The Tuan Fang Altar Set Reexamined

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I have been requested to reevaluate the Tuan Fang ritual wine set in The Metropolitan Museum of Art in the light of my recent studies of excavated Anyang bronzes. The latter may give us some new ideas on the dates and significance of the Metropolitan Museum set.

THE COMPOSITION OF THE SET AND ITS DISCOVERY IN THE TWENTIETH CENTURY

The group made its first appearance in the contemporary world in 1901, at Tou Chi T'ai, in the province of Shensi. Tuan Fang was viceroy of Shensi province in the last days of the Manchu dynasty, and he acquired this set for his own collection. Hence this group of bronzes is known as the Tuan Fang altar set. The Metropolitan Museum purchased it from Tuan Fang's heirs in 1924.

There are several illustrations indicating the composition of this set—that is, the actual number of pieces belonging to it. Three of the illustrations seem to be authentic: the line drawings lithographically reproduced in Tuan Fang's catalogue, T'ao Chai Chi Chin Lu;¹ the Metropolitan Museum photograph (Figure 1); and the Umehara photographs.²

The line drawings of T'ao Chai Chi Chin Lu present twelve ritual bronzes on the altar—all together thirteen objects in the drawing. In addition to these articles, a wine ladle is shown in the Metropolitan Museum photograph; it was found inside the smaller yu.³ The ladle does not appear in the complete drawing in the T'ao Chai Chi Chin Lu, but it does turn up on page 4 of this catalogue. It therefore seems to be part of the original set. Consequently, the set consisted, as far as we know, of fourteen objects.

In Umehara's monographs, there are twenty articles included in the various photographic reproductions of the group. The six additional components are all spoons, or shao, which according to John Ferguson (who negotiated the sale of the set to the Metropolitan Museum) came from a "second assignment" delivered to Tuan Fang by the dealer from whom he acquired the first group. The spoons are shown in a bundle vertically placed in the tsun vase; only the tops of the handles are visible in the picture. It is not possible to check the exact number of spoon handles as shown in the different photographs, but according to the description in Umehara's text, there are six. These spoons are also in the Metropolitan Museum's collection.⁴

The actual excavation of this bronze group is undocumented. In 1928, i.e., before the Anyang excavations—

1. T'ao Chai Chi Chin Lu, catalogue of the Tuan Fang Collection, 1 (Peking, 1908) p. 1.
2. Sueji Umehara, Etude archéologique sur le Pien-chin, ou série de bronzes avec une table pour l'usage rituel dans la Chine antique, Memoire de Tôhô-bunka-gakuin, Kyoto Kenkyusho, 2 (Kyoto, 1933).
tions, Osvald Sirén published an interesting account of the "mound" at Tou Chi T’ai in which the altar set was supposed to have been found. In 1959, on the basis of the Anyang excavation results, Umehara suggested that this version of the discovery referred not to the Tuan Fang altar set, but to a second group of bronzes. Consequently, we must consider the actual excavation of the group under discussion here as still unknown.

THE FORM AND STYLE OF THE TUAN FANG SET AND SOME ANYANG BRONZES

Since we have no excavation data to help us in dating, we have to depend upon a study of the actual artifacts for a more definite understanding of this well-known set of bronzes. In view of our increased knowledge of the burial customs of China’s bronze age, we may start our reexamination by comparing the Tuan Fang altar set found at Tou Chi T’ai, and now in the Metropolitan Museum, with the bronze furniture discovered in Anyang by the Academia Sinica.

In the table below I have itemized the contents of eight burials from the tombs opened during the Anyang excavations of the mid-1930s; each of these burials had remained intact and included at least eight bronze ritual vessels. Tombs with fewer than eight pieces of this type of bronze furniture are not listed in the table. Six of the tombs chosen in the comparative table were excavated at Hsiao T’un, the other two at Hou Chia Chuang. Most of these tombs are probably of a sacrificial nature—the number of skeletons found in these eight tombs varies from one to as many as eight. It is interesting to note that HPKM1022 of Hou Chia Chuang locality is the only one-skeleton burial (Figure 2) among the eight Anyang tombs compared in the

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**RITUAL BRONZES**

- **chih** 鑼形器
- **tsun** 尊形器
- **yu** 古形器
- **ku** 鼬形器
- **chüeh** 爰形器
- **chioh** 角形器
- **ho** 戃形器
- **chia** 載形器
- **fang-i** 方彝形器
- **pien** 篤形器
- **p’ou** 鵱形器
- **ting** 聽形器
- **yen** 聓形器
- **lei** 錞形器
- **tou** 鬥形器
- **kuo** 龝形器
- **p’an** 盤形器
- **ch’an** 鍚形器
- **kun** 橰形器
- **yü** 盩形器
- **hu** 壺形器
- **horn-shaped vessel** 象形角器
- **chin** 象形器

**TOTAL** 合計

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The bronze furniture of this tomb, as compared with the contents of the other seven, most closely resembles the Tuan Fang altar set in composition. The bronzes of the other seven tombs from Anyang all include some food vessels, such as ting, p'ou, hsien, which are found neither in the Tuan Fang altar set nor in HPKM1022 of the Anyang group.

