |
| 8647. | 43 | 0 | FF |
| 8931. | 44 | V | F |
| 9084. | 45 | (V) | (F) |
| 8646. | 45 | C | F |
| 8644. | 45 | V | F |
| 8480. | 48 | V | R |
| 8924. | 49 | C | R |
| 8645. | 50 | 0 | F |
| 9081. | 50 | V | R |
| 8821. | 50 | (C) | R |
| 8934. | 52 | (C) | RR |
| 8640. | 53 | C | R |
| 9002. | 54 | CC | R |
| 8912. | 56 | (C) | R |
| 8468. | 56 | C | R |
| 8996. | 56 | 0 | R |
| 8819. | 62 | C | (R) |
| 9080. | 62 | C | R |
| 8930. | 62 | CC | R |
| 8925. | 68 | CC | RR |

Side, scale:
(concave) CC, C, (C), O, (V), V, VV (convex).
Bottom, scale:
(fit) $F F, F(F),(R), R, R R$ (round).
That E is a shape limited to the A phase of Nazca was pretty well substantiated by our 1927 correlation table 1 . Here the 25 bowls are credited with carrying, from among our forty designs used, 17 that are A, 3 of $\mathbf{X}, 0$ of B in style. Similarly for the class-A plate, which is also limited to style phase A: A designs 12, X 1, B 2. By contrast, for shapes that were A phase but also continued later, our correlation showed much greater period-seatter of design. Thus, double-spout, U (which ran on into B) : A 17, X 40, B 5. For the flaring bowls F and H, which are mainly $A$ but continue on into " $X$," our design distributions in the correlation table were F: A 17, X 16, B 1 ; and H: A 13, X 14, B 5.

Concavely Flaring Bowls:
C1, C2, Residual from Old Class C
The bowls that remain in our old class C after transfer of the 4 rim-painted plates to shape Ar are not too homogeneous in shape. What nearly all of them share is a concave, flaring side-which they share with classes F and H -and a $\mathrm{H} / \mathrm{D}$ ratio between 40 and 60 per cent-which makes them lower than all but a few extreme $H$ bowls. Some show a bevel in profile, more do not. Some are fairly conical, some rounded, some almost flat in their bottom.

As compared with this not too well-defined shape, they seem to belong to 2 or 3 classes in painted design. Only 1 piece, 8739 , H/D 45 per cent, appears to have an A-period design of pods. All the others are B phase, or late B, or decadent B-Y.

One group comprises 10 concave-flaring-sided bowls, mostly late B period, carrying geometric, not representational, designs on their sides, and the outside bottom painted in quartering. The H/D range is from 40 to 48 per cent, mean 44 . They run from 153 to 187 mm . in rim diameter, with one attaining 214 mm . (nos. 9036, 9095, $\left.8753,{ }^{18} 8674,8813,8428,9012,8469,9011,8591\right)$.

With these might be reckoned 8429 , H/D 42 per cent, which has a quartered bottom, but has a bevel and is convex below this, flaring above; also 8723 and 8430, beveled but not concave, H/D 39 and 46 per cent; 8701 , which is concave and quartered but differs from the group of 10 in being smaller and relatively higher: 131 mm . and 54 per cent. These are all B or late B; 8701 may be $Y$.

I designate this group provisionally as C1. ${ }^{19}$
Second, there are 10 vessels, all of them concave and flaring and without bevel, which are painted in two zones (one in three zones), the lower of them containing women's yellow faces in series. Five of these vessels are in fair quality B style, mean H/D 47 per cent ( $8728,8729,8965,8966,8967$ ). Five are poor in modeling, texture, and painting, and are very late $B$ or $Y$; their mean $H / D$ is 59 per cent ( $8427,8588,8589,8727,8730$ ).
I am inclined to unite with these a group of 4 concave-sided bowls intermediate in H/D ratio: 52 per cent, apparently with B painting (only one of them zoned, and not in yellow faces), and good in quality of finish (8733, 8734, 8995, 9013).

These last 14 bowls I designate as C2.

## Shape D: Flat-Bottomed Flaring Bowl

A second class of bowls which are characteristically concave flaring is shape D. Our old name for these, "shallow bowls," is too general to serve well: classes E and A are equally shallow or more so. The D bowls are shallow or low as compared with classes $\mathrm{C} 2, \mathrm{H}$, and F, largely because they are flatter-bottomed, though they resemble these in their concave profile. "Flat-bottomed flaring" may accordingly make a suitable name for class D .

[^18]This is not a very frequent type: we counted only 9 examples among 563 vessels in 1927, and did not illustrate any of these 9 . Nor is there a very clear example pictured in the Ocucaje vessels in the Kroeber-Strong Ica report of 1924.

I have reëxamined the 9 bowls we assigned to shape D, and have added 8486. They are, together with shape E, as nearly flat-bottomed as Nazca bowls come. The sides show concavity. They are fairly large, from 168 to 201 mm . across, with a H/D ratio of 41 per cent, range $35-47$ per cent. Six of the 9 seem painted with B designs, and late rather than early B-interlocking fish, thorns, and the like; the others are uncertain. We designated the group as of period $X$ in 1927. The present plate 38c shows 1 of them. Plate 38a and 38b are even flatter bottomed, and the flare and concavity are similar. We listed these 2 in 1927 as of Nazca-Y2 phase; but they seem to me to go into shape D if 38c belongs there. Plate 38d seems to me marginal to class D: in 1927 we included it in class A on account of its bevel, presumably.

I admit that the demarcation between classes $\mathrm{C} 1, \mathrm{C} 2, \mathrm{D}$ is not clean-cut as to shape; hence my falling back on type of design.

## High Flaring Bowls of Shapes F and H

These 2 shapes, "cup" and "flaring" bowl in our 1927 terminology, look very different in the key of figure 2 . There the cup bowl, F , is depicted with a conical bottom, sides nearly vertical or parallel, and a sudden roll-out at the rim. The flaring bowl $H$ has a rather flat-rounded bottom, sloping concave sides (whence the name "flaring"), and a broad opening. Its H/D ratio, as drawn in 1927 figure 2h, is about 57 per cent; that of the 2 f cup is about 80 . Both these figures are within the range of $\mathrm{H} / \mathrm{D}$ ratio of the two types, as determined by measurement of all ascribed specimens. But they are only just within the limits, which are $56-72$ per cent for $\mathrm{H}, 62-81$ for F ; and they are at opposite ends of the ranges. Hence the key drawing for $F$ is over-average tall, that for $H$ over-average broad, so that one would not suspect from these drawings any similarity or overlap of shape between the types, such as the measurements cited show to occur on a considerable scale.

In 1927 we showed six photographed illustrations of F (3a-f) but none of H . We did give then 1 text figure drawing of each shape: of $F$ in figure 11 c , of H in figure 12a. The former of these is tilted to show the painted bottom, so the shape is not clearly recognizable; but a measurement of the specimen, 9043 , gives an H/D percentage of 73, and a slope of the sides of 11 degrees off the vertical. The H piece of 1927 figure 12a is 8581 , whose $\mathrm{H} / \mathrm{D}$ ratio is 70 per cent and departure from vertical 21-22 per cent. The significant difference is in the latter featurethe H specimen "spreads" more than the F ; in H/D they are very close. It is also clear that the concavity of the sides is similarly shallow. We have then a second indication that the two types intergrade.

A third is the fact that the piece shown in plate 3 a was actually included by us in the roster of those belonging to class F on page 44, although on page 45 it is given as H , together with $3 \mathrm{~b}-\mathrm{f}$. This was not an unduly gross error, as is evident when one compares 3 a with adjacent 3 b ( $11^{\circ}, 12^{\circ}$ slope; 74 , 70 per cent H/D). But it does show how close some F and some H bowls are.

This comes out also in 2 other pairs of bowls to which Mr. Dawson called my attention, through discovering that they had been misplaced.

|  |  | D | H | H/D\% | Concavity |
| :---: | :---: | :---: | :---: | :---: | :---: |
| F | 8604 | $\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots .139$ | 98 | 71 | 5 |
| H | 9097 | $\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots .142$ | 104 | 73 | 3.5 |

Here the " $H$ " member of the pair is the less wide and the less concave-the contrary of what is implied by "flaring."

|  |  | D | H | H/D\% | Concavity |
| :---: | :---: | :---: | :---: | :---: | :---: |
| F | 8928 | . 143 | 96 | 67 | 6.5 |
| H | 8917 | 143 | 100 | 70 | 6 |

Again the "H flaring" bowl is the less flaring.
We must accordingly accept the fact that the 2 classes F and H intergrade and render their distinction difficult.

Nor are we helped by painted design, for on both shapes it is straight or early A period (like Ocucaje B, F or Cahuachi A) in two-thirds of the cases, late A or " $X$ " (or earliest B) in one-third.

I give therefore in table 14 means, maxima, and minima of the usual dimension measures for all ${ }^{20}$ the 30 and 34 specimens ascribed by us to F and H in 1927; also the concavity and side slope ${ }^{21}$ of most of them.

TABLE 14
Comparison of Fand H Bowls, Nazca

| Measurements | F | H |
| :---: | :---: | :---: |
| Diameter in mm. |  |  |
| Maximum. | 149 | 227* |
| Minimum. | 110 | 130 |
| Height in mm. |  |  |
| Maximum. | 117 | 144 |
| Minimum. | 77 | 83 |
| Height/Diameter per cent |  |  |
| Mean.. | 72 | 65 |
| Maximum. | 81 | 72 |
| Minimum. | 62 | 56 |
| Concavity in mm. |  |  |
| Mean.. | 4.9 | 4.9 |
| Maximum. | 9 | 9 |
| Minimum. | 3 | 1 |
| Slope in degrees |  |  |
| Mean. | $12.4{ }^{\circ}$ | $16^{\circ}$ |
| Maximum. | $15^{\circ}$ | $22^{\circ}$ |
| Minimum. | $8^{\circ}$ | $13^{\circ}$ |

* Unique; the next largest run 173, 172, 171, etc.

[^19]It is evident that there is overlap between F and H in every measurement employed: considerable for four features, and present in the fifth. The H bowls average a little the larger, around 150 mm . as against 130 in width, $95-100 \mathrm{~mm}$. as against $110-115$ in height. For width, the median of H is at the upper limit of F , the median of F at the lower limit of H . For height the medians fall somewhat within the limit of range of the opposite class; but the overlap has a range of 34 mm . as against a total range of 67 mm . for the two groups together.

As regards proportion, the F group is the relatively higher, by 72 per cent as against 65 per cent; but the overlap is for 10 percentage points out of an extreme difference of 25 points.

TABLE 15
F and H Bowls Compared According to Period of Design

| Measurements | F |  | H |  |
| :---: | :---: | :---: | :---: | :---: |
| Diameter. | 21 A | 132 | 21 A | 159 |
|  | 8 X | 133 | 9 X | 151 |
| H/D per cent. | 21 A | 72 | 21 A | 65 |
|  | 8 X | 74 | 9 X | 65 |
| Concavity . | 21 A | 4.5 | 11 A | 4.0 |
|  | 8 X | 5.8 | 8 X | 6.2 |
| Slope in degrees. | 14 A | 12.5 | 11 A | 15.5 |
|  | 4 X | 12.1 | 8 X | 16.9 |

For concavity, the $F$ and $H$ means come out exactly alike. This makes the concavity relatively a bit deeper for F , because of its smaller average size.

For slope, the overlap is not very great-between $13^{\circ}$ and $15^{\circ}$; and the means are not very far apart either, $12.4^{\circ}$ for $\mathrm{F}, 16^{\circ}$ for H. Again the F mean is near the H minimum, the H mean near the F maximum. I believe that partial and intergrading as its differentiation is, the slope is the feature that most impresses the eye-has most pattern value. The F "cup bowl" does tend to be somewhat nearer an ordinary coffee cup in shape; the H "flaring bowl" does flare more, if "flare" refers to degree of over-all spread, without reference to curve or billowing of the spread.

Yet when half the specimens of each group fall within the range of the other, our two classes are obviously not valid, unless there be some unrecognized diagnostic criterion that separates them cleanly. I have not been able to find such a criterion. It might therefore be wise to renounce separation of the classes, and unite them in "FH." Or F, FH, and H might be distinguished on the basis of the measurements I have given. The F subclass would then consist of pieces beyond the H range, H beyond the F range. However, pieces would almost certainly turn up that were straight $F$ in some features, FH in others; and as new specimens were described, they would alter the F and H limits, and therewith the FH range also.

It occurred to me that the intergrading might be partly accounted for by change in the proportions of F or H or both as the Nazca style moved from its early A phase to its late A to X phase already referred to. I made the comparison,
but nothing much eventuated. Concavity did seem to grow with time, but in both F and H . In table 15 are the figures for what they are worth.

## Summary of Concavely Flaring Bowl Classes

We have now encountered 4 or 5 groups of bowls that "flare" with concavely spreading sides ${ }^{22}$ but vary in $\mathrm{H} / \mathrm{D}$ ratio:

| D | H/D: 41 per cent | flat-flaring. . . . . . . . . . . . . . . . . . . . . . full B |
| :---: | :---: | :---: |
| C1 | H/D: 44 per cent | (bottoms painted quartering)...... B-late |
| C2 | H/D: 47 per cent | (design in zones).................. . late B-Y |
| H | H/D: 65 per cent | high flaring. . . . . . . . . . . . . . . . . . . . A, X |
| F | H/D: 72 per cent | high flaring. . . . . . . . . . . . . . . . . . . . A, X |

It is obvious that the 3 shallowest of these 5 groups are late in Nazca-style history ; the 2 deepest, early. I do not however believe that D, C1, C2 grew up out of H, F. The designs suggest that, within later Nazca, flaring bowls grew somewhat higher ( 41 to 44 to 47 per cent), but that this trend had nothing to do with the much higher ( 65,72 per cent) earlier bowls.

It would rather look as if the idea of concave flaring bowl sides persisted all through the Nazca style, but that the feature was played with rather variously in different periods-as indeed it was in goblets and vases also.

> Bowl Shapes G and GG

Our last class of bowls, G, "straight-bowl," again makes difficulties. In the 1927 type drawing (fig. 2 g ) its height runs about 90 per cent of the diameter. We attributed only 5 vessels to $G$. The one illustration, plate 5 c , has sides that are neither quite vertical nor straight, though nearly enough so to give the effect of a short

TABLE 16
Bowls of Class G, Nazca

| Cat. no. | H <br> (in mm.) | Rim D <br> (in mm.) | Max. D <br> (in mm.) | H/Rim D <br> per cent | H/Max. D <br> per cent | Profile | Design |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :--- |
| $8434 \ldots .$. | 95 | 116 | 123 | 82 | 77 | convex | 3-prongs |
| $8670 \ldots .$. | 102 | 124 | 124 | 82 | 82 | convex | Vertical stripes |
| $8668 \ldots$. | 124 | 127 | 135 | 98 | 102 | concave | Vertical stripes |
| $8690 \ldots$. | 124 | 101 | 110 | 123 | 113 | concave | Trophy heads, arrows |
| $8831 \ldots .$. | 95 | 114 | 117 | 83 | 81 | concave | Parallel angles |

cylinder: the H/D ratio is 83 per cent. This piece seems to be a low or short member of the cylindrical vase series; it is probably unrelated, as a shape concept or mode, with the bowl classes. I presume we put it in the bowl group largely because it seemed too low for a "vase."

In the Ocucaje plates there are 2 pieces that approach the G "straight bowl" type. One is 25 h , though this is somewhat more concave in the side and more rounded in its bottom than the exemplar 5c. It is also somewhat higher, propor-

[^20]tion 91 per cent. It can perhaps best be construed as a low example of class P , "bulbous II vase." ${ }^{23}$ A second possible G is 28 j . This, however, is pinched in a good deal at the waist for a cylindrical shape.

The measurements of our 5 G-shape bowls of 1927 are listed in table 16.
It is hard to see common features, except that these 5 differ from all other bowls in having a diameter somewhere in their lower half equal to or greater than the rim diameter. Three have a H/D ratio (at rim) of $82-83$ per cent; but the others, of 98 and 123 per cent. These last could be construed as P -shape vases, which turn concave above where their convexity attains its maximum diameter toward the base. However, the third specimen with concave profile (8831) agrees in proportions closely with the two whose total profile is convex.


Fig. 5a-e. Hemispherical bowls of shape GG, period A, from Ocucaje; a, b, negatively painted; b from outside of grave F17.

All in all, it would seem that our old $G$ is both too rare and too variable to be a satisfactorily usable shape class. More examples may reveal a significant diagnostic feature; until then, the class is best held in abeyance.

GG is a bowl shape which we failed to recognize in 1927, or at least confused with interior-painted plates. In vertical section it is simply the geometric segment of a circle-its profile the arc of a circle. This is exemplified by the negatively painted bowl from Ocucaje Al, 4493, shown in plate 29f; and again by F12-4746

[^21]in 27 r . Here the dominant stylistic feature is the almost perfect rounding of the bottom. Both height ratios are 47 per cent. Both specimens are early Nazca A; the negative one seems especially early because in the south other negatively painted vessels have so far been described only from Paracas. It seems profitable to set up for these round-bottomed bowls a provisional class GG; the letter is doubled in order to replace without confusion of terminology our old and dubious class G. My present figure 5 shows 5 phase-A vessels of this shape from Ocucaje.

