DORIS DOHRENWEND

THE EARLY CHINESE MIRROR

Three small bronze disks unearthed from Chinese soil and published within the past decade suggest that the round metal mirror was known and used in China as early as the Western Chou and even the Shang period. One such find is a small disk from the Shang site at Hou-chia-chuang. It has a long central loop, a convex reflecting surface, and the back is decorated with a design of striated quadrants bordered by a band of scallops[1]. A second early specimen antedates 770 B.C. as it was found in a Chinese tomb of Western Chou date excavated in the region of the great dam site at San Mên Hsia on the Yellow River[2]. It is round, rimless and perfectly flat, with a double loop; the decoration consists of two very primitive profile tigers flanking a wild horse or ass above the loop, and a bird below. The design, rendered in a thread-like relief line, brings to mind two mirrors of comparable style (one with dancing figures in the Yale University Museum[3], the other with a coiled quadruped design in Kyoto[4]), and suggests a relation to Ordos rather than to Chinese art. The third piece, in the collection of Kyoto University[5], is perhaps the most significant. Its loop is analogous to the loop of the Shang mirror; its face is slightly concave; and it has a Middle Chou décor of interlacing, grooved, flat dragon bands. These examples are still isolated and thus problematical. Only one of them, the "Middle

* I would like to express my gratitude at the outset to Professor Max Loehr of Harvard University and Professor Alexander Soper of Bryn Mawr and New York University's Institute of Fine Arts for their criticism and encouragement. Without it this paper would surely remain, as do so many old seminar papers, unreadable and unread.

1 See Kao Ch'ü-hsün, Yin-tai ti i-mien t'ung-ching chi ch'i hsiang-kuan chih wên-t'i (Problems of the Bronze Mirror Discovered from a Shang burial), *Academia Sinica, Bulletin of the Institute of History and Philology*, XXIX (Taipei, 1958), Plate 2 and pp. 685–721. This button or lid-like bronze object was found in 1934, loop down, at the western side of Hsi-pei-kang 1005, a grave believed to date from the later Shang period which contained the remains of six individuals and was one of a group of thirty-seven other small graves. Polished metal is still visible on the face of the disk, which elsewhere shows traces of red pigment and of woven material. While he mentions the divergent opinion of scholars on the Chinese mainland and the(initial) doubts of the Japanese scholar Sueji Umehara, Kao Ch'ü-hsün, among others, believes that the object is a mirror. However, while scallops are seen on a variety of Shang animals the central linear design is not typical of late Shang art. Closest to it from China itself are the painted striated quadrant patterns on some neolithic spinning whorls from Shih Chia Ho in Hupei (cf. *K'ao-ku T'ung-hsün*, 1956, 3, p. 14, Fig. 3).

2 Kuo Mo-jo discusses and illustrates the mirror in *Wên Wu*, 1959, 1, p. 14. For a good photograph of it see Lin Shou-chin, «Culture of the State of Kuo», *China Pictorial*, 1962, 3, pp. 11–12 where it is called «the earliest ever excavated in China.»

3 Carl Hentze, *Mythes et symboles lunaires*, Anvers, 1932, Plate IIIA.

4 Sueji Umehara, «The Late Mr. Moriya's Collection of Ancient Chinese Mirrors», transl. by Jiro Harada, *Artibus Asiae*, XVIII (1955), p. 256, Fig. 13.

5 S. Umehara, "Chūgoku Inshū no Kokyō" (Ancient Mirrors of the Chinese Yin and Chou Periods), *Shirin*, 1959, 4, Plate 4 and pp. 475–9. Very close to this mirror in form and décor and so, perhaps, in time of manufacture and in use is an object published by the Institute of Archæology of the Academia Sinica, Peking, 1959, in *Shang-ts'un-ling Kuo-kuo mu-ti* ("The Cemetry of the State of Kuo at Shang Ts'un Ling"), cf. Plate 38: 13 – wherein, however, it falls under "Miscellany" and is not called a mirror. Miss Hagiko Itō, in a Masters thesis (1960–61) on the Chinese mirror for Tokyo University, was, I believe, the first to suggest that this Kuo find, also, is a mirror.

Chou" piece, has a distinctively Chinese design. It would seem that as yet no coherent account of the earliest history of the Chinese mirror can be written.

The concern of the present paper is not so much with the origins of the mirror in China as with more advanced but still early and clearly Chinese mirrors which belong to definite groups. Such groups can be recognized first in the Ch'un Ch'iu period (722–481 B.C.). Among the Early Eastern Chou mirrors there is a striking variety in structure, form and design – a variety in itself suggestive of a still early or unsettled phase. Of special interest are the double-plate mirrors (that is, relatively heavy, complex mirrors with a plain reflecting surface riveted or soldered to the decorated back), for their evolution appears to have preceded, led into, and influenced the development of the Huai mirror, as defined by Bernhard Karlgren in his important study "Huai and Han[6]". The double-plate types, published by Sueji Umehara in 1935[7], were not considered by Karlgren, but in 1942, one year after "Huai and Han" appeared, Alfred Salmony wrote of them: "It is likely that this group precedes all others"; he further suggested a relationship between two-layer and single-plate mirror design[8]. My intention here is simply to elaborate on Salmony's descriptions and to follow through on his suggestion, for the meeting of the double and single-plate mirrors offers opportunities worthwhile to explore.

The richest comparative material for any study of the double-plate mirrors is found among the Huai mirrors illustrated and analyzed by Karlgren. The term "Huai" is here used as Karlgren uses it, in the chronological and stylistic rather than the geographical sense. The Huai mirror is understood as that flat, sometimes very thin bronze disk with a small, usually fluted central loop and an intricate ground pattern mechanically reproduced through the use of a die[9], whose main development extended from the sixth through the third century B.C.

Karlgren had established five Huai or pre-Han mirror groups with the following characteristics and relative dates:

Category A: "Inserted only as a preliminary." Four round single-plate mirrors with varying but early décor, including primitive granulation and relief effects not recurring on the Huai mirror. (Note: The decoration of the flat mirror A2, with interlacing divided animal bands, is a later version of the design on the "concave mirror" in Kyoto University mentioned above.) 6th c. B.C. or earlier.

Category B: Mostly of Loyang provenance. Chiefly mirrors with flat, plain rims and stamped designs of a pair of opposing animal masks. 6th or 5th c. B.C.

Category C: The first Shou-chou (Ch'u kingdom) mirror category. Large and long lived group of mirrors distinguished by their stamped "comma" or "feather-and-curl" patterns, soon to become the background pattern of the then dominant quatrefoil, geometric and animal designs, and of stylized continuous animal scrolls in sunken execution (see Plate III:1). c. 550–250 B.C.

[6] *Bulletin of the Museum of Far Eastern Antiquities* (BMFEA), No. 13 (Stockholm, 1941). All of the many references to the mirrors treated by Karlgren and to his analyses of them will be to the illustrations and relevant passages in this article, "Huai and Han". Since the plates and text are so conveniently arranged and easy to find, I shall not footnote each reference but only quotations from the text.

[7] In his *Kanizen no kokyō no kenkyū* (*L'Étude sur le miroir antérieur à la dynastie des Han*), Kyoto, 1935. (Hereafter referred to as *Kanizen*)

[8] A. Salmony, "On Early Chinese Mirrors", *Art in America*, XXX (July, 1942), p. 198.

[9] Orvar Karlbeck reconstructed the method by which the Huai mirror was made in his "Notes on some Early Chinese Bronze Mirrors", *The China Journal of Science and Arts*, IV (Jan., 1926), p. 5.

Category D: The Loyang or central regional group. Mirrors distinguished by very fine geometrically-patterned backgrounds and a main décor of animals-in-silhouette of extraordinary vitality and distinction (Plate III:6). 4th through 3rd c. B.C.

Category E: The second pre-Han, Shou-chou category. Mirrors with intricate animal scrolls and interlacery in silhouette against geometric background patterns of the type found in Category D (see Plate III:5). c. 250—200 B.C.

The C and D Categories are the result of a clear stylistic distinction, first noted by Orvar Karlbeck[10], between two groups of Huai mirrors, an Anhui and a Honan group. As Karlgren reflected, however, the problem in setting up regional categories in the Huai period is the lack of first-hand provenance data. Uncertainties in the case of his C or first Shou-chou category have been underlined by the publication in 1956 of a monograph on the tomb of the Marquis of Ts'ai, for among the rich and varied contents of this fifth century burial at Shou-hsien — the very region believed to be the heartland of the Ch'u mirror — there were no mirrors[11]. Further, Karlgren stated in "Huai and Han" that there seemed to be no mirrors from the 1933 find at Shou-chou, datable through bronze inscriptions to the later third century[12], so that perhaps not a single pre-Han mirror can be said with certainty to have come from the neighborhood of the last Ch'u capital.