It is interesting to compare in some detail the ritual bronzes excavated from HPKM1022 with the Tuan Fang altar set. Let us see to what extent these two sets of bronzes resemble each other and to what extent they differ. The component members of the HPKM1022 bronze furniture are: two chih, one yu, one ku, two chüeh, two chia, one fang-i, and one horn-shaped vessel (Figure 3); while those of the Tuan Fang altar set are: four chih, one tsun, two yu, one ku, one chüeh, one ho, one chia, one chioh, one ladle (tou), and one altar table (chin) (Figure 1). There are no fang-i or horn-shaped vessels in the Tuan Fang set. On the other hand, no tsun, chioh, or ho were found in HPKM1022, which lacked also an altar table and a ladle.

The resemblances as well as the differences of these two sets may be due to a variety of reasons. Before going into further detailed discussion of these problems, it might be more profitable to examine individually the homologous ritual vessels that are found in both sets.

This group consists of the following types: chih, yu, ku, chüeh, and chia. The last three types of bronzes from Anyang have already been studied in great detail, and the results have been published in monographs in the new series of Archaeologia Sinica. So we may start our comparison with these three better-known types.

Ku and Chüeh (Figures 4–8)

There are thirty-nine examples of ku from the Anyang tombs photographically reproduced in Archaeologia Sinica. The one from HPKM1022 of Hou Chia Chuang (Figure 5) is the best example among the ku series of the Anyang collection and possesses the unique feature of being partly cast from a deeply incised mother mold by way of a negative clay mold.

8. Li Chi and Wan Chia-pao, “Ku-beaker.”
FIGURE 3
Ritual bronzes, found in HPKM1022, Hou Chia Chuang. Academia Sinica, Nankang. Courtesy of the Institute of History and Philology
FIGURE 4
*Ku*, from Tou Chi T'ai, Tuan Fang altar set, H. 8¼ in. The Metropolitan Museum of Art, Munsey Fund, 24.72.10

FIGURE 5

FIGURE 6
*Chiieh*, from Tou Chi T'ai, Tuan Fang altar set, H. 9¾ in. The Metropolitan Museum of Art, Munsey Fund, 24.72.9
The decoration of the foot section is beautifully done in fretwork.

The ku from the Tuan Fang set is similar to the Hou Chia Chuang specimen in the following respects: it is decorated on all three sections; the lower and middle sections are both divided into four parts by projecting flanges; both the upper section and the lower section have border designs. But there are also important differences in the ornamental details. The following differences deserve special mention. On the Tuan Fang ku: there is no yinleiwen (cloud and thunder design) filling-in, and the animal designs are executed by simple broad lines; there is no fretwork; the flanges on the lower section are not cast in full length; the border designs are composed of animal figures instead of spiral-filled bands.

The similarities between these two homologous vessels are, however, more striking than the differences. The general outline, the proportions of the different parts, and the curvature of the lines bear a resemblance that makes the differences in ornamental details somewhat insignificant.

There are two chüeh in HPKM1022 of Hou Chia Chuang. Only one is found in the Tuan Fang set. The latter possesses a round bottom (Figure 6), while both examples from the Hou Chia Chuang tomb are flat based (Figures 7, 8). In ornamentation these three vessels bear a general resemblance, but the two specimens of Hou Chia Chuang differ from each other in certain respects: R1051 (Figure 8) is fully flanged on the body, with the main ornamentation divided into four sections, while R1050 (Figure 7) has no flanges, except for the well-developed nasal ridge. In addition, R1050 has no inscription, while R1051 carries a monoglyphic inscription \( \text{ 좋 } \) (Figure 391) consisting of a vertical stroke passing through a small circle and bands flowing from the upper and lower parts of the vertical. This is the ancient form of the modern character \( \text{ 놈 } \) (chung, mean-

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**FIGURE 7**
Chüeh, from Hou Chia Chuang, HPKM1022, R1050, H. 8\( \frac{3}{4} \) in. Academia Sinica, Nankang.Courtesy of the Institute of History and Philology

**FIGURE 8**
Chüeh, from Hou Chia Chuang, HPKM1022, R1051, H. 8 in. Academia Sinica, Nankang. Courtesy of the Institute of History and Philology
ing middle). This inscription is located beneath the bow-shaped handle. The uprights on the rim of both of the Hou Chia Chuang chiieh cups are located near the turning point of the spout.

