

ARCHAEOLOGICAL FINDS ON LAMMA (遼舶洲)
ISLAND NEAR HONG KONG.

PART VI.

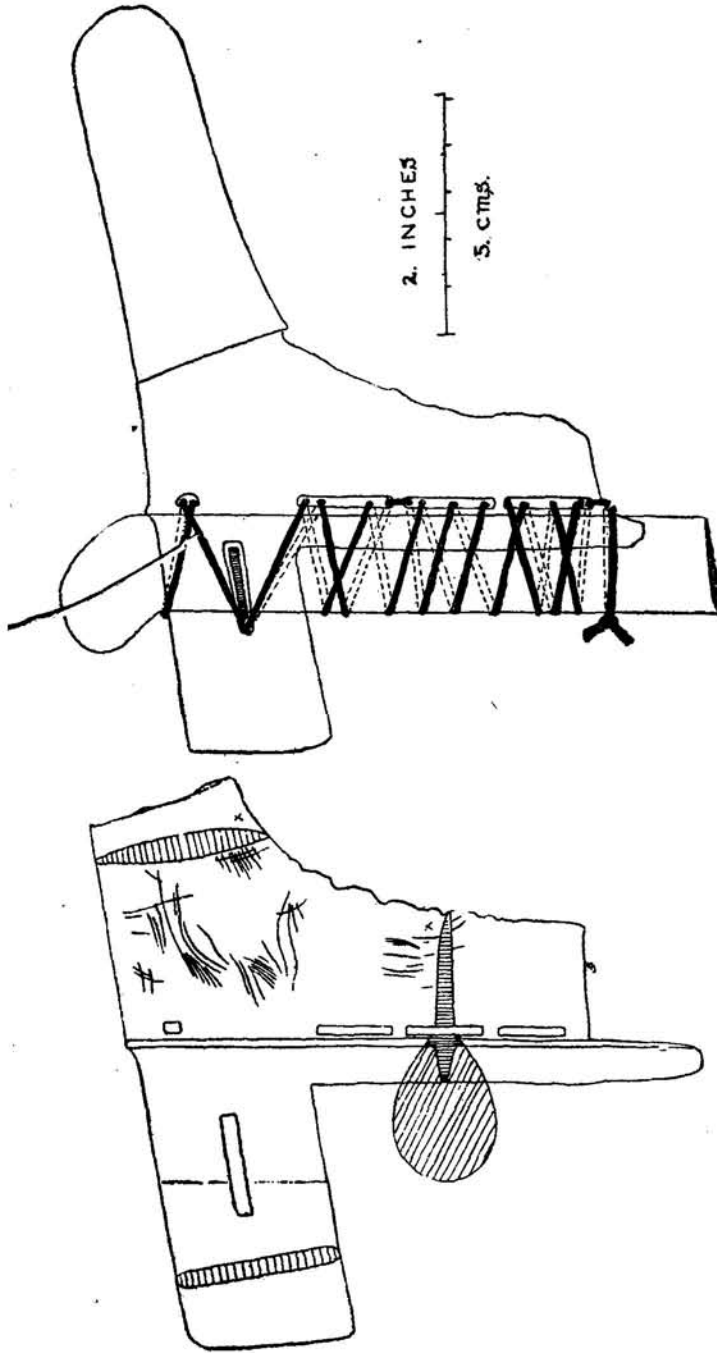
By D. J. Finn, s.j.

Among the finds made at Tai Wan on Lamma Island, there are several specimens, all broken and some very fragmentary, of the distinctively Chinese weapon, the "ko" 戈 halberd. The importance of these finds is very great, for the weapon is clear evidence of *Chinese* contacts, the form of the specimens classes them as of *one* period and it is possible to suggest an *approximate dating* for that particular type. After dealing with that weapon, other specimens of weapons found will be described.

