CHAPTER VII.

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The curvilinear type occurs in three forms:

1. As a quatrefoil which occurs as an all-over pattern, such as the wide band (6) of al-Hasbā’ minaret (fig. 6 A) and also as a narrow band as in the narrow band (5) of the same minaret (fig. 6 B).

The minaret of al-Juwaijī mosque at Mausil displays a similar wide band (pl. 203). (1)

2. As plating which takes the form of a narrow band such as the first and the sixth band of al-Hasbā’ (fig. 6 B).

3. As a meander which takes the form of a narrow band such as the second narrow band of the same minaret (fig. 6 B). (2)

(1) This minaret was built in 1107/1695. In 1358/1939 it was demolished by the municipality of Mausil, and was replaced by a stone minaret of Turkish style. (al-Daiwachi, op. cit., p. 149).

(2) It seems that these forms of geometric curvilinear ornament are peculiar to the minarets of Mausil itself, as they are not found anywhere else, not even on the minarets of the same region such as the minarets of Arbīl, Tāwūq, and Sinjār. (fig. 7 , pls. 44, and 55).

The technique with which these bands are rendered is the same as that of the minarets of the early 11th - 12th Centuries, such as the minarets of Dāmghān (Tarik-i Khāna, early 11th century), Bīstām (c.1120), and Sāveh. The similarity goes as far as the actual method by which the ornamental brick was raised above the surface of the minaret; other than that, the designs of the latter minarets are rectilinear and without the slightest curvilinear tendency (see Hill and Grabar, op. cit., figs 184, 169, 214).
The Arabesque

This term is generally used to denote a host of stylized non-figurative ornamental patterns, curvilinear, rectilinear or otherwise. (1)

Hersfeld suggests that this term should be used only to denote the ornament of the art of Islamic countries, and further suggests that it should be restricted to the foliage ornament of Islamic art. (2)

He maintains that this "foliage ornament as conceived by Muslim art can hardly be described and analyzed as a unity, since it exhibits considerable differences according to time and place." (3) After stating that there are some general characteristics which distinguish Islamic foliage ornament clearly from the foliage ornament of classical antiquity, he stresses that "As to its origin, it is certainly derived from the classical foliage ornament with its conventional flora, always unrealistic however realistically treated." (4)

He further maintains that in Greek antiquity there was a gradual striving towards life-like forms which constantly increased until it reached its culminating point towards the early Hellenistic period, but later a reaction against that trend, partly caused by unhellenic ideals and views of art and partly by the decline of technical skill which - presumably - led to less life-like forms of foliage ornament. This reaction passed into Islamic art, and accordingly the 'arabesque' in Islamic art represents a further development of the reaction which began in the classical period. (5)

(2) Hersfeld, ibid.
(3) Ibid.
(4) Ibid.
(5) Ibid.
However, 14 years later Herzfeld apparently changed his mind and considered the ornament of the '1st style' at Sämarra not only as the ornament from which all 'arabesque' was derived, but also a style peculiar to Sämarra. (1)

Kühnel maintains that this type of ornament has been rightly defined by Riegl as an "exclusively Islamic form of denaturalized vegetal ornament consisting of shoots of split or bifurcated leaves or inorganic tendrils." (2)

Kühnel supports Riegl's idea by pointing out that in Spain a derivative of the Arabic word 'taurīq ('foliation') is used to denote arabesque decoration. This clearly implies that this description was restricted to foliage ornament. Kühnel adds that its invention was the outcome of a particular Arab attitude, and that parallel developments occur in Arabic poetry and music. (3)

As regards the origin of this 'denaturalized' foliage ornament, Kühnel follows Herzfeld in stating that the 'arabesque' has its prototype in certain acanthus, vine leaf and cornucopia forms of late antiquity which tend to progress in undulations or with bifurcations. This style was not yet fully developed in the Umayyad period. (4) To Kühnel, the 'arabesque' has acquired its typical shape in the 9th century under the Abbāsids (presumably at Sämarra) and in Islamic Spain. He also maintains that it appeared fully developed in the 11th century in provinces governed by the Saljūks, Fātimids and the Moors. (5)

It should be noted that Kühnel includes the 'abstract cloud band' with the other vegetal forms, such as the palmette, rosette and naturalistic flowers, which are the components of the 'arabesque'.

(1) Herzfeld, "Der Wandschmuck," p. 7; Fātimid, op. cit., p. 18.
(2) Kühnel, op. cit., p. 558.
(3) Ibid., p. 560.
(4) Ibid., p. 561.
(5) Ibid.
The mere existence of the cloud band, which was originally exclusively Chinese, whether rendered abstractly or realistically, should have suggested to Kühnel the possibility of a Chinese prototype for the 'arabesque', or at least he should have made allowance for such a possibility when attributing the 'arabesque' to prototypes of late antiquity.

In fact, the only scholar who has suggested such a possibility is Strzygowski who, although regarding the purely geometrical scroll (which is based on the spiral and which ultimately created the 'arabesque') as Turkish, suggests that it may have originated in China. (1)

Herzfeld and Kühnel define the characteristics of this so-called 'arabesque' ornament in broadly the same way. To Herzfeld, the 'arabesque' is based on the principle of "infinite correspondence." (2)

In borders, the 'arabesque' (meander) is governed by "the cognate principle of reciprocity." (3)

To Herzfeld, "the vegetable stalk (meander or scroll) loses almost entirely its character as a part of a plant..." (4) He also maintains that the leaf similarly loses its vegetal character and "gives up all pretension to realism." (5)

In order to maintain his theory of a Hellenistic origin, Herzfeld stresses that it is still possible to trace the derivation of these denaturalized leaves from the conventional leaves of Hellenistic ornamentation, both in their contours and in their internal design. (6)

Kühnel isolates two principles governing the 'arabesque':

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3. Ibid.
4. Ibid., p. 363.
5. Ibid.
6. Ibid.
Reciprocal repetition and "the formation of palmette or calice forms by pairs of split leaves." (1) Kühnel adds that two aesthetic rules are always scrupulously observed: the rhythmical alternation of movement, and the desire to fill the entire surface with ornament. (2)

A comparison of these two articles shows that although Kühnel refutes Hersfeld's general approach to the arabesque as antiquated, he agrees with all that Hersfeld says about the "denaturalized vegetal ornament" including its Hellenistic descent. (3) The only new aspect identified by Kühnel is the split leaf forming a palmette or calice and even this he takes from Rieg's definition (which he quotes at the beginning of his entry): "denaturalized vegetal ornament consisting of shoots of split or bifurcated leaves on inorganic tendrils." (4)

Most of the drawings illustrating Kühnel's entry (some of them are reproduced in fig. 73) exhibit this feature distinctly. (5)

One may gather from these analyses that the essential character of this ornament is composed of two basic components: 1) a highly stylized scroll, and 2) stylized bifurcated leaves.

1. - This scroll is curvilinear, undulating uniformly, with shoots branching off from it at regular distances. These shoots turn back in a spiral towards the semicircular spaces formed by the scroll and end in a finial.

In one of the examples given by Kühnel, the spiral shoots end alternately in five lobed leaves, perhaps vine leaves. They have two serrated petals on one side and a forked tendril (or two small petals) on the other side (fig. 73 a). In the second example (fig. 73 b) the shoots end in lotus flowers. In the third and fourth

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(1) Kühnel, op. cit., p. 558.
(2) Ibid.
(3) Ibid., p. 561.
(4) Ibid., p. 558.
(5) Ibid., p. 559, figs. 1 - 4.
(6) Ibid., pp. 559-60, figs. 1 - 8.
Fig. 73: "Arabesque" border designs.

A. From the mosque of ṣAmr in Fustat. C.800.
B. = = = = ʿUqba, Ḍairawān.
C. = a Qurʾān. Granada. 15th century.
D. = = wood carving. Egypt. 13th century.
examples (fig. 73 a and d) which are composed of two interlaced "arabesque" scrolls, the shoots end in the so-called split leaves or the so-called "sepals."

At Sānrā, a large number of scrolls of varying degrees of stylization occur, in stucco as well as in the wall paintings, as border designs. In fact Hamīd, in his work on the "plant borders" at Sānrā (1) has illustrated 23 variations of this type of scroll (2) apart from three Sasanian ones. (3) Almost all of those variations follow rigidly the characteristics of the 'arabesque' scroll as defined by Herzfeld and Kühnel.

It should be noted that these scrolls at Sānrā are normally divided into two types: 1) 'vine scroll' and 2) 'palmette scroll' (4) The first type is illustrated in fig. 73 a, and the second in fig. 74 a. In both examples, though obscured by elaboration, the stalk and the shoots adhere to the same formulae.

However, all of the border scrolls at Sānrā are considered to be derived from the Sasanian "half-palmette" scroll (5) such as the one depicted in fig. 74 c, which is from Ctesiphon. (6) Consequently they are commonly derived from Hellenistic prototypes.

In fact, an exact parallel to the Sasanian "half-palmette" of fig. 74 c is found in the mural paintings of the Jausaq al-Khaqani (fig. 74 b) (7) Though this is roughly executed, the similarities cannot be overlooked.

It is proved in this Chapter, in the discussion on the 'heart-shaped' motif, (8) that the so-called Sasanian "palmette" and "half-palmette" of this kind, whether three-lobed or five-lobed, enclosed

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(1) Hamīd, op. cit., pp. 194-207.
(2) Ibid., figs. 54-7, 59-75 and 95.
(3) Ibid., figs. 51-3.
(4) Ibid., p. 196.
(5) Ibid., p. 196 and figs. 51-3.
(6) Pope, Persian Architecture, pl. 174.
(7) Herzfeld, "Die Malereien" pl. LVIII.
(8) See infra pp. 245-49.
Fig. 74: Palmette and half palmette scrolls.
A. Sāmarrā stucco. After Herzfeld.
B. Wall painting. After Herzfeld.
C. Ctesiphon stucco. After Pope.
by a heart-shape or winged, whether at Sâmarrâ', in Sasanian art, in the art of the Steppen, or in the murals of Fandikent, has no connection whatever with the Hellenistic palmette, which was derived, but despite appearances, it is not to be associated with the Assyrian palmette. It is, in fact, a by-product of the Chinese scroll, the late type of Chinese scroll, which is closer to the Near Eastern type, is intrusive in China, for a common prototype to both Sasanian and Sâmarrâ' scrolls.

The study of Chinese scrolls exhibiting the same characteristics reveals that this type of a scroll has been in constant and uninterrupted use as a border motif from the 1st Century B.C. onwards, on various media.

The earliest of these scrolls appears on the outer rim of the back of the 'TLV' bronze mirror of the Saligman collection (pl. 204). In the early 2nd Century, it appears on painted lacquer, such as the basket found at Lo-lang (fig. 75 a) and on a silk dated between the Chin and Northern dynasties (3) and published by Chubanshe (fig. 76). It appears on stone carvings of the 6th Century, as on the funerary couch of the Northern Ch'i (550-77) in the Museum of Fine Arts, Boston (fig. 75 b), as well as in sculpture of the 8th Century, such as the inner border of the hollow surrounding the head of the "Eleven-headed Kuan-Yin" of the Freer Gallery (fig. 75 c).

On porcelain, the same scroll also appears especially on Ming 'Blue and White' from the beginning of the 14th Century onwards, as in fig. 75 d and e.

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(1) Watson, op. cit., pl. 94; Sullivan, op. cit., pl. 49.
(4) Chubanshe, op. cit., pl. 2.
(5) Sickman and Soper, op. cit., pl. 40 (a) and 41 (a).
(6) Ibid., pl. 56 (b).
(7) H. Garner, Oriental Blue and White, (London 1954), pls. 1b and 2c.
Fig. 76: Buddhist embroidered fabric of the Chin dynasty (265-420) to the Northern dynasties (438-581), depicting heart-shaped motifs and the so-called 'arabesque' scroll. After Chubanshe.
It should be noted that an exact parallel of the scroll depicted in fig. 75 D appears on a pot and on a spherical object in a very well known Byzantine fresco at the Church of Nerezi in Yugoslavia (1164). (1) A similar border scroll appears on the cuff of Empress Irene at the mosaic of St. Sophia in Constantinople. (2) Fig. 75 E exhibits two versions of this scroll. The scroll depicted on the rim is identical with that of fig. 75 D whilst the scroll depicted on the neck is more elaborate and more ambitious.

In painting, another elaborate version appears as a border design on the collar and cuffs of an Emperor's robe (fig. 77 ). (3) This painting is datable to the 7th Century, and is now in the Museum of Fine Art, Boston.

The uninterrupted descent of this scroll from the 1st Century B.C. to the present day on the various media of Chinese art strongly suggests its indigenous nature.

However, it should be pointed out that this particular scroll is by no means the only scroll in Chinese art exhibiting the characteristics of the 'arabesque'. In fact there are numerous examples of foliated and bifurcated scrolls in the ancient art of China. Some of

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(1) A. Grabar, op. cit., pl. on p. 145. It should also be noted that a good number of old Russian embroideries published by Suirin exhibit exact and near-exact parallels of this scroll (A.N. Suirin, Drevo ruskoi skhoj Cosundarstvennoe Izdatel' stvo, Moscow 1963, pls. on pp. 31-2, 43-4, and 58) as well as containing many other Chinese elements, such as the "slanting T" pattern (pl. on p. 81), the rectilinear zigzag and square-ly looped band (pls. on pp. 77, 80, 83, and 124), lobed pointed arches (pls. on pp. 34-5, 37, 100, 105, and 125), cloud collars (pl. on p. 37), and stretched loo-e with a rounded central lobe (pls. on pp. 34-5, and 37). It should also be noted that the garment of pl. on p. 125 exhibits a Saljük crown amongst its ornament.