The majority of the "C" mirrors were assigned to Shou-chou solely on the basis of the local dealers' reports so carefully collected and analyzed by Karlbeck along with the mirrors which he had discovered in the Huai Valley as early as 1916[13]. Of the mirrors brought to him in 1932 at Shou-chou by farmers who had actually dug them out of their fields Karlbeck said: "Although third century mirrors were not uncommon, the bulk dated in the second century and were mostly composed of the early TLV type and another contemporary [i.e. Han] type with short inscriptions[14]." In the light of the two mirrorless tombs of the Late Chou period in Shou-hsien, the earlier evidence for the Shou-chou mirror must clearly be restudied, and we are left with a considerable group of homeless types.

We cannot deny either to the fifth century or to the Ch'u kingdom the examples which stylistically seem to belong to them. The Ch'u manner is developed and unmistakable in fourth and third century mirrors of the C group. A provisional solution of the problem might be

[10] See Karlgren, "Huai and Han", p. 13.

[11] See the report, "Objects excavated from the tomb of the Marquis of Ts'ai at Shou-hsien", *Shou-hsien Ts'ai-hou mu ch'u-t'u i-wu*, Anhui Provincial Museum, ed., Peking, 1956 (also *Wu Shêng ch'u-tu chung-yao wên-wu chan-lan t'u-lu*, "Illustrations from the Exhibition of the Major Remains Excavated from Five Provinces", with preface by T'ang Lan, Peking, 1958, pp. 3–7 and Pls. 37–60). The burial is especially important for its inscribed bronzes which allow attempts at dating. It must have occured after 494 B.C., when the Ts'ai capital under stress was moved to the Shou-hsien region, and before 447, when the state was annihilated by Ch'u. As to the identity of the Marquis and the later sixth or earlier fifth century dates of the key bronzes, Ch'ên Mêng-chia summarizes varying opinions in pp. 19–21 of the Report, himself preferring the earlier dates and the Marquis Chao. (Professor Soper called my attention to this monograph and later kindly sent me a typescript copy of an article of his on the Ts'ai tomb finds to help with the Chinese material.) It might be noted here that outside of the Loyang and Ch'ang-sha regions the surer evidence for the Late Chou mirror is still, after a decade of Communist digging, slim. See, for example, the single, small, and apparantly plain round mirror found among the perhaps sixth-fifth century things at Shan-piao-chên (Plate 31:1, No. 1:220 in Kuo Pao-chün, *Shan-piao-chên yü Liu-li-ko*, Peking, 1959). From grave No. 3 of a group of 59 Warring States graves discovered at Pai-chia-ts'un, Hopei, comes another piece of interest as an early "feather-and-curl" mirror with a divided field, or an additional band between center and (apparently flat) rim (cf. *K'ao-ku*, 1962, 12, rubbing on p. 626, fig. 20).

[12] Karlgren, pp. 8, 12.

[13] Karlgren, p. 13.

[14] Karlbeck, "Selected Objects from Shou-chou", BMFEA 27 (1955), p. 43.

1. to establish a general or non-regional ("CD") category for the sixth to fourth century Huai style mirrors (at present there are ten Honan mirrors in "Shou-chou" Category C, and Karlgren himself said that at the earliest stage "there may have been a mirror industry identical in both centers[15]"); and 2. to associate the later C Category examples with the art of the Ch'u kingdom *in toto* rather than with a particular center. If another Ch'u center is to be postulated as the home of the southern mirror, a likelier place would seem to be Ch'ang-sha, since from its tombs, some of which are believed to date from the Ch'un Ch'iu period, both lacquerware and bronze mirrors with designs which compare well with the C Category mirror designs are known to have come[16]. However the problem of provenance is solved, Karlgren's clearly defined categories are frequently referred to in the following discussion of two groups of mirrors which in origin preceded the Huai mirrors but were to a noticeable degree reflected in their design.

I.

Group I: Early Chinese double-plate mirrors with separate reflecting-plate attached to the decorated back (see Fig. 2 C); predominantly square in form; "structural" and decorative inlay; designs of static and axially-arranged decorative animal bands and silhouettes.
7th–5th c. B.C.

Alfred Salmony analyzed the décor of the Stoclet square mirror illustrated in Fig. 1 A[17] as consisting of ten animal parts: the two largest forms which emerge from the rectangular center as animal heads with "split lips"; the two medium-sized elements projecting into the field from diagonally opposite corners as crested birds; two bird heads in the regions of the animal heads; and four bird heads at the four corners with large, round, inlay "eyes[18]". Connected by straight bands and decorated with inlaid inner lines, these shapes are at best ambiguous. The loop of the mirror is hard to characterize beyond that it is small, simple and central. "Field" and "rim" are not set off from each other but are merged in the all-over design of interlocking forms. Salmony believed that the ground now visible may once have been hidden by the inlay, which was turquoise.

There is nothing in the design of this mirror to suggest foreign origin or influence. It seems perfectly Chinese and straightforwardly early in style and in structure. The corner inlays, for example, are inset turquoise disks, not rounded, decorative "overlays" such as were perhaps intended for the corners of 1 B and 1 C. The Middle Chou design is unique on the square mirror, however, and so the piece is hard to place. The décor is comparable to what Max Loehr has described as "pointed hooks, intricately interconnected in divided broad lines", a Late Western

[15] Karlgren, p. 56.

[16] See "Ch'ang sha Ch'umu" (The Ch'u Tombs of Ch'ang-sha), The Provincial Museum of Hunan, ed., *Kaogu Xuebao*, 1959, 1, p. 60 and Pls. 6–7. Of the forty-five bronze mirrors excavated from the Ch'ang-sha tombs opened between 1952 and 56 it is written: "They bear a striking stylistic resemblance to those reportedly unearthed by tomb robbers from the Ch'u tombs in Shou Hsien region before World War II, so much so that some of then could very well be passed off as coming from the same mould."

[17] Umehara, *Kanizen*, Plate XXXV: 5.

[18] Salmony, "On Early Chinese Mirrors", Fig. 1 and pp. 191–2.

Chou style ornament[19]. There is certainly a wide stylistic gap between this sturdy design with its slight stiffness and the graceful "baroque" of the full Huai style. Yet one other possibility might be mentioned.

Both Umehara and Salmony illustrate the Stoclet mirror 1 A in much the same company in which it appears here and consider its being the earliest of this group. Yet there is a difference between a "double-layer mirror", such as this one, and the "openwork mirror". If we make this distinction, 1 A cannot be taken as the earliest of the openwork types because it is of a different (although apparently related) kind. Loss of inlay has produced an openwork effect. This mirror, however, is not an openwork mirror "with inlay" as are the other examples in the group; it is an *inlaid mirror*. The effect sought, in the rim area at least, would seem to have been the equally rich but more even surface of the Chin-ts'un inlaid or "damascene" mirror. Mirror 1 A is still the earliest known of its kind, but in actual date it could fall anywhere between the Late Western Chou style mentioned and the early inlay style of the sixth and fifth centuries B.C.[20].

Illustrated in the study of Ordos knives cited in note 19 is one whose handle is decorated with the Chinese "pointed hooks" and also with an "S-curved animal", a motif prevalent, according to Loehr, in the seventh to fifth centuries B.C. Further, the S-curved animal design on the knife handle comes "surprisingly close to a small openwork plaque of Ordos origin composed of two tigers in alternating position... a motif current in China around the sixth century B.C.[21]" Allowing for differences in detail, this is a close description of what we have in the design of mirror 1 B, in the collection of Heinrich Hardt, Berlin[22]. The mirror animals each fill roughly one half of a square and are rendered in flat relief. They are an early form of what Salmony has called the "fantastically transformed tigers" of Late Eastern Chou bronzes and jades. They are nonetheless based on the S-curve and in alternating position, and the parallel between this early Chinese mirror and the Ordos tiger plaque in Stockholm is perhaps worth noting.

The turned heads and arched backs of the "tigers" of 1 B are connected with the central disk via four projections; their feet and bellies scrape the rim without being clearly set off from it. Yet there is a center and there is a rim in this mirror, unlike the Stoclet example. The center bears a small, inconspicuous knob and the rim is broad and flat, flush with the design. At the four corners are inlay sockets which probably once bore turquoise or glass-paste fillings and are reminiscent of nailheads. A painted ornament of seven white rings at the center of the left side in Fig. 1 B "clearly imitates", Salmony wrote, "the eyed glass pastes of the Loyang finds[23]". Such features make this Hardt mirror one of the best examples of that "transitional trend that manifests itself in the earliest production". It would seem that the mirror belongs to the sixth century B.C., or to the flourishing period of the S-curved animal designs, and that it raises the question of a relationship between the Chinese double-plate mirror and the animal plaque of the art of the Steppe.