Much literature is available on the development of the "ko" 戈 and in order to obviate long discussion, the principal works consulted have been grouped together in the bibliography at the end of this article. My object is to use these specimens as a time-index and for that I must first summarise what is known about the weapon. It is acknowledged by all that it started as a knife fastened more or less at right-angles to a long staff so that the knife-handle projected towards the rear: the knife would perhaps have been of the shape reproduced in H.K.N. Vol. V, Plate 10, No. 2 and Text-figure 2, No. 2. This shape is found in bronze even with the notch at the angle of the shoulder and blade (45) Part 3, Plate V, 1 and a very similar weapon was actually found in the face-down (*idem*) burials at An Yang (Shang period). The evolution of the type proceeded along two lines, the more practical one producing at one of its later stages our Lamma form. In this the knife (or dagger) is braced in two ways: first by the addition of a bracket in front which we may call the "gorge" (the Chinese archaeological term is 胡, "dewlap") and then the lower edge of the blade was run down the whole incurving line to add to the efficiency of the blade in ripping and chopping; the second bracing was obtained by lashing the additional member, the gorge, to the staff by using a series of holes—through these a cord or a band was strung to bind fast a projecting dowel-ridge into a corresponding groove in the staff. Text-figure 1, No. 1, is reconstructed on the evidence of our Lamma pieces. Our specimens would as far as binding goes represent the *latest* development but their general shape would seem to be the form developed *before* the refined T'sin shape (e.g. dated weapon 222 B.C. from Lo-lan in Korea). A comparison with H.K.N. Vol. V., pages 130-132, figures 3-5 will bring out the necessary points: all the Lamma specimens known to me, ten in number have three longish slots in the "gorge" almost opening up its whole length below the original blade level and in reality so weakening the attachment that many of the specimens broke off there; there is one small round hole near the upper inner angle of the process (i.e. the 𠄎 or original dagger-handle where it projected back from the staff) and from the evidence of the downward direction of this hole, it must have taken a string from below. In the "process," there is usually a central slot or hole to take a wedge or plug for holding the staff hard up against the stop-ridge. Our pieces (all but one of Professor Shellshear's) had three slots and an upper

hole running up alongside ~~the stop-ridge~~: this type though not the commonest is otherwise well known, e.g. already in the Ts'in period (15) Vol. 1, p. 42: (67) No. 144: (3), p. 16: (64) figure 25: (41) Plate V, 12—this last piece is of importance as it comes from Luang Prabang in the Laos. Some of our pieces had ornament of the type illustrated in H.K.N. Vol. V, p. 132: one piece seems to have had a pair of studs on each face below the top small hole where they would act as a guard for the strings of the binding and where they correspond in a suggestive way with the points of attachment of the projecting ears that occur on the Dong Son specimens (Louis Finot Museum, Hanoi) or (34), No. 150 or (66) figure 9. The notch at the lower outer end of the process (H.K.N. Vol. V, p. 132) and the panel ornament that usually accompanies it occur on two of Professor Shellshear's specimens. All our specimens when so far complete show the stop-ridge projecting below the dowel-ridge. All make an angle of about $80-82\frac{1}{2}$ deg. between the top horizontal and the stop-ridge. All the moderns would agree that the date of such types cannot be much earlier than the end of Chou (45), pp. 464, 471: (68), pp. 116-7. On the other hand such weapons seem *not* to be represented on the "stone-house" carvings (tombs) of the Later Han (II century A.D.), the common weapon there having a distinct spear-like point stretching up in line with the staff: only in one case, a picture of the Hsia tyrant Kieh (traditional date, end of the nineteenth century B.C.; in Han times a *semi-mythical* personage), is there a weapon which looks like a misunderstood "ko" or rather a form transitional to the *chi*: the weapon seems to have been obsolete and replaced by another type of more spear-like implement the *chi* 戟 in the first centuries A.D. (34), (61). Of great importance, however, is the dated specimen in (15) Vol. (k) 6, p. 10 v.: it was made in the Yang-tsze (*Han-yang army*) region in the year 5 B.C. (*Kien P'ing second year*). This piece is almost of the same size and shape as our complete piece and differs mainly in the total number of holes up the gorge (three in all) and in the greater length of the process.

Thus we are left with the limits—between the fifth century and the turning point B.C.—A.D. as the probable dating of our pieces: the Southern geographical position making the later part of this time the more probable on the usual assumption that Chinese culture in the South was retarded. The history of Canton would suggest that such vestiges of Chinese culture, especially military weapon types, reached here by the intermediary action of the Yüeh Kingdom (Chao T'o, Prince or King of Yüeh B.C. 209-137). There is however also the possibility that the presence of the weapon on Lamma may be related to the great expedition sent in 120 B.C. by the Han monarch Wu Ti against the Southern Yüeh Kingdom of Canton: one of the six lines of attack was by sea and the admiral was styled commander of the "KO SHIPS" which would seem to be a reference to the armament of the troops on board or to supplies of these weapons that were brought for the troops advancing over the inland routes. This, it seems to me, is a most important point for the dating of the Lamma finds: the 'ko' on Lamma seems to be a sure index of the date of the bronze objects as a whole and of the harder pottery with its context. Undoubted fragments of the same type of weapon were found at A 22 ins.

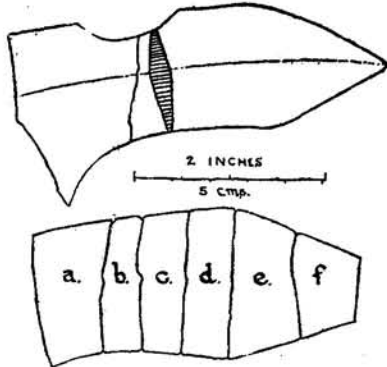


Text-figure 1.—“Ko” weapons.