In this class GG there also belong 3 bowls from Nazca, outlined in present figure 6. Of these, 8998 and 8999, different in size, but mates in proportion (H/D 38, 39 per cent), shape, and design are figure $6 \mathrm{a}, \mathrm{b}$. This design is exterior and


Fig. 6a-c. Hemispherical bowls of shape GG, period A, from Nazea.
consists of alternately red and black "pods" separated into panels by red lines, on a white background-a typical phase-A design. There is also the bowl 8812, figure $6 \mathrm{c}, \mathrm{H} / \mathrm{D} 41$ per cent, segment-spherical in profile, with a white, dark red, and brown-orange repeated amphibian, chiefly eyes and gills, painted on a black band outside ; I am uncertain whether this design is only A or occurs in B as well. All 3 of these bowls we classed as "shape" A in 1927, in spite of their exterior painting, on account of their rounded bottoms.

There seems in these pieces-and there may be others not yet noted-warrant for a distinctive shape class of A period.

The "plate" subclass Aw, inside-painted with B-Y period design, also is evenly rounded, but is flatter than GG, that is, it represents a thinner slice of a larger sphere.

Again, in Nazca Y, we have a class of bowls which I designate as shape DBY (deep bowl of Y period), which round continuously. They are represented by 1927 plates 15e, 16b, c. These are of heavy ware and higher than the GG class; the $\mathrm{H} / \mathrm{D}$ ratio runs from 60 to 75 per cent. The designs are also of quite different content and disposition. Toward the rim, their curvature sometimes flattens out somewhat (never wholly so), sometimes continues into an in-curve. I would assume that these DBY represent an independent development, not a persistence from the GG bowls of A times.

However, there are 4 bowls wholly painted with outside design-bottom as well as sides-to which Mr. Dawson called my attention. They lack any shoulder, bevel, or concavity, have a thoroughly rounded bottom, and then rise to the rim with continuing but somewhat diminished convexity. They might thus be put into shape GG; but what is even more striking than the shape is the similarity of the subject of design, a masked deity, coupled with its all-over coverage of the vessel.

|  | H | D | H/D per.cent | Design |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8505. | 86 | 142* | 60 | Panache, snake | striped body, |
| 8920. | 84 | 143 | 60 | Falcon eye, wings? | thumb claw, spread legs, trophy heads held |
| 8921. | 83 | 141 | 58 | Head at both ends,m up and out, 2 snake | k whiskers pointing as tails along side, |
| 8922† | 83 | 142 | 58 | no trophy heads |  |

* Actually 127-157, oval; in fact, rim is pinched in to be bean-shaped.
$\dagger$ Mate of 8921.
It seems clear that we have here a distinct tradition-perhaps within a single workshop-of a highly specific, elaborate, rather difficult unit of form and ornament. If more examples turn up, we shall have to recognize a class characterized by design as well as shape. Until that happens, it will be most economical to consider the group a variant of GG-perhaps GGa, the " $a$ " standing for all-over painting. In 1927, we put them all into "miscellaneous" class Z.

I would estimate the design to be late A or early B -more or less what we meant by X in 1927.

## Residual: Unclassified Bowls

The 9 outside-painted pieces that we included in shape A in 1927 are low, averaging 38 per cent in H/D, with range from 32 to 46 . They average poor in quality and are heterogeneous. Two or 3 of them look like A style, 3 are B style, 2 Y or later, 1 or 2 too nondescript to classify. The seeming $A$-style ones are without bevel in the side-they just round on up. The B-style bowls round sharply instead of being angled. Of the 2 Y or late bowls, 9014 , shown in present plate 38 d as marginal to class D , has in profile a flat-conical bottom (the only one like that), a sharp bevel, and rather deeply concave and sharply spreading sides. No. 8710 is virtually a "cumbrous bowl" as Kelly long ago, in 1930, described them, except that the rim painting-which comes in segments-is outside instead of inside.

These 9 seem a collocation, not a group. Some of them are like shape-class B, except that the painted sides slope or spread more.

I leave these pieces to be placed later. My present purpose is to determine valid natural classes, not to give at all costs a non-residual pigeonhole assignment to every vessel that Uhle collected in Nazca.

## The Nazca Y Style

We did not in 1927 classify the Nazca-Y part of the Uhle collection into shapes. We did subdivide the 50 -odd pieces we diagnosed as Y into three stylistic groups, Y1, Y2, Y3.

Y1 we characterized as a hasty, careless, decadent Nazca, generally on dull yellow or buff or muddy background.

Y2 we described as a hard ware, polished, usually with a red background, its painted design tending toward the geometric.

Y3 included 7 freely modeled birds, animals, and men, and a few others.
I would now describe these 3 groups as follows:
"Y1" is simply Nazca Y-it might also be called "Nazca C"-subsequent to Nazca B, and the terminal phase within the Nazca style. It is fairly abundant in the Rio Grande drainage, but not being a fine or even well-made ware, it has got into collections proportionally much less numerously than Nazca A and B.
"Y2" is the local phase of Coast Tiahuanacoid or Huari. At least this is true basically, though there probably were some interinfluences with Y1.
"Y3" I now consider to be an artificial mixture-mostly Nazca A, plus some $B$ and some $Y$.

Our old listing of "Y1" covered 23 jars (1927, p. 27) ; 2 goblets or jars (p. 28) ; and 7 bowls and a goblet which we considered transitional between Y1 and Y2 though nearer to Y1 (p. 29). The total was 33 vessels.

Y2 included 2 plates painted inside, 2 bowls, 5 jars (p.27), and 3 oblong bowls (p. 28) ; total, 12.

Y3 (p. 29) consisted of 7 vessels shown in 15a, 17a-f, a pair including $9 \mathrm{k},{ }^{24}$ and a white bowl, 9007, and a bird jar, 8423-11 in all.

This makes 56 vessels; which with 563 A or X or B , and presumably 38 of Ica or Inca or foreign type ( $18 \mathrm{a}-\mathrm{l}, 19 \mathrm{a}-\mathrm{g}$ ) adds up to the 657 mentioned on page 5 of our 1927 monograph.

## TRUE NAZCA $Y$, FORMERLY "Y1"

These are the principal true $Y$ shapes recognizable in the Uhle Nazca collection.
a. Strap-handled face pitchers, like 12a-f. These I subsequently found diagnostic in excavating. There are 12 in the Uhle collection; also I would include the strap-handled bird pitcher 17 e . Except for the almond-eyed face, I know no Nazca A-X-B shape from which they might be derived. Symbol, FPY-face pitchers (in) Y (style).
b. Cylindrical-collared jars, like 13c, d, f. They may have three handles, a single lug, or neither. Symbol, CJY.
c. Transitional forms like 13e (strap-handle, no face, cambered neck, body fivecornered).
d. Bowls, with continuous rounding and rather deep lip sometimes incurved, sometimes not. They come both circular and oval in horizontal plan: 15e, 16b, c. They have already been mentioned in discussion of bowl shape GG. These deep bowls are also diagnostic. Symbol DBY.
e. Oblong bowls, like 15c and probably 16a. Symbol, OBY.
f. Goblets, the lower cylindrical part definitely smaller in diameter than the upper flaring portion: 16f, probably also 15d, and allied, 9d. These seem examples of angled-goblet shape I which we attributed to B in 1927 but which attained its full development in Y. Symbol AGY-angled goblet (in) Y.

The following Uhle pieces I am not sure about, but incline to consider Y:
Two-chambered jar, facing figures, 13a-Y on account of noses and handle.

[^22]Two-chambered monkey-bridge-and-spout, 17d-on account of color and painted design.

Wide-mouthed jars $13 \mathrm{~b},^{25} 15$ f, seemingly derivative from Nazca A-B shape R. Symbol, WJY.

Incurved or lipless jar, 16d (H/D ca. 100 per cent). The white "eyes" or "stars" suggest Tiahuanacoid style, but the larger figure is similar to that of 12d, which is surely Y .

The inside-rim-painted plates of shape Ar, shown in $4 a, b$, do not quite seem $Y$, as 4 e also does not; but they also do not fit too happily in the B-period niche where I have put them. There are design resemblances between 4 b and 12 e .

Nazca-Y painted designs are very sloppily executed, but nevertheless characteristic.

1. Detached "demon" (deity) heads, very deliquescent or degenerated; even amoebalike: 16b, 12a.
2. Armed or rayed forms suggesting suns, flowers, and so on, perhaps derived from preceding. The ends of the $5-12$ rays are usually bent over, and there is mostly a round center or eye. The rays or arms may be long, narrow, and pointed, or short and clustered: 12c, d, e, 15c, e, 16c, d.
3. Simple crosses: 13f, 12b, 17d. These may be related to the last; cf. the series: $12 \mathrm{e}, 12 \mathrm{~d}, 16 \mathrm{~d}, 12 \mathrm{~b}, 13 \mathrm{f}$.
4. Circular panels containing designs: 12b, 13d, 15e, 16c, 17d. Some bowls that I excavated in Y graves in 1926 have the panels white or plain (reserved), without any contained pattern. The circles seem allied to the sunlike and flowerlike raying forms such as $12 \mathrm{c}, \mathrm{e}$; or they may contain such: $15 \mathrm{e}, 16 \mathrm{c}$.
5. Small white dots in: (a), spatter, 12b, 13c; (b), rows, $12 \mathrm{e}, 13 \mathrm{f}, 15 \mathrm{f}, 16 \mathrm{~d}$ in dark stripes, and cf. 4b; (c), somewhat large white disks or circles, 13d, 17d.
6. Multicolored stripes grouped into a rectangular panel, sometimes with black dashes or spatter: 13b, 17e (12e?).
7. Juxtaposition of rectangular panels containing contrasting patterns of simple geometric elements, such as checker with zigzags, stripes with dots: 16a, f. This manner has some precedent in late $B$.
8. Rows of eyed diamonds: 16a, 9d.
9. Step-frets: 16c.

This is an impoverished array of design compared with preceding Nazca A-X-B, but some of it is patently derived from that, and some of the rest might be derived by shrinkage selection.

## COAST TIAHUANACOID ("Y2")

I merely list the illustrated vessels in which a highland influence is stronger than the Nazca remnants or persistences.

Jars, spherical, with or without lugs: 14a, b, 16e.
Jars with longish tapering spouts, with human faces and strap handles or without: 19a, c, $9 \mathrm{k},^{28}$ perhaps 91.

[^23]Lenticular-bodied tapering double-spouts, spread at least $60^{\circ}$ : 19d, e, 20d.
Bowls painted outside: 14d, f.
Plates, rim-painted inside: 14c, perhaps $14 e$.
Probably the side-mouthed jar 15 f ; probably not 13 b .
The designs vary greatly in the distinctiveness and purity of their Tiahuanacoidness.

DISSOLUTION OF Y3
Of the several supposedly Y3 pieces on the 1927 plate 17, one, 17d, has already been transferred to true Nazca-Y style, the old "Y1," on account of its painted design resembling that of $13 \mathrm{~d}, \mathrm{f},{ }^{27}$ as well as because of its brownish color. Doublechambered vessels are of course characteristic of northern Peru. ${ }^{28}$ The bird jar 17 e has also been mentioned as akin to the strap-handled face pitchers so typical of $Y$.

The 4 other vessels of plate 17 I now consider, in the light of further exposure and experience, not only Nazca in our old narrower sense of A-X-B, but specific Nazca A. My colleague Dawson and I sounded each other out recently on the attribution of the mammal and bird figures 17 b and f and agreed that they probably are from quite early in the Nazca development-A or even proto-A. I was helped to this idea by having found one or two analogues in my Nazca excavations; he deserves credit for coming to the conclusion through unaided stylistic sensitivity.

Granted 17b as Nazca A, 2 unillustrated pieces, a bird jar (8423) and a white spiral whorl-modeled bowl (9007), ${ }^{29}$ plate 37 f , of the present paper, fall in line as also Nazca A ; and so does, probably, the double-bowl of 17c. Already in 1927 we commented on the "Y3" tendency toward a white background for fanciful pieces; this tendency I would now transfer to early A.

The quail-bodied head-and-spout 8423 , just referred to as not Y but probably A, has its body black, the breast speckled with gray, the underside white. The beak is white, the head black, the eye has elongated concentric stripes of gray, orange brown, and white surrounding a circular white pupil with black center. The wings have a gray rectangular body, and gray feathers. The right wing is barred red, white, gray; the left white, red, gray; these bars being outlined in black and crossed by four black lines. On the black upper side of the tail are five transverse wiggly zigzag lines, respectively white (proximal), orange-brown, gray, deep red, white (distal). The spout and bridge are deep red, almost purple. The texture is good, the painting firm, the colors saturated, and Y thinness and sloppiness of pigment are altogether lacking.

How did we come to regard this group of A vessels as belonging in a phase of Y?
I think it was because we drifted into the assumption that A was simple, severe, and limited to few shapes. Therefore all free figure modeling was non-A-in fact seemed at the opposite end of the scale, B or even Y. Thus we credited the 3 figure jars and the spout-and-bridge figure of plate 17 to Y3-as well as the head jar 7a

[^24]and the man jars $9 \mathrm{a}, \mathrm{b}, \mathrm{c}, \mathrm{j}$ to period B; all of which I now see as A. That modeling occurred in A as well as in $\mathrm{X}, \mathrm{B}$, and Y has long been plain from the Uhle Ocucaje vessels 26a, b. And Paracas is certainly rich in successful attempts at freely modeling individual effigy forms; so that impulses in the same direction in Nazca A should not be surprising.

There remains the remarkable fish-tailed man or god cylindrical jar 15a-b. This is altogether too fine in modeling, texture, and painted design to fit into Y. Nor is it A . The curled-over rays and jagged staves of the headdress definitely place this piece in period $B$.

## Summary of Reclassification of Nazca Shapes

A, inside-painted plate, formerly included in A, "angular bowl" and in C, "conical bowl." There are at least 3 subclasses.

Ac, circular center panel painted (rim may or may not have simple radiating lines). The style of painting is Nazca A. The height ranges from 28 to 45 per cent of the diameter, mean 38 per cent. There is usually a bevel between center panel and rim (shape B in bowls) but some are sphere-segments (shape GG).

Ar, rim painted. A less well-defined and less homogeneous group than Ac, possibly derived from it. It is at any rate from periods $B$ and probably Y.

Aw, whole upper (inside) surface painted as unit; no bevel, profile uniformly convex, plate shallow, H/D = 32 per cent. Period, B or Y.

B, gambreled bowl, formerly "point-bottom bowl." Painted outside, like all other bowl types. There is an angle in profile, sharper than that in shape A, so that the slope of the bowl side approaches verticality and makes a convenient and effective though narrow, ribbonlike design field, especially for repetitive elements. The H/D ratio is 44 per cent. Period, mostly A, but carrying over into X-B.

E, flat non-flaring bowl, formerly "angular bowl." Bottom relatively flat, side sloping up essentially straight in profile, with not more than nominal concavity or convexity. This is a well-defined class, consistently A in style of painting. The H/D ratio is around 48-50 per cent, with range from 37 to 62 per cent.

D, flat-bottomed flaring bowl, formerly "shallow bowl." Flat-bottomed much like E , but the sides show a concave profile, and they are lower than E , around 41 per cent in the mean. These tend to be large for bowls. This is an infrequent shape. Those of the designs which are distinctive are fully developed or late B.
(C, residual from old class C, "conical bowl," after subtraction of subclass Ar plates. Concave and flaring-sided, bottom roundish without bevel.)

C1, non-representational geometric design on outside; underside of bottom also painted, usually in quartering. H/D mean, 44 per cent. Period B, mostly late B.

C2, bottom unpainted, sides zoned, the lower zone often with yellow faces in series. H/D means, 47 to 52 . B to late B to Y .

F-H, high flaring bowls, formerly F, "cup bowl," and H, "flaring bowl," form a numerous class of rather wide range of shape. The bowls we ascribed to type $H$ average somewhat larger than F , somewhat lower and broader in H/D ratio ( 65 per cent as against 72 per cent), and, as a function of this last feature, the departure from vertical of their side slope (or spread in profile) is greater, as expressible in degrees of arc. The absolute depth of concavity of the side is about the same. In
$\mathrm{H} / \mathrm{W}$ ratio, about half of all these bowls fall in the overlap area of their distribution; about a quarter are "pure F," that is, above the maximum of any bowl originally put into $H$; and a quarter are "pure $H$," below the minimum for F . Still, for half of the group, I have found no tangible or definable criterion on which to base ascription to either F or H ; and it proves that at least twice we assigned one of a pair of essentially identical bowls to F and the other to H . Until someone succeeds in finding a diagnostic differential, it will be most correct to deal with the group as undifferentiated F-H. They are flaring bowls higher than D, C1, C2, and higher also than the non-flaring $B$ and $E$ shapes.

Most F-H bowls are from period A, but they also run over into " $X$," that is, late $\mathbf{A}$ and early B .

G, formerly "straight bowl," was based on only 5 examples, which prove too heterogeneous to form a valid or at any rate useful class.

GG, sphere-segment bowl, new class, has an even rounding of surface upward. It occurs somewhat scatteringly, beginning with 2 negatively painted bowls of Ocucaje grave A1, and contains some positively painted vessels (on inside or outside), most or all of which are also A in design phase. GG differs from the plate Aw in that the latter, painted on the inner side, is flatter than GG.

I, angled goblet. Lower half or third cylindrical, sometimes even contracting slightly; upper portion in a nearly straight flare of $20^{\circ}-25^{\circ}$, sometimes more. The height is less than the rim diameter. This form seems to be limited to the transition from late $B$ to $Y$. Some $Y$ forms have the bend accentuated toward a right angle; see AGY below.