[19] M. Loehr, "Ordos Daggers and Knives, New Material, Classification and Chronology. II: Knives", *Artibus Asiae*, XIV (1951), p. 108.

[20] J.G. Andersson locates the beginnings of the Late Chou inlay style in the sixth century B.C., about the time of the inception of the Huai style, in "The Goldsmith in Ancient China", BMFEA 7 (1935), p. 37.

[21] Loehr, "Knives", Plate IX, No. 60 (the knife); Fig. 4, a line drawing after Andersson's Plate 25:9 in "Hunting Magic" (the plaque); and p. 108.

[22] Umehara, *Kanizen*, Plate XXXV: 4; also Salmony, "On Early Chinese mirrors", Fig. 2.

[23] "On Early Chinese Mirrors", p. 193.

In Fig. 1 C[24], another square mirror in the Hardt collection, we see what is probably the next step in the development of the type. Instead of two flat tigers there are now four slightly rounded bird forms, each disposed within one quarter of a design more clearly set within its frame. The birds confront each other in pairs, a heraldic device not new in Chinese bronze art. Their heads are somewhat "squeezed in" about the quatrefoil of very early design at the center of the mirror-back; their crests curve and meet in such a way as to form additional, heart-shaped ornaments on the horizontal axis; bird feet brace on the rim. The petals of the quatrefoil are round, as in the "rosettes" among the dragon bands on certain Li-yü vessels[25], not pointed or heart-shaped as on the Huai mirrors. Also of interest among the non-zoomorphic motifs are the forms which rise on short stalks from the rim between the breasts of the birds. They are early variants of the "peripheral quatrefoil" of Kalgren's D 42, D 43, and D 44 (cf. Plate III:2), single-plate round mirrors assigned in "Huai and Han" to the third century B.C. – roughly three centuries later than the Hardt mirror in question, if the sixth century date here proposed for it is accepted.

The rim in 1 C is still broad and flat, as in 1 B, the only evidence of decoration being the inlay sockets at the four corners. In 1 D, a mirror from the Loyang graves now in the Royal Ontario Museum, Toronto[26], such structural features are no longer visible. The Toronto mirror cannot be characterized as "transitional". It is the finest and (along with a square mirror in the Buffalo Museum of Science with four "air view" birds and a patterned rim[27]) surely among the latest of the double-plate mirrors with paired bird designs. Succeeding it are single-plate early Huai mirrors with bird patterns such as No. 70 in the "Illustrated Catalogue of the Exhibition of Cultural Objects from Ch'u[28]" (and Karlgren's B 5 which has no known provenance but is quite like the Ch'ang-sha specimen), and also, in all probability, such Huai style mirrors with four birds from the Loyang region as Karlgren's D 10 and D 40.

The center of mirror 1 D is defined by the now outward-turning heads of the four birds, and it bears a small loop whose ends are embellished with tiny feline masks. The rim is decorated with a band of fine-scale triangular meanders. Turquoise inlay was intended only for the heart-shaped "peripheral quatrefoils" and the lyre-like ornaments projecting inward from the rim. The opposed pairs of confronted birds recall the design in 1 C, but the creatures are now more suave in silhouette and richer in the patterning of their bodies with scales and the finest striations. The heads have great open beaks; the crests are gone; tails drop in a single graceful curve. The elements which would correspond to wing-feathers have now been more definitely appropriated by the lateral "lyres". The legs of the birds terminate not in claws but in rounded spirals which dip slightly into the rim as do the curling tails.

[24] *Ibid.*, Fig. 3; Umehara, *Kanizen*, Plate XXXV: 2.

[25] S. Umehara, *Sengoku-shiki dōki no kenkyū* (*Étude des bronzes des royaumes combattants*), Kyoto, 1936: cf. detail Plate XXIII.

[26] W. C. White, *Tombs of Old Loyang*, Shanghai, 1934, Plate LI, No. 128; Umehara, *Kanizen*, Fig. 2: 7; Salmony, "On Early Chinese Mirrors", Fig. 5. In the case of a mirror of the same type in the Hakutsuru Museum, Kobe, Mr. Minao Hayashi of Kyoto University pointed out to me traces of woven material *between* the face and the back of the mirror, suggesting that the textural and coloristic effects so clearly sought in this period may have been achieved on occasion by the insertion of colored cloth.

[27] See A. Salmony, "Chinese Metal Mirrors; Origin, Usage, and Decoration", *Hobbies, The Magazine of the Buffalo Museum of Science*, XXV (April, 1945), p. 37.

[28] *Ch'u wên-wu chan-lan t'u-lu*, Peking, 1954, No. 70.

The birds of 1 D have the pincer-like open beak of the West Asian eagle or eagle-griffin[29]. The design in both 1 C and 1 D of fabulous animals flanking a plant-like motif may well have developed independently in China; its elements existed there. The Late Chou combination and its popularity, however, might also have been inspired by a meeting with West Asian designs, possibly in steppe versions. In the case of the Ordos plaque and mirror 1 B the common motif of the S-curved animal was duplicated in different positions to form, respectively, rectangular and square compositions. An Ordos plaque in the Mayer collection, Stockholm[30], has a heraldic design of confronted birds in openwork which, if doubled to form a square would give us something quite like 1 C or 1 D in general character. Similarly, if we could place in opposing position a pair of Siberian gold plaques from the collection of Peter the Great, each with a rectangular design of contorted quadrupeds flanking a "tree of life[31]", the result would be a square arrangement analogous even in the use of color inlays to the design of the mirror 1 D. Sir Ellis Minns suggested that much of the Northern metalwork may have been executed for the steppe peoples by the craftsmen of the neighboring settled civilizations — Greeks and Persians in the West, Chinese in the East[32]. If the Chinese did manufacture such plaques in pairs for the nomads it would have been both easy and natural for them to adjust the rectangular moulds for the foreign designs toward more fully symmetrical square compositions such as we see in 1 B—1 D. This adaptation of the plaque would help to explain the line of square mirrors which was not typical and did not last, and would give us one way in which foreign motifs and inlay techniques entered into Chinese art in the Late Chou period. As for the Toronto mirror 1 D it must date from around 500 B.C. With the fine inner patterning of its low relief forms it bears the imprint of the Li-yü style (this might now more accurately be called the Hou-ma style[33]) yet in design is clearly more advanced than 1 C.

Before leaving the subject of bird patterns on early mirrors, the peacock designs on two lacquered round boxes from the Ch'u tombs at Ch'ang-sha might be mentioned in connection with Huai mirror design. It seems possible that the quatrefoils of Karlgren's "C" mirrors — particularly the striated kind (see Plate III:1) and the radiating lines of "leaves" on "stalks" (cf. Plate III:2, or C 26, C 27) — are related to the tail-feathers of such birds; and that the mysterious "flail" motif on mirrors C 51—C 54 was derived from the peacock crest. Chiang Hsüan-i illustra-

[29] Cf. André Godard, *Le trésor de Ziwiye*, 1950, Fig. 30, for example, as distinguished from the eagle-griffins and beak-heads in Northern animal art which generally have the more contained outline of the closed beak (see S. J. Rudenko, "The Mythological Eagle, the Gryphon, the Winged Lion, and the Wolf in the Art of Northern Nomads", *Artibus Asiae*, XXI, 2 (1958), Figs. 1a, 1c, 1d, 4a and b, Pls. I:1, II:1,3,4, III: 1 and Guitty Azarpay, "Some Classical and Near Eastern Motifs in the Art of Pazyryk", *Artibus Asiae*, XXII, 4 (1959), Figs. 21, 22, 23, 27).

[30] See J.G.Andersson, "Selected Ordos Bronzes", BMFEA 5 (1933), Pl. IX: 1.

[31] G.Borovka, *Scythian Art*, New York, 1928, Plate 52B.

[32] Minns, "The Art of the Northern Nomads", *The Proceedings of the British Academy*, XXVIII (1942), reprint, pp. 13–14.