On right: Plate 17, No. 1. Blade is drawn as if straightened out: notice lower lip of join showing that the gorge was battered after the breaking off of the point. The binding (cords or strings) has been restored on the basis of Dr. Herklots' study of the fragments remaining in the slots: note the peculiar direct passage of one string each time from slot to slot.

On left: Plate 17, No. 2. Note mark on process showing trace in verticigris of original shaft: the section of the shaft follows O. Karlbeck's observations. On the blade, traces of a textile covering: it is suggested that this may have been the ground for ornament: actually the form of the traces gives some support e.g. Dr. Herklots independently of me has observed the bare area where one would expect the open jaws of the animal usual on elaborate specimens.

and at B 75 ins. (this being the part where the depths below the surface are greater because of the superimposed sand dune). In H.K.N. Vol. IV, p. 136 and also below, an account of one "ko" blade is given whose pieces (text-figure 2) came from different cuts, at 24, 29, 74, 90 inches—all fitting together though scattered far from each other in the earth: hard corded ware with gritty cream slip was found with one piece. But the most interesting piece is the one complete weapon found in E about 50 ins. (Plate 17, No. 1: text-figure 1).



Text-figure 2.—Fragments of "ko" blades of a different type. The upper nick in the upper piece is a subsequent gapping. Compare also Plate 17, No. 3 (a third). The lower blade has been referred to in H.K.N. Vol. IV, p. 136; also, below.

ridge along the blade. And again like the others, it was broken off where the "gorge" begins (in the photograph this appears as mended and the text-figure is better) apparently by a blow which bent back the whole front part of the blade, and the cutting edge of the gorge was subsequently dented by one or more impacts. A remarkable and quite exceptional feature is the preservation of the hempen (? not determined scientifically) cords which bound the bronze to the one time staff or handle: the cord at each interruption of the slot was reversed in direction instead of being carried on around the wooden shaft (or it may be, this was a device for doubling the cord between the slots).

A visible print on the specimen, Plate 17, No. 2 and text-figure 1 has given us the measure of the staff where it crossed the wedge-slot. On this same piece, there are most interesting vestiges of some fabric incrustated in the verdigris: they occur on both faces of the projecting blade—on one face they end in a definite curve about 45 mm. from the line of the stop-ridge and one can trace there the turn back of the threads at the edge of the fabric: thus it seems to have been a "mitten" or case which left bare the effective part of the weapon. I make bold to suggest that this cover may have been decorated in colour or lacquer; on this part of other more

That site seems to have been the scene of a combat, for this one cut only to feet wide yielded at about the same level an exceptional number of bronze weapons, most of them showing signs of rough use; 2 assegais (H.K.N. Vol. V, Plate 11, Nos. 5 and 12), a dagger of Indo-China type (see text-figure 2 below), a socketed bronze adze (H.K.N. Vol. IV, Plate 20, No. 3), stone rings of III P. type (gapped or 玦 type), bronze arrowheads of two very distinct kinds and a tanged spear (or dagger) Plate 17, No. 8. Near, there was found a round-bottomed jar of black corded-ware. This 'ko' is small, its breadth from tip of blade to end of the process being originally about 155 mm. and its height along the stop-ridge 100 mm. Like the most of our pieces it lacks any central