J, waisted goblet, former "goblet." A slightly flaring cylinder, somewhat constricted in the middle, with a long concave curve, without angle. The rim diameter is largest; the height greater than it. Period B. Suggested subclasses:

J1. H/D 90-110. Differentiated from F-H bowls by greater height and less flare. Early or middle B ("X").

J2. H/D 130-140, or in the range of vases. Differentiated from bulbous-concave vase $P$ by flatter bottom and by the waist being near the middle instead of in upper part. Full or late B.
?J3, near-bowl goblet. Definitely waisted, 75-85 per cent of mouth; low, H/D 90-100 per cent.

K, double-convex goblet, former "double-curve" goblet. In profile, a moderately but conspicuously constricted middle separates a convex lower and a convex upper half; the upper continues into a slight turn-in ( $0-9 \mathrm{~mm}$.) at the rim. Either the upper or the lower bulge may have greater diameter; if it is the upper, the vessel is relatively squat (H/D 96-129 per cent) ; if the lower, it is tall (H/D 134-149 per cent). The design comes more often than not in two or three zones. Full B period.

L, conical goblet. An inverted cone frustum, with relatively flat bottom. The sides are reasonably straight, but tend more often to the concave than convex. H/D ratio 97-130 per cent. Late B and Y.

M, tapering vase, former "small vase." Leans both toward J, waisted goblet, and $O$ and $P$, the 2 bulbous vases. It resembles the 2 latter in over-all proportion and in the maximum diameter coming low down. It resembles J in usually appearing
to be constricted, though this is an illusory effect of merely concave profile in the upper half. Painted design may be vertical, staggered, or zoned. Period B, as ascribed in 1927.

N, cylindrical vase. The tallest and slenderest Nazca shape, with H/D percentage more often above 200 . The mouth is usually slightly larger than the diameter below. When the reverse holds, N resembles P except for being slenderer. Period B. Suggested subclasses:

N 1 , as described, essentially cylindrical. Painting one- or two-zoned.
N2, three bulges and two concavities in profile, with design in four zones, fitted to these curves. Probably begins later in B than N1, and derivative from it.

O, bulbous-convex vase, former "bulbuous vase I." The diameter is greatest in the lower half, whence the "bulbous" effect. The general profile is convex. This may turn slightly concave just below the rim, but without actual diminution of diameter below that of the rim. The H/D ratio is around 125 per cent with the amount of variation usual in the Nazca style. The painted design may be zoned, but tends to be vertical. Period B.

P, bulbous-concave vase, former "bulbous vase II." Differs from 0 in that toward the top there is a slight but conspicuous constriction of diameter, above which the lip spreads a little. There are 2 subclasses, differing in time.

Pa , in period A, H/D 90-105 per cent.
Pb , in period $\mathrm{B}, \mathrm{H} / \mathrm{D} 125-150$ per cent.
The time spread of these 2 subclasses may be what led us in 1927 to ascribe shape P to phase X .

It would be possible to recognize a third subclass:
$\mathrm{Pn}=\mathrm{Pb}$ with modeled nose (and sometimes ears) $=\mathrm{Y} 1$ as below.
Q, liples jar. Somewhat like the collared jars R, S, T minus their collar; though the upper half tends to slope with rather minimal curvature. The mouth diameter is from 50 to 60 per cent of the body diameter. The period for painted examples is certainly B prevalently, though we set it as $X$ in 1927. A very similar shape occurs in A but unpainted.

Qp, pseudo-Q, really a convexly incurved bowl.
$R$, wide-mouthed jar, and S, narrow-mouthed jar form a continuous series and I suggest they be distinguished, when convenient, by the arbitrary criterion whether the neck diameter is more or less than half the body diameter.
$R$ has a wide time-range, from A to late B. It occurs in A both painted with design and unpainted.
$S$ is rare in A. The extreme forms-Rim D/body D $<40$ per cent-seem to be B.
T, two-handled small-mouthed jar, former "handled jar." This is shape $S$ with two small handles or lugs set in vertical plane far enough up on the vessel's shoulders not to extend the body diameter. Like S, typically B period. (Unpainted two-handled but wide mouth jars go back to A: either incised or as plain cookpots.)

TTT, three-handled jar, with constricting cambered mouth, and a characteristic design painted on its roughish surface (Ocucaje 28i), is A period.

U , double-spout jar. Most frequent in A, progressively less common through B, not reported from Y. There are 2 main subclasses, plus probably subvarieties of these and occasionals.

U1, ${ }^{30}$ ox-heart-shaped, the body usually a little less high than wide, but higher if the spouts are included. The effect at any rate is slightly elongated vertically, rather subglobular. The typical A form, continued, however, into X and at least early B.

U2, lenticular, with varying degrees of flatness, edge, or bevel, and unrounding of bottom. I raise the question whether these vessels may not have been made in an upper and a lower half joined together. The spouts remain surprisingly like those of U1 in the gross. U2 is characteristic of full or elaborate B; the time of its first appearance remains to be worked out.

Cylindrical, hourglass, double-cone, rectangular, stepped, and other forms such as double-spouts on effigies appear sporadically, but unless they recur as types they need not be elevated into subclasses. These aberrant or experimental types seem early in period as well as late.

The familiar Coast Tiahuanacoid double-spout has not been found occurring in Nazca-style association, so far as I know, and seems to represent an invention in another style, perhaps after impingement on this of Nazca B.

V , head-and-spout jar. There are several subtypes.
V1, body more or less globular, man's head, short spout, short bridge. Period A.
(V1a, with spout rising out of head, and the bridge turned into a curved strap handle, is so far represented only by 9 j . Period A.)

V2, woman's (?) head, spout-and-bridge longish, body of vessel beveled, not globular. Period B.

V3, body of vessel modeled into effigy of bird, musician, or the like. Probably period A , continuing into B .
(V4, double-chambered, with bridge connecting effigy and spout, so far represented only by 17 d , probably period Y.)

W, flaring rim jar. Woman's globular head or trophy head, mainly painted, surmounted by flaring collar roughly as high and wide as the head. Period B.

W has affinity in concept with shape $Y$, and also with $R$.
X (human) figure vase. There are almost inevitable ties with V , which also represents human bodies; but shape X dispenses with spout-and-bridge and has a simple, large opening on top; which fact, in turn, makes a link with W. ${ }^{31}$ Except in the effigy subclass, modeling is fairly carefully executed for the head, but sketchy for the seated body (sometimes knees only), details being done in painting. Subclasses are:

X1, seated man. ${ }^{32}$ Usually A period.
X 2 , seated woman, carrying receptacle. B period.
(X3, whole figure more or less modeled. Plate 15a, b is standing, has a fish tail, and "carries" a wide collar ; but other freely modeled or imaginative effigies can be expected to turn up.)

Y, head vase or jar, formerly "head jar." I alter to "vase" because of the close relationship in shape between the most common form of head vessel to the bulbous-

[^25]concave vase $P$. Other $Y$ forms relate to $Q$ and R. Mainly, it is the applied painting that makes a vessel Y.

Y 1 is a P vase with modeled nose and sometimes ears added. Synonym, Pb plus n, Pn. Period B. The lower Pa of period A seems to have had no shape-Y counterpart.

Y2, a somewhat corresponding modification of wide-mouth jar $R$, but with three medallion faces $(\mathrm{Y} 2=\mathrm{Rn})$. The period has not been determined.

Y3, modification of lipless jar Q (by addition of modeled nose) : Y3= Qn. The presumable period is B .

Y4, turbaned head, approaching life size. Period A. There is no such form relationship to $\mathrm{P}, \mathrm{Q}, \mathrm{R}$ as in the 3 preceding, but rather a suggestion of an enlargement of part of shape $X$, human figure vase.

## Some Nazca-Y Shapes

The following are non-Tiahuanacoid Nazca-Y period shapes that have been described above. I suggest for them capital letter designations ending in "Y," in which the letters preceding $Y$ have no relation to the arbitrary system of nomenclature so far used for the shape classes, but are the initials of terms descriptive of them; this procedure to prevent confusion between the non-Y classifications developed in 1927 and the partial classification for $Y$ developed above.

FPY, face pitchers, of Y period ("a" above, under "True Nazca Y, formerly Y1").

CJY, cylindrical-collared jars, with or without lugs or handles ("b" above).
WJY, wide-mouthed jars, perhaps developed from A-X-B shape R.
DBY, deep bowls ("d" above), with circular and oval subvarieties.
OBY, oblong bowls, rectangular ("e" above).
AGY, angled goblets of Y period (" f " above), an exaggeration of angled goblet I .
Other shapes of period $Y$ remain to be isolated and defined.

## Grouping of Classes by Style Phases

Limited to Nazca A:
Ac, Pa, TTT, V1, V3, X1, Y4.
Nazca $A$ and continuing into " $X$ " or B:
B, F-H, GG, (P), R, U1. (Q, S, without design in A.)
Nazca B:
C1, D, J1, J2, K, M, N, N2, O, Pb, Q, S, T, U2, W, X2, X3, Y1, Y3.
Late B to Y:
Ar, Aw, C2, I, L, V4.
Nazea Y only:
FPY, CJY, WJY, DBY, OBY, AGY.

## PART III: DISCUSSION OF VESSELS ILLUSTRATED

## Introduction

This section contains photographic reproductions of 105 ceramic objects in the Nazca style, together with a piece-by-piece commentary and interpretation.

The first four plates show vessels from Ocucaje of the same "straight-A" phase of the Nazca style as Strong and I (mainly) described in our 1924 monograph on Uhle's pottery finds from Ica Valley. The vessels figured here now in plates 31-34 might have been included in the 1924 monograph but were not. They further define and affirm the A phase. Three of these vessels (pls. 31a, d; 32a) are included by courtesy of the Peabody Museum of Harvard University. Although collected by Uhle, they were exchanged about 1905, when F. W. Putnam was Director of both Museums.

The fifth plate ( pl .35 ) shows vessels from two stylistically aberrant graves, numbers 3 and 9 , at site F at Ocucaje. Although the rest of the graves at site $F$ are straight A, I interpret these two as subsequent, and provisionally denote them as "late A."

The last eleven plates, $36-46$, are all from the collection made for the University by Uhle in Nazea or Rio Grande Valley, which was the basis of the Gayton-Kroeber 1927 analysis. With the exception of two or three graves dug by himself, Uhle secured this material from either huaqueros or hacendados-pot-hunters or plantation owners, in English. He did associate considerable parts of the collection with localities, mainly haciendas, which means he had reason to believe, or perhaps felt certitude, that such vessels were excavated at the localities specified to him. However, without actual grave attributions, associations of objects are mostly lacking, and their bearing on stylistic problems is therefore more over-all, indirect, or conjectural than that of the grave-lotted collection from Ocucaje.

The vessels in these eleven plates might have been included in the Gayton and Kroeber monograph of 1927 on Nazca. They now supplement that earlier publication, adding 73 vessels to the 143 photographically represented there. ${ }^{1}$ The additions have been selected primarily with a view to illustrating shape classes underrepresented in the earlier work; or new subclasses established now. Beyond that, the pictures have been chosen for their bearing on matters of painted design and phase of style development. They range from Nazca A to Nazca Y.

Colors are abbreviated as follows: B, black; Br, brown; G, gray; O, orange; R, red; V, violet; W, white; Y, yellow.

## Plate 31

Ocucaje: Phase A
Graves A1, B4, 5
31a: Peabody Museum 73864, by exchange, original Uhle 4489 from grave A1. Shape E. Diameter 144 mm . Design: hummingbirds. The feet are very short and almost turned upward. Each bird's beak nearly touches the wing and overlaps the tail of the one before it.

[^26]This specimen completes the illustration or description of the vessels attributable to grave A1 as it is defined above (Pt. I, "Qualifications on 1924") as a true burial distinct from non-grave vessels and objects at site A. The A1 grave lot comprises:

4489-73864, the present bowl.
4490, plate 29c.
4491, B bowl, zigzag band, alternate up- and down-pointing triangles Dark R and Light $R$; profile and outline of design shown in figure 7a below.

4492, B bowl, made by reduced firing (B all through paste), shape E, figure 7b.


Fig. 7a, b. Two bowls from Ocucaje grave A1: a, 4491, gambreled B bowl with design; b, 4492, E bowl, blackware all through.

4493, negative-painted; plate 29 .
4494, negative-painted bowl, similar to last, also shape GG, vertical stripes outside, blurred on bottom: figure 5a.
[4495, specified as not from this grave.]
4496, owl jar, rough ware, light buff, unpainted, incised ; plate 29d.
4789 [sic, correct, from grave A1], painted with varicolored short stripes, plate 29 g .

In summary, the grave contained 7 bowls and 1 modeled jar. Of the 7 bowls, 1 is B, 2 are negatively painted, 4 positively painted- 2 in more or less regular Nazca-A style, 2 somewhat aberrant; the jar is unslipped, unpainted, incised. Compared with Nazca generally, the genre is Nazca A. But compared with the rest of Nazca A, the contents of the grave are only Nazcoid, and must evidently be construed as earlier than straight A-"proto-A" or still transitional from Paracas.

31b: B5-4649; profile shown in figure 3a. Shape A, center-painted plate-bowl. D 175 mm ., H 60, H/D 34 per cent. B and Br on W, rim R . The design appears to represent a vegetable, and occurs chiefly on plates. See figure 4 a , b for similar designs in duplicate instead of quadruplicate, also on Ocucaje class-A plates. Martin-Vegue 44-A-4 is related. Also from grave B5 are the vessels c, d on the present plate; also plates $25 \mathrm{~h}, 25 \mathrm{c}, 26 \mathrm{~b}$, 26 f (B5-4644-45-46-48) ; and an undescribed bowl in Peabody Museum, original Uhle number 4647.

31c: B5-4643. Shape E, flat non-flaring bowl, unusually large. D 237, H 129, H/D 54 per cent. The cat design is simple in paws, tongue, whiskers, lack of mouth mask, and "centipede" body. Similar painting occurs below on F-H bowls 42a, b. Maskless cats appear in Seler figures 20, 24, 32, the centipede body in 58-69.


B4-4638
Fig. 8. Design on E-shape bowl, period A, Ocucaje.

31d: Peabody Museum 73857. Originally Uhle B5-4647. Shape B or E. D 133. The bird is unusually simple and "archaic." It may be resting on the water, like Seler figure 310.

31 e : B5-4646. The 4 pieces $31 \mathrm{~b}-\mathrm{e}$, together with plates 25 c , $\mathrm{h}, 26 \mathrm{f}$, now make all 7 vessels from grave B5 available in illustration. Shape D or F bowl. D 116 mm ., H 66, H/D 57 per cent. The eight figures (colors Br, R, Y, B, G, R, Br, G-on B) presumably represent lizards-as in 27t, F17-4759. ${ }^{2}$ Some have the hind-foot toes turned backward, some forward as if they were frogs. The tails, too, curve some backward, some forward. The vessel is unusual in being painted over its whole outer surface-as in 33a, 37b, 38a-f, although the painting on the bottom is pretty well confined to tails. The freedom with which these are interwoven contrasts with the schematic stiffness of the bodies.

This piece was previously shown on an inadequate scale in 1924, plate 26 b .
31f: B4-4640. Shape Pa, bulbous-concave vase. D 173, H 179, H/D 103 per cent. This is the Nazca-A shape out of which the later Pb developed. Cf. plate 34a below, and 25 h . There are five units, alternately Y and G, on Dark R background, in the horizontal trophy headband of design.

The pottery of grave B4 is now completely described. Besides the present 31f, text figure 8 shows bowl 4638. The other numbers from 4635 to 4642 are illustrated in Kroeber and Strong's original Ica report of 1924: in sequence, $25 \mathrm{f}, 27 \mathrm{k}, 26 \mathrm{i}$, 26d, 29b, 29a.

[^27]Of the present 6 phase-A vessels, the only one with light background for the design is the plate-bowl $b$ (and this has its rim $R$ ) ; $c$ and $f$ have their designs outlined in B ; the other 4 are unoutlined, except for some $W$ inner borders, toes, and eye rims of the lizards in e .

## Plate 32

Ocucaje: Phase A
Graves Cb, F4, 8, 18, 20, 22
B and E Bowls, A Plate
32a: Peabody Museum 73865, original Uhle 4654 from grave "b" of Ocucaje site C. Shape E, flat non-flaring bowl. D 165. For the design compare 1924, plate 26c from grave F2; also plate 33b below.

32b: Cb-4651. Shape E. D 164, H 70, H/D 43 per cent. Four colors: R, Br, B on W. Water-bird design; compare 1924 plate 27 o , 1927 plate 3 b , and Seler figure 295.

Grave Cb contained 7 vessels, 4651-4657. These are now all illustrated: 32a, b here; a class-A plate as drawn in figure 9a, with defaced design of a crustacean and fishes ${ }^{3}$ and $27 \mathrm{e}, \mathrm{i}, \mathrm{v}, 28 \mathrm{i}$.

32c: F22-4778. Shape B, gambreled bowl. D 155, H 85, H/D 55 per cent. There are ten units in the design band, each bordered (or divided and paneled, as one will) in W , the upper right half $B$, the lower left half with this color sequence: R G O—R G O-R O-R O (R can be construed as Dark R, O as Light R).

The "oblique" steps of the design show that these oblique and "penetrating" forms of the step and step-fret are not necessarily late derivatives from a "natural" restrained and rectangular step; this vessel is straight-A phase like all others in plates 31-34.

Grave F22 contained 1 other bowl, 27 c .
32d: F8-4718. Shape B, gambreled bowl. D 195, H 100, H/D 51 per cent. The design here is of eight fishes, Dark R and Dark Y, with B and W on B background. This form of fish recurs in Nazca A ; cf. Seler figure 336. The B longitudinal line, mouth, and diagonal stripes, together with W anterior underside and tail edge, give the fishes a curiously cut-up effect.