[33] The "Li-yü style" was so named by Ludwig Bachhofer (see *A Short History of Chinese Art*, New York, 1946, 42–4 and Figs. 28, 49) after the find which first called attention to it. Current around 600 B.C. and still seen in such vessels as the Cull Huang-ch'ih *Hu*, dated c. 482 B.C. through the inscription as interpreted by W.P. Yetts (*The Cull Chinese Bronzes*, London, 1939, Plates XVI–XVII and pp. 45–75), it characteristically shows friezes of finely-patterned flat dragon bands. The discovery near the village of Li-yü, however, was a chance find of sacrificial bronzes only (see Georges Salles, "Les bronzes de Li-yü», *Révue des arts asiatiques*, VIII (1934), 146–58). At Hou-ma, also in Shansi, on the other hand, Chinese excavators uncovered in 1959 remains of what is believed to have been a capital of the feudal state of Chin including thousands of fragments of pottery moulds from bronze casting in flourishing Li-yü style (see *Wen Wu*, 1960, 8–9, pp. 11–14 and Plates and Ibid., 1961, 10, pp. 31–5 and Figs. 4–9). Since the moulds give evidence that Hou-ma was a center for the mass production of such bronzes in the Eastern Chou period the style is subsequently in this paper called the Hou-ma style. The indicated seventh-fifth century date for it should not be substantially affected.

tes one of the boxes[34], Laurence Sickman the other, perhaps slightly later one, which is in the collection of J. H. Cox, Washington[35]. The painted patterns on these peacock boxes, exterior and interior, are among the earliest and loveliest known from Ch'ang-sha. The lid designs feature repeats of heraldic birds, surrounded by a painted outer border of diagonals and curls in the earlier inlay style. Sickman recognized the dominant element on such lacquers as the eye-feather of the peacock and said: "It is this eye of the peacock reduced to a heart-shaped or petal form and often arranged as a quatrefoil about the central knob of the mirrors, that is very evident in many mirrors of the fourth to third century B. C. recovered from Shou-chou and, like the lacquer box, associated with the Ch'u state[36]." I would venture further to suggest that lacquers such as these boxes and the Shou-chou mirrors with related designs were made at the same place, Ch'ang-sha, as early as the fifth century, and with the painted lacquer style already leading the bronze style of the mirrors.

The Ch'u lacquers are currently almost invariably dated to the fourth and third centuries B. C. – the centuries which saw the height of Ch'u power, on the one hand, and to which, on the other, comparable designs on Huai mirrors have been assigned by Karlgren. Yet the dates of individual Huai mirrors are not entirely settled, and the lacquer art must have had something of a history by the fourth century. The bird designs on the early Ch'ang-sha boxes should be datable to the earlier fifth century B. C. They consist of the same elements, though they are more "open" and fanciful in aspect, as the designs on mirrors 1 C and 1 D (sixth-fifth century); the style of the birds, as seen in Chiang's Plate 17, with their cross-hatched, band-like bodies and spiralled joints, is the Ch'u equivalent of the Chin or Hou-ma style (seventh-fifth century); the border pattern on the Cox piece is more finely rendered but otherwise identical with the perhaps earlier fifth century inlay style patterns on some fragments of a lacquer vessel (or vessels) in the Museum of Far Eastern Antiquities, Stockholm[37].

Finally these elaborate, inventive, early lacquer designs must have inspired the related mirror décor; it could not have been the reverse. Lacquer was a newer and a freer medium than bronze. Once the technique was developed, as it appears to have been by 500 B. C., the lacquer style is likely to have been the more progressive, and it may have influenced not only Huai mirror design but even the metal inlay style which is believed to have given the lacquer painter some of his first patterns[38]; where, for example, did the thickening-and-thinning lines of the increasingly curvilinear inlay designs come from if they were not first made with the brush? The reign of bronze, like the power system associated with it, was broken by the fifth century B. C. in China, Perhaps this was due not only to economic, social and political changes within the Middle King-

[34] See *Ch'ang-sha, Ch'u-min-tsu chi-ch'i i-shu* (Changsha, the Chu Tribe and Its Art), Vol. I: Lacquer, Shanghai, 1949, Plate 17.

[35] L. Sickman and A. Soper, *The Art and Architecture of China*, Penguin-Pelican History of Art, 1956, Plate 12A. Not shown are the designs on the interior, where the birds have the loop-like crest so similar to the "flail" motif of C51–54.

[36] Ibid., p. 291, n. 12.

[37] Cf. Sickman and Soper, Plate 12A and Andersson, "The Goldsmith", Plate XVI; the vessel fragments were donated to the Museum in 1931 by C. T. Loo, who stated that they were from Ku-wei-ts'un. While their designs are not identical with any published from Ku-wei-ts'un (see *Hui-hsien fa-chüeh pao-kao*, "Preliminary Report on the Hui-hsien Excavations", Peking, 1956, pp. 69–109 and Pls. 39–78), lacquer is known from the site and they do agree fairly well with the design of an inlaid tubular fitting from grave 1 (No. 1:172, p. 79, Fig. 97:1); also with the designs on some of the painted clay vessel, mirror and belt-hook facsimiles reported, along with the much discussed figurines, to be from Hui-hsien and dated in the first half of the fifth century B. C. by M. Loehr in "Clay Figurines and Facsimiles from the Warring States Period", *Monumenta Serica*, XI (1946), 326–33.

[38] See Andersson, "The Goldsmith", pp. 18, 34.

Fig. 1A
A. Stoclet, Brussels

Fig. 1D
Royal Ontario Museum, Toronto

Fig. 1B
H. Hardt, Berlin

Fig. 1E
A. Stoclet, Brussels

Fig 1C
H. Hardt, Berlin

Fig. 1F
W.R. Nelson Gallery of Art, Kansas City

continues Plate I

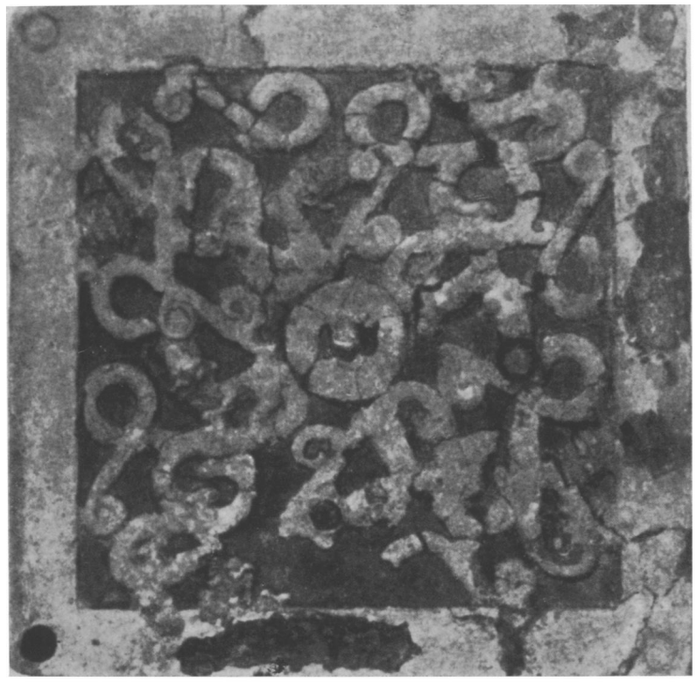

Fig. 1G
Excavated at Ch'ang-sha, 1954. *Hunan Provincial Museum*

Acknowledgements for the Illustrations

Plate I

Fig. 1A after S. Umehara, *Kanizen*, pl. XXXV: 5
Fig. 1B after Salmony in *Art in America*, XXX, Fig. 2
Fig. 1C after Salmony in *Art in America*, XXX, Fig. 3
Fig. 1D Courtesy of the Museum
Fig. 1E after Umehara, *Kanizen*, pl. XXXVIII: 1
Fig. 1F after Salmony in *Art in America*, XXX, Fig. 4
Fig. 1G after *Hunan ch'u-t'u t'ung-ching t'u-lu*, pl. 3

Plate II

Fig. 2A after Salmony in *Art in America*, XXX, Fig. 6
Fig. 2B after Umehara, *Kanizen*, pl. XXXIV: 2
Fig. 2C after Umehara, *Kanizen*, p. 35, Fig. 19
Fig. 2D after Umehara, *Kanizen*, pl. XXXII: 1
Fig. 2E after Umehara, *Kanizen*, pl. XXXI: 1