(2) Graber, ibid., pl. on p. 99.

(3) Sickman and Soper, op. cit., pl. 62.
Fig. 77: Yen li-Pen: Portrait of the Emperors (detail). 7th century. After Sickman and Soper.
these scrolls are clearly derived from plants (most probably creepers) such as the scrolls on the 3rd – 4th Century B.C. bronze tiger of the Museum of Far Eastern Antiquities, Stockholm (pl. 205). Others which are clearly derived from animal forms include the well-known 'dragon scrolls' depicted on bronze objects datable to the 4th Century B.C., such as the chariot part excavated at Chin Ts'un Honan and now in the British Museum, and the other chariot part datable to the 3rd Century B.C. (formerly in the collection of J. Homberg). Similar motifs occur on bronze mirrors from the 4th Century B.C. onwards.

One of the most beautiful of these 'dragon scrolls' exhibiting the so-called 'arabesque' type of meandering and foliation (including the heart-shaped element) can be seen on the Han Jade disc of pl. 206.

In fact Chinese dragons and dragon scrolls provide the answers to a number of puzzling questions about the other elements in the 'arabesque', such as buds, volutes, and the famous 'kidney-shaped volute', as well as the split leaf, which will be discussed presently.

Only very few of the minarets of Iraq exhibit 'arabesque' scrolls of the type discussed above. In fact, the only minaret that exhibits such a scroll in the form of a band is the minaret of the Nurî mosque, where the scroll is severely abstract.

(1) Watson, op. cit., pl. 89a.
(2) Ibid., pl. 80a.
(3) Ibid., pl. 80c.
(4) Ibid., pl. 91c, 93 b-c, 95, 96a, 97a, 98a-b and 101.
(6) These elements have been discussed when dealing with the 'S' pattern (see supra, pp. 280-283).
(7) The second narrow band from below (pl. 43 and fig. 6).
On the minaret of Suq al-Ghazl the 'arabesque' scrolls are limited to the muqarnasāt of the āwād (pl. 47), to the lancet forms of the segmented blind niches of the kūrāl, and to the cavetto borders surrounding them (pls. 52 and 53).

Though the muqarnasāt of the minaret of Dhu‘l-Kifl and those of the minaret of Shaikh Ma‘rūf al-Karkhī exhibit another form of composite 'arabesque' defining heart-shaped motifs, (the so-called vase motif) the 'arabesque' scroll of this kind cannot be found in their ornament.

2. - The stylized bifurcated leaf of the 'Arabesque' seems to have played an important and dominant role in the 'arabesque', and also independently; it was also used in combination with the scroll.

The study of this motif in Islamic art has led to the identification of a very large number of variations with correspondingly numerous degrees of stylization (figs. 73, 74 A and B and 73, and 79).

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(2) This scroll is called by Iraqi masons salīm ornament. They attribute its creation to Sultan Salīm, but they do not specify which of the Salīms he was. However, it was probably Salīm II, who pulled down and rebuilt the dome of the Kāşimīn shrine and built its first minaret between 926/1519 and 978/1570. It may seem strange for an Ottoman Sultan to be personally responsible for a technical innovation of this kind but it is common knowledge that most of the Ottoman Sulṭāns were trained in a profession as a sign of piety. It has been related that some of them actually earned money from the sale of work they had produced. Some of them took up calligraphy, others carpentry and so on. It should be noted that the Turkish word 'Suslemeş' means "ornamentation." This may suggest - though this is unlikely - that the Arabic salīm is a corruption of the Turkish word. On the other hand it is possible that with the rebuilding of the dome and the minaret of the Kāşimīn shrine during the reign of Salīm II, this scroll was reintroduced to Baghdad for the interior decoration of most of the existing mosques which were built or redecorated during the Ottoman period. Baghdad abounds with this salīm scroll used as a border design.
Fig. 78: Variations of the bifurcated leaf in Islamic art.
(for details, see the following page).
A, B, and C. From a stucco panel in the shrine of Fīr-i Baqran. 1299-1311. After Hill and Grabar.


H. From the carved facade of the main entrance to the Hātuniye madrasa. Karamān. 1385. After Hill and Grabar.


N, and S. From carpets datable to the 17th-18th century. Afer Riefstahl.

O. From the mosque of ʿUqba. Qairawān. After Kühnel.

P. From the salver of Alp Arslān. 1066. After Talbot Rice.


R. From a Persian carpet. Late 17th century. After Grote-Hasenbalg.

T. From a Persian carpet. 2nd half of the 16th century. After Grote-Hasenbalg.

Fig. 79: Variations of the bifurcated leaf in Islamic art.
(for details, see the following page).
Fig. 79:

A. From Pīr-i Ṭabānī stucco. 1299-1311. After Hill and Grabar.
D. From the stucco tyúngnam of a blocked entrance at the sarine of Pīr-i Ṭabānī. After Hill and Grabar.
E, G. Seljuk wood carvings from a door in the Sāhib Ātā mosque. 1279. After Hill and Grabar.
F. From a wood panel in the Seljuk window doors of the Ālī al-Ḥāfiz mosque. 1155-1220. After Hill and Grabar.
H. From stucco decoration above a niche in the sanctuary of Pīr-i Ṭabānī. After Hill and Grabar.
I. From blocked window of Kirk kizler tomb in Karamān. 15th century. After Hill and Grabar.
J. From interior doorway at the Kārtevīya madrasa at Karamān. 1302. After Hill and Grabar.
K. From a carpet. 16th-17th century. After Grote-Jansenbælg.
M. = = =. Turkish. 1st half of the 17th century. After Grote-Jansenbælg.
N. From a carpet (Kərəbbə). 1843. After Grote-Jansenbælg.
and adaptation (figs. 60 A-E, 81, A & B, 62 A-C, 83 A-D). (1)

Almost all of these variations exhibit some common features.

(1) A long upper leaf rising in the direction of the stalk at first, then curving upwards and backwards in a wide arch and ending in a pointed blade-like tip or in a curl inclined forwards in the original direction of the stalk.

(2) The lower leaf is almost always sharply hooked towards the stalk and much shorter and thicker. This can clearly be seen in fig. 78 C. In fig. 78 C both leaves are equally curved. In fig. 78 L the lower leaf is greatly elongated.

These motifs however may be subdivided into two types. The first type exhibits the characteristics described above as in fig. 78 C; the second type, which is depicted in fig. 79 A has the same characteristics, except that the lower leaf tends to correspond with the direction of the upper leaf, and its tip bends forwards (away from the stalk) to end either in a sharp point or in a curl.

(3) Many of these bifurcated leaves show a rounded form between the curve of the lower leaf and the stalk. This form is always below the point at which the stalk contacts the two leaves (see fig. 78 A, J and B, and fig. 79 B, D and D). In some examples, this form resembles a form of sagging of the stalk, as in fig. 78 A, L, B, and fig. 79 B, D, and D. In other examples, it is distinctly a curl, or most probably a volute, as can be seen in fig. 78 J and D and in fig. 79 B, and D.

This indicates that the sagging form under consideration was

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(1) Fig. 60 A-F shows the adaptation of this element in the form of cloud bands and cloud scrolls; and fig. 83 illustrates a frequently recurring motif in the 'arabesque'. This secondary motif is referred to by various names, depending on the degree of stylization to which its components (principally the bifurcated leaf) are subjected. It is sometimes called a palmette, at other times a tortoise motif, especially when occurring in the borders of carpets.
Fig. 80: Bifurcated leaf cloud bands in Islamic art.
A and B. From Persian carpets. 2nd half of the 16th century. After Grote Hasenbalg.
C, D, and E. From Turkish carpets. 16th-17th century. After Riefstahl.
F. From a wood panel in the Saljuk window doors of the Şahib C'Ata mosque, Konya. 1279. After Hill and Grabar.
Fig. 81: Arabesque composite motifs in Islamic art.

A. From the Abbasid Palace, Baghdad.

B. From the minaret of Suq al-Ghazl, Baghdad.
Fig. 82: Analytical drawing of the composite arabesque motifs in Islamic art.

A. From the Abbāsid palace.

B. From the minaret of Sūq al-Ghazl.

C. From a stucco on an angle wall in the shrine of Pir-I Baqrān.
Fig. 83: The adaptation of bifurcated leaves for the so-called palmette, and the so-called tortoise motif.

A. From the stuccoes of the Pîr-î Baqrân shrine.

B. From a 16th century carpet.

C. From a Persian carpet. C. 1600.

D. From a Turkish carpet. 1st half of the 17th century.

E. From a Karabâgh carpet. 1848.
Fig. 84: Analytical drawings of the various forms of the cramped scroll in Islamic art.
A and B. From a Syrian alabaster capital. 8th century.
   After Dimand.
C. From another Syrian alabaster capital. = = .
   After Dimand.
D and E. From Samarrā stucco ornament. After Herzfeld.
F. Detail of E.
originally a third leaf curling towards the stalk which, in some examples, was fused to the lower side of the stalk. In other examples it was reduced to a small curl; and in a third variety it was eliminated completely, as in fig. 78 and fig. 79.

It would be of interest to quote Herzfeld's observations on the convention of the fused leaf in the 'arabesque':

"Stalk and leaf are no longer as in nature — two co-ordinate but formally distinct elements — but have coalesced to such an extent, that the leaf no longer grows out of the chief stem on a small stalk, but represents simply an expansion or outgrowth of the chief stem." (1)

Kühnel is more specific about this convention in the 'arabesque', for he states "the principles which regulate the arabesque are reciprocal repetition, the formation of palmette or calice forms by pairs of split leaves ...." (2)

Citing Shäfl, KizwInT explains that in the two sepal split calyx and in the three sepal split calyx, the stalk is connected sideways to the base of the calyx, "thus forming a single curved line with one flank so that the whole base is placed to one side of the stalk." (3)

The study of these bifurcated leaves reveals that though the majority of them constitute terminals for the shoots of the undulating stalk, they were also used independently for the creation of other ornamental motifs, or, more correctly, they were utilized for the embellishment of other motifs which were originally non-foliate. Finally the original motifs, though still forming the skeleton of the design, were gradually obscured by bifurcated leaves.

(2) Kühnel, op. cit., p. 558.
(3) KizwInT, op. cit., p. 47.
One of the non-foliate motifs which were so treated is the heart-shaped motif (Joo-e). This motif was reconstructed by the use of two bifurcated leaves confronting each other symmetrically. This form appears in the muqarnasāt of the so-called ʿAbbāsid Palace (fig. 81 A); the muqarnasāt of the minaret of Suq al-Ghażl (fig. 81 B); and those of the minaret of Shaikh Maḥrūf al-Karkhā (pl. 68). In all of these three designs this motif forms the lower half of the decorative panels. The upper halves of these panels, though they are partially interlaced with the lower halves, are composed of two dorsal bifurcated leaves placed symmetrically (figs. 81, 82 and pl. 68). In all three examples the composite motifs are surmounted by trifoliate forms. Though these trifoliate forms vary in shape, they do incorporate the two upper curls or tips of the upper leaves of the bifurcated motifs with an added central petal. This new composite finial is referred to by ShāfiʿI and others by the term "notched-base calyx." (1)

The upper motifs of these panels, which are composed of two dorsal bifurcated leaves, are variously described according to the degree of stylization. For example, the motif depicted in fig. 83 A (a detail from the stucco panel of Fir-i Bagrān shown in fig. 82 C) is considered to be a palmette, whilst the forms depicted in fig. 83 B–E are considered to be 'tortoise' motifs—especially when they occur in the borders of carpets.

When these forms occur on ʿAbbāsid pottery, they are described by Lane as originally Sasanian half-palmettes which have degenerated by losing their middle lobe, "and thus assumed the 'split leaf' form that we instinctively associate with the word 'arabesque'..." (2)

(1)猕文ini, op. cit., p. 49 and figs. 12a and 12 b.
(2) Lane, op. cit., p. 6, and pls. 48 and 72 b.
This assumption that the 'split leaf' is derived from the Sasanian 'half palmette' should be disregarded. In fact the 'palmette' is a by-product of the so-called 'half-palmette' which occurs both in Sasanian and in Islamic art. The direct descent of the Sasanian and Islamic so-called 'half-palmette scroll' from ancient Chinese prototypes has been established in the earlier part of this study. It has also been shown that the foliate motifs contained within the undulations of these scrolls have no connection with the Hellenistic palmette, as they have always appeared in the form of two or three tendrils stemming from only one side of the shoots towards the inner curves of the meandering main stalk.

In some examples these tendrils have been replaced by petals; in other examples they were replaced by floral forms, but the original layout, using only one side of the shoot and extending towards the curves of the main stalk, has always been retained. Thus they have never at any time been a section of a palmette nor have they even been connected with it.

The same phenomenon occurs in the Sasanian so-called 'half-palmette' scroll, where the tendrils are turned into petals, and in similar scrolls depicted on 8th Century Umayyad alabaster capitals published by Dimand. These capitals were found in Syria and are now in a private collection in Paris. (1)

On one of these capitals two such scrolls appear (fig. 84 A and B). (2) In both examples, in order to cover the whole width of the surface with the scroll, the undulations of the main stalk were exaggerated greatly and thus the main stalk was cramped in such a

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(2) Ibid., Pls. 40 and 41.
way that the normally horizontal so-called 'half-palmettes' had to be rendered vertically. When two such cramped meanders or scrolls are made to meet each other symmetrically (as is the case in the two examples), the two corresponding terminals of both scrolls are bound to resemble a 'split palmette'. The number of petals in such 'split palmettes' depends on the number of such petals, tendrils or volutes depicted in the terminal motifs from which such 'split palmettes' are derived by some scholars.