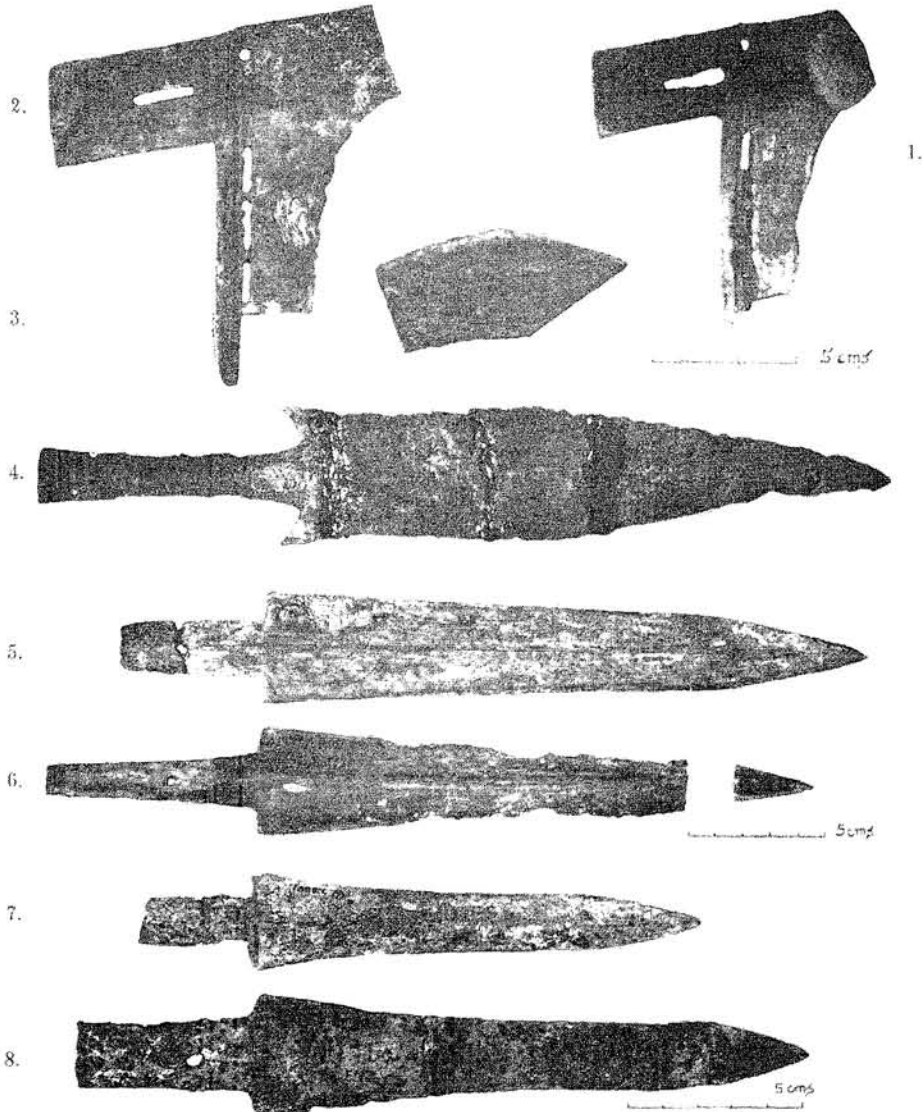


Plate 17. 1—3 Bronze "Ko" 戈 Halberds. No. 1 is complete but the front part of the blade was bent back and then broken off. See text figure 1. This specimen retains the binding cords in the slots. No. 3 is the tip of a "Ko" of slightly different type. See text figure 2.

4 A bronze dagger of Indo-China type: see text figure 3.

5—8 Bronze daggers with tangs (spear-heads?). The tip added to No. 6 does not certainly belong to the blade.

Numbers 1, 2 and 3 are reduced to the same scale; numbers 5, 6 and 7 to the same scale and numbers 7 and 8 to the same scale.

elaborate specimens, a decoration of an animal head is used and from the animal's mouth the blade is conceived as projecting just as here it would project from the cover. In fact, the traces of fabric (text-figure 1) strangely suggest such a shape. The characteristics of our site which I have repeatedly discussed are against any suggestion of this being an object buried with the dead: I offer the above suggestion as an alternative to the usual explanation of the wrapping as a practice in burial rites. We know that the weapons were often kept in covers (see 34 and 66) and here we seem to have partial covers. Other vestiges of the wrapping occur on the process, a part that usually had some kind of decoration: we may recall the other name, probably a piece of punning* soldier's slang, for this weapon, "Cock Crow" 鷄鳴, and we can see how this part would correspond to the comb—the angling of the blade corresponding to the upstrained neck and gorge—the wedge or thereabouts resembling a beady eye: given the delight of the Chinese in zoomorphic ornament, the working out of the decoration was easy. Some threads of the fabric caught in the wedge-slot would show that there were two wedges, one above the other, entering one from each side. These wedges with the strings might enter into the zoomorphic pattern as ears.

With this interesting specimen was found the only certain dagger from Lamma, that is, the only short thrusting and cutting weapon for which we have a handle in one piece. The reproduction, Plate 17, No. 4 is bound to be misleading, for the object was found in five pieces, some separate and some adhering by their flat surfaces to each other: the pieces were by us clumsily stuck together for the photograph and this has caused the big blob across the blade and just below the hilt. If joined so that the fractured surfaces fit closely and accurately into each other, the whole would be crumpled up into a violently distorted horn-like curve. Again, the edges are so indented as almost to give the impression of deliberate serration, but that would seem rather to be evidence of the most ruthless use; one edge shows at least 20 nicks, the other about ten major ones. The flat surfaces show distinct *slashes across* the blade. On the whole, one is tempted to revere it as the weapon of a man who fought a desperate fight to the end. A strange thing is that the point is apparently intact and that the hacking only begins on the edges a few centimetres back. This implement is definitely allied to the daggers found at Dong Son (Indo-China, Annam, first centuries A.D.) (4) Plate IX and figure 6: another specimen with a hilt guard more like ours is on show in the Musée Finot but not yet published and Janse has added some more specimens in (28) Plates XV and XVI. An exceptional feature of our dagger is that the handle preserves part of the original grip: a textile covering, leather (?) pleated and bound around, gave a better hold over a middle space specially prepared in the casting between the pommel and the upper part of the guard: this textile as in the case of the assegai binding (H.K.N., Vol. V, p. 135) was laid over a strip of bamboo: the bronze here shows a sunken area in which again on each face there is a vertical groove 45 mm. long × 5