Plate III

Figs. 1–6 after Karlgren in B.M.F.E.A., No. 13

Fig. 2A
C. T. Loo, Paris

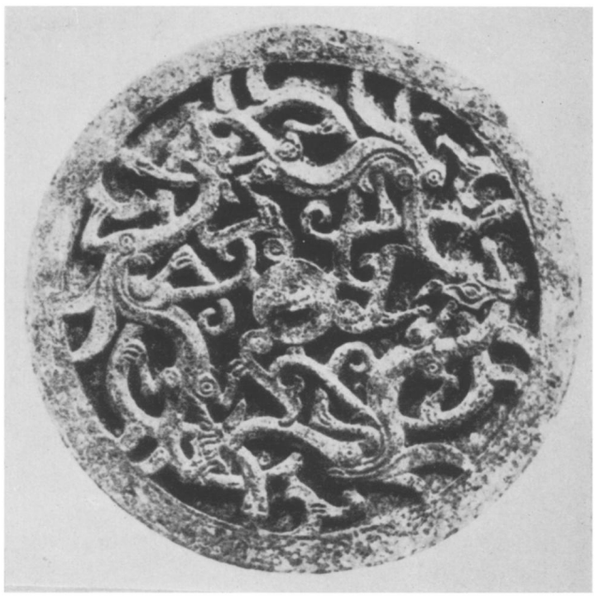

Fig. 2B
G. L. Winthrop Bequest, Fogg Museum, Harvard

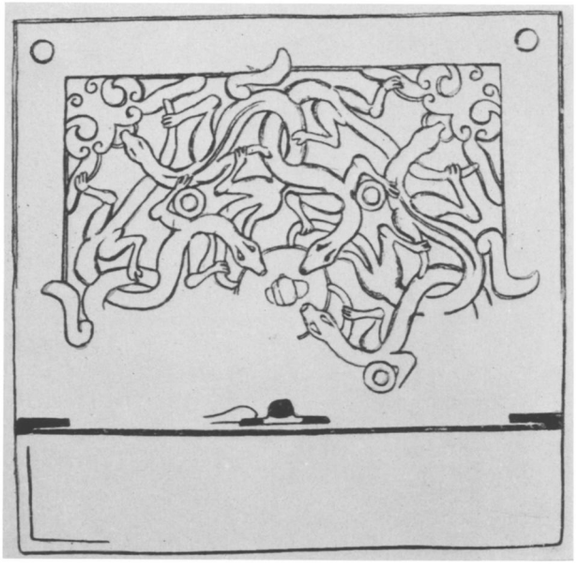

Fig. 2C
G. L. Winthrop Bequest, Fogg Museum, Harvard

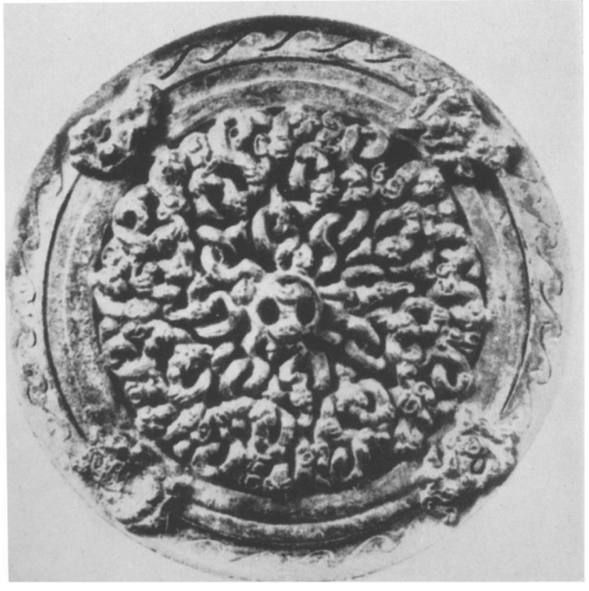

Fig. 2D
G. L. Winthrop Bequest, Fogg Museum, Harvard

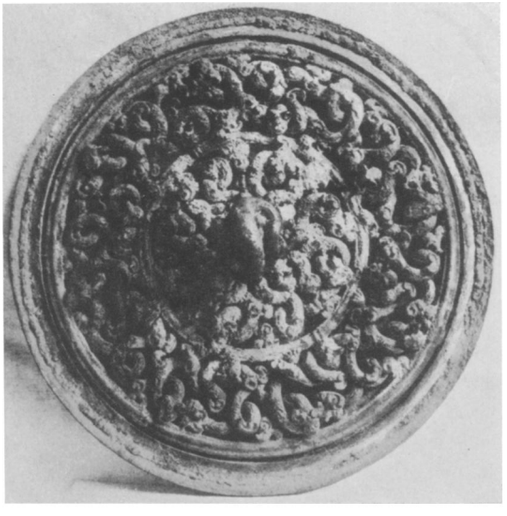

Fig. 2E
Ōkura Collection, Tōkyō

Plate III

Fig. 1
Lagrelius collection
Karlgren's C19 «4th c.»

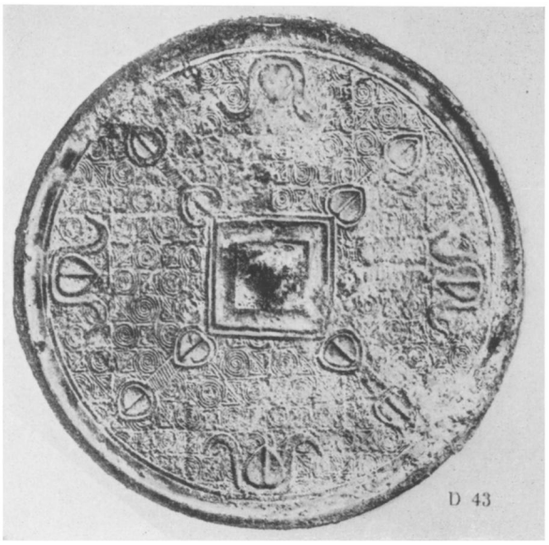

Fig. 2
Formerly Lagrelius collection
Karlgren's D43 «3rd c.»

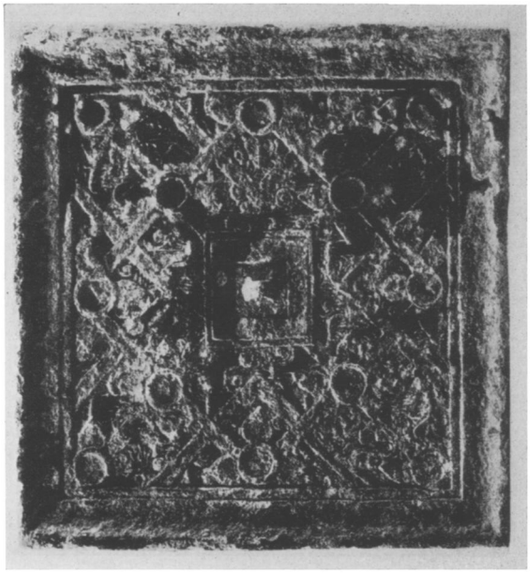

Fig. 3
Lagrelius collection
Karlgren's C85 «3rd c.»

Fig. 4
Oeder collection
Karlgren's E10 «3rd c.»

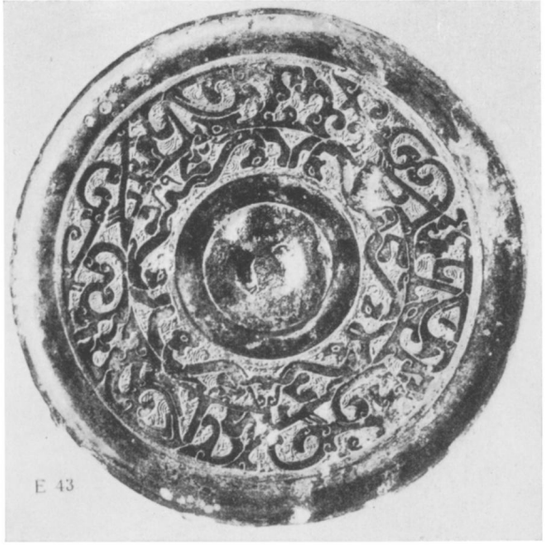

Fig. 5
Becker + Newmann
Karlgren's E43 «3rd c.»

Fig. 6
Museum of Far Eastern Antiquities, Stockholm
Karlgren's D5 «4th c.»

dom, to such technological changes as were wrought through the introduction of iron, or even to the Late Chou influx of foreign ideas and styles from the North and West, but was a result also of the rise of the Yangtze state of Ch'u with its splendid, exotic culture and its already flowering art of painted decoration. This art was applied to surfaces even of bronze, as in the painted mirror[39]; surely it was one of the factors which affected, in the Late Chou period, the basic concepts of design in metal.

Comparable to the Toronto mirror in the fineness of its patterning and intricacy of detail, and probably roughly contemporary in date, is another "openwork" mirror in the Stoclet collection illustrated here in Fig. 1 E[40]. This mirror, however, is round and, according to Salmony, represents "a stage in which the ornamented top and the plain base are produced in one cast[41]". R. W. Swallow illustrates a mirror said to have come from the Piao Bell Tomb at Chin-ts'un[42] which is nearly identical with 1 E, except that it has no quatrefoil and is still composed of two distinct parts. Thus, within the time of popularity of a single mirror design – perhaps around 500 B.C. – we have the technical transition from the double -layer mirror to the single-plate mirror with double-layer effect.