It should be noted that the majority of the termini of the cramped meanders or scrolls are much smaller than the preceding loops of the design. These loops therefore enclose the termini. The same method of cramping the foliated scroll within a given space occurs extensively in the stuccoes of Samarra. In these stuccoes a palmetto form naturally occurs within the undulation of such scrolls when they are cramped symmetrically. This is best illustrated by figs. 34 (1) and (2). The two designs in both examples occur as filler motifs in patterns composed of units of irregular geometrical shapes. (3) The two designs depicted in fig. 34 D 1 & 2 and those of fig. 34 E 1 & 2 are shown as they occur in their respective panels in the Samarra stuccoes; design '2' in both examples occurs on the edge of the panel and is followed by design '1'.

The motif of fig. D '1' is composed of two units which mirror each other. They are separated by a horizontal line halfway across a connecting stem.

Each of these units is considered by Hamid to be one of the many new varieties of the enclosed palmette that occur in Samarra. (4)

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(1) Ibid., fig. 19.
(2) Ibid., fig. 20.
(3) See figs. 19-20, Ibid.
(4) Hamid, op. cit., p. 143.
He believes that this unit is formed by the upper petals of
the 'split palmetto' joined together "to release a complete
palmette hanging downwards." (1) The same identification applies
to the central element of figs. 8 A, B, D and E.

However, the study of the designs depicted in figs. 8 A, B, D and E reveals that the clue to the nature of these designs lies in the motifs nearest to the edge of the panels, that is D '2' and E '2'. In fact it lies in either half of D '2', for both are composed of a section from a cramped foliated scroll comprising the petalled terminal and the undulation preceding it. This could be illustrated more clearly by comparing the lower half of D '2' with the dotted cramped scroll of fig. A & B from the centre to the beginning of the upper curve of the main stalk as marked by the arrow-heads; or by comparing the upper half of D '2' (or the dotted quarter of D '1') with the dotted part of the cramped scroll of A from the centre to the beginning of the first lower curve. It should be noted that the so-called 'enclosed palmette' in fig. A is not clearly defined. But there is a striking similarity between the rising three-petalled element, marked by the arrow-heads, and the upper half of D '2' and the dotted quarter design of D '1'.

Here the three petals, though cramped together in order to fit the geometrical shape of the all-over pattern, are clearly discernible. When two units of this kind (either half of D '2'), are fused symmetrically, the so-called full palmette enclosed by two half palmettes is produced by sheer accident. By fusing two designs of D '2' type symmetrically, design D '1' is achieved.

The same method has been used for the realisation of design E '1'.

(1) Ibid., p. 144, and fig 11 b and e.
However, design E '2' provides extra support for this conclusion, since it is in fact a complete foliated meander forced into this shape with as little modification as possible in order to fit half of one of the irregular geometrical units comprising the all-over pattern. The scroll under consideration (F) comprises one inverted terminal element of two leaves (the so-called two-petalled half-palmette) one upright element of three leaves, and a vertical stalk expanding gradually downwards. The shape of this element suggests that it was most probably another three leaved element originally but its petals were fused together. The result of that fusion is a half elongated petal with a hooked volute at its base just below the point where it meets the stalk. That this design is essentially a meander rather than a palmette is proved by its further development. The stalk turns to the left and proceeds a short distance to the left, sprouts a petal and branches upwards, flaring into a two petalled element followed by two more undulations, each of which in turn flares out into two petalled elements. This can clearly be seen in design 'E' below, an enlargement of E '2'.

It should be noted that all these forms of petalled elements occur in almost the same order, as well as in a 'cramped scroll' manner, on another alabaster capital from Syria (fig. 84, C). (1) Dimand attributes this capital to the 8th Century. If Dimand's dating is correct, then the whole theory that the Sammarrē bevelled style (Herzfeld's 'First Style') is unique to Sammarrē, and developed in its entirety at Sammarrē should be completely abandoned; for this capital is rendered in excellent bevelled technique. Its decorative elements are most advanced in stylization and comparable with the best that Sammarrē produced. However, the attribution of this

(1) Dimand, op. cit., pl. 45.
particular capital to the Umayyad period is doubtful if based on the actual locality (talqqa) in which it was discovered, for it is quite possible that a migrant decorator from Iraq could have been responsible for its introduction into Syria at a later date.

A comparison between the 'cramped meander' of fig. 64 C and that of F shows that in both cases various elements occur in the same order. Even the same stylizations apply apart from minor details such as the lobing of the inverted petal in F 1 (the same petal in fig. C 1 is not lobed), and the stretching of the lower petal into a spiral in fig. 64 C 2 (the parallel petal in F 2 remains short).

The vertical element in F 3 has its exact parallel, even including the notches at the bases, rendered horizontally in C 3. C 2 represents the earliest fully developed stylization of the so-called 'two sepal notched base calyx' with the characteristic hooked sagging to one side of the stalk. From this example (C 2) it is very clear that the so-called split leaf and the two sepal notched base calyx are in fact various stylizations of the terminal part of the foliated scroll. The majority of the 'bifurcated leaves' or two sepal split calyx are derived from a scroll terminal consisting of two petals or two tendrils proceeding in opposite directions. The notched base split calyx and the 'three sepal calyx' are derived from such a terminal consisting of three petals or tendrils. In the first example (notched base), the lowest tendril or petal is fused with the main stalk. In certain examples of this type a small bud-like knob occurs in the fork of one or both of the tendrils. This indicates an extra leaf which has been stunted consciously in the
early stages of its development for purposes of the design, such as the cramping of a scroll.

These stunted petals are defined in the early examples (as on the alabaster capital, fig. 84 C 2 & 4 and the Sämarra stuccoes fig. 84 D, E, & F 2) by the outline running into a succession of adjacent circular loops with narrow openings. The narrow spaces between every two such loops connect the stunted petal to the main body of the so-called 'two-sepal notched base calyx' (fig. 84 F 2) and seem to form abbreviated stems for the stunted petals.

The rounded notch with a slit on one side is of an extreme importance, for it permits the identification of the Sämarra foliated ornament of the bevelled style (Hersfeld's '1st Style') as a cramped scroll, and not as a derivative from the so-called 'palmette'.

Another feature of similar importance is the clasping device. This device can be clearly seen across the connecting stem between the upper and lower parts of figs. 84 D '1' and '2', and across the central vertical element of fig. 84 E '1', as well as across the connecting stem between elements 3 and 4 in fig. 84 C. In all three examples these motifs are composed of two symmetrical halves held together by the clasping device whilst the rounded notch indicates the position of the stunted fused stems, and the slit indicates the direction in which the fusion has taken place. This fusion causes the obliteration of the original curves and unites them in a plain surface. This can best be illustrated by the clasped central element of fig. 84 E '1'. This element has two notches at its base and a round dent with a slit between and slightly above them. The round dent here is in fact a marker depicting the symmetrical divergence of the two stalks around it, and the
vertical slit points out their upward direction. Another form of this device occurs in the stuccoes of Samarrā in the form of an elongated drop and serves the same purpose.

Before mentioning other non-foliate motifs to whose forms these terminals were adapted, it should be noted that a new type of scroll was developed from these scroll terminals or bifurcated leaves. This type of scroll is formed by a number of such leaves of various degrees of stylization issuing from one another. Two such meanders are placed symmetrically and vertically so that the symmetrical leaves face alternately inwards and outwards as in fig. 82 C (from Mīr-i Baqrān).

By interlacing a number of such motifs, an all-over pattern of interlaced meanders is achieved.

In other examples, this pattern is used for the covering of tiled domes, such as the dome of Manjid-i-Shaikh Lutfallāh (1) in Isfahān, and the majority of the tiled domes in Baghdad, as on the domes of the Abū Ḥanīfa, Ma’rūf al-Karkhī, al-Gailānī, al-Ḥaider Khān, and al-Ahmadiya mosques.

The same terminals in various stylizations were incorporated in the form of cloud-bands especially on borders of carpets (fig. 80 A–E), and on other media.

The earliest depiction of this 'arabesque' component in the form of a cloud band in wood carving occurs on the Saljūk window shutters in the Ǧāhā al-Dīn mosque at Konya (1155–1220) (fig. 80 F). (2)

(2) Hill and Grabar, op. cit., pls. 418-19.
One of the most elaborate examples depicting a foliated scroll or ('arabesque') in the form of cloud-bands can be seen in the stucco pendentives flanking the doorway to Bayan-ul-Khān mausoleum at Bukhāra (ca. 1359).

On a 16th Century Persian carpet (pl. 207) the central so-called 'medallion' exhibits two types of interlaced cloud bands. The four blue bands are rendered in the conventional Chinese manner.

The red cloud bands, though they may appear in the form of a cloud collar, are actually two cloud bands depicted as mirror images of each other, with their ends joined together at both sides.

(1) Ibid., pl. 30.
The heart-shaped motif.

The minaret of the Siraj al-Din mosque (pl. 60) exhibits a strip from an all-over pattern in the form of a band surrounding its lower cylinder (fig. 85A). This band is formed by a pattern composed of a succession of geometricalized and stepped bud-shaped (or heart-shaped) motifs with two volutes stemming from their bases in a symmetrical arrangement. The centres of these shapes are occupied by stepped triangles stemming from their bases by means of connecting lines.

The reconstruction of the all-over pattern (fig. 85B) reveals that the pattern is actually a heart-shaped one composed of horizontal registers. Each register is composed of two lines of partially reciprocating heart-shaped motifs. The reconstruction also reveals that what seemed to be two volutes are in fact two halves of the stepped triangles forming the cores of adjacent motifs.

No exact parallel to this band (fig. 85A) can be found on other Iraqi minarets, nor, apparently, on any other existing minaret. The same is true of the all-over pattern from which this band was derived (fig. 85B). On the other hand, a good number of closely related strips and all-over patterns occur in Islamic art, mostly as textile motifs and as surface ornament in architecture (figs. 86A and B; 87A and B, and 88A–E). Perhaps the closest parallel to fig. 85 occurs as early as the first half of the 9th Century, as a border design at Samarrâ' (fig. 88C). The Samarrâ' strip is in fact equal to one half of the strip of fig. 85 with the reconstruction of the all-over pattern shows that it is composed of diagonally distributed closely-knit heart-shaped motifs enclosing the

(1) Rebuilt or restored in 1318/1900.
(2) This is the lowermost band of the lower cylinder.
Fig. 85:

A. Geometrical band from the minaret of the Sirāj al-Dīn mosque, Baghdad.

B. Reconstruction of the all-over pattern from which the band was taken.
Fig. 86: All-over patterns of heart-shaped motifs in Islamic art.
B. The governor of Rahba from the Schefer Ḥarīrī. 1237. After Ettinghausen.
Fig. 87: Trefoils and palmettes enclosed in heart-shaped motifs from Samarra stuccoes. After Herzfeld.
Fig. 88: Sāmarrā border designs. After Herzfeld.
so-called 'five-petalled palmette'. The pattern is curvilinear. Seen horizontally, every other heart-shaped unit is inverted. Seen vertically, the tips of the motifs in one vertical axis point in an upward direction, whilst the tips of those in the adjoining vertical axis point downwards.

Other related strips from all-over patterns composed of rows of heart-shaped motifs also occur in the stuccoes of Samarrā, such as those in fig. 88 C and D.

The nearest all-over pattern to that of fig. 85 B (as regards the degree of stylization) can be seen on a 13th Century Central Anatolian carpet from Konya (fig. 86 A). In this carpet the motifs are almost rectilinear, and faulted or lobed. The points of faulting are accentuated by small stylized volutes. The base volutes end in hooks. The inner space of the central lobe is occupied by a 'V'-shaped filler-motif. The nature of the base volutes is partially obscured by the fact that the identical heart-shaped motif adjoins them in the row immediately below. Only in the bottom row, where the base volutes are unobscured, is the true nature of the pattern revealed. In this carpet the heart-shaped motif has become so angular as to become misunderstood. Indeed, to Erdmann the pattern comprised

"diamond lozenges with severely stylized flowers or leaves used to fill out the pattern." (2)

A curvilinear version of the Konya pattern appears amongst the Samarrā stucco designs (fig. 87 B). Apart from the curvilinear rendering and the different filler motifs, the Samarrā pattern exhibits the same characteristics as the Konya pattern.

(2) Ibid., p. 17.
(3) Herzfeld, Der Wandschmuck, pl. 294, Orn. 268.
Other versions of the heart-shaped all-over pattern, with slightly different variations either in the stylization of the heart motif or in the distribution of the motifs over the available surface, occur as textile and wall ornament in Islamic miniatures (fig. 86 B, and pls. 203 and 209) and as wall ornament in the Sīmārāq stuccoes (fig. 87 A). In all these examples the designs include trefoils or fleur-de-lys and five-petalled palmettes enclosed by heart-shaped motifs.

Though the heart-shaped motif was identified as such in its most composite and highly evolved form in the arabesque, e.g. in the miqarna of the minarets of Sūq al-Ghazl (pl. 53 and fig. 81B) and Ka'īf al-Karkhāl (pl. 68) and those of the so-called Abbāsid Palace (pl. 175 and fig. 81A), its early forms have been completely ignored by most of the authorities on Islamic art, and were considered as a by-product of the palmette. In its early form this motif was termed 'the enclosed palmette'.

