

REVIEW ON THE HONGKONG NEOLITHIC
COLLECTION.

BY P. L. YUAN.

Geological Survey of China, Peking.

For the study of the distribution of the neolithic culture, the collection personally made from the field by Dr. Heanley is a new addition of great interest. It contains 25 stone implements and 12 pieces of pottery from several localities near Hongkong. By these finds the known neolithic area in southern China extends a little further east; for, so far as we know, stone implements have been recorded in Yunnan, Kwangsi, and Lei Chou Peninsular in Kwangtung.

At the present stage of our knowledge, Neolithic culture was quite widely distributed in China. Any information of its present extent is valuable. On the other hand, however, the problems that a field archaeologist bears always in mind, are whether the topography that the Neolithic people chose to settle has undergone any changes in favour of or against the preservation of the ancient sites, and whether the climate too has had any fluctuations. These again lead to the indication as to how the Neolithic people chose their settlement, that is, whether on plateaus, on lowlands, in caverns, or in pile-dwellings, and thereby marks the differentiation of occupation, culture, and probably of race and chronology.

Leichow Peninsula has long been known to have stone implements, especially abundant after rain and thunder storms. The older people thought the stones were implements of the thunder God and called them Lei Fu, i.e. thunder-axe. From Lei Fu is derived the name Leichou for naming the Peninsula (See Miscellaneous Records of Kan Hsi).

In this connection, the remarks made by Dr. Heanley in his note, that the implements were mainly collected near some smaller inlets and narrow side-streams, bears a strong resemblance to the Leichou area and is very suggestive from the fact that the implements occur upon the surface more abundantly after rainwash. The reviewer has not enough knowledge of the topography of the region to say whether a search upstream at the different localities would pay for finding some undisturbed sites. On the other hand, the fact, that complete erosion of the sites has been accomplished, is also possible.

Axe:—Of the implements themselves, there are several prominent features in this collection. There is only one specimen which we can call an axe. The differences between adze and axe best made out by Flinders Petrie are tabulated for reference.

*Axe**Adze*

- | | |
|---|---|
| 1. The edge parallel to the handle. | 1. The edge across the handle. |
| 2. Mounted into a handle or a handle into it. | 2. Bound on to a handle in general (Pl. XVIII). |
| 3. Equal faced and edged. | 3. One face longer or flatter, and usually ground on one side. |
| 4. To drive into wood to split it. | 4. To take a thin slip off a large mass. |
| 5. A short body and means of pulling it back or twisting it loose from the grip of the cloven wood. | 5. A long body and (in ancient times) only a weak attachment to the handle, as it was never struck in deeply. |
| 6. Is thick in order to bear shock and carry weight. | 6. Is thinner; strength not required. |
| 7. Axe is earlier type in general. | 7. Adze long preceded the axe in Egypt. |

Out of the 25 pieces of stone implements the only one under the above categories (esp. 1, 3, 4, 6) that can be regarded as an axe is No. 3. It is rather of a shorter type. (see later in the paragraph on "rectangular index").

Adzes:—Far larger in number are the adze group. For 13 of them i.e. Nos. 14, 19, 17, 16, 10, 13, 11, 4, 24, 8, 5, 6, 18, belong to this class. All of them are rather small and thin. The proportion of their width and height varies, this will be dwelt with in a later paragraph.

Three others, i. e. Nos; 15, 23, 20, being in a broken state, show no edge. It is interesting to note here that the transverse section of No. 15 roughly shows a pyroxene prism, quite different from the ordinary, somewhat rounded, rectangular section of adzes.

Adze-Scraper:—Five implements, i. e., Nos. 12, 2, 1, 7, 9, (also slightly No. 6) though belonging to the adze, have a very singular feature in not having the lateral symmetry. Looked at from their longitudinal section, they are

W. H. Flinders Petrie: Tools and weapons, p. 5.

adzes. But on lying flat, with the sharpened side upward, their right end slopes upward and is shorter than the left end. There is none of this kind for comparison at hand. By all indications, and some trial for polishing and scraping, I reach the conclusion that they were first intended as adzes and later specialized for scraping. They are used as right-handed implements held in the hand with the sharpened edge downward. If one moves it toward one's body on a board, or a plank, or a piece of hide, one would be able to do some scraping. Thus I put them under the *scraper* or more carefully *adze-scraper* class.

(The iron axe which Dr. Heanley sent for comparison with Nos. 1 and 2, is by no means a parallel to them. First it has a longitudinal symmetry. Secondly its edge being parallel to the handle makes it an axe, whereas Nos. 1 and 2 are evidently adzes. Thirdly the edge which looks sharpened on *one side* of the iron axe is a deformation after usage, not by scraping but by a strike downward and a little sideward).