The décor of mirror 1 E recalls the patterned flat dragon bands on objects from the Li-yü and Hou-ma finds and might suggest an earlier date. Yet the configuration of such bands on the mirror, where they form four "hobby-horse" bird-griffins (crested quadrupeds with gaping beaks), is unusual. The rimmed sockets with comma-like flourishes on the joints of the creatures and also on the rim seem to reflect simultaneously the former riveted construction of the mirror and the Persian and Sarmatian inlay style of the fifth-fourth centuries B.C.[43]; such circles are seen on the shoulders and haunches in animal designs from West Siberia[44], Pazyryk[45], and the Ordos[46].

Also pointing to the fifth century rather than to the sixth are the affinities between this mirror design and designs on Huai mirrors dated by Karlgren not even to the fifth century but to the fourth and third centuries B.C. Several of the single-plate mirrors shown in "Huai and Han" have features reminiscent of those of this mirror. Similar quatrefoils (namely, the elaborate striated ones believed to represent the eye-feather of the peacock) occur on Karlgren's C 19 (see Plate III:1), C 20 and C 22, "fourth century". The "rivets" or rimmed sockets are seen in seemingly early designs in both the C and D Categories of Huai mirrors (C 30–C 31, D 44 to D 46, all "third century"). These circular sockets appear to have been added to the Huai mirror repertoire after the quatrefoil and before the "slanting T" motif. They testify to the influence of double-layer designs, and their occurrence on such mirrors as C 42 with the Ts and C 80 and

[39] See S. Umehara, "Sengoku-jidai no saigakyō" (Painted Bronze Mirrors of the Period of the Warring States), *Bijutsu Kenkyū*, No. 178 (Nov., 1954), pp. 153–72; cf. for similarities in the fluid, inorganic, elaborate style the painted dragon design in Fig. 7 from a bronze mirror and the painted bird décor on the lacquered box in Chiang Hsüan-i's Plate 17.

[40] Umehara, *Kanizen*, Plate XXXVIII:1.

[41] Salmony, "On Early Chinese Mirrors", p. 198.

[42] Swallow, *Ancient Chinese Bronze Mirrors*, Peiping, 1937, Plate 3. It is not among the objects believed likely to be from Chin-ts'un by White in *Tombs*, Sueji Umehara in his *Rakuyō Kinson kobo shūei*, Kyoto, 1937, or Karlgren in "Notes on a Kin-ts'un Album", BMFEA 10 (1938), 65–83.

[43] See A. Salmony, "Sarmatian Gold Collected by Peter the Great", *Gazette des beaux-arts* (Sixth Series), XXXI (Jan.–Feb., 1947), Figs. 2,3 and pp. 9–14.

[44] Borovka, Plate 46A.

[45] Azarpay, Figs. 23, 24, 26.

[46] Salmony, *Sino-Siberian Art in the Collection of C. T. Loo*, Paris, 1933, Plate VIII:4.

C 85 with raised lozenges (Plate III:3) suggests both closer connections between such specimens and an earlier date than is assumed in Karlgren's arrangement[47].

Related to the Stoclet round mirror in the decorative quality of its animal bands and to the Toronto square one by the common convention of the spiral animal foot, mirror 1 F[48], a square example in the William Rockhill Nelson Gallery, is most striking in the diagonal arrangement of the design. The diagonals are created by the corner-to-center direction of the four winged serpentine creatures, each of which touches with his tongue one of the scaled petals of the Hou-ma style quatrefoil[49]. Variation is achieved through the leisurely but precise undulation of the animals across their own paths. There are no corner "rivets" on the rim but rather a continuous band of alternating scales and depressions (it is possible that the latter were once filled with turquoise[50]). Again with this rim there is the suggestion of a connection between the early Chinese square mirror and the rectangular animal plaque; the Mayer bird plaque and several others from the Ordos region have similar rims[51].

The Chinese dragon, an imaginary species associated above all with the idea of water, emerges from the Late Chou period in true prototypal form. One can see important stages in its evolution on the mirrors. To the basic animal band were applied different heads and appendages in 1 B, 1 E, and 1 F. The "band" acquires body and convincing motive power in the next group of mirrors. Not yet fully articulated, the creatures are nevertheless seen as glittering thoroughbreds on the inlaid mirror. Then, forged from a welter of diverse animal features and types – domestic and foreign, real and imagined – the dragon, as seen in Karlgren's D 5 (Plate III:6), has been given the final "shot" of life or muscular energy; the creatures on the fourth century mirror are essentially complete. In this development the fluid yet formalized design of the Nelson Gallery mirror is comparatively early. It looks back to the hieratic conceptions of the ritual bronzes; it is also one of the earliest representations of the dragon (see the large wings) specifically as a serpent with the power of flight.

Mirror 1 G[52]. is a transitional type. Like the examples in Group II, its animal décor is rendered in rounder relief. Yet it retains the square form, axial symmetry, and the more purely decorative or non-organic conception of the animal body characterizing Group I. It is of identical type with two other better preserved mirrors[53], neither of known provenance and one of which

[47] I believe that the "zigzag lozenge" was first brought out in relief over the background patterns of the Huai mirror (in a network, not singly, and at Loyang in the fifth century, not the third) because the effect thus achieved was that of a superimposed grill or two-layer effect (compare, for example, C80 with a raised lozenge-network and C 85, a clear imitation of a double-layer mirror with grill-effect, "rivets", etc.). It is in part because he sees the raised lozenges in isolation and as a late feature that Karlgren has placed the early mirrors D 37 and D 40, which have them, toward the very end of the D Category.

[48] Salmony, "On Early Chinese Mirrors", Fig. 4.

[49] Cf. the quatrefoil on the Hou-ma style *ting* in the Holmes collection, New York (Umehara, *Sengoku*, Plate XXXI). This "mouthing" of a plant-like element also occurs in Borovka's 52B (the Siberian plaque cited in connection with mirror 1D), except that there the scene is shown in profile rather than from above. Perhaps it is related to West Asian designs featuring ritual watering of the "tree of life", or again a Chinese version of a Northern version of a Mesopotamian symbol. The fertilizing waters would on the mirror be represented by the dragons' outstretched tongues, just as it is water that must have been meant by the drop-pattern on the much longer tongues of the Ch'ang-sha wooden "guardians".

[50] Salmony, "On Early Chinese Mirrors", p. 194.

[51] See Salmony, *Sino-Siberian Art*, Plates XXIV:7 and XXVI:3.

[52] See *K'ao-ku*, 1951, 1, Plate 22:4 and pp. 102–3; also *Hunan ch'u-t'u t'ung-ching t'u-lu* (An Illustrated Catalogue of Bronze Mirrors Excavated from Hunan Province), ed. by the Hunan Provincial Museum, Peking, 1960, Plate 3 and pp. 7, 20.

[53] See Umehara, *Kanizen*, Plate XXXV:3 in the Hakutsuru Museum, Kobe; and *idem*, *Shina Kōkogaku ronkō*, Tokyo, 1938 Plate 64.

has an inlaid rim. 1 G shows traces of inlay among the animals in the field but on the rim has only the moulded sockets at the four corners. Face and decorated back are of different color metal, the former being bluish-black and the latter appearing greyish. The mirror is particularly interesting as the only double-layer specimen known from Ch'ang-sha, where it was excavated in 1954 from Ch'u grave MO 11 of the Warring States period.

II.

Group II: (2 A–2 C) Double-plate mirrors, predominantly round, with décor of serpentine animal interlacery in relief and with development of inlay decoration particularly in the rims. 5th c. B.C. – (2 D) Different structural type with round openwork grill inserted into larger, rimmed reflecting-plate. 6th or 5th c. B.C.

With the mirror in Fig. 2 A[54], in the former collection of C. T. Loo, we are again at the beginning of a sequence – with decorative features recalling structural ones, with an emergent animal species, and with more primitive transitions between center and field, field and rim. Yet 2 A appears to be later than 1 B, the earliest comparable mirror of the preceding group. The three projections from the central disk are now slightly curved and fluted; they are not simply grafted into the animals' heads and haunches but are gripped by their feet. The rim is flat and plain, as in 1 B, but instead of moulded corner sockets it has four circles of white glass paste to suggest nailheads[55]. Finally, as in the case of the Swallow and Stoclet examples (see 1 E), 2 A has what appears to be a single-plate descendant in a mirror with an identical arrangement of writhing "dragons" in relief excavated at Ch'ang-sha[56]. The Loo mirror rim also comprises elements termed "inward-curving volutes"; these seem to have developed with the double-plate mirror (see also 2 B) and when they occur on such single-plate mirrors as Karlgren's C 68 they too, like the rivet and nailhead effects, probably show the influence of double-plate mirror design.