(1) Hamīd, op. cit., p. 144.
(2) This motif was discussed (infra Chapter X) when dealing with the curvilinear meander at Sīmārāq, and it was shown that the heart-shaped motif (the Chinese Joo-e head) was the principal motif and that the palmette should be considered only as a secondary motif. The palmette was originally no more than a side-effect of the lobing or faulting of the Joo-e head in certain designs, while in others it was a result of faulting the curvilinear zigzag band meander. For expediency the popular term heart-shaped motif is more often used in this investigation than the technically correct term "Joo-e head".
(3) Kiżwini, op. cit., p. 51.
(4) J. Stryzgowski and Hamīd, ibid., pp. 135-144 and 295; Dimand, op. cit., p. 62.
(5) Hamīd, op. cit., p. 144.
Thus the study of the heart-shaped motif became subsidiary to the study of the palmette, and was linked with Greek prototypes (on the grounds that the Greeks were the first to split and enclose the Assyrian palmette) through Sasanian antecedents. Strzygowski, on the other hand, maintains that "the heart motif which appeared in Sasanian art are not highly stylized palmettes, but rather simple geometrical figures." Furthermore, Strzygowski maintains that in Mesopotamia and Persia the "Old Asiatic" forms of the palmette were adopted - particularly in Sasanian decorative art, and that the Sasanian palmette never reached the stage of evolution where its petals turn into a heart-shaped motif. Though Strzygowski does not specify the source of the 'Old Asiatic' palmette, he seems to have been nearer the truth than those who held the formerly widespread opinion that "Samarra" "palmette" was derived directly from Sasanian prototypes, and ultimately from Hellenistic models. The same history is assumed for the so-called 'trifoliate palmette enclosed by heart motif' which occurs in the art of the Turkish nomads of the Steppes, where it is found on saddle ornaments, mostly in metal (fig. 89). The motif seems to have had a wide distribution amongst the Steppe peoples, who seem to have been responsible for its transmission over a very wide area, from Minusinsk in Siberia to the north to Bana (fig. 89) in Hungary to the west and to Balalyk Tepe in the south-east and east (fig. 90 A).

1 Yam, op. cit., p. 134.
3 Strzygowski, apud Hamid, op. cit., loc. cit.
4 Hamid, ibid., p. 135.
5 Ibid.
6 Ibid., pp. 206-5.
7 Kiss and Bartha, op. cit., pp. 229-30.
8 Ibid., fig. 5 (nos. 2, 3, and 4).
Fig. 89: Silver strap mounts from a grave at Bana datable to the Hungarian conquest. After Kiss and Bartha.
A. Wall painting from Balalyk Tepe. 5th-6th century. After T. Talbot Rice.

The suggestion of Turkish influence on the ornament of 'Style C' at Samarra (Herzfeld's 'First Style') seems to have been based on the use of the bevelled technique rather than on the decorative motifs themselves. Thus the palmette is kept within the sphere of Sasanian art (or the "Sassano-Caucasian tradition), and thus the so-called 'trifoliate enclosed by a heart,' which appears among the nomad Turks, was considered to have reached them from the west during the 6th to the 8th Century via Sogdian merchants, and in the 10th Century via the Khazars. But it is generally accepted too that the Sasanian palmette did not develop into "a bare heart-shaped device." This contradiction can be solved by examining evidence from the east rather than from the west. Excavations carried out in 1965 at Tunhuang brought to light a Chin dynasty (265-420) embroidered fabric depicting five Chinese Buddhist priests and with votive inscriptions (fig. 76). The all-over patterns decorating the outer robes of four of the priests are composed of the so-called 'three-petalled palmette enclosed by a heart-shaped motif', identical with that of the nomad Turks and the Hungarian strap mounts (fig. 89 A and B), and to those on the robes of the two cup-bearers of the 5th - 6th Century wall painting at Balalyk Tepe (fig. 90 A). The only difference between the Hungarian motifs and the other motifs is the extra loop-holes which are devised in order to fix the metal.

(1) Talbot Rice, op. cit., p. 33 and pl. 26 (caption); M.S. Dimand, "Studies in Islamic Ornament. II. The origin of the second style of Samarra decoration" in Archaeologia Orientalia in memoriam Ernst Herzfeld, ed. G.C. Miles, p. 64; see Hamid op. cit., p. 245.
(2) Kiss and Bartha, op. cit., p. 259.
(3) Ibid.
(4) Ibid.
(6) Chubanshe, op. cit., (Dolby's translation, p. 5).
(7) Chubanshe, op. cit., pl. 2.
motif to the leather straps of the horse harness of the nomads.

During the Chinese cultural Revolution an 8th Century Chinese silk batik was discovered at Astāna-As-si-ta-ma(1) depicting two fabulous birds under a stylized tree (fig. 90 B).(2) The tree in the design incorporates a heart-shaped motif enclosing a trifoliate form (the three-petalled palmette) slightly different from those of figs. 86A, 89, and 90A where the two lower petals are formed by the two base volutes of the heart-shaped motif. The three-lobed form of the silk batik is independent of the two base volutes and formed by a continuous curvilinear line, twice faulted. This whole motif not only resembles the so-called five-petalled palmette of Sāmarrā, but is in fact a facsimile of it. In Islamic art the two base volutes simply become extra petals.

The appearance of an exact parallel to the silk batik motif on a 4th Century B.C. Chinese bronze mirror (fig. 91 A)(3) in the form of a 'petal motif' constitutes conclusive evidence as to the Chinese origin and nature of the so-called 'three petalled palmette enclosed by a heart-shaped motif'. This is all the more obvious in that prototypes of this petal form can be found in abundance on Late Chou (5th - 6th Century B.C.) bronze vessels - such as the bronze hu (fig. 92 A)(4) and the bronze ting (fig. 92 B), (5) as well as on Late Chou pottery (fig. 92 C),(6) where the motif is in the form of a heart-shape. This proves that the so-called 'enclosed palmette' in Islamic art and in the repertoire of the nomad Turks

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(1) Chubanshe, ibid., pl. 60.
(2) Ibid., (Dolby's translation, p. 6)
(3) Sullivan, op. cit., fig. 1 (C.23).
(4) La Plante, op. cit., p. 20 (note 64), pl. 64.
(5) Ibid., note 66, pl. 66.
(6) Ibid., note 88, pl. 88.
Fig. 91: Early Chinese petal motifs.

A. Petal motif stemming out of central zone of bronze mirror. 4th century B.C. After Sullivan.
B. From a Loyang mirror. After Sullivan.
C. = = = = . = = .
Fig. 92: Early Chinese bronzes depicting symbols of longevity.

B. Ting. Late Chou. After La Plante.
C. Earthenware ting. Late Chou. After La Plante.
D. Ear of a bronze tiger. 10th century B.C. After Sickman and Soper.
has no connection whatsoever with the Hellenistic palmette, or with any other palmette for that matter. What seems to be a palmette is in fact a secondary motif within the Chinese heart-shaped motif, and is defined by it. A similar conclusion has been reached à propos of the zigzag band at Sāmarrā'.

This motif (sometimes referred to as the petal motif, or the heart motif) is called by the Chinese Joo-e or Joo-e head. It occurs in a great number of variations, stylizations and multiple combinations throughout the history of Chinese art from the Late Chou period onwards, and possibly earlier. It is found in practically all media. It occurs in two main categories: a) simple, and b) lobed or faulted. Although both categories are found in a variety of forms and stylizations, they all retain a common unchanging feature: that is the two base volutes or roundels which curve inwards symmetrically (pls. 210, 212-214, 217-219 and B, and figs. 93B, 91A, 92-94).

In a good number of cases, the base volutes, when adjacent to each other or slightly parted, are bridged by a connecting device in the form of a short curved line arching from one volute to the other within the inner space of the motif (pls. 211, 215, 216, and figs. 93 and 94 C). In other cases the two volutes are linked by two such connecting devices, one on the inside and the second on the outside (pl. 216 and fig. 93H and 94 J). In yet other cases - where the volutes are adjacent - the connecting device is sometimes surmounted by a dot or by a three-petalled motif (pls. 215 and 221 and figs 93 J, 94 B and D).

(2) That is: simple, lobed, pointed and rounded; curvilinear, rectilinear, and with tips, cut and parted.
(3) See Appendix, VIII
Fig. 93: Chinese symbols of longevity (Joo-e).
(Various stylizations)
Fig. 94: Chinese symbols of longevity (Joo-e.
(Various stylizations)
These connecting motifs seem to have misled a number of scholars into propounding an erroneous theory about the influence of Seljuk carpets (1) and Islamic metalwork (2) on Chinese porcelain. They have based this theory on the ground that in Chinese porcelain the feature under consideration resembles the Arabic letters ain, chain and fa'; and as it is always flanked by two almost vertical lines, attempts have been made to read it as laqa, laqha, or lafa depending on the presence or absence of a dot above the connecting device. (3) The incoherence of such "inscriptions" is explained by terming the script "pseudo-Kufic."

The clue to the "pseudo-Kufic" employed here can be found on the base of a Japanese bronze statue of a 'Kwannon' in the Victoria and Albert Museum (pl. 222 B), where the Jo-o-e motif has been stretched vertically in order to cover the whole surface of the base. In this example, the outlines reaching from the base volutes to the pointed tip of the motif have been straightened as well as stretched; the lower half of this pattern forms an exact parallel to the Chinese so-called "pseudo-Kufic" of pls. 215 and 221 and fig. 94 B and D. This might suggest—though the speculative nature of this comment must be stressed—

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(1) E.g. B. Gray, during a discussion following a lecture by Miss H. Medley, "Chinese Export Ware and Islamic Design" delivered on 26th June 1972 during the Percival David Foundation Colloquy: Colloquies on Art and Archaeology in Asia, No. 3 (The Westward Influence of Chinese Art from the 14th - 18th Century) held at the Institute of Archaeology, London.

(2) Miss Medley, in the lecture mentioned above, maintained that this motif was borrowed by the Chinese from Islamic metalwork.

(3) See Appendix IX.
doubt that the so-called "pseudo-Kufic" in Chinese porcelain originates from indigenous Chinese prototypes (which can be traced back to the Late Chou dynasty) rather than from Arabic calligraphy (see figs. 91B and 95). In fact, there is enough evidence to prove that Arabic calligraphy itself borrowed Chinese and Buddhist motifs, such as the 'endless knot' (figs. 96 and 97) and the sections of cloud bands forming the tops of vertical letters in "Kufic" script (pl. 223 and fig. 97).

The so-called "Kufic" inscriptions forming the borders of the 13th Century Seljuk carpets found at the Alāʾ al-Dīn mosque at Konya (pl. 224 and fig. 98) in fact have no relation to "Kufic" in any way. They are composed of symmetrical rectilinear units. Each unit is composed of a horizontal rectilinear meander with a split arrow-shaped form or finial stemming from its centre and flanked by two half arrow-head forms (fig. 98A). The units are joined to each other horizontally at the base to form a band (fig. 98 B, C, and D). In fig. 98 A, the units are isolated from each other. They are composed of four split arrow-shaped forms or finials. They seem to depict a section from the continuous meander composed of two halves of adjacent units (of figs. 98 B, C, and D as described above). In fig. 98 B and D the central units (split arrow-heads) are stretched apart in order to accommodate an extra decorative device.

A closer study reveals that the finials are composed of hooked devices which are one of the many Chinese conventions for cloud motifs and for Han curls. In fact the whole arrangement of these units - especially fig. 98C - recalls the 10th Century geometrical cloud bands (in brick-work) of the Na'īn Jāmī (fig. 57 A).

(1) See the 11th Century "Silver Salver" of Alp Aralan (Pope, 'Masterpieces' p. 101, and pl. 65)
Fig. 95: Detail of cotton fabric. T'ang period. After Chubanshe.
Fig. 96: Dish, inlaid metalwork. Northern Mesopotamia. 12th-13th century.

Fig. 97: Carved calligraphy on marble sarcophagus. Herat. 1st half of the 15th century. After Hill and Grabar.
Fig. 98: The so-called 'pseudo-Kufic' in Saljuk carpets. After Erdmann.
and B) and other cloud band forms of later periods (see figs. 54, 55 and 56A).

The appearance of the split arrow-head motif on the Loyang mirror of fig. 91 B in the form of abstracted base volutes, and its appearance on a recently discovered T'ang cotton fabric (fig. 95) as extended base volutes occupying the inner space of a highly stylized Joo-e head (incorporated with a geometrical "arabesque" meander) leaves no doubt about the nature and the descent of this motif from ancient Chinese antecedents. It was then adapted for use in Arabic calligraphy, especially "Kufic"; the motif probably first reached those countries exposed to direct and prolonged Chinese influence, such as Turkestan and Afghanistan. Examples of such scripts can be seen on the tower of Mas'ud III (1089-1115) at Ghazna. In this tower the wide upper band is composed of squares containing a monumental band incorporated not only with "endless knots," but also with a continuous faulted meander similar to those of the Samarrā-stuccoes of figs. 160C and D. Furthermore, this tower exhibits possibly the earliest example of the so-called "square Kufic" in the form of an all-over pattern executed in one-level ḫāṭir. (2)

Further evidence suggesting that Chinese influence affected Islamic calligraphy can be found in the various Arabic sources. Zain al-Dīn, quoting Qālqashandī (Ṣubḥ al-Aḥṣā III) and Ibn al-Athīr (ʿAsad al-Chāba III, p. 157), relates that "after the Arabic script had reached various regions at the time of the conquests, it assumed the names of various regions, eastern and western alike. This was because the Arabs were inclined to

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(1) Hill and Grabar, op. cit., pls. 146 and 147.
(2) Ibid., pl. 148.
identify calligraphic hands with regions famed for their improvement of the (Arabic) script in the early Islamic period. Examples are: the Kūfī, the Bāṣṭī, the Wāṣīṭī, the Ḥirī, the Sāqālī, the Ḥirī, the Nābārī, the Qairawānī, the Qurtubī, the Shāmī, and others which the student may find in the relevant sources. (1)

Quoting Ibn al-Nadīm, Zain al-Dīn mentions other hands attributed to certain cities, such as: "the Makī, the Madān-ayain (2) the Sālūjī, the Isfahānī, and the Sahī or Subī. (3)

Unfortunately, Zain al-Dīn does not quote hands attributed to Eastern provinces or cities apart from the Isfahānī hand. This however should not preclude the assumption that hands attributed to Samarkand, Bukhara, Herāt and Ghazna might have existed; perhaps their names were overshadowed by the omnipresence of the term "Kufī".