32e: F20-4772. Shape B, but approaching GG, hemispherical bowl; for which see figures 2, 5, 6 in Part II. D 135, H 72, H/D 53 per cent. There are twenty-two repeats of the design unit, including the crowded ones at the left of the photograph; apparently eleven of these are Dark $R$, some defaced. The heavy B continuous zigzag line can be seen as dominating the pattern, with the varicolored unbordered triangular figures serving as filler. Or again, on account of their area, these figures may be primary, and the zigzag serves chiefly to accentuate their alternation. I have no idea what the figure represents.

32f: F18-4764. Shape B, gambreled bowl, but the bevel is not pronounced. D 200, H 95, H/D 48 per cent. There are eleven repeats of the design unit outlined in $W$ on $B$ background, the contained arcs $R$ and $Y$ in alternate units, in the eleventh partly R, partly Y; the panel dividers are Y-Br. The denotation of the unit is unknown.

[^28]

Fig. 9a, b. Crustacean designs on interior and exterior of period-A bowls, Ocucaje.
Grave F18 contained 4 bowls: this 32 f, 33 c, 270 , and 4766 whose design band contained seven units and one condensed unit of a fruit or seed of type of Seler figures 396, 397 (palm fruit?), alternately R and $\mathrm{Y}-\mathrm{Br}$, bordered in W on B background, with W panel dividers.

32g: F4-4693. Shape A, center-painted plate. D 159, H 49, H/D 31 per cent. The pairs of short W lines across the Dark R rim border do not seem to recur in Uhle's phase-A material from either Ocucaje or Nazca, but I collected plates with these rim lines repeatedly in my Nazca excavations of A graves in 1926 for Chicago. The center star is B, bordered with W, on Dark R. A ten-pointed star is not easy to draw freehand, and this potter was not too successful as regards symmetry. Also her ten points and fifteen pairs of rim lines do not match too well. However, the idea of ten rays seems to have taken hold at Nazca.

Of the 6 bowls in plate 32 , 3 have a light background, 3 R or B one. Borders or outlines of figures tend to be B or W in contrast with the background; but in 2 vessels, $b$ and $d$, there is no outlining. Vertical lines serving to divide or panel design units come $B$ in $a, W$ in $d$ and $f$, can be construed as $W$ in c, and are lacking in $b$ and $e$.

> Plate 33
> Ocucaje: Phase A
> Bowls from Graves F4, $6,14,18$

33a: F4-4695. Bowl painted over bottom as well as sides. It is shown inverted, bottom up ; the whitish streak across it is a mend, not the near rim. Shape E. H 116, D 45, H/D 39 per cent. Background B; the design of W, R, G, Light R (and Br or $O$ ?) annular disks is approximated again in 35 a and f .

33b: F14-4754. Shape F, concave and round-bottomed. D 134, H 87, H/D 65 per cent. Design, eight fruits (?) somewhat similar to plate 32 a, successively G-V, Y, B, W, B, Br, B, W, bordered and paneled (divided) by $R$ vertical lines.

33c: F18-4765, another side shown in 27 w . Shape E, side slightly concave, bottom flattish. D 147, H 76, H/D 52 per cent. The design is of hummingbirds, some with beak in front, some with head reversed; the present photograph shows two birds on their backs (!), one with beak forward, one with head turned to rear. All the birds have a tail with lance-shaped widening at the end of a long stalk.

33d: F14-4753. Shape F. D 193, H 120, H/D 62 per cent. The design, confined to the upper half, consists of nine parallel zigzag lines, in five colors, namely, downward, $\mathrm{W}, \mathrm{O}, \mathrm{W}, \mathrm{R}$, Light $\mathrm{R}, \mathrm{W}, \mathrm{O}, \mathrm{G}, \mathrm{O}$ on B background. There are fifteen double zigzags in the circumference. The band of "color exercise" is 63 mm . wide-a bit more than half the total height. The varicolored zigzags are not far from 29 g , A-4789, except that there the encircling zigzag lines are broken up into discontinous, slightly rounded chevrons in stacks of eight. In both cases the simplicity of pattern and variety of colors used suggest the effect of a painter trying out his palette of colors.

Somewhat similar is F5-4703, an E-shape bowl, D 127, H 57, H/D 45 per cent, with $\mathrm{W}, \mathrm{R}, \mathrm{W}, \mathrm{Y}, \mathrm{W}$ encircling zigzags on B background.

33b and 33d were the only vessels found in grave F14.
33e: F6-4710. Shape E, flat-bottomed bowl. D 131, H 59, H/D 45 per cent. The upper part of the outside is W , the lower part and bottom are B , with thirty-two B lines rising to the rim to divide the area into as many W finger-shaped panels. This is effective decoration; it can hardly have "represented" anything even symbolically. The B seems painted over the W. Compare the following figure; and, for all W, plate 37 f .

Grave F6 contained also a P vase, 4709, plate 34a; a double-spout, 4706, plate 34 c ; the figure jar 4708 of 25 a ; bowl 4707, 26 h ; and a bowl 4705.

33f: F4-4699. Shape F (?), near E, side concavity very slight. D 147, H 77, H/D 52 per cent. W outside, B base, thirteen thin $R$ vertical lines dividing the $W$ into empty panels. In contrast with the preceding, these are square-cut, not rounded at the bottom.

Grave F4 contained plates 32 g , 33a, 33f; the present figure 1a, above (4701,
lipless jar of shape $Q$, without design, which is a mate of F7-4717, figure 1b) ; 25e, $27 \mathrm{u}, 28 \mathrm{~g}$; and nos. 4692,4696 (plate, mate of 28 g ), 4697,4700 , and 4702 .

This last, 4702, is an unincised, two-handled cookpot of D 140, H 111, MD 96, Neck D 85, D incl. handles 162. The proportions are: H/D 79, M/D 69, Neck/D 61, Handles/D 116 per cent.

Plate 34
Ocucaje: Phase A
Various Forms from F2, 3, 6, 10, 13
34a: F6-4709. Shape Pa , bulbous-concave vase, similar to plate 31f. D 156, H 139, H/D 89 per cent. The design is much simpler than 31f. A B band encircles the middle; above this is a zone of thin vertical lines, thickened in the middle, in sets of six colors separated by one B. Below the B "belt," the color is R slip. This, with 31f, illustrates the low-vase shape Pa out of which the post-phase-A tall vases, Pb and perhaps others, evolved.

34b, 1, 2, 3: three pottery whistles from grave F10: 4733, 4734, 4824 (sic, correct). All have a flange which is perforated for suspension, since the whistles are both small-two inches or less in length- and light for handling. All three still blow.

34b1, 4733 (top, left), represents a person stretched out, with head half up and a conical cap. It is reddish Br . The end of the mouthpiece has been broken off; 47 mm . remain.

34b2, 4734 (bottom, left), represents an animal, probably a mammal, perhaps a dog or sea mammal, probably not a bird. It is reddish and polished, 55 mm . long.

34b3, 4824 (right), but also from grave F10, has a large human face occupying most of the surface that bears the vent; the perforated flange is thus on the back of this head instead of ventral as in the two preceding. The length is 45 mm .; maximum breadth at ears now 19; before the breaking off of one of these, about 20 ; at level of jaw, 17. The modeling is rubbery, as if done on the outer surface with the fingers only, where b1 and b2 have been finished in spots with a tool. Also, this piece differs in being partly painted: dull off-W or light muddy $Y$ for the centers of eyes and mouth; a dark brownish $R$ around the $W$ of eyes and mouth, also to indicate tiny arms and fingers on the two sides, from about the level of the jaw down; and a Light Br for the remainder of the face. The nose is pinched up, the ears project upward; otherwise there is little modeling. The face suggests monstrosity in its viscid formlessness; there is no trace of cat-deity symbolism; although the dark border of the eyes includes a vertical bar above and below, which is an early Nazca style of eye-paint.

Somewhat similar is the whistle g on this plate, F3-4689, though grave F3 appears to be somewhat later that the other F graves. This piece is also crude in the softness of its plastic effect, flattish, with modeled nose, painted with W in part; but there is a headdress instead of ears, and the length is about equally divided between legs (where it was blown), body, and head.

We have so little on Nazca-style whistles that I might mention another, though it is without data, having been given to me in 1926 as a personal souvenir or gift token in the manner customary in Peru. It is now number 16-7852 in the University Museum. It is really a flageolet, having two parallel blowholes and two finger-
stop vents, producing two (not three) tones. It is modeled into a bird (possibly a dove), head projecting upward, body rounded flattish, tail flat and blown into. There are three clear perforations from top to bottom, one in front of the throat for suspension, two in longitudinal line down the tail, probably for suspension also, at any rate not affecting the tone when stopped. The plan, modeling, finish, and W and dark painting are a bit more sophisticated than in the preceding Ocucaje pieces, but this one might well be of the same A period.

34c: F6-4706. Smallish double-spout, spheroidal except for being flat-bottomed. It could not be designated as shaped like an ox heart. D 133, H of body 117, H to top of spout 156 , body H/D 88. The B-bordered, crested head, neck, and sketchy body of the painted birds are of striking W . The wing is pointed, the tail a B oblate circle, legs are lacking.

34d: F2-4678. Miniature head-and-spout, only 59 mm . high to top of spout; D 48, body H 44, H/D 92 per cent. The decoration of the spherical body is Bcentered W disks on the R background. Mouth and eyes in the face are similar disks. The only real modeling is the nose.

The two other vessels in grave F2 are shown in 26c, 28j.
34e, 34f: F13-4751, F13-4752. Two unpainted, incised, two-handled cookpots. See Part II, footnote 16.

34e, D 188, H 112, H/D 60 per cent; D of mouth 144, or 77 per cent of body; D of neck 142.5; H of collar 15. The cylindrical handles drop from the rim to well above the body maximum. Between the handles on each side, just below the neck, are five elevated rectanguloid bosses, each crossed by nine to eleven thin vertical incisions. Between each two bosses, there are about five (sometimes only three) longer incisions. The vertical inner rim is incised with a zigzag line, the triangles below which contain a number of short vertical scratches or jabs with a pointgiving the effect of facing, alternatively rough and smooth triangles.

34f, D 250, H 221, H/D 89 per cent; rim D 165-170, neck D 127-130, Rim/body $\mathrm{D} \pm 76$ per cent, Neck/body D 58 per cent; width of top of sloping collar, ca. 40 mm . The two strap-handles, $20-22 \mathrm{~mm}$. wide, are set down the shoulder, a little above the maximum body diameter. The rim lip is concave, sloping, and about 40 mm . wide on top. The incisions on the shoulder and side, and the slashes within their area, were made with a sharp edge and are narrow. Their pattern is like that of the inside of the collar of 34 e , but on a much larger scale and more haphazard.

These 2 vessels are of interest as being, with 28 f from F10 (and compare also the bird jar of 29 d from A1), the unpainted, incised, formative prototypes of the later Nazca painted and standardized jar shapes R, S, T. We have seen that the wide-mouth $R$ shape ( $M / D>50$ per cent) tends to be earlier, the narrow-mouth S to be associated with full- or late-Nazca painted designs. This agrees with the 2 present pieces 34 e , f, whose mouths are respectively 75 and 76 per cent of the body-a true cooking pot proportion. The handles of course are functional in an actual cookpot. As the jar became painted and decorative, the handles might be retained (shape $T$ ) or more frequently dispensed with ( $R, S$ ).

Besides 34 e, f, grave F13 contained only 2 bowls: 27a, F13-4750, and its mate 4750A.

34 g , the whistle F3-4689, has been discussed above in connection with 34b1, 2, 3. It is well to recall that grave F3, with F9, is probably of later A phase than the remainder of site F ; see the discussion of plate 35 .

Plate 35
Ocucaje: Phase A-plus
Graves F3, 9
The two graves F3 and F9 differ from the remaining ones at Ocucaje F in apparently dating from a somewhat later phase of Nazca-style development, which I provisionally designate as "A plus." It is certainly not $B$, perhaps not yet " $X$," but it includes shapes and designs somewhat different from those occurring at sites A1, B, Cb, and most of F. The distinctness especially of grave F3 was repeatedly pointed out to me by Lawrence Dawson as he helped me in finding, measuring, and drawing specimens.

The first two figures of this plate, 35 a and b , have been previously illustrated, but on an inadequately small scale.

35a: F3-4681 is plate 27h. This F-H bowl has been touched on in Part I, under "Qualifications." Its dimensions are: base D 87, waist constriction 85, rim D 135, H 98, H/rim D 73 per cent. The design is more complex than straight A-phase cat deities, and the long row of attached fruits, the spotted tongue, and the object held in the left hand all seem post-A.

35b: F3-4683 is plate 28e. D 94, body H 86, H/D 92 per cent. The cylindrical body is unparalleled among straight-A double-spouts. The annular disks or flowers (?) on maroon background are also unique, on account of their size and "petaled" effect; although disks without petaling occur in $f$ of the present plate, andsmaller in size-in 33a and 34d. In the present double-spout they are mostly divided into seven "petals"-which would be difficult to execute geometrically, but less so freehand; although eight- and nine-segment disks also occur, and a small quartered one. Compare also 27r, F12-4746, with five-petaled disks.

The division of a circle into sevenths recurs in 9003, plate 37e (and in MartinVegue, pl. 44-A-1, a seven-pointed star).

35c: F3-4684. This is a bulbous-concave vase, of subtype $\mathrm{Pb} . \mathrm{D}$ (body and rim both) 135, of waist 123, H 162, H/D 120 per cent. Compare this proportion with the straight-A Pa proportions of 103 and 89 per cent in 31f and 34a. Also, there is no straight-A vase with three zones of figured design as this has them. On the other hand, the B background of the zones in this piece appears to be a reminiscence of earlier A. The sinuous dolphins shown have more flexibility than most straight-A portrayals, but lack the basic rectangularity and elaboration of design of characteristic later pieces. There are six to eight animals in each of the three zones, in the order Light R, R, G. The B background has rows of minute W dots.

35d: F3-4682. A high bowl, perhaps assignable to shape F. D 151, H 116, H/D 77 per cent. The idea of zoning is incipiently present. The only figure design is a series of twenty simple eight-pointed stars (four crossing lines), in the order: $\mathrm{O}-\mathrm{R}-\mathrm{B}$, the three together forming a repetitive unit. The first horizontal stripe is $R$, the lower one $O$ (or Light $R$ ).

35e: F3-4686. Lower than a and d, but otherwise similar in shape. D 161, H 94, H/D 58 per cent. This is one of the few repetitive over-all patterns in straightA or A-plus Nazca-though see 27b, e, v; and, probably of later period, 28a. The colors are R, Light R, B, W. The W disks with B center we have already encountered in 33a and shall see again in $35 f$. The overlapping double-ares, with their fish-scale effect, are new, and apparently unique for the Nazca style.

35f: F9-4727. Shape near E. D 103, H 60, H/D 58 per cent. The simple design of large alternately W and R disks with B centers, and in a B zone, is striking. They


FI2-4748
Fig. 10. Heavy S-shape jar, period A, from Ocucaje.
are not "petaled" (divided or radiated), but are connected by a W line. We have already mentioned annular disks in 33a, 34d, and 35b; and might add 27r, F124746, where the centers are $W$ instead of dark and the sectoring is into fives.
$35 f$ is the only vessel from grave F9 shown here, although the 2 others in F9 are represented in 27 n and 27 x . Grave F9 seems less definitely divergent from straight A than is F3.

The contents of grave F3 comprise 35a-e; the bowl 27 b ; the center- and rimpainted plate 280 ; another inside-painted bowl 4688; a pottery whistle, 4689, described under 34 g ; and some beads of "turquoise and other materials," 4690. Not one of these ceramic pieces, except the whistle, has a close parallel in any straight-A-phase specimen; the closest to straight A is the design painted on 35c, though the shape of this is post-A.

> Supplementary on Ocucaje
> Contents of Graves F1, 4, 7, 12, 17, B1, 3

Grave F12 contained 3 vessels: 4746-4748. The 2 first have been illustrated in $27 \mathrm{r}, 27 \mathrm{q}$. The third, 4748, is a narrow-mouthed jar of shape S , which (see Pt. II, "Jars R, S, T") I have been inclined to consider as more typical of late than of early Nazca. The design has become faint and would be indistinguishable in a photograph. Dawson was good enough to sketch it, and from this the formal drawing in figure 10 has been made. The colors appear to be B on Dark R plus perhaps
fugitive or post-fired painting. The "hooks" are reminiscent of those in plate 46c, which in turn has a design almost identical with that of figure 8 except that in 8 the "hooks" are closed into loops."

This jar F12-4748 is unusually heavy, weighing twenty-eight ounces. It suggests highland ware in a certain stoniness. The dimensions and proportions are: H 142, max. D 152, MD 54, neck 40 mm ., H/D 93 per cent, Neck/MD 74 per cent, and the crucial M/max. D only 36 per cent. It has a wholly flat base.

Grave F1 contained bowl 4676 with a prawn or crayfish design shown in figure 9 b , which has been discussed in a footnote to the description of $\mathrm{Cb}-4651$ in present plate 32b.

a


Fig. 11a, b. Period-A bowls from Ocucaje.
Figure 1 in Part II shows 3 lipless jars of shape Q, but without design painting, from graves F4, F7, and F19 respectively.

F4-4701 and F7-4717 (fig. 1a, b) are evident mates though they had been placed in separate graves. They differ slightly in height. Both have been washed with a purplish-R slip. The context of figure 1a in grave F4 has been cited in the discussion of plate 33 f .