* Ko-ko pronounced in some ancient fashion: *Kuá*, T'ang sound: probably Chou sound was fairly similar and like Cantonese *Kwo*—see Karlgren: B.M.F.E.A., No. 4.

mm. wide and slightly shallower than one mm. Close by the dagger were found bits of deer-horn impregnated with the verdigris of copper and these may have formed in the groove parts of the actual grip. There is an interesting link with the specimens (28) Plate XV and XVI and figure 17, for, there in the bronze, the decoration of the handle is obviously derived from a wrapping in textiles. Dr. Goloubew's adduction of Siberian weapons (4) figure 5 does not convince me and I think we should rather see here the bronze form of the stone blades that are known in old Chinese jade daggers, a form that has been found in Lamma in the schistic stones. But we have here again a valid link with the Yüeh peoples of the South: Dr. Heine Geldern has recently stated as his opinion that the bronze drums with which this type of weapon is associated are the work of the Yüeh. Thus as far as our bronzes are concerned there are definite grounds for setting them down as products of the centuries about the beginning of the Christian era and as related intimately with the Southern peoples. There are indeed differences between the Dong Son finds and ours, such as the more barbarous style of the 'ko's' found there (now in the Musée Finot) or the actual differences in detail and ornamentation of the daggers: such difficulties do not prevent us from recognizing a close relation but they warn us from confidence in a precise date.

We must leave the very important arrow-heads and the related stone objects for a future article and conclude here with the spear-heads. The specimens with tangs might be called daggers but we have seen above a bronze dagger cast in one piece with its haft and actually spear-heads of this type fastened to their shaft by a tang with a surrounding ring as extra support are known from Lo Lan (Korea). The one most interesting feature of these pieces is the very pleasing flow of the lines of the blade. It is a very graceful "leaf" outline and its nearest parallels are in Japanese weapons such as (31) figures 186 sqq. (Yamato: Yayoi, Iwaibe periods). In Janse's article on Chinese swords (53), one finds no such marked specimens of this flow of line as in the weapons of Europe, both bronze and iron (Hallstatt and notably in Helenendorf in Transcaucasia (54), figures 50, 60, 61, 68). Comparing with Janse's classification of Chinese swords, we should have to put all these under his D, swords with tangs. His D I has right-angled shoulders but no central ridge along the blade: D II rounded or obtuse-angled shoulders but with a central rib; D III takes the intermediate forms and he would assign D II and III to the end of Chou or slightly later. Our weapons Plate 17, Nos. 5, 6, 7, and H.K.N. Vol. V, Plate 10, Nos. 3, 4, along with fragments from 22 ins., B. 84 ins., B 80 ins., C 36 ins. (Mr. Clarabut's site, H.K.N. IV, p. 58, 69), E 38 ins. all show a central ridge on the blade. The fragment from B 84 and No. 7 have a very marked wire-like rib whereas No. 6 has a rib that spreads into an obtuse-angled triangle (in section). The tang when intact makes usually a right angle or an approach to one with the shoulder: only from the neighbouring Y.S.W. (probably earlier site) comes one piece with a rounded shoulder but even there one side of the casting shows the more usual rectangular lines. The continuation of the rib on the surface of the tang is missing on No. 6, and obscure on No. 7. On the Y.S.W. fragment, the tang rib is more pronounced than the blade rib. No. 8 resembles