Obviously not only "Kufic" but also the naskh hand was spread by the conquests. Both must have contributed equally to the shaping of the various monumental hands which were developed in the Islamic world. These new hands incorporated certain features of naskh, such as the lengthening of the vertical letters which is also a characteristic of the predecessor of naskh, the Nabālī hand; neither the squat early Kufic, which was first known as Ḥirī, nor its prototype, the 'Satranjīlī had this feature. (4)

It seems possible that future research in this field might well be able to assign hands containing Chinese and Buddhist motifs, such as 'interlaced Kufic,' 'foliated Kufic,' 'floriated

(1) Zain al-Dīn, op. cit., p. 306.
(2) This most probably means the two calligraphic hands of Kadīna or perhaps the hand of the Kadīna people.
(3) Ibid., p. 322 (footnotes 1 and 2).
(4) ibid., pp. 326-327.
Kufic and the like, to Bukhara, Samarkand, Herat and Ghazna.

One may now return to the Joo-e head. This heart-shaped motif appears in Islamic art in almost all its Chinese variations. As early as the Han period, a group of four identical Joo-e motifs radiating from a common centre appear on the cover of an earthenware 'timp' now in the Royal Scottish Museum (1) (fig. 99 A). The design in this example is crudely executed in incised lines. The Joo-e motifs are pointed and cusped. The inner spaces are decorated with small circles. An almost exact - but more refined - parallel can be seen on the Chinese silk of pl.225, where the Joo-e's are faulted and linked to each other.

Pl. 226 shows the Japanese adaptation of this motif for the metal-guard or cross-bar of Japanese swords.

The same formation (four Joo-e motifs) appears in Islamic ornament; with slight variations, one may cite the tile-work of the "Blue Mosque" at Tabriz dated after 1465 (fig. 100). (2) It also appears on 15th Century book-covers made in Herat (pl.227) (3) where the motif is slightly altered, e.g. by omitting the base volutes and by connecting the Joo-e's to each other. This formation is generally referred to as a medallion (4) (see fig. 99 B).

Other formations consisting of a larger number of Joo-e's radiating from a common centre can be seen on Chinese lacquer

(1) No. 1957. 238...
(2) Hill and Grabar, op. cit., pl. 218.
(3) Formerly in the collection of F.R. Martin, Stockholm. It is datable to 1435 (P. Sarre and F.R. Martin, Die Ausstellung von Meisterwerken Muhammedanischer Kunst in München, Munich, 1910 (Munich, 1912) 1, pl. 19). In this example the inner motif is identical with the so-called cloud-collar (infra, p. 354 & n. 5).
(4) Rempel, op. cit., p. 375 and fig. 175/2.
Fig. 99:

A. Cover of a grey earthenware thing in the Royal Scottish Museum (1957.238 a).


B. Elements of Joo-e heads and cloud collars. Islamic. After Rempel.
Fig. 100: Faience mosaic in the Blue Mosque, Tabriz. 1465. After Pope.
of the Wan-li period (1537-1619), such as the box depicted in pl. 228 (1) from the Low-Beer Collection. The appearance of this motif in the same formation as that of the Han period (fig. 99 A) constitutes firm evidence as to the uninterrupted descent of this motif from early Chinese prototypes.

An almost exact parallel to the motif of the lacquer box appears on Persian carpets of the 17th Century (pl. 229) (2) amongst other Chinese motifs such as the lotus and highly stylized cloud bands (on both sides of the central motif in pl. 229). This leaves no doubt about the origin of such formations in Islamic art and renders any attempt at linking this motif (the so-called medallion) with the palmette, and consequently Sasanian prototypes, highly suspect. (3)

The most common use of this motif in Islamic art is in the form of a horizontal strip composed of identical units. This form is used as a border design. It occurs at Sämarra in a variety of shapes. They include examples which are simple (fig. 88 D and E), cusped (fig. 88 A), lobed (fig. 101 A), elongated (fig. 88 B), with an inner secondary motif, such as the so-called palmette (fig. 88 A and C) or a drop-shaped motif (fig. 88 B), or examples which lack such devices (fig. 88 D and E). The same type of border appears in wood on the 12th Century minbar of the Imādiya mosque (dated 548/1153-4) shown in fig. 104.


(2) Sarre and Martin, op. cit., I, pl. 62.

(3) See Rempel's attempt in fig. 99 B (Rempel, op. cit., p. 375, and fig. 172/1) to establish such a connection.
Fig. 101: Analytical drawings of various faulted curvilinear zigzag bands on Samarra stuccoes. After Herzfeld.
Though exact parallels for this strip can be found in 15th Century miniatures of the school of Herat (pl. 230), which would seem to confirm the generally accepted opinion that Chinese influence made itself evident in Persian pottery during the 14th Century (1) and on Persian painting during the 15th Century, (2) a number of such strips appear in early 13th Century miniatures in the form of sleeve-bands. These occur in a scene of two horsemen in Kitab al-Baijara (Baghdad 606/1210), (3) and in the miniature depicting Socrates and two students from The Choicest Maxims and Best Sayings of the Topkapu Sarayi Museum (4) (fig. 102 A and B).

The same strip appears on the minbar of the Qadi of Saida (37th Waqama) in the Leningrad Maqasat of Hariri (Baghdad C. 1225-1235). (5) Another version of this strip can be seen on the 'Elephant Clock' from Jazari's Book of the Knowledge of Mechanical Devices, (6) in the band immediately below the dome (fig. 102 O).

The appearance of this motif in the miniatures of the School of Baghdad as well as in Samarra stuccoes - amongst other things - seems to render invalid the assertions of Miss Medley and Mr. Gray.

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(1) Miss U. Medley argued this view in her lecture "Chinese Export Ware and Islamic Design" delivered at the 1972 Percival David Foundation Colloquy.
(2) B. Gray argued this view in his lecture "Chinese Influence in Persian Painting" delivered at the Colloquy mentioned in n. 1 above.
(3) Fittinghausen, Arab Painting, pl. on p. 97.
(4) Probably Syria, first half of the 13th Century; ibid., pl. on p. 76 and caption.
(5) Ibid., pl. on p. 107.
(6) Ibid., pl. on p. 95.
Fig. 102: Islamic miniatures depicting strips of Joo-e heads. After Ettinghausen.
B. = The Choicest Maxims and Best Sayings of the Topkapu Saray Muzesi.
Individual Joo-e's as well as sections of strips appear in Islamic architecture as surface ornament - in actual monuments as well as in miniature painting. Examples are the appearance of the crown motif at Sāmarrā (1) and at Hār-ī Bakrān (pl. 231). In this example the motifs are inverted.

In the miniature of pl. 17 the Joo-e occupying the pendentive is lobed or faulted and flanked by two half Joo-e's.

Apart from the Joo-e's of the Chinese clouds depicted in Islamic miniatures (fig. 105), (2) this motif occurs in two main categories in Islamic art, simple and lobed.

1. The simple Joo-e occurs in the following forms:
   A. With a pointed tip and fully curved sides (fig. 106 A).
   B. With a pointed tip and slightly curved sides (fig. 106 B).
   C. With a pointed and cusped tip (inwardly curved sides) as in fig. 106 C.

   These three forms are all represented in the Sāmarrā stuccoes (see figs. 83 and 46 A respectively).

2. The symmetrically lobed or faulted Joo-e occurs in the following forms:
   A. With a central lobe which is pointed and has fully curved sides, such as fig. 106 D (this form occurs in the wooden door of the Mausoleum of Mahmoud of Ghazna, executed shortly after 421/1030 (pl. 141). (3)
   B. With a central lobe which is pointed and has moderately curved sides (fig. 106 E and G). Examples occur on the Cisrādīya minbar (fig. 104) and the miniatures of the

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(1) Intra., P. 342.
(2) Which constitute perhaps the only fully recognized Chinese element in Persian art (see T. Arnold, Survivals of Sassanid and Manichean art in Persian painting (Oxford 1924), p. 6.)
(3) Stütinghausen, "The Bevelled Style", pl. XV/fig. 2 and caption.
Fig. 103: Samarrā border designs depicting the so-called 'half palmette with the wing-like element'. After Herzfeld.

Fig. 104: Border designs on the minbar of the 'Imādiya mosque, depicting Joo-e heads. Iraq. 1210. After Ettinghausen.
Fig. 105: Chinese cloud forms in Islamic miniature painting.
(see the following page)
Fig. 105:

A. From a treatise on Natural History by Ibn Bakhtishu. Tabriz, L295. After Blochet.
B. From The Book of Kings by Firdawsi. Tabriz, 1310. After Blochet.
J. From a treatise on Natural History by Ibn Bakhtishu. Tabriz, 1295. After Blochet.
Fig. 106: The various forms of the Joo-e in Islamic art (see the following page).
Maqāmat of Ḥarīrī (pls. 33, 34 & 203 and figs 107 A, B, & C).

C. - With a pointed and cusped central lobe (fig. 106 G and K).

D. - With a pointed rectilinear central lobe (fig. 106 F and H) as in the Maqāmat of Ḥarīrī (pl. 200) and the crest of the fabulous bird of fig. 108 from Ǧaʿīb al-Makhlūqāt.

E. - With a rounded central lobe (fig. 106 J).

F. - With a pointed and cusped central lobe and multiple lobing.

A further study of this motif reveals that the Joo-e has had a far-reaching effect on Islamic architecture. Apart from its use for surface ornament, its various forms were borrowed for the profiles of a wide variety of arches: pointed (two-centred and four-centred), cusped and segmented. It is used in the same manner as the faulted or lobed meander (see Chapter X, p. 345); that is, usually by omitting the base volutes and by the adoption of the remaining forms. In other examples (whenever the material permitted) the whole motif - including the base volutes - was adopted for arches, as in the lacquer screen in pl. 232.

Fig. 106 H seems to provide the answer to the origin of a curiously-shaped segmented arch which appears in the 10th - 11th Century as surface ornament on the minaret of Cān (pl. 40 and 233 and fig. 109 A), and the Mausoleum of the Imām Muhammad al-Durrī (4).

This form occurs mostly in Chinese clouds of Persian miniatures (fig. 105 E-G) and especially in miniatures of the school of Herāt (fig. 105 H) the central lobes of the Herāt motifs sag inwards slightly. A near-exact parallel to this form can be seen on the Chinese throne of the Emperor Ch'ien Lung in the Victoria and Albert Museum (pl. 218). A slightly pointed version of this form appears on the backrest of an elephant howdah in the Shāhnāma (1206) in the Pozzi Collection, Paris (fig. 106 L) (Blochet, Muslim Painting, pl. XI).

See Appendix X.

(3) Creswell assigns this minaret to the 12th Century ("Evolution," p. 295) whilst Herzfeld assigns it to the Uqailid period (386-486/996-1093), (Archaeologische Reise, II, p. 319.)
Fig. 107: Motifs occurring in the miniatures of the *Maqamat al-Hariri*. Baghdad. C.1225-35.


D. Vertical section from a faulted curvilinear zigzag band (Somerrei type) from the same manuscript.

E. An all-over pattern of Joo-e heads in the same manuscript (the Leningrad Hariri).
Fig. 108: "The Miraculous Rescue of the Stranded Voyager". From the *Ajā'ib al-Makhlūqāt* of al-Qazwīnī. Wāsit. 678/1280. After Ettinghausen.
Fig. 109: Variations of the madānī arch in Islamic art (see the following page).
Fig. 109;

A. A niche from the minaret of Cāna. After Herzfeld.

B. From the congregational mosque of Bistam. 702/1302.
   After Seherr-Thoss.

C. From the Maqāmat of Ḥarīrī. C. 1237. After Blochet.

D. = = = = = = =

E. = = = = = = of the Suleymaniyya Library.
   Ettinghausen.

F. From the Pleasure Garden of Saʿdi. Shīrāz; Bokhāra.
   349/1555. After Blochet.
(Imām Dūr), (1) as can be seen in fig. 110.

In the late 12th or early 13th Century this takes the form of a free-standing arch, as in the cloister of the Congregational mosque of Bistām (2) (pl. 234 and fig. 109 B). The three given examples seem to be the only surviving — as well as the earliest — occurrences of this arch on actual Islamic monuments. On the other hand Islamic miniatures depict a good number of such arches from the first half of the 13th Century onwards (pls. 235 & 236 and fig. 109 C-F).

The Bistām segmented arches leave no doubt about the most un-architectonic nature of this form of arch — especially as the actual arch which bears the weight is a simple pointed arch, as can clearly be seen. The segmented arch under consideration is rendered in a thin panel of carved stucco (3) on each side of the pointed arch. This form has no constructional value at all apart from bearing its own weight. The way in which this arch is constructed clearly indicates its purely ornamental value.