In addition to having a round bottom, the Tuan Fang chiieh possesses a fully developed flange that extends along the bottom of the tail (opposite the pouring spout) and reaches beyond the tail by nearly one centimeter. A similar flange appears underneath the spout, terminating about two centimeters short of its lip. On the top of the ox-headed handle there is a short flange bent below the rim, very much like a beam under a Chinese roof. The decoration of the Tuan Fang chiieh is in high relief against a yünleiven background, in contrast to the Hou Chia Chuang examples, whose ornamentation is in low relief, with richer details of yünleiven. The bulging eyeballs of the animal face are more prominent in the Hou Chia Chuang pieces. The location of the uprights is further from the spout junction in the Tuan Fang specimen than in the Hou Chia Chuang chiieh cups; this structural feature, which recalls the Chün Hsien specimen (M60)\(^\text{10}\) of the Western Chou period, seems to be very common among the bronze chiieh specimens of Shensi origin. Unlike the Hou Chia Chuang examples, the Tuan Fang chiieh cup has fine decoration covering the outer surface of the three legs.

There are, however, points of resemblance between the Hou Chia Chuang chiieh and the Tuan Fang piece: all three legs on each piece are triangular in cross section, with elongated depressions on the two lateral sides; uprights are all capped by top-hat-shaped ornament; both the Tuan Fang chiieh and R1051 from Hou Chia Chuang have inscriptions under their bow-shaped handles.

\textit{Chia} (Figures 9–11)

There are two tetrapod \textit{chia} specimens from HPKM1022 and one tripod \textit{chia} from the Tuan Fang set. The three vessels in this group are functionally analogous, so they are all classified within the category \textit{chia}. But structurally, with the exception of the similar arrangements of the two uprights on the rim and the handle at the side, they have very different appearances. The

\(^{10}\text{Chün Hsien Hsin Tuan, Institute of Archaeology, Academia Sinica (Peiping, 1964).}\)
main features of their bodily structure are traceable to different prototypes; their analogous ritual functions may be totally unrelated to their bodily construction.

It must be pointed out that tetrapod chia are comparatively rare.11 What seems to be particularly significant is that the thirteen complete examples of tripod chia from Anyang are typologically uniform. All possess three independent legs of the ting type, while the Tuan Fang tripod chia possesses li-model legs united at the upper part exactly like a li tripod. After an intensive search, it may be definitely stated that tripod chia with li-model feet, so far as scientifically excavated specimens are concerned, have not been found in the Anyang area and its immediate neighborhood.

Yu (Figures 12–21)

The two yu flasks from the Tuan Fang set have been graphically written about by Osvald Sirén. He called them “Urns or Cans,” and described them in the following terms:

... with lids and arched handles, intended for the keeping and transport of the sacrificial wine. They are practically of the same type, although one is somewhat smaller and is placed on a square plinth. Both the urn and the lid are divided by four fantastically profiled ridges, which curve like the stem of a boat over the swelling urn and stick out like pointed ears from the lid. This zoomorphic hint is emphasized by the animal heads on the handles which are crowned with ears resembling elk-horns. The decorative motive is otherwise ornithomorphic in character. Heraldically posed birds, with large round eyes, long hooked beaks and flame-like wings occur here in five borders, varying somewhat in size and shape, but all fantastically wild and bold. . . .12

There are four yu flasks excavated by Academia Sinica archaeologists from the Anyang area (Figures 13–16). One of the four, registered as R1071 (Figures 13, 17–20), was found in Tomb HPKM1022. It is the most elegantly shaped specimen of this class of bronze vessels. It consists of three parts: the main body of the flask covered by double lids. The middle section forms a long neck in outside appearance and is made in the shape of a beaker. This separate element constitutes the actual cover immediately above the liquid container, but in practice it also served the purpose of a beaker. When in place on the yu, the beaker is inverted and surmounted by a lid linked to the arched handle by a looped device. The entire vessel, including the handle, the cover, and the ring foot, is fully decorated with beautifully composed ornamentation. The body and elongated neck are covered by eight horizontal bands of different design and varied decorative elements. The animal shapes, wherever they occur, are highly metamorphosed. Whether or not they were of ornithomorphic origin is difficult to say. The harmony of this

11. A statistical counting of 190 chia vessels of all shapes in various illustrated catalogues shows only 10 examples of tetrapod type, less than eight percent of the total number. From the Anyang area of the Shang-Yin period the total number of chia vessels is 16, of which 13 are tripod and 3 are tetrapod (a much larger percentage than average). See Li Chi and Wan Chia-pao, “Chia-vessel,” p. 62.
12. Sirén, Early Chinese Art, p. 34.
vessel's shape and decoration is an accomplishment of supreme skill by a master hand.