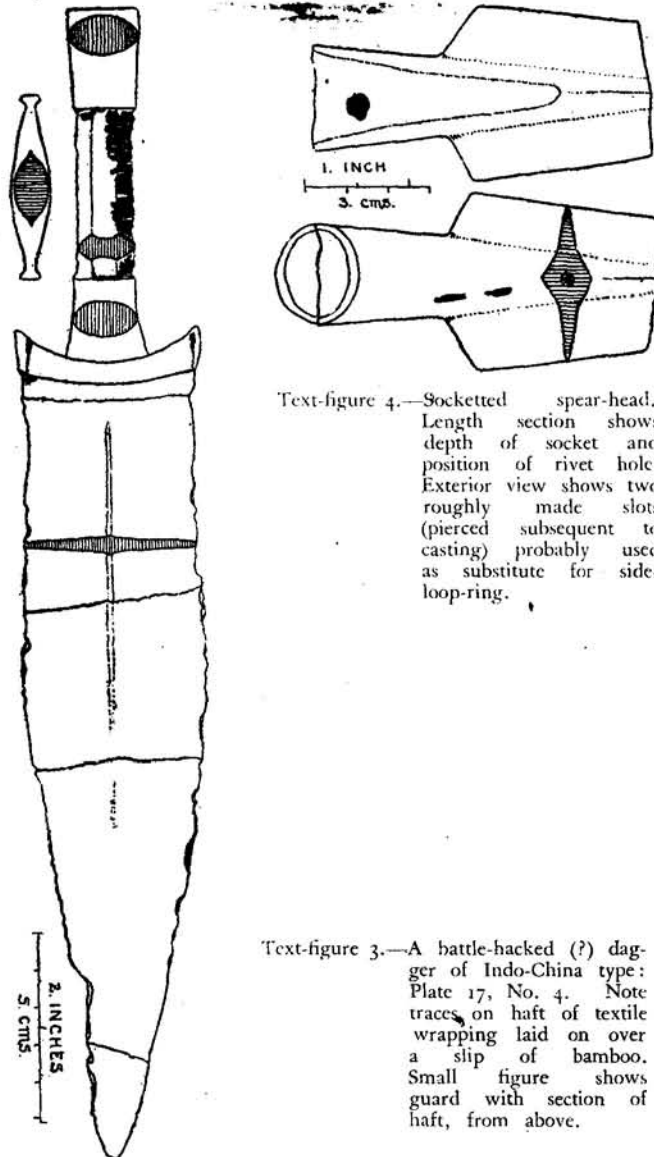
this last fragment and has no rib on the blade except the type of surface-join which might result from the use of a piece of polished stone or bone as the "pattern" used for making the fireclay mould (see H.K.N. V, p. 125): this type of weapon-blade has been found at Tai Wan in a few bronze fragmentary specimens with straight parallel edges which seem to be parts of *chi* 戟 blades. The tang of No. 6 seems to have been filed smooth (so notably one of the *chi* fragments): that of No. 7 not to have been finished in the casting or rather some of the sand or clay to have got displaced and the usual hole in the tang not to have been cast.

These weapons seem to be contemporary with the rest of the weapons. The pleasing specimen No. 7 came from the same cut W and the same level as the "bodkin", H.K.N. V. Plate 10, No. 1. The piece No. 8 was found broken but with the three pieces adhering to one another at E about 50 ins. and had the rich context described above under No. 1, the *ko*. The interesting weapons 5 and 7 were picked out of the sand heaps where they had doubtless been cast by the sand-junk coolies, but fortunately we have assurances of their proper relation to the rest: two fragments of tangs very similar in section and finish to No. 5 were found, one at B 40 close to a crystal ring (and contiguous with 'Mr. C's site' mentioned above). A point that from its patina (light green) and its shape of rib may well be that of No. 6 itself was found at D. 34 ins. These finds taken together with the other fragments described above show this type of weapon to belong to the same context as the "*ko*", *assegai*, *bodkin* and *dagger*—and even the bronze socketed celt (at least of Indo-China type)—and the bronze arrows of which later.

A special feature of No. 5 is the preservation of pieces of wood adhering both to haft and blade: it is difficult to determine whether these are traces of a scabbard or of a shaft. In general all these pieces are marked by a strength of structure based on a lozenge (rhomboid) section associated with a rib, the ratio of greatest thickness to width about half way down the blade being $\frac{1}{3}$ or $\frac{1}{4}$.

The dagger No. 4 (text-figure 3) with its flat blade and poorer metal stands in marked contrast to the rest even though it shows a kind of conventional rib: its condition is unthinkable if made of the stuff of the other pieces which would snap, not bend. The dagger agrees better with the weapons "*ko*" and "*chi*" that have no rib along the blade normally. The specimens of "*ko*" illustrated in text-figure 2 agree, on the other hand, rather with the ribbed weapons in their fractures, their section and their edges: text-figure 2 (upper) shows an edge of the brighter type as on No. 5 which makes the impression of a white metal and which has been explained as a polishing with mercury after the casting was complete: there are in this latter case unmistakable marks of a sharpening by polishing (filing).

For these spear-heads or daggers, there is no very certain parallel to be adduced. It is nearer to the Central European type than to the usual Chinese type which has parallel edges that sometimes change their line rather clumsily about two-thirds way down from the hilt. However it is noteworthy that Karlbeck has published a dagger and sword (less

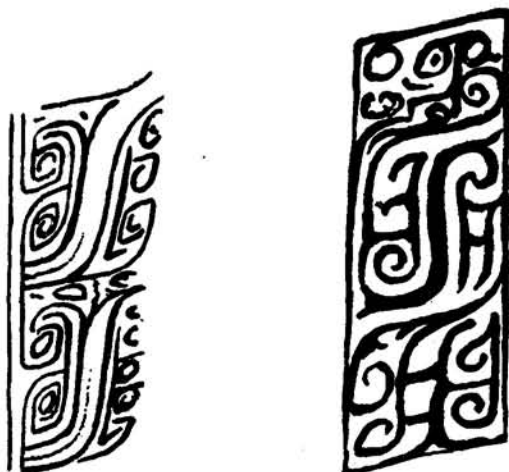


Text-figure 4.—Socketted spear-head. Length section shows depth of socket and position of rivet hole. Exterior view shows two roughly made slots (pierced subsequent to casting) probably used as substitute for side-loop-ring.