In the Maqāmāt of Ḥarīrī of the Suleymaniye Library in Istanbul (pl. 235 and fig. 109 E) similar arches are depicted. A closer study of the arch of pl. 235 reveals characteristics

(1) Built between 1061 and 1085; E. Herzfeld, "Damascus" p. 19.
(2) Wilber assigns this mosque to 699/1299 (Islamic Iran, p. 127). Seher-Thoss assigns the cloister to 702/1302 ("Design and colour," p. 112).
(3) The same form can also be found in the form of individual blind arches decorating modern buildings in Iraq. Pl. 238 shows two blind niches flanking the door of an Iraqi house (probably in Hillah or in Karbalā'). The finials of these niches are formed by such segmented arches. The processes caused by faulting are hardly perceptible in this example, but nevertheless the accuracy with which this feature is depicted leaves no doubt about its nature.
Fig. 110: Variations of the madānī arch in the miʿrāb of the Ḥanāfī maqṣūra al-Durā (tombe of Muṣlim ʿIbn Quraish). 453-478/1061-1085. After Herzfeld.
similar to the arch of Bistām; it too is constructed of a thin panel of stucco or wood. This characteristic is made apparent by the closeness of the parted curtains immediately behind the arch. The Schefer Hariri of the Bibliothèque Nationale exhibits a similar arch (fig. 109 D). (1) In other miniatures from 'Hasā'il Ikhwān as-Safā' (of the Suleymaniye Library) similar arches appear (fig. 111 C). (2) Similar arches also occur in a number of 16th Century miniatures belonging to the school of Buhārā, such as the Bustan of Sa'dī in the Bib. Nat., Paris (3)(fig. 109 F).

In another miniature from the Schefer Hariri (pl. 236 and fig. 109 C) a series of three such arches can also be seen. This would seem to indicate that this form of the Joo-e has been put to exactly the same use as the faulted meander of Sa'mārra. (4)

This form of arch (in the form of a series of arches) has continued to be used in Iraqi domestic architecture until the beginning of the second half of the 20th Century. It has been used mainly for the arches of the wooden balconies of Iraqi houses. (5)

Pl. 237 shows the use of such arches for the canopy covering the base of a Shī'a minaret at Ṣinna. This minaret is constructed of sheet-metal supported from within by an iron frame-

(1) Blochet, op. cit., pl. XXX
(2) See Etttinghausen, op. cit., pls. on pp. 98 and 99.
(3) Blochet, ibid., pl. CXVI.
(4) See infra, p. 345.
(5) See p. 259, n. 3.
Fig. 111: Detail from the Rasā'il Ikhwan al-Safa.
Iraq. 1287. After Ettinghausen.
work composed of iron girders (angle-iron beams). (1)

In this example, the lines of the central lobe are not cusped and the two protrusions caused by faulting are greatly reduced. In fact this arch in particular seems to have closer affinities with forms F and L of fig. 106. (fig. 106)

Other segmented arches resembling form J are in common use in Iraqi architecture (domestic and otherwise) for the vaulting of majāzes (corridors), Ḥamāma, and blind arches (pl. 239). The central lobes of these arches are severely flattened. They relate closely to the Joo-e form of the lacquer throne of pl. 248.

It is interesting to note that the stucco pattern of the cloister of Biaštâm’s Congregational mosque is composed of hexagons enclosing six-petalled flowers. The motif and the carving technique are common features of Chinese carved lacquer, although most of this dates from the 17th Century and later. The motif is normally used as a background pattern on Chinese lacquered objects.

Garner (2) has published a number of similar patterns.

(1) Strange as it may seem, minarets of sheet-metal only appeared in Iraq very recently - especially in small towns and villages such as Milla and Musayib. However, a minaret was constructed from wrought iron for Jami‘al-ʿAbbās at Haušīl in 1927 (see Diwachi, on. cit., p. 249 and pl. 48). Other unconventional building materials seem to have been in common use for the building of early minarets. Ibn ʿAsākir mentions five wooden minarets among the minarets of Damascus (see Ibn ʿAsākir, on. cit., pp. 60, 62, 63, 69, 129).

The use of wood for the construction of early minarets brings to mind the minaret of Jami‘ al-Mansūr. Jawād, quoting Ibn al-Jawzī (Al-Muntazam, VI, p. 130) relates that “in 303 (915 A.D.) a fire occurred in the carpenters’ Bazaar (Sūq al-Najjārin), which led to the complete destruction of the Bazaar as well as to the death of its people, and some sparks reached the minaret of Jami‘ al-Mansūr which caused the minaret to catch fire and burn.” This seems to indicate that the minaret under consideration was most probably constructed of wood (see Majawād and A. Sūsa, “Madinat al-Mansūr wa Jami‘ al-Mansūr” Sumer XXII, (1966), p. 8).

one of them is an exact parallel to the pattern of Bistām. This seems to suggest that Chinese lacquer patterns as well as lacquer technique were borrowed for stucco ornament. This may also provide a possible clue to one of the most chronic problems of Islamic ornament yet unsolved, that is, the origin of the bevelled technique.

This technique is attributed to Central Asia in rather vague and ambiguous statements. Thus Dimand states:

"This new technique of carving was probably introduced from Central Asia in the time of Harūn al-Rashīd (A.D. 786-809) by Iranian or Turkish artists employed by the Court. It can be traced back to the Scytho-Siberian animal ornament, some of which dates from the Han period (B.C. 206 - A.D. 220)...." (1)

In a similar passage, Kühlner attributes the sudden appearance of the bevelled technique at Sāmarrā to the arrival of Turkish soldiers from Central Asia as a bodyguard for the Caliph. (2)

A closer study of Chinese lacquer reveals astounding similarities between the bevelled technique of Islamic stuccoes and the technique of carved lacquer (see pls. 40, 41, and 42). In fact these three objects are carved in bevelled technique. The execution of the patterns exhibits the same characteristics as Herzfeld's 'First Style', that is the manipulation of the secondary motifs by giving them plastic qualities so that they have the same value as the basic motifs.

(1) Dimand, op. cit., p. 64.
(2) Hamid, op. cit., p. 245.
(3) Pls. 240 and 241 depict two versions of the Joo-e; pl. 242 depicts the Chinese 'Guri scroll.'
This can clearly be seen in pl. 285. The 'Guri scroll' of pl. 242 is so similar to the arabesque scroll that it leaves very little doubt about the common origin from which they were both derived. Admittedly, the examples of carved lacquer given here are of a much later date than the Sāmarrā' stuccoes, but it should also be pointed out that lacquer-work was known in China as far back as and that Han lacquer has been found in Korea and at Lo-Lang. Though these early finds do not display bevelled carving, it is highly probable that objects carved in the bevelled technique did exist but did not survive or have yet to be unearthed.

In fact Willetts mentions a plaque in the Low-Beer Collection exhibiting such a technique which he assigns to the pre-Han period; this will be discussed presently.

The attribution of bevelled carving to Scytho-Siberian animal art should not be seriously considered any longer - especially as the very existence of "Scytho-Siberian" art has been strongly challenged, and has been termed mere mirage.

The technical similarity between Scytho-Siberian animal art on the one hand, and the carved lacquer and the Sāmarrā stuccoes on the other hand seems to be purely coincidental.

This could be explained in several ways. The Scytho-Siberian objects, whether animal representations or horse trappings, are mostly cast metal reliefs. The technique is most probably that of sand-casting. One of the essential requirements of sand-casting is the absence of undercuts in the model for which

(2) Willetts, op. cit., I, p. 201.
(3) Trever, op. cit., p. 25.
a sand-mould is to be made. In fact even vertical surfaces (edges) are to be avoided in order to facilitate the separation of the sand-mould from the 'master' (original model) without damaging the mould. Damages to sand-moulds are not infrequent when separations are effected. Such damages require skilled and time-consuming repairs.

The elimination of all under-cuts, deep cuts, and vertical surfaces or sharp edges becomes imperative when a sand-mould is intended for mass casting. This method can only be applied to small objects, such as the Scytho-Siberian animal sculptures and horse-trappings which are clearly the products of such a method. Their designers might well have had this technical necessity in mind, and have resorted to the elimination of the undesirable features mentioned above, by slanting the inner and outer contours of their designs. Thus a bevelled style arose quite naturally.

The same requirement (the elimination of under-cuts and so on) presents itself in objects executed in sheet-metal, whether hammered, beaten or chased. In such objects the inherent qualities and the characteristics of the medium do not lend themselves to the execution of sharp edges, but tend to preserve a plastic appearance. When forced into sharp edges or undercuts, the metal would either be torn or show signs of warping and contortion unless helped by heating.

In carved lacquer (tiao Chi) and in stucco, the occurrence of this bevelled technique is caused by an entirely different procedure.

In Chinese carved lacquer - as in the Samarra stuccoes -

(1) Willetts, I, p. 201.
two types of ornament occur. In one of them the design is executed in flat relief by the use of sharp tools. This is very similar to the technique employed in the Sämarrä styles A and B (Creswell's classification). In the other, the design is rendered in plastic modelling with a putty of lacquer. This produces an effect very similar to the technique of Style C (Creswell's classification) of Sämarrä, otherwise known as the bevelled technique.

This latter technique used to be considered a Japanese invention, and was referred to by the Japanese term takamakiye (bevelled technique). But Lillet points out a pre-Han plaque in the Low-Beer Collection executed in this manner. This proves the antiquity of this technique and its use in China centuries before its appearance in Japan. Examples of this technique can be seen in pl. 240, 242 and 243 which depict Chinese lacquers in the Royal Scottish Museum.

In this type of lacquer, the plastic consistency of the lacquer putty does not lend itself to the execution of sharp edges or undercuts. Thus the motifs acquire sloping surfaces, meeting their counterparts in oblique angles. In such work, any other surface ornament or details would have to be achieved by carving.

It is generally accepted that the bevelled stuccoes of Sämarrä were initially moulded, then carved, but the recent restoration of the ornaments of 'Bait al-Zakhrip' at Sämarrä by the D.G. of Antiquities proved that the bevelled technique

(1) Ibid.
(2) Ibid.
(3) Talbot Rice, op. cit., p. 33, and pl. 26 (caption); Dimand, "The origin of the Second Style", p. 64.
could easily be executed by the direct application of gesso
putty and by modelling it with the aid of an ordinary plaster-
ing spatula.

However, the sudden appearance of this technique at
Samarrā confirms the general idea held by a number of scholars
as to its actual physical introduction from Central Asia by the
Turks. All the other evidence in this thesis shows that
Chinese influences on the stuccoes of Səmarrā and on its wall
painting were dominant. They include the curvilinear zigzag
meanders, the crown motifs, the Yin and Yang, the phoenixes, and
the Jao-e. All these features combine to suggest a Chinese origin
for this technique, a theory which is further supported by the
similarity in substance and in the method of application between
the lacquer and the stuccoes of Style C. The extent and nature
of Chinese influences at Samarrā can be overestimated, however. As the Tang
however, the popularity of the Jao-e does not seem to have declined through the centuries, whether in China, Central Asia,
or countries further afield. It has been used until recently
on ceremonial robes (pl. 24,3) and official costumes as it was
used centuries ago.

The Jao-e decorates the breastpiece of the official outfit
worn by the 'Yamen Runner' of 1915 (pl. 24,4) as it decorated
the ceremonial hat and its two ribbons of Rai' o- tien (pl. 24,5)
seven centuries earlier.

(1) Talbot Rice, *ibid*; Dimand, *ibid*; Cohen-Iener, *ibid*.
(2) That is, the countries at the other end of the silk routes.
(3) The Jao-e forms the embroidered collar of the dress worn by
the second woman from the right in. and P. .ykes, *Through
Deserts and Oasis of Central Iran* (London 1920) pl. 58.
(4) See Lykes, *ibid*., frontispiece.
(5) J. Lanzmann, *Chinese Portraiture* (Tokyo 1966), pl. 33.)
APPENDIX. VIII

As this study has proved conclusively, the heart-shaped motif and its by-product, the so-called palmette, is Chinese. A closer study of Sasanian art motifs reveals that a 'heart-shaped' motif with base volutes ending in petals did exist in Sasanian art. The stucco panel of fig. 112 from Ctesiphon (now in the Metropolitan Museum of Art, New York) exhibits four such motifs, one at each of its four corners. The reliefs of Taq-i Bustan offer three examples of this motif as well.

One of these is in the form of a finial at the end of the scabbard of the sword of the slain foe at the feet of Ardashir II (fig. 113 A), who, is probably, judging by the finial on his sword, his trousers, and his headgear, a Central Asian ruler, though Ghirshman - Parthians and Sasanians, pp. 190-1 - thinks that he may be a Roman. But the Romans depicted in other Sasanian reliefs (e.g. at Naqsh-e Rustam and Bisapour) are portrayed in distinctively Roman attire. It should be noted that the scabbards of the swords of Mithra and Ardashir do not have similar finials.

Another example appears on the two pilasters flanking the equestrian King in the Taller Grotto (fig. 113 B). In this example the heart-shaped motifs are placed adjacent in the form of a border design.

The third example appears as a textile design on the outer garment of the Goddess Anahita, in the same grotto (fig. 113 C). In this pattern the design is formed by a roundel enclosing four heart-shaped devices (Joo-e's), their tips pointing towards a common centre.

It seems that Strzygowski was not aware of the existence of these motifs when he noted the absence of a three-petalled palmette, whose petals turn into a heart-shaped motif, in Sasanian art. Nevertheless, the appearance of this motif in conjunction with the pearl roundel at Ctesiphon as well as its appearance as a textile pattern on the garment of Anahita can only be attributed to the influence of Chinese imported silks and other commodities on the art of Sasanian Iran.
Fig. 112: Stucco panel from Ctesiphon. Sasanian. After Pope.
Fig. 113: The heart-shaped motif in Sasanian art.