Axe-Adze:—No. 22 is a broken one, but shows the cutting edge clearly. At the first sight one finds its shape somewhat puzzling. For after a close observation, one can notice that there are two stages in the development of its shape. It was originally intended for an axe. Then it may be either due to wearing after use, or done by the maker from its very start, that the longitudinal section at one side is symmetrical while that on the other side is not.

Hafting of the adze in the handle:—Of the above 22 adzes a few of them are shouldered and have quite clearly the tang for hafting into a handle. These are Nos. 20, 19, 2; 6. This feature is common in Southeastern Asia, as also found in the Neolithic implements in Indo-China, India, and the East Indies. They are comparable but not identical. Probably N. 20. from Hongkong may correspond to the one shown as No. 2 on Pl. III in the Memoir Vol. X Fasc. I, published by the Geological Survey of Indo-China. For the rest, the Indo-Chinese ones have longer tangs than those of Hongkong. Also there is another prominent difference in that the Indo-Chinese specimens have angular sides; in other words the transverse section of the tang of Indo-Chinese specimens are rectangular whereas the Hongkong ones are more or less oval, probably not due to later weathering either.

Dimensions:—The size of the axes and adzes are all measured with a vernier forceps. The items are noted down in the accompanying table.

Rectangular Index:—For the reason that these adzes are not only of various sizes but also vary in the relation of their height to their width, I have coined a term "rectangular index" to denote this ratio; the figures are obtained by the formula:

$$\text{Rect. Index.} = \frac{\text{HEIGHT} \times 10}{\text{WIDTH}}$$

The multiplier, 10, is simply to avoid one place decimal point which is all that is necessary for sufficient accuracy. As shown from the table the shorter types have 13, and the long types have 20, as an average.

It is hoped that after a greater compilation of these indices one will be able to trace the difference in the development of shape according to its utility.

Hoe:—No. 21 has a sharp symmetrical, widening knife edge, and a short handle or tang bending about 45° from the plane of the blade. To explain the bending tang of an axe seems somewhat difficult; though possible. From a comparison, with one used later in the Egyptian Iron age, it seems more probable that it belongs to the hoe class. The only difference in the stone and in the iron ones is that the former has a tang to put in the handle whereas the latter has a caved roll to put the handle in. An additional observation is that this shape is probably the most economically made, with the largest edge and the least blade possible.

Hammer:—The one marked "hammer stone from Cheung Chow" is a broken one and only shows the hammering part. Its transverse section is not round or rectangular, but trapezoidal. A feature which is somewhat unusual among pestles. Further examination beyond this is not possible.

Pottery:—The pottery amounting to 12 pieces falls into two classes: (1) One of quartz sand and (2) the other of red clay.

The first class looks like a very coarse one but it is of a quite high technique. The method, of making pottery of quartzsand pasted in clays, requires a knowledge of the right proportion of mixture and the intensity of heat. This knowledge is quite a measure of some long experience. I know of no other locality yet that is said to have the same kind of coarse-sand pottery, except the one that Dr. Li Chi and I personally dug last fall at the Neolithic Site at Hsi Ying Tsin in southern Shansi. In our finds, some are simply of the gray color, while others are painted with a very thick deep-red paint of high polish. The Hongkong pieces certainly are comparable to the unpainted ones.

This kind of coarse-sand pottery is comparatively thick and usually from a large ware, most probably a container of grains.

The other, that of red clay, was also different from our northern Chinese find. The material is different because at the south latitude the under hydrated clays do not occur. The incised pattern is of a quite different

kind. Some of the Japanese seem to be comparable. Though these few pieces could not be relied upon to judge the whole culture of that bygone day but by what little they show they indicate a very careful pains-taking way in modelling and incising. The incised lines are of equal breadth and depth and show no irregularity or free sketching.

Chronology:—For chronology, the Hongkong finds, meagre as they seem to be, represent in a general way the Southern Neolithic culture, having somewhat a relation with India, Indo-China, the East Indies, and their eastern prolongation into Japan. Taken for granted that they are, as a tentative conclusion they are probably of a later date than the northern Neolithic culture which we call the Yang Shao culture.

Since the pottery and the stone implements are not found in situ (that is, they are not in the same state as they were originally deposited), it is also possible to doubt whether they are of the same period.

Note: From the verbal information of Mr. Carl Bishop he has found pieces of coarse grey pottery in quite many places but the specimens have not been examined by the reviewer.