The main decoration of 2 A consists of three animals related to, but more advanced toward naturalism than, the "fantastically transformed tigers" of the Hardt mirror 1 B. The heads now have features; crests curve up to meet the rim; the feet are clawed and busy gripping each other and the mirror parts. With the exception of the split-lipped profile heads the animals are disposed as though seen from above. Most important of all, however, is that these spined, lizard-like creatures are realistically modelled in high relief, and that they are beginning to move. As they make their way around the center of the mirror they overtake each other, overlap, begin to "interlace". Thus, in place of the static design and axial symmetry most natural to the square form emerges the concentric movement (of *three* elements) suggested by the round; and even in this early piece there is the prophecy of grace.

[54] Salmony, "On Early Chinese Mirrors", Fig. 6.
[55] *Ibid.*, p. 194.
[56] *Kaogu Xuebao*, 1959, 1, Plate 6:1.

Fig. 2 B[57], an example from the G. L. Winthrop collection in the Fogg Museum, is an open-work mirror with more complicated interlacery and with a rim design in early inlay style. The plain central disk bears a tiny loop which one might now call "fluted". There are three curving fan-tailed projections from the center. The field contains six interlacing animals: three serpents, who bite the rim and whose tails end in curls which seem to merge with the central projections; and three winged dragons. The dragon heads, in profile, have ears and spiral horns. Each dragon bites the tail of the preceding one. Each of the creatures has two sets of legs (the left front claw clutches a rim volute) and, issuing from the shoulders, a pair of wings; these recall the wings of the Nelson mirror dragons except that they are now less formalistically treated. The shoulders and haunches of the dragons are marked with sunken circles.

The circles, once roundly capped with inlay, are again reminiscent of the Persian and earlier Sarmatian selection of the main animal joints for emphasis or decoration with inlay. The animal type is known from plaque designs from western Siberia (G. Borovka's 52 B cited in connection with 1 D) and from the Chinese borderland (the Ordos plaque in the former collection of C. T. Loo on which a dragon, with body longitudinally pleated, struggles with two tigers[58]). Borovka suggested that the dragon is descendend in part, at least, from the Iranian horned and winged griffin, just as are the dragon-like "contorted quadrupeds" of the West Siberian plaque, whose bodies are already elongated and twisting[59]. The Winthrop mirror animals are very like these plaque dragons both in features and modelling. Like them, and possibly through them, they must be related to Iranian designs. Perhaps we cannot even speak of "dragons" in Late Chou but only of proto-dragon types (bird, animal and snake – there is still diversity) or of griffins more or less transformed in China and the steppe, for several of the "diverse animal types" from which the Late Chou creatures sprung had already been assembled into archetypes in the West.

Especially noteworthy in 2 B is the inlay pattern of the rim, as it links the mirror with the evolving inlay style of the Loyang region. There is the unusual square *chien* from Chin-ts'un in Toronto, for example, with borders inlaid with gold, copper, malachite, and turquoise; with body covered with Huai style "commas"; with an accompanying grille of interlaced animals; and an estimated date of the earlier fifth century[60]. Fifth or early fourth century, on the other hand, must be the inlaid mirror in the Freer Gallery[61]. It has intertwined "dragon" décor and a rim design of criss-crosses with curly ends agreeing basically with the (simpler) criss-cross pattern of the rim in 2 B. The Winthrop mirror would seem to fall into place between the Toronto vessel and the Freer damascene mirror, and thus might be dated in the fifth century B. C.

The two-plate construction of the Freer mirror proves the relationship between the double-plate mirror and the inlaid mirror. Its design, on the other hand, might be taken for comparison with that of a square mirror in the Winthrop collection illustrated by the drawing in Fig. 2 C[62].

[57] Umehara, *Kanizen*, Plate XXXIV:2 (Fogg 1943.52.152).

[58] Salmony, *Sino-Siberian Art*, Plate XXII:3.

[59] Borovka, p. 87.

[60] See Andersson, "The Goldsmith", Plates II–III (White's No. 252), and Bachhofer, pp. 46–7.

[61] See *A Descriptive and Illustrative Catalogue of Chinese Bronzes Acquired During the Administration of John Ellerton Lodge*, compiled by the Staff of the Freer Gallery of Art, Washington, 1946, Plate 37, No. 36.3 and pp. 68–9.

[62] Umehara, *Kanizen*, Fig. 19:1, p. 35 (Fogg 1943.52.154); see Plate XXXIV:1 for photograph. Even closer in design to the Freer luxury specimen than 2C is another Winthrop double-plate mirror in the Fogg illustrated by A. Bulling in "The Decoration of Some Mirrors of the Chou and Han Periods", *Artibus Asiae*, XVIII,1 (1945), p. 26, Fig. 5.

The rim in 2 C is plain except for corner inlay sockets, and its eight animals are modelled in relief, but the way in which these creatures are interlaced – in pairs like linked horseshoes – is identical with the way the six creatures are linked in the Freer inlaid mirror. There are traces of color and decorative inlay on Winthrop mirror 2 C, now much corroded. Also of interest are its corner-filling arabesques; the corner *fleur de lis* of Karlgren's C 84, a square single-plate mirror dated in his sequence to the third century, may reflect these designs.

The Winthrop mirror shown in Fig 2 D[63] represents another type of two-layer construction, and although it is far more densely populated with serpentine bodies it may still be earlier than the other examples in Plate II. Topped by a knob pierced four ways, its heavy, slightly convex grille fits into the back of a larger reflecting-plate whose concave rim is decorated with unconnected S spirals. Covering the points of juncture between the two parts of the mirror are four plastic animals, each with a crested, back-turned head, four short legs, and with main joints accented by relief spirals[64]. The grille itself is composed of no less than twenty-four interwoven serpentine animals. Eight feline heads bite the rim; eight similar heads may be detected a little further in; four heads, also in mid-field, stretch out their tongues at the rim; and four serpent heads make contact with the center.

Bronze objects comparable to the grille and reflecting-plate of the mirror 2 D have been illustrated separately[65]. The back of the under-plate of such mirrors is known from some examples to bear a linear design of its own, even though this is hidden under the inset grille[66]. Thus it is possible that this double-layer mirror type was evolved by combining two objects originally used separately and in quite different ways. The ensemble resembles a shallow covered dish with the cover locked on. The reflecting-plate might bear reference to some sort of reflecting basin, or perhaps to an earlier single-plate mirror with design on its back. The decorative, cover-like grille is perhaps again an adaptation of the openwork metal plaque, only in this instance not the angular but the round form. H. F. E. Visser has recently illustrated a number of these round animal grilles – some of them with loops for attachment and the majority decorated in the Houma style – suggesting use as harness ornaments[67]. Whatever its origin, the openwork animal grille "caught on" in Late Chou China and was used in a number of ways, not only to decorate mirrors and other objects but also to fit vessels in which, most probably, heat was produced or incense burned[68].

The dense interlacery of the Winthrop mirror grille recalls the tight interlacing of bands on such Hsin-chêng style vessels as the *fu* in the Art Institute of Chicago[69]. The granulated, serpentine bodies of the animals, with their joints indicated by plastic spirals in a way still more

[63] Umehara, *Kanizen*, Plate XXXII (Fogg 1943.52.150).

[64] *Ibid.*, see Fig. 17, p. 33 for a line-drawing.

[65] As in Umehara, *Kanizen*, Plate XXXIII: 1,4 and 5.

[66] *Ibid.*, see Fig. 18, p.34.

[67] Visser, "A Group of Circular Bronze Objects of the Late Chou Period", *Artibus Asiae*, XXII, 1–2, 1959 (Issue Dedicated to the Memory of Alfred Salmony), p. 188.

[68] According to Andersson ("The Goldsmith", p. 8), a grille was found with the square *chien* in Toronto which fitted it like a cover. For interesting variants of such "covers", see B. Karlgren, "Notes on Four Bronzes", *BMFEA* 26 (1954), Plate 8 and P. Singer, "The Unique Object in Chinese Art", *Oriental Art*, N. S. VII,1 (Spring, 1961), Fig. 6. These two animal grilles are domical or curved and have quatrefoil flowers projecting from their four corners; if such objects did not belong to early incense burners they remain a complete mystery, for as covers they could contain nothing not designed to escape.

[69] See Bachhofer, Plate 26.

decorative than natural, suggest the Hou-ma style of the seventh and sixth centuries. The animal cartouches also point to the Hou-ma phase, for they are quite like the more fully modelled animals which one finds in relaxed attitudes on vessels from the Li-yü hoard; one such *ting*-cover creature has a similar serpent under his left front foot[70]. On the other hand, the design of mirror 2 E[71] – of the same general type as 2 D except that it has the animal loop of the Scythian mirror and its grille is divided by a circular band – is reflected in the flat interlacery design of Karlgren's E 43 (Plate III:5) dated by him third century B.C. but more likely to be fifth century. Thus, 2 D is tentatively placed in the later sixth or earlier fifth century, a time when it would naturally bear a Hou-ma stamp yet could also inspire early experiments with animals and animal interlacery on the flat Huai mirror.