The context of figure 1b is that F7 held 3 other vessels, bowls 4714-4716, shown in $27 \mathrm{p}, 27 \mathrm{j}, 26 \mathrm{e}$.

Figure 1c shows what might be classed with the 2 preceding as a lipless jar, especially as it is coated somewhat like them, with a rusty $R$ wash over its burnt O or brownish paste. But it is curved inward where these slope inward like a cone frustum, and in that respect it is rather pseudo-Q shape and reminiscent of the

[^29]modeled and painted cat-head bowl-jar of 46 g , though this rises and curves in more than figure 1c.

The grave context of F19, besides 4770 of figure 1c, was 2 bowls: 4768 and 4769, shown in 26 j and 26 g .

Measurements have been given in Part II, under "lipless jar Q," tables 7, 8.
Figure 11a, b shows 2 bowls from B graves.
B3-4632, figure 11a, is a shape-B gambreled bowl, H 81, D 196, H/D 41 per cent. It is painted with twelve repetitions of a three-part horizontal zigzag, alternately B and R on W , paneled. This design is similar to that shown in plate 37a (8692, Nazca).

Grave B3 contained 7 vessels, 4626-4633, of which 3 are shattered and only 1 other has been illustrated, the inside-painted plate of $28 \mathrm{~h}, 4630, \mathrm{H} / \mathrm{D} 27$ per cent. Specimen 4629, also inside-painted, is notable for its size, which when whole must have exceeded 400 mm . diameter, and for what may have been a unique, bold design, B and R on W.

B1-4624, figure 11b, the only vessel in its grave, is an unpainted $R$ bowl notable for its size: H 145, D 244, H/D 59 per cent. There is a trace of bevel or gambrel, but it is not definite, and the piece does not fit too well into any bowl-shape class, since it also scarcely flares with any continuity.

| Uhle Ocucaje Grave Lots Completely Enumerated and Described or Illustrated (See text of explanation of plates) |  |  |  |
| :---: | :---: | :---: | :---: |
| Grave | Passage in which described | Grave | Passage in which described |
| A1. | 31a | F7. | Ocuc. Suppl. |
| B1. | Ocuc. Suppl. | F9. | 35f |
| B4. | 31f | F12.. | Ocuc. Suppl. |
| B5. | 31b, e | F13. | 34e, f |
| Cb . | 32b | F14. | 33d |
| F2. | 34d | F18. | 32f |
| F3. | 35a-e | F19. | Ocuc. Suppl. |
| F4. | 33 f | F22.. |  |
| F6.... | .. 33e |  |  |

Plate 36
Nazca
Interior-Painted Plates of Class Ac
Herewith begins a series of illustrations of vessels from Nazca without recorded grave associations, which will be analyzed for style of shape and design.

The present plate shows 6 inside-center-painted plates of "shape"-class Ac, which are characteristic of style-phase A (at least in the larger sense). All of them have a plain R border. The design is restricted to the circular central panel which occupies about two-thirds to three-fourths of the total diameter of the vessel as it appears photographed from above. The background of this panel in all 6 of the pieces here shown is W or whitish. Four of them have the painted figures outlined in B; 2 are without outline. The W radiating lines crossing the margin, usually in pairs, which I encountered frequently on shape-A plates in my 1926
digging of A-phase graves for Chicago, are unrepresented in Uhle's material, whether from Nazca or Ocucaje; except for the one Ocucaje case of plate 32 g , F4-4693, with the ten-pointed star, and here the central field is $R$ and the bordering is W; and Nazca 8466, discussed in Part II, table 9, footnote.

The sizes, proportions, and degree of bevel of the Nazca plates of this class are given in table 9 of Part II. Figure 2a-f gives horizontal side views of the same 6 vessels in the same order as in plate 36a-f, except that 2 b has not the shape-B bevel or gambrel of the others, but is hemispherical, of shape GG.

36a was given me personally at Nazca as a memento or token in 1927. It is now no. 54-41-10/34461 in the Peabody Museum. The design suggests an ear of maize in husk with two snakes or worms emerging; I do not know what it actually represented.

36 b is Uhle's 9093 . It may represent a sprouting or growing tuber. I recall no counterpart in Seler.

36 c, 8704, is a full-face visage with an unusual amount of hair. One would expect it to be a trophy head, though neither eyes nor mouth suggest this. The narrow mouth slit and the threadlike tongue recur in other figures.

36d, 8431, shows five simple pallar beans.
$36 \mathrm{e}, 8592$, shows better than 3 g a high fish, perhaps of tuna type. This is a common type, especially on plates: compare 28h (B3-4630) ; Seler figure 343, 344.
$36 f, 8523$, shows four fishes, each generically similar to that of $36 e$ but sharper nosed and larger tailed, headed to the right, which is the less usual direction in the Nazca style.

## Plate 37 <br> Nazca <br> Low Bowl Types B, D, E

37a: 8692. Gambreled (formerly "point-bottom") bowl of type B. See table 12 in Part II. The design element, B background, panel divisions all point to stylephase A, during which this shape B was chiefly in favor. The odd half-unit of pattern is typical. About ten elements were planned, but there proved to be room only for nine and a half.

37b: 8558. Also shape $B$, gambreled, but the vessel is of style-phase $B$, as shown by the bottom painted in quartering. See table 12 just cited. A poorer view of this piece is shown in plate 5 d and it is there classified as of shape $B$, though not so listed on page 44 of the 1927 paper.

Other than plate 5d, we illustrated no shape-B bowls in 1927. But the 1924 Ocucaje report shows $26 \mathrm{f}, \mathrm{g}, \mathrm{i}, 27 \mathrm{c}$, j , all straight-A-phase B shape.

37c: 8533. Shape D, flat-bottomed flaring bowl (originally "shallow bowl"), whose sides flare considerably and are somewhat concave in profile, in distinction from shape E ; whereas the difference from $\mathrm{F}-\mathrm{H}$ is that D is both lower and flatter bottomed. We failed to illustrate the type in 1927-it is not very frequent though definite enough; and there are no examples shown in the 1924 report on Ocucaje, since that deals with Nazca A, whereas the D shape is usually or always Nazca B. The present piece shows the unitary (non-complementary) interlocking fish or snake as design unit.

37d: 8577. Also D shape. The painting is vigorous but roughly done, and I would assign it to decadent B approaching Y . The birds shown are discussed below, in comparison with Seler's birds, under plate 44c, d.

37e: 9003. Another D bowl, with considerable spread. The painting is somewhat sloppy and hasty, of B to Y period, I would estimate. The larger stars have seven and eight points with about equal frequency. Cf. plate 35b.

37f: 9007 . This is basically of shape E , but its spiral fluting is unusual enough so that we put it in the miscellaneous class " $Z$ " in 1927. It is a striking piece with its bone W relieved only by B accentuation of the grooves in its twist. This is the piece referred to above (under description of pl. 33e) as one which I would now withdraw from late Nazea and construe as early A phase.

37g: 9084. Herewith we come to straight shape-E, flat non-flaring bowl, which we called simply "angular bowl" in 1927. The bottom is as flat as bottoms get in the Nazca style, the side then slopes upward at an angle but nearly straight, with little bulge or flare. See table 13 in Part II. E-shape bowls are characteristic of Nazca A. The bird represented is what Seler calls "maize-bird" or dove (his figs. 286, 287).

37h: 8818. E-shape bowl, the bird's webbed (?) feet being carried onto the underside of the vessel, which is quite flat. For other instances of paint on the bottom, see plates 31e, 33a, 41a-f.

$$
\text { Plate } 38
$$

Nazca
Various Bowls, Plates, Goblet, Jar
All B or Late B except Jar h
Plate 38 is a miscellany, in shape and in design. Only a common period holds the vessels together; they are from late in the development of the Nazca style except for the jar 38h. Most of them in 1927 were put into shape classes other than those I assign to them now.

The first 4 vessels, 38a-d, I was tempted to set together as a group "C3." They are certainly allied to classes C1 and C2 as discussed in Part II. But they differ from these in not having been put into our 1927 class C, as present C1 and C2 were; and also in being neither quartered on the bottom nor zoned. They are all fairly flat-bottomed, shallow, definitely flaring, and concave in profile. They differ from class B in not being gambreled, from E in not being straight-sided, from F and H in being lower. But they do resemble the small class of D bowls in their relatively flat bottoms, shallowness, considerable flare, and concavity of side; also in seeming to be of late Nazca period. Accordingly, I leave them provisionally in D.

38a, 38b: 8741, 8740. D shape. In 1927 they were classed as Y2, that is, Nazca Y with Tiahuanaco influence. They are figured in plate 14f, d; but inverted there, set with bottom up, which makes them look like inside-rim-painted plates of class Ar. Their finish is too hard and their coloring too brilliant to be Y ; and their designs seem to me now more in the Nazca than in the Tiahuanaco manner of Y. There is parallel within Nazca of the hanging rods or bars of the design of 38a in 40 d (cf. Seler, fig. 172). The lower tier of figures in 38 b may be much reduced trophy heads; cf. Seler figures 201-204. Otherwise I have noted no parallels in Seler to the designs of 38a, 38b. Seler, with his interest in symbolic-representative
meaning, has slighted mere geometric designs, which are far more numerous in Nazca ceramics than the illustrations in his basic monograph would lead one to infer.

38a dimensions: D 169, H 75, H/D 44 per cent.
38c: 8943. Shape D; so listed in 1927. H 183, D 76, H/D 42 per cent. The design seems to me in poorish late-B manner, verging toward Y. Colors: Y, R, Dark R (purplish), B, on W.
38d: 9014. Marginal to shape D, with somewhat rounded bottom, definite bevel, low and heavily concave sidewall. It was classed as shape A in 1927. D 195, H 62,


Fig. 12a, b. Profiles of interior-rim-painted "plates" from Nazea shown in plate 38e, f.

H/D 32 per cent. The design painting seems late, with groups of alternately W and $R$ vertical stripes on $B$ background, broken by four $W$-bordered squarish panels, alternately B and W-stippled B. It is an aberrant piece. B backgrounds and W outlining are usually early.

38e, 38f: 9023, 8665. Two rim-patterned, inside-painted "plates" of type Ar, whose side profiles are shown in figure 12a, b. In 38e, the W-stippled meander and the B-stippled "worm" suggest 38d; as do the W-bordered rectangles. 38 f of course is late and deliquescent B: multiple disintegrated heads, bent-over rays, pronged "thorns," all very hastily cursive.

38 e we classed as shape " C " in 1927 ; 38 f is unlisted, apparently through a misprint of its number; it approaches F-H bowls in outline although it flares morethe ratio of base to top diameter is $2: 5$. It might be classed as shape I, angled goblet. It is Ar, of course, only in virtue of being rim-painted on the inside, rather than of any formal shape as such.

38g: 8732. Shape I, angled goblet, as we classed it in 1927, except that the bottom is rounded-conical, instead of essentially flat; from the bevel to the base is
nearly 30 per cent of the total height. It is the only one of our angled goblets with round bottom. For this reason it is also much the highest in proportion. In terms of mouth diameter, the total height is 102 per cent, the waist 82 per cent, the bevel diameter 84 per cent. The angle between below-waist and above-waist profile is about $160^{\circ}$, or $20^{\circ}$ bend.

The design of 38 g consists of six pin-feathered, wingless, running birds-much like Seler's figure 301 (plus the dots or pin-feathers of figure 300)-in the upper zone, quite hastily painted; and in the lower, a row of paneled full-faces, abbreviated to four horizontal strokes each-a far remnant of the characteristically phase-B women's Y faces in rows-as shown also in the lower zone of Seler's figure 301 (except that here there are five strokes to a face). Seler's piece is also an angled goblet-so the 2 specimens agree almost point for point. The period of both obviously is the transition from terminal Nazea B to Y; if not indeed full Y.

38 h : 8520 , shape R , wide-mouth jar, as listed in 1927 , though we did not then show any outright $R$ jar in photograph. The mouth diameter is 68 per cent of the maximum diameter; the neck 64 per cent, the height 92 per cent. The collar height is 11 per cent of the total height. The proportion of 68 per cent is greater than for any R, S, or T jar figured and measured in the Uhle collection ${ }^{5}$ or figured by Seler. It approaches the 75 and 76 per cent of the cookpots of present plate $34 \mathrm{e}, \mathrm{f}$ from Ocucaje F13. We may therefore infer that this jar is early, in or toward the NazcaA range. With this the $W$ dividers are in accord, which set off each trophy head in its own panel. The heads are also in the unusual position of being prone re-cumbent-face down. Only the one right of center is set upright because the space remaining for it was too narrow to lay it like the others.

## Plate 39

## Nazca

Goblets, Shapes J, K, L Phases B and Late B
Nazca goblets are tall vessels, spreading from the bottom up. Sometimes the upward spread is considerable, either beginning halfway up by means of an angled profile (shape I), or by means of an inverted cone shape beginning at the bottom (shape L). These two forms are characteristic of late B and continue into phase Y.

Characteristic of developed phase B, but not continuing into Y, are 2 other shapes with moderately constricted but sinuous, unangled middle: J, waisted goblet (in 1927, merely "goblet"), and K, double-convex goblet (in 1927, "doublecurve goblet"). These 2 differ in that J flares somewhat upward, at times approaching the high F-H bowls; whereas K may be larger at bottom than at top, and then approaches the concave cylindrical vase $P$. These 2 phase- $B$ shapes, favoring gently flowing profiles, thereby approach non-goblet shapes such as the higher bowls and lower vases, sometimes differing from them chiefly in proportions. As the Y-phase decadence was approached, the feeling for curvatures of tactile movement became lost, and the silhouette turned abrupt, harsh, and geometric in I and L .

[^30]Examples of shape I, though somewhat aberrant ones, have already been shown in plate $38 \mathrm{f}, \mathrm{g}$, and figure 12 b ; and another, aberrant in a different way, appears in 40a. The present plate 39 shows two illustrations each of shapes J, K, L.

39a, 39b: 8501, 8408, both shape J, waisted goblet. They were construed in 1927 as "K, double-curved goblet," and "M, small vase," respectively-which indicates the tendency of the earlier goblets to intergrade. They may in fact have originated in phase $B$ through modifications of flowing surfaced bowls and vases; at any rate, there seem to be no goblets or direct prototypes of goblets in A.

39a is largest at the top, but genuinely waisted. Its measures are: D at top 94 mm., waist 80 , bottom maximum 87, H 120, H/D 128 per cent. I confess I feel no great assurance in assigning this piece to class J rather than K . The top and bottom zones of painted design are the same, reversed; the legged figures are perhaps insects or spiders, corresponding somewhat to Seler's "water beetles," figures 364, 365. The middle zone is geometric, but the steps in the squares are rounded off, as are some of the points in top and bottom. The execution is still precise, but tending toward rapidity. I would estimate the design to be late B .

39 b is nearly cylindrical, which is no doubt why we put it in "M, small vase," in 1927. The diameters, downward, are about $118,110,113 \mathrm{~mm}$. (corresponding to 67, 62, 63 in the photographic negative), the height 151, H/D 128 per cent-this last the same as in 39a. The waist constriction is slight, but attracts the eye.

The painted pattern of 39 b is unusual, in vertical panels instead of zoned; and I can recall no analogues for the striking "H" figures (except possibly Seler figure 365 ). I can only guess the period of the painting: B-Y transition, with the simplification of $Y$ already present but its sloppy execution not yet accepted, in this piece.

Other J goblets are shown in plate $9 \mathrm{e}, \mathrm{g}$, i .
39c, 39d: 8957, 8474, double-convex goblets, K. These both taper toward the top, show a definite waist, are very similar in H/D ratio, and evince the same stage of design development, namely full B , or late B with retention of quality. They even contain the same crossed-rectangle design unit in background and subsidiary zoning respectively, also the rays with bent-over squarish ends.

39c measures $91,87,102 \mathrm{~mm}$. in its three diameters, in downward order, H 137, H/D 134 per cent. ${ }^{6}$ The central animal design is strange-Nazca wing and paw, but body truncated and suggestive of Huari Tiahuanacoid. The quartered bottom is full or late B, but more commonly found on bowls of type C.

Could Huari have begun early enough to influence the Nazca B style in Nazca Valley?

39d: 8474 , has diameters of $96,86,110 \mathrm{~mm}$., and is therefore unusually slimwaisted ; H 151, H/D 137 per cent. The head reappears on the Q-shape lipless jar of plate 5 e , even to the blood in or under the mouth; and again in plate 4 e . Seler shows a similar headdress in figures 220 following, and the same "open" or jawless and blood-dripping mouth in figures 234-237, and especially 238,240 . Our 5 e and the Seler figures agree in bearing a " 3 -battlement" headdress instead of curledover rays. The small figures floating in the background of 5e evidently are halves

[^31]of the rectangles that accompany the head in the present piece. A certain clarity in the pastellike colors is also shared by 5 e and the present 39 c and 39 d .

39e, 39f: 8395, 8516, are L, conical goblets, and were so classed in 1927.
39e: 8395 , measures D 134, H 171, H/D 128 per cent. The elegance of form of $39 \mathrm{c}, \mathrm{d}$ is gone. The painting is mannered and hasty-probably later and certainly less skilled than the very similar painting on 40a. I would say it is incipient Y. The diamond eyes in the rim zone are Y or incipient Y : cf. plate 9d.

39f: 8516, measures D 143, H 158, H/D 110 per cent. There is slight concavity of profile, whereas 39 e is convex. The design is quite unusual. The three-pronged element recurs elsewhere, as in 43d, but the flag- or hatchet-shaped units are inexplicable. As a Nazca design, I would be at a loss to place this one in a period, though the vessel as a whole suggests Y.