A. From the relief of Ardashīr II. Taq-i Bustān.
B. From a pilaster in the Taller Grotto at Taq-i-Bustān.
C. From the outer garment of the Goddess Anahita in the same grotto at Taq-i Bustān.
The use of a dot as a filler motif within the inner space of the Joo-e head is a common feature in Chinese art. The earliest example of such use can be seen on the cover of a Han dynasty earthenware t'ing in the Royal Scottish Museum (No. 1957 238 & a), as well as on the 8th Century silk batik of fig. 90 B. It also appears on a cloisonné enamel vase (pl. 156) in the Royal Scottish Museum (No. 1874.30.3) roughly datable to the 18th Century. Other examples appear on the lacquer gourd-shaped wall vase of pl. 219 A and B and fig. 93 G (in the same Museum, No. 1928.692). On a number of examples this dot was replaced by a drop-shaped device or a device shaped like a tea leaf. This seems to be the reason for the appearance of the so-called "three petalled palmette enclosed by a heart motif." The origin of all these variations is a device rising from the juncture of the base volutes. Hence the similarity to cain and chain, for in early "Kufic" these letters were always written open. The fact that the filler motif has appeared in so many guises in Chinese art may help to explain the misunderstandings of its true function. The confusion between the primary and secondary motifs (in this case the Joo-e head and the dot, respectively) calls to mind the similar confusion between the Joo-e head and the palmette in the stuccoes of Cararra.
A considerable body of hitherto disregarded evidence seems to point to China as a possible source of the pointed arch.

This statement might seem unreasonable and contradictory to the generally held opinion that the pointed arch originated in Sasanian architecture (Cresswell, *MIA* II, p. 43).

It is equally unreasonable to assume that it is Sasanian from a single example on the back of the façade of Ctesiphon, especially once a parallel could not be found in earlier or later Sasanian monuments.

Furthermore, Godard (quoting Choisy) maintains that "The Persians have never accepted anything but the barrel vault ... and the dome on squinches ...." (Godard, *op. cit.*., p. 179).

Assuming that the arch is a form of vaulting, the complete absence of keel vaulting in Sasanian architecture could hardly have contributed to the evolution of the pointed arch. In fact the pointed arch of Ctesiphon is an isolated incident.

According to Havell, the pointed arch in Islamic architecture was acquired by Muslim builders through Arab contacts with the Buddhists of Western Asia, where such arches formed the niches of the principal images of the Buddha (see E.B. Havell, *Indian Architecture* (London 1913), pp. 4-6). Though Havell erroneously maintains that "a certain type of the pointed arch was in use in Egypt and in Asia Minor even before the days of Buddha" (ibid., p. 5) his statement seems to provide a possible clue to the source from which the pointed arch of Ctesiphon might have been derived, i.e. the niches of Buddhist temples of Central Asia. In fact, a good number of Buddhist pagodas in Central Asia and in China exhibit exact facsimiles to Islamic pointed arches (two-centred, four-centred and lobed) as was pointed out when dealing with the zigzag band (Chapter X, p. 345 and pl. 299). Another confirmation of Chinese influence on Sasanian art motifs and possible on Sasanian architecture can be found in a quotation by Gray from Nigam, who maintains that the palace of Khazarmaq was built by a Ruma (Byzantine) architect, whilst it was decorated by a Chinese decorator. This suggests that Chinese decorators might have been responsible, at least as designers, for the stucco ornament of other Sasanian monuments such as the Palace of Ctesiphon, probably the appearance of the pointed arch was inspired by them (B. Gray, "Chinese influence").
Pl. 203: The minaret of the Juwaiji mosque.

Mausil. 1107/1695.
Late 1st Century B.C. After Watson.

Pl. 205: Bronze tiger. Chinese. 4th - 3rd Century B.C.
After Watson.
Pl. 206: Jade disc. Han dynasty. After Gure.

Pl. 209: Khusraw Anushirvan conversing with Busurjmír.

From the Sháh nama of Firdawsí, 1486. The
British Museum.
Fl. 210: Chinese textile, showing Joo-e head. Han period. After Lusnichenko.

Fl. 211: East Asian silk, showing Joo-e heads. Medieval period. After Von Falke.

Fl. 212: East Asian silk showing Joo-e heads. Medieval period. After Von Falke.
Fl. 213: Chinese porcelain from the Ardabil shrine.
14th Century. After Pope.

Fl. 214: Chinese porcelain from the Ardabil shrine.
14th Century. After Pope.

After Robson.

16th - 17th Century. The Victoria and Albert Museum.
Pl. 217: Chinese box. Wood and porcelain.
1537-1619.

Pl. 218: Throne of the Emperor Ch’ien Lung. 1644.
The Victoria and Albert Museum.
Pl. 219: A and B.
Details from a gourd-shaped vase. 18th Century. The Royal Scottish Museum (1928.692).

The Victoria and Albert Museum (632-1877).

B. The base of A.
Pl. 223 : Silver salver, made for Alp Arslan. 1066-7.

After Pope.

Pl. 224 : Konya carpet from the 'Ala' al-Dīn mosque.

After Erdmann.
Pl. 225: Chinese silk depicting linked Joo-e heads and a background pattern of swastikas ('interlocked T' pattern).

Pl. 226: Guard of a Japanese slung-sword, date unknown.

The Victoria and Albert Museum.

Pl. 229: Detail from a Persian carpet. c. 1640. After Sarre.

After Miles.
Pl. 232 : Detail of 'The meeting of Husayn and Husayyın in The Palace Garden.' From the manuscript of Khwaja Kirmani, Herat. 1396. British Museum.
Pl. 233: The minaret of Ĉana after restoration.

Iraqi D.G.A.
Fl. 234: Segmented arch (madani) at the cloister in the congregational mosque of Bistam. 699/1299.

After Seherr-Thoss.
Pl. 235: Segmented arch (madānī) in a miniature from the Maqāmāt of the Suleymaniya. 1242-1258.

Pl. 236: Segmented arch (madānī) from the Maqāmāt of the Bibliotheque National. c.1237. After Blochet.
Fl. 237: A sheet metal minaret depicting segmented arches.

Fl. 238: A facade of an Iraqi house at Karbala' or Hilla, depicting segmented arches.
Pl. 240: Chinese lacquer. Late Sung. c. 1280.
The Royal Scottish Museum (SYL 15).

After Low - Beer.

Pl. 242: Chinese lacquer box, carved with guri scrolls.

Pl. 243:
Kashgar women and children. After Sykes.

Pl. 244:
A Ya-yieh runner.
After Sykes.
Pl. 245: Portrait of Pai Lo-tien.

Late Sung period. c. 2nd half of the 13th Century. After Laneman.
INDEPENDENT MOTIFS OF CHINESE ORIGIN FOUND ON IRAQI MINARETS.
The Key-motif.

On the existing minarets of Iraq, three types or variations of the 'Key-motif' are found (fig. 114 A, B, and C). All three variations are composed of reciprocating key-motifs stemming from two horizontal and parallel lines.

In variations A and B, the key devices are hooked, whilst in variation C they are not.

In variations A and C, the reciprocating key-devices are separated from each other by an intervening continuous line; in other words they define an angular meander. These meanders are formed by the parts of the background which were left by the reciprocating key devices.

In variation B, the key devices reciprocate directly, without an intervening line, and thus they do not define a continuous meander.

It should be noted that the apparent dissimilarity between variations A and C on the one hand, and variation B on the other, is superficial. It is due to the rendering of the reciprocating key devices of variations A and C in one colour, whilst the reciprocating keys of variation B are rendered in varying colours.

(1) In this figure, variation A is from the minaret of the Ḥadā'ir mosque; it dates from the last restoration. The space it now occupies was formerly taken by a band of diagonal squares (compare pls. 62 and 63). Variation B is from the minaret of Ḥādā' al-Salām mosque, and variation C is from the minaret of Sinjār (pl. 45).

(2) In variation A the key devices and the parallel lines from which they stem are rendered in plain brick, whilst the secondary motif, that is the meander, is rendered in kāshī. In variation C, the key devices are rendered in relief, whilst the intervening meander is defined by the sunken background. In variation B, the lower horizontal line and the key devices stemming from it are rendered in kāshī, whilst the upper horizontal line and its key devices are rendered in plain brick.
Fig. 114: Key border designs in Islamic art.

A. From the minaret of the Khaßafīn mosque.
B. From the minaret of Ābd al-Salām's mosque.
C. From the minaret of Sinjar.
D. From the stuccoes of Samarra.
The earliest parallel to variation A in Iraq occurs on the stuccoes of Sāmarrā (Creswell's Style A) during the 9th Century (1)(fig. 14, D). The Sāmarrā motif is slightly rounded at the corners. Another key motif (the so-called 'oblique key-pattern fret') also occurs in the Sāmarrā stuccoes. This motif is closely related to variation C, that is its key devices are not hooked. (2)

It should be noted that according to Herzfeld, this oblique variation, which occurs in the three styles of Sāmarrā, is not Hellenistic. (3) He believes that it reached Sāmarrā from Bactria, and he presumes that it has descended from the old classical art of that province. (4)

These key-motifs are generally known as Greek key frets and were widely used in Greek architecture, as well as by the Romans, Byzantines, and Sasanians. (5) For this reason, one would expect to find this motif or one of its variations on early Islamic monuments on the assumption that it would have passed into Islamic art from the arts of Byzantium and Sasanian Persia which were predominant in the area. But the early Umayyad monuments such as the Dome of the Rock and the Umayyad mosque at Damascus do not exhibit this motif or any of its variations. The same is true of early Abbāsid monuments. (6) But it does appear at Sāmarrā, as was shown above, in more than one form. Hamíd maintains that

(1) Ḥamīd, op. cit., fig. 5.
(2) Ibid., fig. 6.
(3) Ibid., p. 173, and fig. 6.
(4) Ibid.
(5) Ibid., p. 176.
(6) Ibid., p. 172.
this border motif regains its classical popularity from the Sāmarrā period onwards. (1)

The appearance of the key-motif in Greek and Etruscan art seems to have led the "Classicists" to attribute all patterns which are based on key devices to the Greek key pattern, (2) whether Roman, Sasanian, Byzantine or Chinese. Bain maintains that the "Classicists" have even considered the Pictish key-pattern which appeared in Britain and Ireland many centuries before the arrival of the Romans to be a by-product of the Greek key motif, which reached this region with early Christian art, and was then distorted into its Celtic variation. (3)

In fact one of these Celtic key patterns (pl. 246) is an exact parallel of the very well-known ancient Chinese pattern; the so-called 'slanting (or 'interlocked') 'T' pattern.' This pattern occurs on Chinese bronzes as early as the 11th Century B.C., e.g. a late 11th Century Ting in the possession of T.Y. King, published by Watson, (4) the 12th Century B.C. Hu of the Freer Collection (pl. 247) (5) and the stag-antler from 'in-Yang (fig. 115 datable to the same period. This pattern continues to appear through the 5th Century B.C. on Chinese bronzes (fig. 115 B & C).

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(1) Ibid.
(2) G. Bain, The Methods of Construction of Celtic Art (Glasgow, 1951), p. 73.
(3) Ibid.
(4) Watson, op. cit., pl. 96.
(6) White, op. cit., fig. 29.
Fig. 115: The slanting 'T' pattern in Chinese art.
After White.
A. From a stag's antler found at An-Yang, 12th century B.C.
B. From a bronze axle-head found in W. Honan, 5th century B.C.
C. From a bronze vessel from the Lo River valley, 5th century B.C.
In the 3rd Century B.C. it appears on bronze mirrors (pl. 248) and as borders on tomb tiles (fig. 116) until its incorporation with swastikas, as was suggested before, during the 4th Century. (3)

However, Bain does not miss the similarities between the Celtic key patterns and the Chinese pattern of the Shang period. In this regard he states:

"Some Chinese key patterns belonging to periods prior to B.C. 1000 are very similar to the Pictish key patterns ...." (5)

In fact, Bain mentions key patterns (square and diagonal) discovered in the Ukraine and Yugoslavia datable to a period between B.C. 2000 to B.C. 1500 (6). These prehistoric designs were engraved on mammoth ivories. (7)

Bain concludes:

"The evidence available shows that the key patterns of Britain and Ireland arrived many centuries before the Romans, and that the peoples who brought them made contact in their migration with the tribes that later became the makers of the Greek empire." (8)

This valuable statement actually provides the answers to the origin of key patterns in the West including the Greek-key pattern, and to the means by which they were transmitted to the West, i.e. by the peoples of the steppes.

It is interesting to note that the 'slanting 'T' pattern' of the bronzes also occurs on woven fabrics. Salwen has published

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(1) Watson, op. cit., pl. 95.
(2) White, op. cit., pl. CXVII
(3) This point was discussed when dealing with swastika all-over patterns (supra, pp. 197-210).
(4) B.C. 1766-1122 B.C.
(5) Bain, op. cit., p. 71.
(6) Ibid.
(7) Ibid.
(8) Ibid., p. 73.
Fig. 116: Slanting 'T' pattern on pre-Han tomb tile. 3rd century B.C. After White.

Fig. 117: Reconstruction of pattern on textile from Skog. After Salven.
a piece of fabric from Siang with this pattern depicted on it (pl. 249 and fig. 117). (1)

This occurrence confirms yet again that patterns of Chinese silks and other fabrics were often imitated on other media, in Europe and elsewhere.