Another yü flask (R2065), discovered at Hsiao T'un M238 (Figure 15), while similar in shape to R1071, possesses no middle cover; it is a high-necked bottle, pure and simple; at the top, it is covered by a single lid, originally linked to the curved handle, very much as in R1071. The decorative motifs are, however, far less distorted; the animal heads that appear in the horizontal bands, arranged as on the preceding vessel, are definitely derived from some horned animals.

The third example of a yü flask (R2753) (Figure 16) was found in M331; it is similar to the two already mentioned (R1071, R2065) in that it also has a high neck, immovable like that of R2065. But the main body is of square shape with beautifully designed spiral-horned animal heads facing outward at the four corners. The tips of all the spiral horns of the animal heads protrude freely out of the background; this method of executing the ornamental design is also used in the decoration of one of the chih cups from the Tuan Fang set (Figure 26). There is a steplike molding around the shoulder of the body of the square yü flask at the lower part of the high neck and, as in the two round yü flasks
described above, the neck part is fully covered by ornaments in low relief. In addition, there are animal heads on different parts of the body.

The most interesting specimen of an Anyang yu flask is R1072 (Figures 14, 21), from Tomb HPKM2046. It is the only one that may be classified as a squat type. The main body is like a gourd truncated at the waist; the lid actually covers the rim of the vessel, extending down to the shoulder of the body. Unlike the high-necked flask, the knob of the cover is not linked to the swinging handle, nor was it ever meant to be.

This particular specimen is also unique among the Anyang group in that it is decorated only by a frieze circumscribing the top part of the body. The frieze consists of a series of realistic bird forms against a yünleiwen background, with two animal heads in relief placed near the middle between the two terminals of the movable handle. This is cast in imitation of twisted rope, ending in rings passing through two loop handles attached to the body; the loop handles and the animal heads are equidistant on the frieze. The top of the cover is similarly decorated by a circular band with birds as the main motif; the band is placed near the margin of the lid.
FIGURE 17
Lateral view of *yu*, from Hou Chia Chuang, HPKM1022, R1071 (Figure 13). Courtesy of the Institute of History and Philology

FIGURE 18
*Yu*, R1071, without middle section. Courtesy of the Institute of History and Philology

FIGURE 19
Detail of *yu*, R1071, showing loop-joining device. Courtesy of the Institute of History and Philology

FIGURE 20
The beaker-shaped middle section of R1071. Courtesy of the Institute of History and Philology
What is particularly interesting, in terms of structure, is the method of the joining of the curved handle with the loops on the body (Figure 22a). This method is practically the same as that observed on the two yu flasks of the Tuan Fang set, although, in the latter case, the loop rings of the handle are externally expanded to an elklike animal head (Figure 22c). On the other hand, in the case of the three high-necked yu flasks of the Anyang specimens, the terminal parts of the swinging handle are all cast in the form of an animal head with a crossbeam at its back, which passes through the loop handles on the flask body (Figure 22b)—a method of joining obviously quite different from the interlocked loop type commonly found in all the normal yu flasks without a tall neck.

**FIGURE 22**
Three methods of loop-joining found in the bronze yu flasks of Hou Chia Chuang and Tou Chi T'ai

*Chih* (Figures 23–28)

There are four *chih* goblets from the Tuan Fang altar set; one of the four, which Umehara named *tsun* (Figure 26), is fully covered with animal ornamentation, while the other three (Figures 23–25), comparatively thinner and taller in appearance, are all collared by a narrow horizontal band of *yüleiwen* design. On one of these the band is bordered on both sides by serially arranged small circles within bow strings. Two of the goblets are similarly decorated on the ring foot and the third has a plain foot rim.