Text-figure 3.—A battle-hacked (?) dagger of Indo-China type: Plate 17, No. 4. Note traces, on haft of textile wrapping laid on over a slip of bamboo. Small figure shows guard with section of haft, from above.

opposite) with a similar flow of line (64), Nos. 10, 18 and he notes them as exceptional: both come from the Huai Valley and this, I think, is of importance. In H.K.N. Vol. V, p. 134, I have already suggested that the Yüeh people had links with the North: both geographical and historical considerations would lead us to look to the Ch'u Kingdom as the immediate link—and the Huai Valley bronzes are actually referred to that Kingdom. In this connexion it is well to bear in mind that all tradition pointed to the South (Ch'u and beyond) as having the greater skill in the working of metals for weapons.

But it is impossible to leave this subject without referring again to the best of all the things, the sword which Professor Shellshear found and which he has deposited in the British Museum. It is certainly a sword: it has a tang (with hole) rising from a square shoulder and its general technique resembles H.K.N. Plate 10, No. 3: but it is much longer than anything above, being, though not complete, some 27 cms. long. Its lines are more like those of Chinese swords, as there is a straight-edged taper from the hilt down: it has a kind of guard indicated cursorily as on our H.K.N. Vol. V, No. 4. The great interest, however, is the ornament which consists of three panels disposed at intervals along the blade: each panel is symmetrically divided by the central rib which in the design discharges the function of the nose in the TAO T'IEH design, the ogre head of early Chinese art. Each panel is a conventional design of S-and H-curves that to any one familiar with Chinese zoomorphs will be easily recognized as a composite ogre-head (the design to be looked at with weapon pointed down). A very interesting parallel is the spear head (perhaps of Shang date) in (3) Part II, p. 7 which shows an ogre-head occupying the whole blade of the spear, i.e. a field like each of the panels on the sword and it allows of resolution into elements whose general lines are those of each panel of the sword-decoration. There can be no doubt that the sword derives its decoration from a motive of great antiquity in Chinese art but its conventional rendering of the original zoomorph shows that we are dealing with a *later* period—and yet there is none of the real Han classicism in the transformation so far. It is greatly to be hoped that this most interesting specimen will be fully published and discussed. It is a clear index of Chinese contacts but difficult to assign to any known setting in China itself.



Text-figure 5.

1. Second and third panels of a series of six in contact on right side of rib, drawn from (57) figure 10, No. 2.
2. Upper panel of series of three, not in contact, on right of rib, drawn in part from a photograph of Professor Shellshear's sword and in part from a sketch made directly from the sword.

(P.S.—Since above was written, a remarkably close parallel to the sword has been found. In (57) figure 10, No. 2, there is a very beautiful specimen of a 'ko' of very early type which cannot be later than the middle of Chou (cp. text p. 28): on its blade is an ornament symmetrically arranged about the rib and in itself giving the outline of a dagger in its sheath: this ornament is MOST INTIMATELY connected with that of Professor Shellshear's sword—with the same difference as noted in the parallel above—the older weapon retains more of the original zoomorph, the branching antler idea being well marked. This "ko" was acquired in China for the Wannick Collection (Paris) in 1930: unfortunately provenance is not given. The resemblance is so strong as to make one more ready to suggest the earlier part of the period determined above as that likely for our weapons—and it certainly gives us assurance of an intimate link with an old Chinese tradition that is traceable at least to Shang times).