CONCLUSION

The evidence briefly cited in the introduction suggests that the round metal mirror with a curvature in the disk was the earliest form of the mirror in use in China, perhaps in limited use for specialized purposes. The relationship between the design of the recently published Kyoto University mirror and that of Karlgren's A 2 might warrant extending the date of his A or "preliminary" round mirror category back as far as the eigth or seventh century (if not further) to include the earlier mirror with concave face. Scholars have seen the Chinese mirror as a variant of the Scythian mirror[72]. If there should be further finds in China of Shang mirrors, or of curved disks with polished faces, this view, as noted by Umehara[73], may have to be modified. In any case, the similarities in decoration between the Chinese openwork mirrors and openwork plaques from the Steppe testify to Sino-Siberian contacts in the Late Chou period and to Chinese knowledge of West Asian styles through the intermediary art of the northern nomads. Also affecting Huai mirror design would seem to have been the art represented by the Ch'ang-sha lacquers. The influence of double-plate mirror types on the designs of the single-plate mirrors cannot be doubted. Only the possibilities for comparison afforded by the variety of early types, especially in the fifth century B.C., might be considered more closely.

Several of the designs on the double-plate mirrors discussed in this paper are comparable in general aspect or in separate features to designs on the mirrors illustrated by Karlgren. From the point of view of the earlier types, the following questions arise out of Karlgren's arrangement and dating: 1. the development of the Loyang or D Category in general; 2. the fourth and third century dating of the three square mirrors C 57, C 84 and C 85, all with early designs; 3. the late or third century dating of mirrors such as E 10 and E 43, whose dragon designs can be compared with designs on the double-plate mirrors.

One or two things that may shed light on these questions remain to be said about the early mirrors. First, the double-layer mirrors, both openwork and inlaid, are more likely to be from Loyang or from the more northern centers than from Ch'u. The Toronto square bird mirror

[70] See Umehara, *Sengoku*, Plate XXIII.
[71] Umehara, *Kanizen*, Plate XXXI.
[72] Umehara, *Kanizen*, pp. 19–20 of the French résumé and Bachhofer, p. 46.
[73] See his more recent "Ancient Mirrors", pp. 477–9.

D 1 figures in Bishop White's Chin-ts'un inventory, while 1 C is clearly related to it and 1 B to 1 C. Winthrop mirror 2 B, with its "wart" and rim inlay, points to the Chin-ts'un early inlay style as does the Freer inlaid mirror. Stoclet mirror 1 E shows the northern Hou-ma rather than the southern style. Secondly, the earliest looking mirrors in Karlgren's assemblage are small; mirrors listed as having larger diameters generally have more sophisticated designs.

On the other hand, the D or Loyang Category lags in Karlgren's chronology almost two centuries behind the Shou-chou or Ch'u group in its beginnings. As described it begins with remarkably complex designs, including a hunting scene or two, set against the fine geometrically-patterned background, and it ends in acknowledged "riddles" and hard-to-place specimens. Almost at the end of the D section has been placed a group of small mirrors (D 37—D 48) whose exceedingly early looking bird or quatrefoil designs are attributed to influence from Shou-chou in the third century B.C. Even assuming that such an element as the peripheral quatrefoil on these mirrors was "certainly a loan from Shou-chou category C[74]", – and we have seen it on the Hardt square bird mirror of the later sixth century – it is hardly possible that the Loyang mirror-maker, with such stunning productions as D 5 through D 29 in his memory, could then have produced D 43 (cf. Plate III: 6 and 2). If, in somewhat different order, D 37—48 were moved to the beginning of the D series (or placed in the "CD" general category proposed for the sixth to fourth century Huai mirrors), the series would then have a beginning and a clearer direction, and the fifth century mirror art of Loyang would in part be accounted for. The earliest quatrefoil designs – and some of the most elaborate must have been among the earliest – were probably added to the décor of the Ch'u mirrors, too, in the fifth century, for even the southern mirror art, which was perhaps more conservative, could not have carried on for two centuries (sixth to fourth) adding nothing to the comma background at all.

"The supposition", Salmony wrote in 1942, "that square mirrors were used before circular ones became the fashion seems supported by their predominance[75]". Since square mirrors seem to have become obsolete after the fifth century B.C., the possibility must be considered that the square Huai mirrors C 57, C 84 and C 85 date from that century rather than later. If one moves these mirrors backward in time, with them, of course, go their designs: four relatively naturalistic animals about a star center in C 57; raised "zigzag lozenges" about a star center in C 84, the mirror with the corner *fleur de lis* designs noted in connection with 2 C; and a superimposed diagonal grill effect with "rivets" forming the centers of quatrefoils (see Plate III:3) in C 85. There is nothing precluding the possibility that these designs came very soon after the basic quatrefoil and within the considerable scope of the fifth century, or the early, variety.

Finally, late in the fifth century or very early in the fourth, that early mirror variety must have included fairly complicated dragon-and-quatrefoil designs and early experiments on the flat mirror with animal interlacery such as one sees on the round mirrors E 10 and E 43 (Plate III: 4 and 5) respectively. From the technical standpoint this would not have been impossible. Once it was discovered that the effect of a superimposed design on a patterned background could be achieved by pressing the rim or the design stamp down harder upon the mould than the pattern stamp, the Huai mirror craft was technically prepared for any design that could be developed

[74] Karlgren, p. 79.
[75] Salmony, "On Early Chinese Mirrors", p. 198.

upon the former. This stage seems to have been reached with Karlgren's C 1, or in the sixth century B.C.

The horned, eared, winged, four-footed and long-tailed "dragons" in the field of E 10 are brothers, however flattened, to the creatures of the Winthrop mirror 2 B (fifth century); they are ancestral to the fine snapping dragons, who otherwise lack ancestry, on the fourth century mirror D 5; they are manifestly earlier than the sophisticated E Category animal scrolls among which they are located at present. E 43, on the other hand, has a divided-field design analogous to the divided-grille design of the double-layer mirror 2 E, sixth or fifth century. Even more telling is the S-curved animal dance about its center. It shows clearly the influence of two-layer mirror designs, and in the light of that connection cannot be dated later than the fourth century B.C., at the latest.

Harvard University
June, 1963

NAMES AND TITLES

Bijutsu Kenkyū 美術研究
Ch'ang-sha, Ch'u-min-tsu chi ch'i i-shu 長沙楚民族及其藝術
Ch'ên Mêng-chia 陳夢家
Chiang Yuen-yi (Chiang Hsüan-i) 蔣玄怡
Chin 晉
Chūgoku Inshū no Kokyō 中國殷周の古鏡
Ch'u Wên-wu chan-lan t'u-lu 楚文物展覽圖錄
Hou-ma 侯馬
Hui-hsien fa-chüeh pao-kao 輝縣發掘報告
Hunan ch'u-t'u t'ung-ching t'u-lu 湖南出土銅鏡圖錄
Itō Hagiko 伊藤萩子
Kanizen no kokyō no kenkyū 漢以前の古鏡の研究
Kao Ch'ü-hsün 高去尋
Kaogu Xuebao (*K'ao-ku Hsüeh-pao*) 考古學報
K'ao-ku (*T'ung-hsün*) 考古（通訊）
Ku-wei-ts'un 固圍村
Kuo Mo-jo 郭沫若
Kuo Pao-chün 郭寶鈞
Pai-chia-ts'un 百家村
Rakuyō Kinson kobo shūei 洛陽金村古墓聚英
Sengoku-jidai no saigakyō 戰國時代の彩畫鏡
Sengoku-shiki dōki no kenkyū 戰國式銅器の研究
Shan-piao-chên yü Liu-li-ko 山彪鎮與琉璃閣
Shang-ts'un-ling Kuo-kuo mu-ti 上村嶺號國墓地
Shih Chia Ho 石家河
Shina kōkogaku ronkō 支那考古學論攷
Shirin 史林
Shou-hsien Ts'ai-hou mu ch'u-t'u i-wu 壽縣蔡侯墓出土遺物
T'ang Lan 唐蘭
Umehara Sueji 梅原末治
Wên Wu 文物
Wu Shêng ch'u-t'u chung-yao wên-wu chan-lan t'u-lu 五省出土重要文物展覽圖錄
Yin-tai ti i-mien t'ung-ching chi ch'i hsiang-kuan chih wen-t'i 殷代的一面銅鏡及其相關之問題