From HPKM1022, two *chih* goblets are available for comparative study (Figures 27, 28). Both are covered by full ornamentation. The decoration of Figure 27 (R1075) is composed of animal masks and birds and is divided into horizontal bands of varying widths, while Figure 28 (R1076) is decorated with round and square spirals covering the entire surface—a perfect example of *yüleiwen* design. Both Anyang goblets have a dome-shaped cover with an umbrella-shaped button at the top of the cap, supported by a short stem. In general appearance, these two goblets are less bulbous than the animal goblet in the Tuan Fang group, but not as slender and tall as the other three of the set. It is a matter of common knowledge that the slender type of *chih* goblet became the fashion in the later period.
**FIGURE 23**
*Chih*, from Tou Chi T'ai, Tuan Fang altar set, H. 5 3/4 in. The Metropolitan Museum of Art, Munsey Fund, 24.72.11

**FIGURE 24**
*Chih*, from Tou Chi T'ai, Tuan Fang altar set, H. 5 3/4 in. The Metropolitan Museum of Art, Munsey Fund, 24.72.12

**FIGURE 25**
*Chih*, from Tou Chi T'ai, Tuan Fang altar set, H. 5 in. The Metropolitan Museum of Art, Munsey Fund, 24.72.14
Nonhomologous Specimens (Figures 29–38)

As noted in the beginning of this article, there are a number of objects in the sets chosen for these comparative notes that find no counterpart in the other set. In HPKM1022 from Hou Chia Chuang, there are two such objects. One is the horn-shaped vessel (Figure 36), cast in exactly the same shape as the horn of an ox, with a cover at the larger end; the pointed tip is truncated. The other is the fang-i (Figure 38), a rather common type in most museum collections.
Ritual bronzes from the Tuan Fang altar set that could not be paired in HPKM1022 are more numerous. First, there is the huge tsun vase, nearly 35 cm. (13 3/4 in.) tall (Figure 37), one of the three giant bronzes on the altar table. It is to be observed that this type of tsun is absent not only in the HPKM1022 tomb; what is particularly worthy of attention is the fact that it was never found in any of the more than a thousand opened Anyang tombs investigated by archaeologists. Even among the broken bronze fragments, scattered in different parts of the tomb area as well as the dwelling site, there is no indication that this type of bronze vessel was ever discovered.

The word tsun in bronze inscriptions was usually used as a general term denoting ritual bronzes of many different varieties, and it is the Sung antiquarians who first confined this term's usage to a particular group of the Shang and Chou bronzes. Jung Kêng followed the Sung tradition and started giving this term an even more specific definition, limiting its usage to those bronzes similar to ku and chih in shape, but larger in size. Within this category, he was able to assemble no less than sixty-three examples. Typologically speaking, it is obvious that this term as defined by Jung Kêng is still generic in nature, judging from the illustrations given by him as examples. In another part of the same work, Jung Kêng defines two other types of bronzes in terms of tsun, as follows:

- **tsun**: round, columnlike body, with flaring mouth and foot
- **ku**: similar to tsun in shape, but smaller
- **chih**: similar to tsun but shorter

The tsun in the Tuan Fang set may be taken as a typical example, by Jung Kêng’s definition. But Jung Kêng’s compendium also includes a number of vessels with a wide, angular shoulder below the top section. His normal type of tsun, like the one in the Tuan Fang

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FIGURE 35
Chioh, from Tou Chi T'ai, Tuan Fang altar set, H. 5 in. The Metropolitan Museum of Art, Munsey Fund, 24.72.13

FIGURE 36

FIGURE 37
Tsun, from Tou Chi T'ai, Tuan Fang altar set, H. 13¼ in. The Metropolitan Museum of Art, Munsey Fund, 24.72.4

FIGURE 38
Fang-i, from Hou Chia Chuang, HPKM1022, H. 10¾ in. Academia Sinica, Nankang. Courtesy of the Institute of History and Philology
FIGURE 39
Inscriptions from the bronzes of Tou Chi T'ai (a–j) and Hou Chia Chuang (k, l)
a. Chia (Figure 9)
b. Chih (Figure 26)
c, d. Ho (Figure 29)
e. Ku (Figure 4)
f. Chih (Figure 24)
g. Chih (Figure 25)
h. Chioh (Figure 35)
i. Chüeh (Figure 6)
j. Yu (Figure 12)
k. Fang-i (Figure 38)
l. Chüeh (Figure 8)

altar set, was never found in the Anyang excavation; the shouldered type, however, appeared several times in the Anyang tomb of the Shang-Yin period. It is rather doubtful that these two varieties of Jung Kêng’s defined category can be traced to the same origin.