Plate 40
Nazca
Goblet and Vases
Full B and Late B Phases
The first figure, 40a, is a goblet rather indeterminate as to shape class. The other figures are all M, tapering vases, as I have renamed our 1927 "small vase" shape.

40a: 8811, we put in 1927 into class I, angled goblet. I leave it there, though it is not angular. It curves gracefully, in a long concave line. This fits my definition of J, waisted goblet, especially of subclass J1, "like high bowls F-H, but higher, up to H/D 110 per cent," (which is the proportion of 40a). However, this piece has no "waist" by measurements; the appearance of one is illusory. One could make out a case for K, double-convex goblet, because of the rounding at top and bottom; nevertheless what dominates the profile is the long concave sweep. This in turn argues against its being L, a conical goblet. So I return to our 1927 start, as shape I, an angled goblet, with the proviso that it represents an early form, before the typical curve of period $B$ had turned into the angle of period Y-as exemplified by plate 38 g .

This finding fits with the painting, which is less near the incipient-Y manner of 39 e , and far from the fully degenerate-Y manner of 38 g . Note, by the way, that the present piece still shows full B-phase bent-over rays, which do not appear in 39e. Also, we have here three zones of trophy heads; but in 39 e , geometric "eyes" replace the small heads of the rim zone.

It is not clear what the vertical bars in the bottom zone represent. We could see them as limb bones; but I do not recall that Nazca art ever concerned itself with loose human long bones, in spite of its preoccupation with heads.

The middle figure in the middle zone is of course merely the headdress of the heads on both sides of it, inserted because lack of planning brought it about that there was no space left for a full head.

Herewith we leave the goblets with their tendency to intergrade, and turn to the vases.

All the examples here shown seem to fall into the class $M$, tapering vase, which presents the only difficulties in the vase group. There is no single feature which defines the group sharply: that is presumably why we fell back on the irrelevant
"small vase" in 1927. Of the 5 examples here shown, $40 f$ tapers upward considerably, 3 others modestly, but in 40 c the rim is 1 mm . larger than any other diameter. ${ }^{7}$ Four of the 5 vases show a slight constriction, enough to give elegance to the shape; but 40 b is on the convex side of being a cylinder.

In short, class $M$ is basically cylindrical, with a tendency to a gentle taper, or a mild constriction about two-thirds way up, or both. It differs from N, cylindrical vase, in its H/D ratio being mostly less than 150 per cent whereas N is around 200; and from O and P , the 2 bulbous-vase classes, in lacking their bulbous bulge at the bottom.

The measures for shape-class M are given in table 17.

TABLE 17
Vase M Measures

| Plate | Cat. no. | Max. D | H/D per cent |  |
| :---: | :---: | :---: | :---: | :--- |
| $40 \mathrm{~b} \ldots \ldots \ldots \ldots \ldots$ | 8463 | 103 | 133 | Cf. pl. 10e |
| $40 \mathrm{c} \ldots \ldots \ldots \ldots \ldots$ | 8900 | 100 | 135 | Cf. pl. 9f |
| $40 \mathrm{~d} \ldots \ldots \ldots \ldots \ldots$ | 8405 | 97 | 145 |  |
| $40 \mathrm{e} \ldots \ldots \ldots \ldots \ldots$ | 8518 | 99 | 146 |  |
| $40 \mathrm{f} \ldots \ldots \ldots \ldots \ldots$ | 8954 | 105 | 139 |  |
| $10 \mathrm{~g} \ldots \ldots \ldots \ldots \ldots$ | 8614 | 111 | 135 |  |
| $10 \mathrm{~h} \ldots \ldots \ldots \ldots \ldots$ | 8546 | 97 | 147 |  |

It is evident that in general proportions as well as size, there is fairly close standardization. It is in the nuances of more or less taper, constriction, or convexity that there is enough variation to make it difficult to find a precise watertight definition for the shape class.

The shape is also close to J, waisted goblet, except that this tends to flare, shape M to taper.

As for painted design on the group, it is evident that this is full $B$, and occasionally perhaps more than full: 40 e for instance, with its B on Y zone on Br , is at least approaching the Y phase ; compare $9 \mathrm{~d}, 15 \mathrm{~d}$; and, above, $39 \mathrm{~b}, 39 \mathrm{e}$.

Plate 40b, which is a clearer rendition of 10e, resembles Seler's figures 131, 132, but may represent what he construes his figures 133, 134, 186 to refer to, namely a dance of the ghosts of those whose heads were taken as trophies.

Paintings of large-scale erect human figures, full-face or profile, without animal attributes, were of course hardly possible on Nazca pottery until taller forms were evolved than the Nazca A-shape Pa -in other words, became possible when standard goblet and vase shapes had been evolved; though there are occasional attempts on double-spouts. It is rather remarkable how rare on the whole the erect natural human figure is in Nazca art. I list below the readily available illustrations.

40c emphasizes the bird body as plate 9 f features the human head of a composite being repeated three times on the same jar 8900 . The nearest Seler analogues are figures 101-103, 105 for the bird feet (and wing, and tail), but figure 90 for the non-mouth-masked face. The design is accordingly an unusual combination.

[^32]40d has triple zoning, and all the elements conform to this indication of Beriod: points and bent-over rays; face-arrows (?) ; and bars alternately hanging and standing, like cog gears; cf. 38a, and Seler figure 172.
$40 \mathrm{e}, 8518$, has already been mentioned, just above, as showing or foreshadowing period Y color and design.

40f, 8954, illustrates how a good bulge below can give the illusion of a waist constriction, even though actually there is a continuous taper up to the rim, merely the rate of the taper varying. This is one of the higher M shapes, and has borrowed its zoning, design subjects, and color clarity from the high B tall cylindrical vases. The maximum diameter is near the base and is 105 ; the mouth 85 , or 81 per cent; the height 146 , or 139 per cent of the diameter.

I must confess that I find it hard to distinguish this "M" piece from shape $P$, bulbous-concave vase.

Erect Human Figure Designs

| Erect Human Figure Designs |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Illus. | G-K 1927: |  |  | Seler: |
|  |  | Shape | Illus. | Shape |
| 1 c . |  | U | 124. | . S |
| 5 b . |  | Pb | 129. | M |
| 9 g . |  | J | 130. | . M |
| 9 i . |  | J | 131. | . M |
| 10a. |  | 0 | 132. | M |
| 10d. |  | J | 133. | . N |
| 21b (?) |  | R | 134. | . M |
|  |  |  | 122, 123 | .... shape not shown |

Plate 41
Nazca
F-H High Bowls
With Painting Extending over Bottom
The remaining illustrations are, with one or two exceptions, figures of the high, flaring, concave-profiled bowls of the overlapping classes F and H . On account of their intergradation as discussed in Part II, these bowls will be treated here as a unit, consideration being given to individual peculiarities of shape and designs. The period is A, extending on into early B (" X ").

The present plate shows six views of 5 bowls in which the painted design extends over the bottom as well as the side. Three other such bottom-painted bowls have already been described here: plates 31e, 33a, 37h. The vessels of 41a-f were uniformly posed for photographing so that the bottom and side sloped evenly away from the camera lens at an angle of $45^{\circ}$, so far as the curvatures of both bottom and side allowed.
(All these bowls were originally classed by us in 1927 as F, except that 41e was considered H.)

The measures are given in table 18.
41a: 9043, shown in 1927 drawn in outline as text figure 11c. The design shows one long snake on $W$ background. I am unsure whether to rate this design as of style-phase A or X, but incline to the former, for reasons which would take too long to detail.

41b: 8929. The design is like Seler figures 101-110 and plate 44a, b below. It
shows two figures of a type of bird which has a crop, trapezoidal head, rhomboidal eye, blunt and hairy beak holding a trophy head. The feet are human, the thighs marked with abbreviated trophy-head designs. The wing ends in seven feathers, each tipped with a point and a three-dot face: the ends show in the photograph just in front of the head. Above the feathers is a cogged or spiked edge frequent in cat-deity representations. The trophy head, both feet, and one feather are below the turn of the side into the bottom.

This design is later than the A of Ocucaje, where it does not occur. I do not know whether it is late $A$, " $X$," or early B. It is discussed further after plate 44 c below.

TABLE 18
Bottom-Painted F-H Bowls in Plate 41

| Fig. | Cat. no. | Type | D | H | Conc.* | H/D per cent | Spread $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| a. | 9043 | F | 116 | 85 | 3.5 | 73 | $11^{\circ}$ |
| b. | 8929 | F | 120 | 77 | 4 | 64 | $12^{\circ}$ |
| c, d. | 9101 | F | 120 | 92 | 6 | 77 | $12^{\circ}$ |
| e. | 8828 | H | 152 | 90 | 9 | 59 | $17^{\circ}$ |
| $f$. | 8923 | F | 119 | 90 | 5 | 76 | $12^{\circ}$ |

* Concavity means the maximum distance in mm. between the side of the bowl and a ruler laid from the rim to the
side. This holds also for tables 19 to 23 . rim and side), the rim edge being held level. This holds also for tables 19 to 23 .

41c, d: two views of 9101 , c showing the left side of face and anterior body of the cat-deity figure, $d$ its tail end, right hand, and right edge of face. The hand holds something like a truncheon or atlatl; the snake tail ends in a frog or salamander. The "pleated" body has a "navel eye." Along the back lies a series of trophy heads, face down, with slings to hang them from. The head wears a whiskered mouth mask, with four W disks on a band falling on each side. It is a complex picture, which crowds the $B$ background and took some dexterity and experience to impose on the combination of circular curve and convex-concave vertical curvature. The design is post-early-A, probably "X."

41e: 8828, shape H , also shown, but without bottom, in plate 3c. This vessel is of average height for shape-class F , but has conspicuously greater diameter, spread or flare, and concavity, which is why we attributed it to class $H$ in 1927. I construe the figures as naked, possibly female dancers. There are no genitals, but a "navel eye." They are "tangled" in a web which in 1927 we called motive "no. 13, overlapping lines." Another pair of figures is on the opposite side. Between, on the sides, is a repetitive pattern of rounded rectangles, somewhat staggered as an incident of the increase of diameter upward. They suggest a fish-scale pattern, but I have no idea what they represent. Compare plate 21a, American Museum no. 41.0-1020, shape T, in which the paired figures may be either wrestling or dancing, the same "overlapping lines" are present, but the "scale" pattern is lacking. There are strands of falling hair between the two heads. This suggests that what looks like $W$ lines across B background between the heads in the present 41e should also be construed as locks of B hair, between which show streaks of W background.

There is an interesting act or ritual represented here as to which we can only guess.

The whole scene is unusually lively in action. There is nothing as animated in the entire repertory of phase-A painting. The vessels must be at least " X " in period, and really are akin, in their movement, to plates $5 \mathrm{~b}, 10 \mathrm{~d}, \mathrm{f}, 11 \mathrm{~b}, \mathrm{c}$, and Seler figures 131, 132, 133, 137, 186-most or all of which are indubitable high or climax B.

41f: 8923. The bottom is covered with the same "overlapping lines" web as 41e bears. Above are eleven columns each of four ripe maize ears, according to Seler's interpretation-see his figures 382-386.

I incline to an " $X$ " attribution; the field is rather too crowded to be of A phase.

## Plate 42 <br> Nazca <br> F-H High Bowls with Cat-Deity Design

Six more F-H bowls are shown in plate 42, with the cat deity painted on their sides. Their dimensions are listed in table 19.

TABLE 19
Cat-Deity Design F-H Bowls in Plate 42

| Fig. | Cat. no. | Type | D | H | Conc. | H/D per cent | Spread |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| a. | 8913 | H | 167 | 120 | 4 | 72 | $12^{\circ}$ |
|  | 8773 | F | 147 | 108 | 6 | 73 | $11^{\circ}$ |
| c. | 9100 | F | 142 | 105 | 5 | 74 | $15^{\circ}$ |
| d. | 8909 | H | 157 | 102 | 7 | 65 | $16^{\circ}$ |
|  | 8917 | H | 143 | 99 | 6 | 69 | $11^{\circ}$ |
|  | 9075 | F | 126 | 92 | 9 | 73 | $11^{\circ}$ |

42a: 8913. The figure faces the less usual way, to the right, and encircles the bowl with its "centipede" body. There is no mouth mask, only a point of whiskers at each side of the face, and two more downward, like a forked beard. The rounded eyes are cut off by a straight line above, with the pupils against this-a reminiscence of the Chavin eccentric eye? The mouth is triangular, with a small simple tongue projecting. The paws have five square fingers plus a short thumb with long pointed nail.

I construe this as an early-Nazca piece.
42b: 8773, is generally similar to the last, but it heads to the left, the more usual way. The eyes are similar ; the mouth too is small. There are side whiskers, but none down from the jaws. The tongue, though simple, is long, reaching as far as the nails of the paws. These are again square, but only four, and without any thumb. The centipede body is similar to the last. The background is B, as against W in 42a. Both pieces seem about equally old, but the execution of 42a is better.

In both the foregoing the face is stretched out in the axis of the body. In the next 4 pieces, the face is in front view, the body in profile.

42c: 9100 . The head is similar to that of 42a, except for lacking chin whiskers and showing what appear to be erect ears. There are: side whiskers in a point, eyes cut off above, small mouth, short tongue (though with a capsicum hanging from it), a three-part headdress, square-cut fingers (four) plus a thumb with long claw. The profile body is arched and mottled, like Seler's figures $1-3,8-10,13-16$; the (hind) feet show just to the right of the head. The body ends in a swung-up tail. Below the mottled part of the body is a longitudinal stripe filled with a pattern of "overlapping lines" ( 1927 fig. 3, no. 13) ; also as in plate 41e, f. The background is dark.

42d: 8909. In general, the design is like 42c, with the following differentiations:
Background W
Eyes rhomboidal, not cut off on top
Mouth mask present, with short whisker points downward and long ones curving up past headdress

No ears
Mouth rectangular
Tongue plain, long
Headdress with four uprights instead of three
Feet rounded, paddle-shaped, no thumbs
Body with two rows of "bird tracks" or "arrowheads" instead of mottles; but it does have a similar stripe of "overlapping lines"

Triangular spines along the body back and the side of head may represent fruits
The figure is set in a panel, not encircling the bowl.
42e: 8917. For the first time in this series, the head fills the whole height of the front of the bowl; there are no hands. Also for the first time, there is a mouth mask with only horizontal, spreading side-whiskers. Also there are two W disks at each side of the head. Eyes are rhomboidal, mouth semicircular, no protruding tongue. Body: three rows of vertical arrows, each with two eyes = snake (?).

42f: 9075. The head is much as in 42 e ; but the mask does not meet above the mouth, and there are four W disks instead of two in the band or hair tie falling past the face. The headdress is similar to 42 e , with a face symbol protruding down over the middle of the forehead. There seem to be ears. The body is "pleated," with a "navel eye" in the middle, like 41c, $d$; along the back are spines, with prone trophy heads between.

These 6 pieces form a series as arranged from 42a to 42f. I am less certain that the series is also a chronological sequence.

Seler's cat deities usually have a mouth mask. It is lacking in his figures 20, 24, 32 (mask becomes headdress, has bent-over rays), 59, 60, 68,69 .

The mask does not meet above mouth (as in 42f) in Seler figures 1-6, 8-16, 19, $26-28,30-31$, and occasionally beyond.

Raised whiskers (pointing upward), as in 42d, occur in Seler figures 1-6, 8-19, 23,36 , and others. The co-occurrence of this and the last previous trait applies only in Seler's 1-6, 8-16.

Ears, as in 42c, perhaps f, show in Seler figures 1-5, 8-11, 16, 23, 24, 28-29 (?), 37 (?), 45 (?), 46 (?). In general, they tend to disappear when mouth mask or headdress are fully developed.

Chavinoid eyes cut off above (42a-c) are relatively rare in Seler: figures 6, 14 (eccentric pupil), 23, 24, 59, 69, 90, 97, 99.

Thumbs with claw (42a, 42c) appear in Seler's figures 5, 23, 26, 27, 29-32, 35-38, and so on.

Disks along the side of the face are lacking in all Seler's figures of the "mottled cat," namely, $1-24$; are normally present on the cat deity, $25-89$; are lacking in figures $32,35,36,42,44,46 \mathrm{~d}$, as in 58-69 (jagged snakes), and in 74, 76, 78-82, 84, 87, 90-97.

The frequency of number of disks on each side of the face in Seler is:


This makes more occurrences of three disks than of all others together: usually the third of four is displaced by the mouth mask. In Uhle's Nazca collection in Berkeley four disks seem most frequent.

Plate 43
Nazca
F-H High Bowls with Cat-Deity or Snake Designs
Plate 43 adds 2 more to the cat-god designs on high bowls, and follows with 4 showing snakes.

The measurements are given in table 20.