We now come to an undoubtable spear-head. It is of bronze and the pertinent details can be easily observed on text-figure 4. It has no side-loops cast on for the binding-attachment of the shaft: the absence of these seems to point to Indo-China contacts (4) Plate XXII, (28) figures 22 sqq.: the Huai Valley has produced a specimen (64) figure 50 but the usual form there seems to have been of the looped type. In An Yang the use of the loops seems to be typical (56) p. 80: on the old spear quoted above (3), they are absent, though otherwise its form is that of (56) figure 6, No. 2. The general shape of our specimen recurs in the Indo-China weapons, whereas the Huai Valley piece is of the shape of the An Yang (56) figure 6, No. 1, i.e., the socket is markedly continued as an external feature up to the tip as if it represented a split shaft of wood holding a blade of metal or stone: in the other An Yang type the shaft clips the butt of the blade as in the well-known case of the jade dagger blades mounted in bronze hafts. The Sumitomo piece resembles ours (67) No. 146 but its provenance is not given and the text makes no attempt to date it closer than Chou-Han: the grave carvings of the first two centuries A.D. suggest that the spear was not as much in use then in China as was the *chi*. As confirmation of the Indo-China contacts of our spear-head there is the peculiar occurrence of two slots (5 mm. and 7 mm.) in the socket just above the beginning of the blade (see text-figure 4) and on the side opposite to the rivet-hole (5 mm. in diameter): similar holes have already been remarked by archaeologists as distinctive of the North Annam and Tong King bronze spear-heads (4) Plate XXII, (28) pp. 130; the purpose of these holes is doubtful, but it would seem most likely that they did the duty of the more usual loops as places of attachment for a binding of the shaft and head: however, there is also the possibility of decorative streamers so commonly used in Han times: some have suggested that these holes were to retain poison—as in the practice of Southern primitives still. On the whole the position of the slots here suggest their use for binding as they lie in one vertical, the most convenient position for running a string up to reinforce the grip of the rather shallow socket (about 60 mm.). One might suppose that the Southerners felt the need of some

substitute for the loops: our holes would actually correspond to the points of attachment of a metal loop.

The piece was found at X₄ (a cut following FF in the horizontal depth) at 45 ins.: not far away at 50 ins. (same cut) there was found a bronze arrow-head alongside typical hard stone-ware with diaper pattern. Thus level and context would show that the weapon belongs to the period of the "ko" and the rest: the parallels instanced above point to the Southern (Yüeh) affinities.

In conclusion, I would insist on the value of these pieces for the dating. We have three contiguous sites on Lamma: in order of chronology (mainly by the character of the finds especially by the kinds of pottery), Tai Wan is the youngest, YSW is very similar but older, HSY is the oldest—but there are obvious overlaps even between Tai Wan and HSY. We have *no* "ko" so far from YSW and HSY. We have a spear-head (dagger?) fragment from YSW and report of bronze things having been sold to pedlars by the villagers: no bronze weapons so far from HSY but only a bronze fishing hook and a few pieces of the droppings from a bronze mould in the casting. From YSW we have some very interesting fragments of glazed ware including pieces with the typical "Double F"; from HSY only one glazed cup and that only from the extremity of the site nearest to Tai Wan together with a *very few* pieces of "Double F." On the other hand, we get from HSY most interesting specimens of *soft* wares with patterns naturally leading up to the "Double F" of the hard stone-wares, and wares with patterns more like the old Chou bronzes: from it too, we get a greater abundance and variety of stone implements, including the one most indubitable palaeolithic type. Even a superficial survey would suggest that the "ko" of Tai Wan must be associated in time and culture with the glazed ware—and saying "ko", I mean, the bronze weapons at least of this article. But there is one section that shows the connexion very clearly: in H.K.N. Vol. IV, pp. 58, 69, Plate XI, 5 there is a cup and its context found with the help of Mr. C.: since that, four more pieces could be added to the glazed cup from the cuts C and F 29-50 ins.: that area was noticeable for homogeneity of the pottery finds and amid that pottery we found three pieces of bronze, an arrow-head, the tip of a hilt and a fragment of a blade: from the next adjoining cut D at 29 ins. came the *tip* (f) fragment of the 'ko' text-figure 2, from the next cut again at 21 ins. the fragment (e) and then the remaining fragments from B, the butt fragment (a) being found in the front of the cut at 24 ins. and the other three (b, c, d) at the greater depths below the sand dune at the back. Thus between the tip (f) and the butt (a) of the 'ko' as they lay apart in the earth came the whole collection described above as found in E. The levels and circumstances of these finds do not seem to admit of other explanation except that they are of one time and culture. Our general conclusion then would be that the bronzes (for most part), the stone-ware and the glazed ware should be dated by the 'ko' and that we have no reason for dating these later than the Western Han. I know that this date has its difficulties if the glazed ware is to fall into line with the Han wares, but the date must stand for the present.

I wish here to acknowledge my indebtedness to Professor Shellshear for allowing me to write about his bronze sword and to Dr. Herklots for the great interest and care that he has devoted to this publication making an independent and for me most useful study of the 'ko' bindings; also to Professor Umehara for his "separates" of articles invaluable for this study.

REFERENCES.

Numbering runs with that of previous parts. The present list is divided into two sections, one of which is more general and the second gives the more important references for the special history of the 'ko' (the very important references to the passages in the *K'ao Kung Chi* 考工記 and its commentators are quoted in several of these, e.g. 45 and 63).

- (4) Goloubew, V.: *L'Age du Bronze au Tonkin et dans le Nord-Annam*, B.E.F.E.O., 1929.
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