If we confine our attention to Jung Kêng’s normal type of tsun, that is, the expanded ku as shown in the Tuan Fang group, no example could be cited from Anyang by field archaeologists of the Academia Sinica. But if the shouldered example of Jung Kêng’s tsun is used, scientific archaeology can give several examples of tsun from the Anyang tombs of the Shang-Yin age. Yet, historically speaking, neither the columnlike tsun nor the shouldered type from Anyang could reflect the original shape of the vessel by this name, the origin of which may go back to neolithic pottery. If the primitive pictorial representation of this article (Figure 39f) is analyzed, the tsun in its original form apparently had a rounded bottom. In later usage, the meaning of the term tsun was gradually enlarged to cover a variety of beaker-shaped bronzes that had something to do with wine drinking.¹⁶

To continue our comparison of Anyang vessels with the Tuan Fang set, the tripod ho pot (Figure 29) and the long-handled tou ladle (Figure 31) included in the Tuan Fang altar set, but absent in HPKM 1022, might be compared with counterparts in other Anyang tombs (Figures 30, 32–34). The ho pot (R2072) from the Anyang area, like the chia vessel from Anyang, possesses three independent feet at the bottom. The ho

¹⁶. It is a constant source of confusion for students of Chinese bronzes to assume an infallible identification of types of artifacts and their names in current usage (that were created mainly by Sung antiquarians). The group of bronzes named tsun may serve as an example to illustrate this confusion.
from the Tuan Fang set, however, is footed like a li. There are other important differences between these two homologous articles: the ho of the Tuan Fang group has a spout near the rim and a handle to which the lid is chained, while the Anyang specimen possesses two loops on the body but does not have a handle, and has a very short spout, with the lip of its mouth falling much below the level of the rim of the pot.

Another type of tripod beaker, also classified as belonging to the wine-service set, is similar to the tripod chiieh beaker in every respect below the rim, but the mouth of the vessel is shaped quite differently (Figure 35). There is no upright or spout. It resembles an elongated boat with two tails pointing upward and arranged symmetrically. Antiquarians call this type of beaker chiioh (no), to differentiate it from the more regular type of wine beaker called chiieh (f).

In the second volume of Jung Keng's compendium of the Shang and Chou bronzes, thirty-seven chiieh and chiioh beakers are illustrated. A careful examination of these specimens shows at least four different varieties of the beaker-shaped drinking vessels cast in the bronze age. They are:

1. the regular type, with spout, tail, and uprights on the rim:
   a. without cover: twenty-two specimens
   b. with cover: one specimen
2. chiieh with two spouts having elongated rims, uprights, and a cover: two specimens
3. chiieh without uprights:
   a. with cover: two specimens
   b. without cover: one specimen
4. chiioh with two taillike endings but no spout or uprights:
   a. with cover: four specimens
   b. without cover: five specimens

The thirty-nine chiieh beakers excavated from Anyang, like the one in the Tuan Fang altar set, belong to the standard type: Jung Keng's type 1. The rim is composed of a spout and a tail, with one or two uprights on the rim. But in addition, the Tuan Fang set includes an example of type 4 (chiioh) as listed in the above classification; it is without a cover. The decoration of the Tuan Fang chiioh is executed in raised lines; at the top of the bow-shaped handle, there is an animal head. This bronze is without a counterpart from HPKM1022 or from any of the other Shang-Yin tombs excavated in the Anyang area. But, as already mentioned above, HPKM1022 possesses the unique, truly ox-horn-shaped bronze drinking vessel, to which antiquarians also have given the name chiioh (no). This vessel is a likeness of the projections from the bovine animal's frontal bone, i.e., his fighting organ, which in vernacular language is called a chiioh (no). Its imitation in bronze may be the earliest chiioh type among the drinking vessels.

There are two other points to discuss in regard to the relationship between the bronzes of the Tuan Fang set and those found at Anyang, namely, the shape of the flanges and the inscriptions.

In "Studies of the Bronze Ku-beaker," the following concluding observations were made:

As the flanged specimens are found only in the E-area, [the eastern part of the Hou Chia Chuang cemetery site] there is no doubt some particular reason for this distinction. It may be due to its comparatively late development. . . . The flanges are not a feature peculiar to ku among the early bronzes, so their development on ku was perhaps partly inspired by flanges first developed on other types of bronze. . . . The history of ornament, insofar as the ku type is concerned . . . started a new era after the flange appeared.17

Hence, the development of flanges on ku came late among the Anyang bronzes of the Shang-Yin period; whatever its origin, the above conclusion seems to hold true as far as archaeological evidence goes. HPKM1022 is located in the E-area of Hou Chia Chuang; of the ten bronze ritual vessels found in this burial, no less than four (one fang-i, one chiioh, one ku, and one chiia) have flanges. But when they are compared with the Tuan Fang bronzes, they certainly look somewhat under-developed. The three giant bronzes of the Tuan Fang altar set all possess excessively developed flanges with spikes dividing each of them into a number of sections. The same is true of the flanges of the ku and chiieh, which are also much more prominently developed than any of those of Hou Chia Chuang origin.