TABLE 20
F-H Bowls, Cat-Deity or Snake Design in Plate 43

| Fig. | Cat. no. | Type | D | H | Conc. | H/D per cent | Spread |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| a. $\ldots \ldots \ldots \ldots$ | 9072 | $\mathbf{F}$ | 143 | 113 | 7 | 79 | $12^{\circ}$ |
| $\mathrm{b} \ldots \ldots \ldots \ldots$ | 9073 | $\mathbf{F}$ | 144 | 109 | 7 | 76 | $9^{\circ}$ |
| $\mathrm{c} \ldots \ldots \ldots \ldots$ | 8804 | $\mathbf{F}$ | 145 | 93 | 3 | 64 | $13^{\circ}$ |
| $\mathrm{d} \ldots \ldots \ldots \ldots$ | 8599 | $\mathbf{F}$ | 125 | 84 | 4 | 67 | $12^{\circ}$ |
| $\mathrm{e} \ldots \ldots \ldots \ldots$ | 8803 | H | 158 | 101 | 4 | 64 | $15^{\circ}$ |
| $\mathrm{f} \ldots \ldots \ldots \ldots \ldots$ | 9079 | H | 171 | 121 | 7 | 71 | $15^{\circ}$ |
|  |  |  |  |  |  |  | $(1927: 3 \mathrm{e})$ |

There is the usual intergrading of shapes classed as F and H in 1927, but it is true that the 2 H bowls are larger and spread a few degrees more than the 4 F ones.

The body of 43a is unusually cylindrical.
43a: 9072. Cat deity. Rhomboidal eyes, mouth mask not meeting above rectangular mouth, short tongue; whiskers turned upward but spreading, not pointed; four disks and trophy head at side of face. Body of varicolored, horizontal, spotted stripes; on back, row of trophy heads lying supine.

43b: 9073. Cat deity. Eyes rhomboidal; mouth mask meeting along upper lip, mouth rectangular, tongue short; whiskers rounded at end; ears (?); band of
three disks and trophy head; headdress like 43a in basic plan but different in proportions. Body, a short area horizontally pleated and with navel eye; above and beyond this, one stripe containing dots; along back, prone-lying trophy heads between spines.

43c: 8804. The first of 4 bowls painted "with snakes." In this case, there are side hairs, gills, or milliped legs. The head is relatively small, eyes circular, mouth small and rectangular.

43d: 8599. A series of double-ended snakes, each an S, interlocking with another at each end. Eyes are small round dots, mouth a short bar. A dark stripe runs the whole length of body between the two heads. In the triangular area between each interlocked pair is a three-pronged figure, similar to 39 f and 46a. None of the elements is bordered.

43e: 8803. The design looks more right if viewed upside down, with the bowl rim below. This is confirmed by the fact that when the bowl is reversed, the snake is headed to the left, but when set on its bottom, the head is to the less usual right. The snake head is large, rectangular, with rhomboidal eyes set vertically; tongue longish, curved, pointed. There is a bunch of pointed whiskers projecting out from each cheek; and beyond these, a pair of W hands (or whiskers?). The winding body contains a longitudinal $W$ stripe, in which are round dots connected by a line. The dark background is dotted with whitish three-pointed figures which may represent the same as the side fringes of 43 c or the three-prong elements of 43 d .

43f: 9079. Two intertwined snakes, both headed left. Heads indented, eyes longitudinal rhomboids, tongue curved and pointed. Each body contains a central W stripe carrying a row of (unconnected) dots; one snake has semicircles "bitten out" of the W stripe, the other not. Background B.

All 4 of these snake-design bowls seem to be Nazea A in the larger sense. Compare plate 27 q, Ocucaje F12-4747, and plate 28p, Ocucaje 4711, near F6. Seler shows double-headed snakes in his figures 313-316. Three of these have curved pointed tongues; two, three-pronged or four-pronged elements; two, stripes contain line-connected small disks; two are "bitten into." Martin-Vegue has plate 45-B-5 much like 43d; also 45-B-2 with apparently a series of parallel singleheaded snakes. All these are either phase A or not far from it.

By contrast, the snakes on the rim of the later plate-bowl 4 a are segmented or noded, have circular heads, and hold salamanders (?) in their mouths.

## Plate 44 <br> Nazca

## F-H High Bowls with Bird Designs

The proportions of the 6 bird-design F and H bowls in plate 44 are given in table 21.

Seler devotes his third section to "The Cat Demon [really Deity or Spirit]" as Bird." Here he analyzes figures which combine a feline head and mouth mask with wings, and usually human legs also, these last either stretched out in aerial flight or vertical and supporting the head and body; and sometimes the figure is

[^33]feathered with arrows (Seler, figs. 72-97). Plate 40c, above, might be construed as such a bird deity; so might our plates $4 \mathrm{f}, 9 \mathrm{f}$, perhaps 21 .
Seler's fourth section is devoted to "Another Bird Spirit," illustrated in his figures $98-120$. This usually has wings, human legs or less often bird feet, and a curious bird head which is always in profile even when the rest of the figure is shown full-face. Most characteristic is the beak, always directed vertically, with the mandibles not coming to a point but parallel, or even everted, that is, with their facing edges curved away from each other. The tips of the mandibles are W ,

TABLE 21
F-H Bowls with Bird Designs in Plate 44

| Fig. | Cat. no. | Type | D | H | Conc. | H/D per cent | Spread |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| a. | 8928 | F | 140 | 105 | 5.5 | 75 | $12.5{ }^{\circ}$ |
| b. | 9074 | F | 120 | 77 | 5 | 78 | $13^{\circ}$ |
| c. | 8521 | H | 162 | 102 | 5 | 62 | $22^{\circ}$ |
| d. | 8994 | H | 152 | 100 | 8 | 66 | $16^{\circ}$ |
| e. | 9083 | F | 148 | 92 | 5 | 62 |  |
|  | 8932 | F | 113 | 83 | 4 | 73 | $10^{\circ}$ |

and resemble the thumbnails of some cat-deity hands. The mandibles always clasp a trophy head. The bird's head may be rectangular, trapezoidal, ovate, or irregular, and may or may not be provided with side whiskers coming to a point. Some figures may be wholly birdlike, like Seler's 101, but more are partly anthropomorphized, clothed, or elaborated.

I have already shown one design of this type, the class F bowl 41b. In the present plate I show two more, 44a, b, both also on F bowls.

44a: 8928, is the more naturalistic, that is, birdlike, of the two-though that is not necessarily the earliest form of the representation. There are bird feet, and no clothing or artifacts, except for the trophy head in the beak. The bird is repeated in full two times in the circumference of the bowl, plus a reduced miniature (on the left of the illustration), set upright to squeeze into leftover space, and carrying what looks as much like a capsicum or other fruit as like a trophy head, though it also shows eye and mouth dots. Six colors.

44b: 9074, has human feet, outcurved mandibles, side whiskers, and above these bent-over rays. There seems to be a crop on the throat.

Plate 41b, already discussed, has features of both 44a and b. The bird head is more as in 44a, though the trophy head is larger and hangs down on to the bottom of the bowl; and the beak is feathered or bristly. There is a crop on the throat, human feet, and a wing of seven bars (feathers), each ending in a snake head and tongue-all as in 44b.

Martin-Vegue, 1949, shows two examples of this same bird spirit, both on F-H type bowls. His plate $43-\mathrm{A}-1$ is much like the University's 44 b ; the mandibles are feathered. Plate $44-\mathrm{B}-5$ has a similar head, again with feathered mandibles and a crop. The body is "pleated," the feet are not clear, the back carries trophy heads.

In all these examples, as in Seler's, the single eye is in a line with the beak and is rhomboidal or bipointed-oval.
$44 \mathrm{c}, \mathrm{d}: 8521,8994$. In both these the design consists of files of wingless birds, perhaps downy, immature, or with pinfeathers, like Seler's figures 300, 301. In 44e, there are two tiers of birds, and they are filing to the right; their legs are W. They are also W-speckled, whereas in 44 d the spots are dark on W.

Our plate 3 f (8554) is very similar to the present 44 c , even to W speckling, two tiers, and filing right.

The birds painted in the upper zone of the angled goblet plate 38 g are also similar to the foregoing and to Seler's figures 300-301.

Martin-Vegue's plate 45-A-7 is very similar to Seler's figure 300 in design as well as in the shape of the shallow bowl. In addition, his plate $45-\mathrm{A}-7$ shows quartering on the bottom, which indicates phase $B$ as the approximate period of this style of bird representation.

The present plate 37d, already described above, shows another bird similar in being executed with crudity, in silhouette, heavy footed, but with a certain freedom of movement. It also has a peculiar blunt rectangular beak. This beak recurs unmistakably in Seler's figure 302. The feet there are simply crossed, whereas in 37d they are two-toed; both, at any rate, are aberrant: Nazca bird feet are normally three-toed. The Seler birds are humped (like 44c), with small triangular wings, whereas in 37d the wings are three-feathered, with the feathers snake-headed: they are square-ended, as against more normal rounding ; this seems in conformity with the square-ended beak. Seler's birds are in three tiers around a shape-J goblet higher than wide, and are unquestionably B rather than A in phase, with which attribution the wings of 37 d are in accord-if indeed their sloppy execution does not rather suggest B-Y. (In line with this lateness are the somewhat different though also sketchily silhouetted birds in Seler's figure 301, which are associated with yellow-women's-faces-in-rows so reduced in execution as to stand stylistically at least as near full Y as full B.)

A third (or fourth) species of silhouetted bird appears in 1927 plate 10 g , an M-shape tapering vase, with three tiers of figures. This bird has a turned-over parrotlike beak. (We called it a parrot in 1927, fig. 3, no. 37.) It shows an erect, longish neck, two narrow erect wings, a long forked tail, three-toed feet directed forward and painted cursively. All these last four features recur in Seler's figure 299b; though the beak of this is different: long, downcurved, open.

What all these birds beginning with $44 \mathrm{c}, \mathrm{d}$ have in common is that (1) they occur in files instead of as substantially single units; (2) they are largely or wholly in sketchy silhouette, unbordered, whereas most Nazca birds are taken to pieces and their parts presented in contrasting colors, and bordered; (3) the feet in this group are large, "plantigrade," and drawn with a wide brush; (4) wings are often lacking, never elaborate; instead there may be a humped back; and (5) in about half the cases the body or its contour is dotted, as if to indicate pinfeathers; which accords with the winglessness. As several different species are obviously represented among the examples of this class, it may be that the common feature represented is immaturity of the bird. Part of the examples manifestly date from fairly late in the development of the Nazca style-B or B-Y-and none are clear A.

44e: 9083 . The design is one of the typical representations of birds as they were developed in Nazca A, perhaps to continue part way into B. The crop on the throat is conspicuous. Note the S-line over the eye, the feet turned both fore and aft, and the narrow ray-feathers bordering (and overlapping) the tail. The several repetitions are crowded: the beak of the whole figure shown in the photograph is pushed into the wing of the preceding bird-in fact it has crowded out the middle feather. The remainder of the forward bird is also condensed: note the shortened tail. It is clear that the bird in the center of the photograph 44 e was the first one painted. When the potter had nearly completed the circuit of the bowl, there was insufficient room left, and the final bird (the one on the left of the photograph) had to be telescoped.

44f: 8932. I do not rid myself of a half-conviction that the designs just below the rim represent birds-with neck, head or eye, a decoratively doubled beak still remaining. But why the "millipede" effect? Perhaps a chimera or combination animal? The banding suggests relative lateness of the piece.

## Plate 45

## Nazca

## F-H High Bowls with Repetitive Pattern

The measurements of the 8 simple-design F-H bowls shown in this plate are given in table 22.

45a: 8936. Slings on a B background; the miniature is a space filler. Compare Seler figures 423-426.

45b: 9089. Also on a B background; eleven loops of six festoons; in successive order from the top down: W, R, Y, G, Y, W. For this sort of simple "color exercise" compare plate 29 g , A-4789; also 33a, F4-4695.

45 c : 9097 . The unit of design resembles Seler figures 393-395, which he interprets as a capsicum pepperpod. The middle of each unit is $W$ with a row of dots, bordered along each side by a streak of color. The sequence of these colors is: Y O Y B-Y O Br-Y B-Y O B-Y O B-Y O B. There is some wavering from a basic Y O B grouping to YO Br to YO or Y Br or Y B . The background is Dark R.

45d: 8604. A very similar bowl, the colors, however, being a regularly alternating brownish O and a B, around a W middle. This piece which we classed in 1927 as shape F , with $\mathrm{H} / \mathrm{D}$ ratio of 71 per cent, and the preceding $45 \mathrm{c}, \mathrm{H} / \mathrm{D} 73$ per cent, again evidence the intergrading of these two "shape classes."

45e: 8446. Design, bean pods; compare Seler figures 375-378.
45f: 8438. Design, trophy heads. The half-circle eye is on a level with the nose; the upper lip is abnormally long; a bar of paint crosses the cheek; there is beard on the jaw; and a sort of turban is worn. Compare plate 3a, 8598, shape H , and 1927 figure 12a, 8581, shape H, two rows of heads; also Seler, figures 187, 188.
$45 \mathrm{~g}, 8535, \mathrm{~F}$, and $45 \mathrm{~h}, 9086$, H, differ about as much in design as in shape. Both are W-bordered, but 45 h also has W divisions into panels (like $45 \mathrm{c}, \mathrm{d}, \mathrm{f}$ ), of which there are only half lengths in 45 g . In both, half the "step" is oblique-angled; but 45 g combines it with a "fret," square at the corners but round at the end. In both,
the design is complementary, the formal design unit consisting of two interlocking, reversed halves.

The same designs, but consistently rectangular, undivided, and also W-outlined, appear in 2e, f. Compare also Martin-Vegue plates 45-B-7, 46-A-1, 46-B-5.

TABLE 22
Repetitively Patterned F-H Bowls in Plate 45

| Fig. | Cat. no. | Type | D | H | Conc. | H/D per cent | Spread |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| a. | 8936 | F | 143 | 96 | 5 | 77 | $12^{\circ}$ |
| b. | 9089 | F | 132 | 86 | 4 | 65 | $12^{\circ}$ |
| c. | 9097 | H | 142 | 104 | 3.5 | 73 | $13^{\circ}$ |
| d. | 8604 | F | 140 | 97 | 4 | 69 | $13^{\circ}$ |
| e. | 8446 | F | 122 | 85 | 6 | 70 | $15^{\circ}$ |
| f. | 8438 | H | 153 | 107 | 7 | 70 | $17^{\circ}$ |
| g. | 8535 | F | 147 | 108 | 4 | 73 | $12^{\circ}$ |
| h....... | 9086 | H | 170 | 95 | 2 | 56 | $17^{\circ}$ |

Plate 46
Nazca
F-H High Bowls and Cat Jar
Plate 46 continues with examples of F-H bowls (a-f) and concludes with an unusual cat-head jar (g).

The measurements are presented in table 23.
TABLE 23
F-H Bowls and Modeled Cat in Plate 46

| Fig. | Cat. no. | Type | D | H | Conc. | H/D per cent | Spread |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| a. | 8470 | F | 143 | 117 | 4 | 81 | $8^{\circ}$ |
| b. | 8648 | H | 133 | 83 | 3 | 62 | $12^{\circ}$ |
| c. | 8579 | H | 166 | 117 | 4 | 70 | $12^{\circ}$ |
| d. | 8997 | H | 135 | 91 | 7 | 67 | $15^{\circ}$ |
| e. | 8709 | F | 136 | 95 | 4 | 70 | $15^{\circ}$ |
| $f$. | 8484 | H | 142 | 95 | 7 | 67 | $16^{\circ}$ |
| g. | 16-7851 | ps-Q | 111* | 76 | . | 68 | $\ldots$ |

* Mouth diam., 49 mm ., is 44 per cent of max. diam.

46a, $8470, \mathrm{~F}$, is unusually tall. It shows five repetitions of a design, with double paneling dividers, on a $B$ background. It is not clear what the three-pronged design (cf. pls. 39f, 43d) stands for, nor the W dots that border it. The latter recur in plates $4 b, 11 b$, which are Nazea B, and in 12e, 13f, which are Nazca Y, whereas the present bowl, in spite of its height, is almost certainly Nazca A. A nearer parallel is to be found in the next illustration, 46b, and perhaps in Martin-Vegue plate 45-B-2.
$46 \mathrm{~b}, 8648, \mathrm{H}$, carries four and one half units of a double spiral on a B ground studded with W dots. The spiral recurs in Martin-Vegue plate 45-B-4 ; similar dots, though fewer, in 46a.

46 c, $8579, \mathrm{H}$, has no close parallel known to me for its main design of concentric loops or U's except Ocucaje B4-4638, shown drawn in figure 8. The surrounding W hooks are closely paralleled in plate 29c, an E-shape bowl from Ocucaje, A-4490. As this is early A period or pre-A, a similar or not much later dating is indicated for the present specimen. The leftover space proved too narrow for a compressed version of the design unit, so a wholly different one was used for filler.

46d, 8997, H, shows an over-all, highly conventionalized trophy-head pattern. The nearest analogue in Seler is figure 173, and that is not too close; also 1927 figure 3, no. 30, "curvilinear head series."
$46 \mathrm{e}, 8709, \mathrm{~F}$, is similar to the last in its columning, and in carrying four tiers in each column. The slight curvature of the contained four strokes is reversed in each tier; but the main organization of the patterning is owing to the varying slope of the three pairs of lines dividing the tiers. These have something of the effect of the "overlapping lines" element of 1927 figure 3, no. 13, of 1927 plate 21a, and of present plates 41e, f, 42c, d. But there might also be connection with the capsicum pods of Seler figures 392, 393.
$46 \mathrm{f}, 8484, \mathrm{H}$, is a better rendition of the color, values, and crucial right and left ends of the design of plate 3d. This seems a later piece than any other in the present plate; or perhaps a late imitation of an early design. Some of the outlining is quite unsteady. Note the stepped mouth area without mask or whiskers; trident tongue ending in snake (?) heads; W snake-headed locks (?) or fillet ends (?) beside the face; long bent arm holding an atlatl (?); feet just behind head; spined body with swifts (?) in the interstices; tail ending in a head with side whiskers and hands having thumb nails.