The exaggerated development of the flanges on the Tuan Fang vessels may be considered as a continuing evolutionary feature, whose origin may be traced to the Shang-Yin period. This statement is also partly based on the close typological similarities of the general

shapes among the homologous bronzes like the ku, the chüeh, the yu, and the chih.

I should like to comment on our present knowledge of the bronze inscriptions. It is a well-known theory, advanced by my esteemed friend Bernard Karlgren,\textsuperscript{18} that there are three symbols inscribed on ancient Chinese bronzes that could be relied upon as a guide to define the Yin bronzes: they are what Karlgren called \textit{Ya-hing, Si tsi sun}, and \textit{Kü}. It is a rather curious fact that these symbols have been found in each instance only once on the inscribed bronzes in the excavated tombs of Anyang. It would certainly be remarkable if nearly all these “Yin” bronzes with the Karlgren symbols from the Anyang area should have been plundered before scientific digging started in 1928!

On the other hand, the bronzes of the Tuan Fang set from Tou Chi T’ai are almost all inscribed with some glyphic symbols. Three of the particular bronzes that carry such symbols are the ku, the chüeh, and one chih, all of which, however, typologically do not represent the standard type of testified Anyang finds of the Shang-Yin period. The other two symbols, namely \textit{Si tsi sun} and \textit{Kü}, were not found in either of the two groups of bronzes compared above.

**GEOGRAPHICAL AND HISTORICAL FACTORS**

Geographical and historical factors may have played an important role in the divergent evolution and type differentiations of early Chinese bronzes. Although a number of writers in the past did call attention to geographical factors, nobody seems to have realized that local divergences of the bronze types may have existed as early as the Shang-Yin period.\textsuperscript{19}

During the time when the bronze industry was highly developed in the Anyang area, there was a parallel development in the Sian Fu area, in the northwest, where the capital of the Chou state was located. While there might have been a great deal of trade and interchange of cultural objects between these two areas, there must also have been local products peculiar to each region. What I am particularly concerned with is the development of the bronze industry. We know that certain types of artifacts were made only in a certain locality. Such local specializations have been found to occur in the case of pottery and stone tools. It should not be surprising if this was also true of the bronze industry.

Two examples of this are the chia and the ho pot. In these cases, although functionally they are analogous, the structural differences between the Tuan Fang and the Anyang examples are more than apparent. This point needs some careful consideration. We may begin with the chia vessel first. It has been pointed out already that all the Anyang specimens of chia of the Shang-Yin period from excavations possess \textit{ting-type} feet, but that the chia from the altar set, on the other hand, has the feet of a \textit{li}. Similarly the ho pot possesses a \textit{li-type} foot in the Tuan Fang specimen, but a \textit{ting-type} foot in the Anyang specimen. These two cases show that there

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{map.png}
\caption{Sketch map showing the locations of three \textit{hsien} (districts): Anyang, Paochi, and Yuanchü}
\end{figure}


\textsuperscript{19} Recent researches have brought forth the information that there existed earlier Shang bronzes, which were more primitive than the finds in the Anyang area and were produced in western Honan, near the modern city of Lo Yang.
might be local distinctions that should be independently analyzed in order to avoid chronological confusions.

There are, of course, other instances of such parochial differences of style; for example, the absence of the fang-i and horn-shaped vessel in the altar set, and the unique altar table and the so-called tsun in the Tuan Fang group, for which we find no parallels in the Anyang excavations.

The fact that the Tuan Fang set has vessels dating from Shang and Chou should not startle us in view of the fact that Shang and Chou coexisted for many generations—a historical fact now fully confirmed by modern archaeological investigations. Just as there existed a predynastic Yin culture in the Anyang area, similarly there was a long period of predynastic Chou culture, part of which was contemporaneous with the dynastic Shang-Yin era. It is historically known that Chou was a vassal state in the service of the Yin court and the royal house of the Yin intermarried with the feudal lords of the Chou. Recent excavations along the Wei River valley also proved the existence of a long predynastic culture dating back to the neolithic period before the Chou developed into a power strong enough to overthrow the ruling dynasty.

In the consideration of such ritual vessels as those in the Tuan Fang set, the source of supply of the metals used in casting is a matter of some interest. This question has been recently investigated by both geologists and students of history. It has been determined that while tin was found in ingot shape in Anyang, indicating it was probably imported from a long distance, copper ore was definitely smelted in situ, as testified by its remains in many lumps and fragments of malachite. Consequently, in our opinion, the source of these minerals containing copper must be located not too far from Anyang.

Geologists can testify to the existence of a number of copper mines within a distance of 300 km. from Anyang. Those located in southern Shansi are of special interest in the present discussion. The six mines of Yüan Chü district, on the northern bank of the Yellow River in southern Shansi province, occupy a position almost halfway between Anyang and the Wei River valley. If the Shang-Yin industrialists could make use of the copper ore from Yüan Chü, the Chou people of Shensi could also have transported these ores to the Wei River valley. I have mentioned the Yüan Chü copper deposit in particular because it is one of the best known in northern China and is still being mined. The Northern Sung dynasty had one of its official mints located in this district.

CONCLUSIONS

We now can make an attempt to answer the queries that led to this discussion. Let me take them up according to the order in which they were made.

The question about the composition of the Tuan Fang altar set implied in the beginning of this article may be summed up as follows: Is this set now as it was found in the original burial? My answer is: It is possible. In the past, different dates have been given to different items. The chioh was labeled as Early Shang, the ku and chih as Shang, the tsun, ho, chia, and yu as Early Chou. As the entire group presumably was buried in an Early Chou tomb, it is not surprising to find a few articles older than Chou included in the sacrificial offerings. This was really an old practice, encountered repeatedly in tombs of the Shang-Yin dynasty.

I agree, therefore, in general with the idea that the individual articles in the Tuan Fang altar set were cast in different periods. However, the various dates originally assigned by the Metropolitan Museum may be given a reappraisal in the light of present knowledge. In view of the recent discoveries near Chêng-chou and Lo Yang, the term "Early Shang" now bears a quite different meaning. The chioh of the Tuan Fang altar set could hardly be that early, if it were Shang at all. But the dwarfed tsun (Figure 26) (called tsun by Umehara, and reclassified here as chih), which has been dated as Early Chou, might be a local product of the Shang-Yin period, from Shensi province. It is not necessary for me to repeat what has already been said in the individual comparisons. If we bear in mind that local styles already existed as early as the time of predynastic Chou in Shensi, we might avoid errors originating from periodization on the basis of a single

criterion—whether the criterion be stratigraphical, ornamental, structural, or epigraphical. I have pointed out on other occasions that there are six different aspects of ancient Chinese bronze studies, which, while closely related to one another, should nevertheless be pursued individually and independently in the detailed analyses. These six aspects are: casting method, shapes, ornaments, inscriptions, nomenclature, and functions. Analyses of the first four may be based on direct observations of the actual artifacts. The last two groups of data are mainly documentary in nature; they concern both the historical records and the meaning of early script and language.

The precedent for the Tuan Fang altar set is found in the set HPKM1022, whose ritual bronzes, although slightly different in composition from the Tuan Fang group, were also all designed for the wine service.

In the classic Shoo King, or The Book of Historical Documents, there is a chapter "The Announcement About Drunkenness," considered to be an authentic Early Chou document, in which the founder of the Chou dynasty cautioned "the princes of the various states, all the high officers, with their assistants and the managers of affairs" about the ruinous consequences of indulgence in the use of spirits. But throughout this announcement, which incidentally reads very much like a preamble to the Eighteenth Amendment to the American Constitution, one exception is always made: that is, their use in "the great sacrifice." It is evidently the belief of the time that the offering of intoxicating liquids was to be limited to the dedication to Heaven and the worship of the dead, and wine consumption should be limited exclusively to those occasions. If any living people should be tempted to this habit, they are doomed.

It is important to bear in mind that in Early Chou it was the belief of the founder of the dynasty that:

When Heaven has sent down its terrors and our people have . . . lost their virtue, this might also be invariably traced to their indulgence in spirits, yea, the ruin of states, small and great, by these terrors, may be also traced invariably to their crime in the use of spirits. Thus, according to the State Announcement, "Spirits were used only in the great sacrifices" in the beginning of the new dynasty.

But in the preceding Shang-Yin period, especially when the last ruler, King Chou, was in power, he built a subterranean tank to store wines in order to indulge to the utmost in the delight of a drinking spree. The royal addiction to wine drinking naturally encouraged general lay consumption, especially among the privileged and the rich.

I believe it is for these reasons that the luxurious wine set cast in bronze in the Shang-Yin period, as represented by the HPKM1022 group, shows so much grace, delicacy, and superb taste, in beautifully preserved examples such as the ku beaker, the chih goblets, and above all the yu flask. In contrast to this group, most of the individual articles of the Tuan Fang altar set from Tou Chi T'ai look not only unworldly but almost otherworldly in appearance; the spiky flanges and the powerful shapes of most bronzes from this set give one an awesome impression. They were perhaps loftier in conception and more sacred in purpose. But they were hardly fitting for the daily use of living people, even in the remote Chou period; they are certainly less human in taste. Their awesomeness, however, must have suited the occasions when "the great sacrifices" were to be performed!

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24. Legge, Shoo King, p. 401.