Plate 46 g , no. 16-7851, given to me personally as I left Nazca in 1926, is the only vessel in the last six plates which is not a high F-H bowl. It is a recurved convex lipless jar of shape pseudo-Q, but worked into a cat head with modeled projecting nose and ears. It is 111 mm . in diameter, 49 across the rim, 76 high. The background is blackish, the painting $\mathrm{W}, \mathrm{B}, \mathrm{R}, \mathrm{Br}$. There are conspicuous feline whiskers, but no mouth mask, and conspicuous eyebrows. Over the middle of the lower lip (and "central tooth") is painted an oval yellowish Br spot.

I paid no particular attention to this piece, assuming it to be Tiahuanacoid. It is certainly outside the main Nazca tradition as we know it so abundantly. But when I showed it to Dawson, he immediately diagnosed it as early, containing Chavín influences; and with this judgment I now agree. It is somewhat outside the Nazca stream because it is literally proto-Nazca. It is not straight Chavín nor straight Paracas Cavernas as represented at Ocucaje in the Truel collection; but it seems to lean in their direction.

The nearest analogue I can point to is Martin-Vegue, plate 45-A-3, a small W or whitish bowl or jar painted, in outline only, with a cat head on its front. This vessel curves in toward the rim much less than 46 g ; but it turns in more than any determined bowl shape in Nazca; and the author has labeled it "miscellaneous" as style phase-or perhaps with reference to our 1927 shape class "Z, miscellaneous." The painting shows these features in common with 46 g : pointed whiskers at the sides of the mouth; nostrils (modeled in 46 g ) ; eyebrows large and conspicuous,
of several parallel lines or stripes; mouth roughly oval, with vertical lines separating the teeth.

Our 46 g , though related to shape-Class Q, "lipless jar," nevertheless is actually nearer to the pseudo-Q jars or bowls discussed in Part II. It continues the convex curve of its lower half on into the upper half, where $Q$ jars tend to straighten out toward the rim, whether they are plain A-period or design-painted B-period pieces. Coupled with this difference is the fact that the ratio of mouth diameter to maximum body diameter is visibly lower for 46 g : 44 per cent, as against $50-75$ per cent for all but one of the $Q$ jars in table 7, and 70-79 per cent for the pseudo-Q jars of table 8 in Part II. The Martin-Vegue piece is 76 per cent, and is more decidedly bowl shape than any other.

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Lawrence Dawson found mislaid specimens, measured many vessels, sketched their contours and sometimes design, and discussed point for point with me, out of his varied knowledge of Peruvian ceramics and particular study of the University's Nazca-style collections. He is engaged in an intensive analysis of the development of that style, in comparison with the prospective constructive results of which my present ones are mainly corrective only.

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## PLATES

Plate 31. Ocucaje graves A1, B4, 5 .


Plate 32. Ocucaje graves Cb, F4, 8, 18, 20, 22.


Ocucaje graves $\mathrm{Cb}, \mathrm{F} 4,8,18,20,22$.

Plate 33. Ocucaje graves $\mathrm{F} 4,6,14,18$.


Plate 34. Ocucaje graves F2, $3,6,10,13$.


Plate 35. Ocucaje graves F3, 9 (A-plus phase).


C

e

b

d

f

Ocucaje graves F3, 9 (A-plus phase)

Plate 36. Nazca interior-painted plates Ac.

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Plate 37. Nazca low-bowl shapes B, D, E.


Plate 38. Nazca bowls, plates, goblet (late), jar (early).


Plate 39. Nazca goblet shapes J, K, L.


Nazca goblet shapes J, K, L.
[425]

Plate 40. Nazca cylindrical jars, shapes I, M.

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Plate 41. Nazca high-flaring F-H bowls, bottom-painted.


Plate 42. Nazca F-H bowls, cat-deity designs.


Plate 43. Nazca F-II bowls, cat-deity and snake designs.


Plate 44. Nazca F-H bowls, bird designs.


Plate 45. Nazca F-H bowls, repetitive designs.

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Plate 46. Nazca F-H bowls and modeled cat jar.


Nazca F-H bowls and modeled cat jar.
[432]


[^0]:    ${ }^{1}$ The two earlier papers discussed here have plates numbered as follows: Gayton and Kroeber, 1927, pls. 1-21; Kroeber and Strong, 1924, pls. 25-40, of which only pls. 25-29 are referred to here. In text references to the plates the dates of the papers are omitted since the plate number alone is sufficient to indicate the source; thus:

[^1]:    ${ }^{2}$ Described in Kroeber and Strong, 1924.

[^2]:    ${ }^{8}$ Already by 1930 the wish evidently had become occasional father of a misremembering that we had done so. In "Cultural Relations between North and South America"" in the Proceedings of the 23d International Americanist Congress, I find myself saying: "Calling the homogeneous lot from (Ocucaje) Ica, Nazca A, Gayton and I were able to segregate the mixed lot from Nazca Valley into style Nazca A and Nazca B . . . Gayton was able to demonstrate the objective validity of each of the two styles by a statistical correlation." ( X is ignored.) This certainly seems to

[^3]:    imply, erroneously, that we began with the Ocucaje touchstone and validated by correlation, instead of the reverse.-Style phase A is characterized in this passage as restrained, somber, and severe; B as bright, flamboyant, proliferating, rapid, flowing; Y as being simple to the point of degeneracy, but also still containing some flamboyances, extensions, flowing quality-in short, being an abbreviated, cursive B. (P. 8 of the article.)

[^4]:    ${ }^{4}$ Kroeber, 1944, p. 36; also p. 117, App. A.
     sort of "cumbrous bowl" of post-Nazca period but is specified as not from the grave. The grave contained 8 ceramic pieces: the 4 not shown in $29 \mathrm{c}-\bar{d}, f-\mathrm{g}$, and the total assemblage are discussed in Pt. III in the text section referring to pl. 31 of this paper.

[^5]:    ${ }^{6}$ The painted textile in Kroeber, 1944, pl. 12b, though not from grave A1, is evidently also Paracas-Nazca transition in time, if not full Paracas, because of its resemblance to Kroeber, 1944, pl. 12b from the Truel-Ocucaje-Paracas collection.

[^6]:    ${ }^{7}$ See fn. 3 above.

[^7]:    ${ }^{1}$ The proportions of $16 f, 15 \mathrm{~d}, 9 \mathrm{~d}$ are: $\mathrm{H} / \mathrm{D}$ mouth, $85,98,147$; min. D/D mouth, $58,48,70$; base $\mathrm{D} / \mathrm{D}$ mouth; 60, 52 , 95 -not a homogeneous type; 9 d is particularly deviant.

[^8]:    ${ }^{2}$ These 9 vessels have not been included in the description and discussion of F -H bowls below, nor of C1 and C2. They agree with the F-H class in their H/D ratio of 60 per cent or more; but F-H designs are phase $A$ and X, not B. Conversely, the present lot agrees with C1-C2 in having phase-B design, including bottom-quartering; but C1-C2 H/D ratio is less than 50 per cent.
    ${ }^{8}$ The lowest and next to the highest of these proportions come out as 96 and 126 per cent on somewhat ampler measures for specimens 8795 and 8395 as cited by us in 1927 on p. 43 in the list of smallest and largest vessels of each shape. Or rather, I must say "miscited," since the line for shape I has been displaced by the printer and put after the lines for $\mathrm{J}, \mathrm{K}, \mathrm{L}$. When corrected (by the specimen numbers given in the complete listing on p. 44), the shapes on p. 43 run in this order: ...G, H, J, K, L, I, M, N. . . Or, to correct, emend at head of lines as follows: $\mathrm{I}>\mathrm{J}, \mathrm{J}>\mathrm{K}, \mathrm{K}>\mathrm{L}, \mathrm{L}>\mathrm{I}$.

[^9]:    * Top and bottom zone alike.
    $\dagger$ Middle zone is plain red band. Top and bottom zone alike.
    $\ddagger$ In place of 8958 listed in 1927, probably by error.
    \& Geometric design.
    * Mate of 8473.
    $\dagger \dagger$ Irrespective of sign.

[^10]:    ${ }^{4}$ The lipless jar $Q$ and the bulbous I vase $O$ constrict toward the mouth, but in an essentially straight in-slope, without the in-curl or roll we attributed to type K .
    ${ }^{5}$ Smallest and largest, 1927, p. 43: the line for shape " J " actually gives the K goblets 8903 and 8584.

[^11]:    ${ }^{6}$ The Chicago numbers are $170686,170691,170764$. There may be others in the collection.
    ${ }^{7}$ I have also considered in this connection $27 \mathrm{~b}, 27 \mathrm{~h}$, but have decided that fundamentally they are F bowls. Their H ratio is 80 or less; their Base/Mouth ratio, 75 or less.

[^12]:    ${ }^{8}$ Means, 1917, pls. 3:2 and 4:2, shows views of two sides of a vase that is neither M nor N . It consists of a bulging bowl, something like the lower half of shape $W$, surmounted by a gently spreading cylinder more than twice as high. The total height in his $4: 2$ is 71 mm ., the maximum width below 45, the minimum above it 40 , the mouth $42 ; \mathrm{H} / \mathrm{W}$ thus is 158 per cent, which is nearer M than $N$ proportion. There are three zones of design: at the bottom a face (wearing a sling behind), covering the bulge; a wide zone with a cat deity among tadpoles; at the rim, a narrow band of trophy heads. The style is B.
    ${ }^{9}$ The Chicago museum numbers are: 170708, 712, 723, 730/28, 732-1, 736, 739, 740, 771, 772, 773.

[^13]:    ${ }^{10}$ The Chicago museum numbers are: 170685, 687, 688, 702, 725.
    ${ }^{11}$ Contrast the P-shape vessel 170723 from grave 10, whose rim diameter measures 76 mm . in its photograph, but 12 mm . below the rim has shrunk to 73.5 mm .
    ${ }^{12}$ Numbers 170682, 690-2, 700.
    ${ }^{18} \mathrm{Pl}$. 4e has an anomalous cylindrical single-rod handle-perhaps rather a spout, since it is open at both ends. It also has the widest mouth of all jars figured by us in 1927: 54 per cent

[^14]:    of the height. With $R$ and $S$ arbitrarily distinguished below by Rim/D ratios above and below 50 per cent, this piece, 8578 , would be basically $R$ rather than $S$, or than $T$, as we classed it on account of its handle-spout. But except for the abstract idea of our word "handle," one prominent cylindrical projection is not the same as two cylindrical lugs-either formally or functionally. For the same reason I do not include with the two-handled class $T$ the three-handled 28i, which my 1926 Nazca excavations established as a type instead of an anomaly. The shape of the body, the tapering cambered mouth, the size of the handles, the standardized texture and design-all signalize this three-handled type as far removed from class T.

[^15]:    ${ }^{14}$ The piece, 4711, was found near grave F6, not in it, Uhle specifies; but the snake deity and the stars on it are A-style painting. I first measured the illustration, which yielded 64, 80, 17 per cent, as against the figures cited above based on measures of the pot itself. In spite of the small size of the illustration, the percentage proportions come out essentially reliable except for collar height, which is too minute in the picture.
    ${ }^{15}$ But not always. Fig. 10, discussed in Pt. III, shows an A-period non-handled narrowmouth S shape ( $\mathrm{F} 12-4748$ ), whose rim D/max.D is as low as 36 per cent, with H/D 93 per cent. This is a very heavy piece, dark red with a black band, carrying an overpainted perhaps fugitive design.
    ${ }^{18}$ As painted ware. Unpainted two-handled wide-mouth jars already occurred in A: Ocucaje F4-4702 is a rough buff pot 108 mm . high, 138 body D, $95 \operatorname{rim} \mathrm{D}, 83$ neck D, 21 H of collar; H/D ratio is 78 per cent, Rim/D 69 per cent, H/coll.H 19. The fairly sizable handles project beyond the body $11-12 \mathrm{~mm}$. (contrary to those on later painted T jars), spreading the calipers to 161 mm . This may have been a cookpot.-Similar are F13-4751 and F13-4752, pl. 34e, $f$ of the present paper, described in Pt. III; except that these are incised, as F4-4702 is not.

[^16]:    ${ }^{17}$ This piece, 8886, has the white outlining of the design perceptibly raised above the colored figures and black background. The white may have been put on last; I found no sure indications one way or another; but the white pigment must have been somewhat viscid. I suspected that it might have been laid into incisions, but could not detect traces of such. The continuous pattern is one of 6 step-frets complementary with the black background, in the order: Lt R,G, R, Lt R, $\mathrm{Dk} \mathrm{Br}, \mathrm{V}$. The lower row follows the same order but begins with $R$ under the Lt $R$. The spouts and bridge are painted $B$, the top of the body $R$, the bottom is extraordinarily flat. The quality of work is superb. I consider the piece very early: formative Nazca A, with reminiscences of Paracas tradition.

[^17]:    * Strictly, 8466 is Acr. The center has a bold vegetal design, which might represent sprouting beans. The rim design is geometric on $R$ ground. It is crossed by bars alternately $Y$ and $B$ both $W$-bordered. The $R$ space between bars is bisected by a B line, and the $Y$ bars themselves are similarly B-bisected. See Pt. III, text for pl. 36 .

[^18]:    ${ }^{18}$ This piece exceeds our old shape I, "angled goblet" (discussed above), in the degree to which its inward bend at the middle approaches a right angle.
    ${ }^{19}$ Not counted as C1-or as C2-are 9 concavely flaring bowls classed in 1927 as I, angled goblets, but now excluded. Four of these have quartered bottoms, and all are B or late B in design; but their H/D ratio is too high ( $60-73$, mean 67 per cent) for C1-C2.

[^19]:    ${ }^{20} 29 \mathrm{~F}$ pieces, 31 H were available.
    ${ }^{21}$ I measured 28 F pieces for concavity, 18 for degree of slope of side; 19 H for each. Concavity and slope are measured by holding a ruler edge tangent against the most protruding parts of the side, wherever they come; concavity is then measured with a narrow ruler across the daylight showing between the bowl's hollow side and the first ruler. Slope is measured by manipulating a transparent plastic protractor in front of the first ruler.

[^20]:    ${ }^{22}$ Nine flaring bowls which I exclude from their 1927 attribution as angled I goblets (see $n$. 2,19 ) have not been included in any of these five classes. They resemble the first three in being of late period, the last two in their H/D ratio.

[^21]:    ${ }^{23}$ This is not forcing the point, since 25 h is early Nazca and the tall $P$ forms are middle or late Nazca, in line with the obvious tendency of most vessels to become higher-or lower-as the style developed. For low $P$ vases in Nazca $A$ at Ocucaje, see pl. $28 \mathrm{~m}, \mathrm{n}, \mathrm{H} / \mathrm{D} 92$, 102 per cent.

[^22]:    ${ }^{24}$ We say: " 91 ," but the description shows that 9 k is meant.

[^23]:    ${ }^{25} 13 \mathrm{~b}$ is hard to place, though there is design similarity to 17 e .
    ${ }^{28}$ The shape is Tiahuanacoid, the painted design element resembles that of 17 c , which I now class as Nazca A. See below.

[^24]:    ${ }^{27}$ Commented on in 1927, p. 29.
    ${ }^{28}$ By Nazca-Y times Mochica influence may well have been occasionally reaching the Rio Grande Valley. Compare the stirrup-mouth 19b, which is polished R, Y, B, and W, well painted.
    ${ }_{20}$ The bowl is chalk white, with a black line (both on the inner and the outer side) in the groove between each of the convexly raised whorling spirals. The bottom is completely flat (except for the swelling of the whorls) ; the sides rise at about $70^{\circ} ; \mathrm{D}$ is $103 \mathrm{~mm} ., \mathrm{H} 60$, percentage 37-basic shape E.

[^25]:    ${ }^{30}$ I use U1, U2, not Ua, Ub, because the U1 form runs on from period A into period B.
    ${ }^{31}$ Cf. the wide collars of 8a, shape $X$, and 8 c , shape $W$.
    ${ }^{32} \mathrm{Xm}, \mathrm{Xw}, \mathrm{Xe}$ might also be used for $\mathrm{X} 1,2,3$, (man, woman, effigy).

[^26]:    ${ }^{1}$ Nazca style, A-Y, 112; style of Ica, 12, foreign style from Nazca, 7; total Uhle from Nazca region, 131; American Museum, 12; total, 143.

[^27]:    ${ }^{2} 27 \mathrm{t}$ has six figures, five of which I construed as frogs, one as a salamander. But salamanders are rare in South America, and I doubt if any occur on the arid Peruvian coast.

[^28]:    ${ }^{8}$ Another crustacean, suggestive rather of a river-mouth prawn (camaron) than of a lobster, is shown in fig. 9b. It is on the side of a bowl, F1-4676, H 108, D 195, H/D 55 per cent.

[^29]:    ${ }^{4}$ B4-4638 of fig. 8 has five units of design on what I consider an E -shape bowl in spite of a slight concavity of its side. The D is 124, H 72, H/D 58 per cent.

[^30]:    ${ }^{5}$ The nearest is pl .7 b , a head jar, then attributed to shape-class Y , where the ratio is 60 per cent.

[^31]:    ${ }^{0} 8957$ does not occur in our 1927 classification list, but there are two 8958 's, under K and under O. I assume there was a misprint, and that 8957 was put in $K$ then as now.

[^32]:    ${ }^{7}$ So under the calipers; in the photograph the maximum is in the lower half.

[^33]:    ${ }^{8}$ The German word Dämon preserves more of the original sense of Greek daimōn than does English "demon," which implies evil.