Though an exact parallel to this pattern is not found in Islamic art, one finds patterns obviously derived from it, such as the diaper pattern of the 13th Century carpet from the 'Alā' al-Dīn mosque at Konya (pl. 250). (2) In this pattern the originally Chinese zigzag meander of the 'Slanting 'T' pattern has been retained, whilst the key devices forming the horizontal bars of the 'T's are incorporated within the lines of the zigzag (fig. 118). They do not stem from its corners as in Chinese and Celtic patterns.

One may now reconsider the key-motifs of the minarets of Iraq. An almost exact parallel to variation B can be seen on a Han silk in the Hermitage Museum (pl. 251). (3) The only difference between the two motifs is that the key devices (4) of the Iraqi minaret are attached to a horizontal line, whilst in the Han silk, the motifs are without such a line.

This pattern occurs in Chinese art in a number of variations, and it is called by the Chinese Lei-Wen, (5) which means 'thunder pattern.' One of the earliest depictions of this motif

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(1) E. Salven, Bonaden Fran Skog Undersökning Aven Nördisk Bildavnad Fran Tidig Medeltid, (Stockholm 1923) pls. 41 and 43.
(2) Talbot Rice, op. cit., pl. 179.
(3) Lubo-Lusnichenko, op. cit., p. 26 and pl. V.2.
(4) These devices are sometimes referred to as 'squared spirals.'
(5) Pope, op. cit., p. 40. (description of pl. 4•).
Pl. 250: Diaper patterned carpet from the 'Alā' al-Dīn mosque, Konya. 13th century. After Talbot Rice.

Fig. 118: Analytical drawing of the pattern of the carpet of the 'Alā' al-Dīn mosque.
occurs on the foot of the 12th Century B.C. Hu of pl. 247. The key devices in this example have rounded corners, and they do not reciprocate with each other.

In another variation, the Lei-men exhibits a different feature (fig. 119a). The hooked key devices in this example are doubled symmetrically on both sides of the now common vertical bar stemming from the horizontal line. This doubling of the keys causes the motif to appear like a capital 'T' with a horizontal bar ending on both sides in a squared spiral or a squared volute. This motif, when placed next to an identical motif, defines a similar secondary motif which is in fact the background reciprocating with the original pattern in an inverted position. In fact, the 'T' shaped devices of the reciprocating secondary pattern are fully interlocked with their counterparts of the original pattern.

The pattern under consideration, which is formed by the doubling of the key devices, has strong affinities with the 'slanting 'T' pattern' (the so-called interlocked 'T' pattern') of the Shang bronzes (11th Century B.C.) and with the Celtic key pattern. In fact they are so closely related that the differences between the two types are minor. The apparent differences are due to space requirements, and to a lesser degree, to artistic innovation. In the border pattern (fig. 119A) the 'T' shaped devices had to be placed adjacently in order to fill a narrow strip evenly; whilst in the all-over pattern of the Shang bronzes (pl. 247, fig. 119B) and the Celtic key pattern (pl. 246), the larger surface area to be covered by the pattern seems to have prompted the slanting of the 'T' shaped
Fig. 119: Variations of the lei-ven.
devices as well as the zigzagging of the connecting horizontal line below (fig. 119 B). With this the designer was able to cover a wider surface area than the Lei\-wen of fig. 119 A would have required. He has also achieved an integrated all-over pattern by placing his new slanting zigzag meanders perpendicularly and adjacently, in such a way that the right 'squared spirals' of the slanting 'T' devices are accommodated by the triangles formed by the zigzag of the neighbouring motif. With this he seems to have successfully avoided the monotony of a horizontal succession of Lei\-wen strips which would have occurred had he utilised them for the coverage of a large surface area.

The main difference between the Lei\-wen and the so-called 'interlocked 'T' pattern, apart from the slanting of the 'T' devices and the zigzagging of the horizontal connecting line, appears in the rendering of the 'squared spirals' of the two patterns. They are identical in the Lei\-wen (fig. 119 A) but different in the 'slanting 'T' pattern' (fig. 119 B). This seems to have been consciously arranged by the designer in order to reproduce a secondary interlocking motif identical with the original motif. The secondary motif would have been obliterated had he contrived to render the 'T'-shaped motifs under consideration identically. The straightening of the zigzag line, as well as the upright setting of the 'T'-shaped devices of fig. 119 D, will definitely result in the restoration of the Lei\-wen of fig. 119 A. This should prove that the pattern known as the 'slanting 'T' pattern is in fact merely a version of the Lei\-wen (most probably a later development of it because of its sophisticated composition), and thus it should be identified as a 'cloud
and thunder' pattern, and not "a stylization of zoomorphic form .... which evolves from the bent elbows of a squat animal of frog-like form,"(1) as White has suggested.

It should also be noted that this version of the Lei-üen should be referred to as a 'slanting 'T' pattern rather than an 'interlocked 'T' pattern, because the interlocking motif in this version as well as in most of the other versions are secondary motifs occurring automatically and simultaneously as soon as the original motif comes into being.

The exactitude with which these motifs repeat themselves inevitably and inseparably in a fixed relationship, and the way in which they contrast with each other, whether by difference in colour, in shade or degree of prominence, recalls the celebrated Yin and Yang motif. One is black, or receding; the other is white, or projecting. Each squared spiral contains its counterpart and enhances it. Exactly the same may be said of the eternal relationship between the comma-shaped conventional Yin and Yang. This supports Dyer Ball's claim that the Chinese consider the Lei-üen to have "arisen from the representation of the two pervading principles of nature, the Yin and the Yang."(2)

This seems to suggest that almost all of the self-repeating motifs in Chinese art are embodiments of the principle of the duality of nature. It further suggests that Islamic art motifs exhibiting such a phenomenon, such as the bands of reciprocal trefoils and the repeating zigzag bands of the Sîmarrâ stuccoes, if not direct copies from actual Chinese patterns,

(1) White, op. cit., p. 60.
(2) Ball, op. cit., p. 49.
must at least have been inspired by this method of embodying the principle of the Yin and the Yang.

In another Lei-ten depicted on a 17th Century Chinese carpet (fig. 119 C), another variation is shown. The pattern in this example is composed of adjacent 'T' units. These units are enclosed in an oblong frame formed by the horizontal lines from which their perpendicular bars stem. The intervening spaces between the 'T' motifs and the oblong frames surrounding them are filled by an angular motif corresponding in form to the shape of the horizontal bar of the central or inner 'T' device and interlocking with it at both ends.

Interestingly enough, a plaque of kāshī faience on the wall of the Ǧaḥašna madrasa(2) exhibits two such motifs (see pl. 252).

The motifs in this example are rendered symmetrically in such a way that their spirals are nearest to each other. The vertical positioning of the plaque obscures the proper identification of these motifs. In fig. 120 the motifs are easily identified.

Another version of the key border design appears on Anatolian carpets. The earliest of these carpets are datable to the early 15th Century, such as the 'Marby Rug' of the Historiska Museet in Stockholm (pl.328), and that of the Staatliche Museum in Berlin (pl.331).

(2) This madrasa is within the Ǧaḥašna mosque in Baghdad.
Pl. 252: Plaque of kāshī fience on the wall of the Qapllāniya madrasa.

Fig. 120: The plaque of the Qapllāniya madrasa turned horizontally.
In these two carpets, the hooked key borders frame the octagonal fields containing the animal compositions.\(^{(1)}\)

In both examples, the tips of the hooked key devices are tapered, so that they end in a sharp point. This has consequently caused the reciprocating key devices of the secondary motif to take the same form.

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\(^{(1)}\) For the description of these carpets and their motifs see Chapter XI (\textit{infra}, pp. 365 & 366).
The '3' motif.

The '3' pattern generally occurs on the minarets of Iraq in the form of a narrow band composed of identical '3' motifs in a horizontal position (fig. 121).

Fig. 121.

They occur on minarets of the 'Intermediate Style', such as the old minaret of the Gailānī mosque (pl. 64), and those of the Naqšāniya (1) (pl. 86), Husain Pāshā (pl. 85), and Fadl (pl. 89) mosques as well as minarets of the 'New Style', such as the minarets of the Ahmadiya (pl. 58), and Munawwar Khātūn (pl. 109) mosques.

The 'S' pattern band does not appear on the existing cylindrical minarets of the mediaeval period in Iraq, such as Mūjīda, Sinjār, Tāwūq, Dhu'il-Kifl, Sūq al-Chāzl, Arbil and Abu Ḫudair, (pls. 42, 45, 44, 55, 46, and fig. 7) nor on the two octagonal minarets of Āqna and Khilaliya (pls. 40 and 41). That this is probably due to the chance survival of the present mediaeval minarets may be judged by the occurrence of this pattern on Seljuk minarets outside Iraq, such as the minaret of Sāveh which was built by Muḥammad ibn Malikshāh in 504/1110. The lowermost band of this minaret is an 'S' pattern chain executed in two-level ḫāsīrī. (2)

(1) On the old Gailānī I minaret, and on the Naqšāniya minaret, the pattern is depicted in white kūshī on a dark background. This makes the identification of the pattern rather difficult, as the dark parts of the background come into focus readily, and appear as if they were the pattern.

(2) G. C. Miles, "Inscriptions on the minarets of Sāveh, Iran", Studies in Islamic Art and Architecture in Honour of Professor K. A. C. Creswell (Cairo, 1965), p. 168, pls. 1a and 1b.
Fig. 121 : Variations of the 'S' motif.

A, B, D, E, and G. From Islamic works of art.
C. From a Chinese silk.
F. From a Jacobite miniature.
Other than minarets, this motif does not seem to occur on existing Islamic monuments, nor in miniature painting; but an exact parallel appears on the famous 15th Century Central Anatolian carpet in the Staatliche Museen in Berlin (p.1331).

On another 15th Century Central Anatolian carpet in the Historiska Museet (the so-called 'Marby Rug'; see p.328) a closely related 'S' motif appears (fig. 121 B). Here the two curves are made angular, and each contains a rectangular 'key' device within its inner space as well as the 'stepped triangle' which appears in the 'S' motif of the minaret (fig. 121 A).

Though the close affinities between fig. 121A and B may suggest their derivation from a common prototype, if not the derivation of fig. 121 A from fig. 121 B through the omission of the 'key' device, a closer study of the minaret motif reveals that it is in fact a very narrow strip from an all-over pattern of heart-shaped motifs (Joo-e heads). The all-over pattern from which the 'S' pattern under consideration is taken, is the same pattern from which the geometric-al band surrounding the lower cylinder of the minaret of the Sirāj al-Dīn mosque has been taken. In fact the 'S' pattern of the minaret is actually a half of the band of the Sirāj al-Dīn minaret which was fully discussed above. (1)

The appearance of 'S' motifs on Seljuk carpets, together with many other motifs of Chinese and Buddhist origin or of Chinese descent, (2) and the absence of parallels in Islamic art prior to the Seljuk period, suggests a Central Asian origin and yet again brings China into focus as a possible source.

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(1) Suura, pp. 243 and 244.
(2) Such as phoenixes, dragons, 'Joo-e heads,' 'three dots', swastikas and the 'endless knot'. 
Investigation of the Chinese repertoire has yielded unexpected and extremely important results with regard to the 'S' motif, as well as the 'kidney-shaped' motif in the 'arabesque'.

The nearest parallel to the use of the 'S' motif as a band in Chinese art is the border motif of a carved stone sarcophagus, datable to 6525 A.D., in the Nelson Gallery of Art in Kansas City (fig. 122). This pattern is an almost exact curvilinear parallel to the stepped Saljuk pattern and to that of the Iraqi minarets. It is composed of identical motifs fused to each other in the form of a continuous band. Even the volutes within the curves recall the stepped triangle and the 'key' device of the Islamic motifs.

The pattern of the sarcophagus (fig. 122) might well pass as a cloud band composed of identical cloud tufts in the form of an 'S' (similar to the Chinese cloud design which appears on 16th Century Iznik Jug in the Victoria and Albert Museum (pl. 253 and fig. 121). But the kidney-shaped type of volutes and the presence of t'ao-t'ieh masks composed of two dragon heads indicate otherwise.

These volutes are peculiar to dragon representations on bronze mirrors (pls. 24, 254 and 255 and fig. 122 C-D and F), ritual vessels (fig. 122 C-D and F), and tomb tiles (fig. 123 A, B) of the Late Chou period.

The t'ao-t'ieh masks at the two corners of the stone slab (where the bands terminate) form heads to the bands and identify it as a dragon scroll beyond a shadow of doubt. The t'ao-t'ieh in the centre

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1 Sickman and Soper, op. cit., pl. 53.
2 So much so in fact that they have been called dragon volutes (see Sullivan, op. cit., p. 21).
3 Sickman and Soper, op. cit., pls. 52-3.
4 Indeed, the presence of these masks raises the possibility that highly stylised dragons are being depicted.
Fig. 122: Stylized Chinese figural motifs displaying 'S' forms.
Fig. 123: Chinese dragons depicted on pre-Han tomb tiles. After White.

A. Male dragon.
B. Female dragon.
of the lower border merely divides the dragon scroll into two.

It seems that neither the 'S' motif nor the "kidney-shaped" volute were amongst the early Chinese conventions for depicting clouds. Both features seem to be connected with dragons of various degrees of stylization and abstraction.

As early as the Shang or early Chou periods, the body of the dragon was moulded into the shape of an 'S' (fig. 122 G), most probably in order to retain a sense of its sinuous shape in a highly stylized and severely compressed form. This transformation was probably brought about by the need to depict dragons in narrow bands on ritual vessels (fig. 122 A-B, and G). This convention seems to have been retained in the depiction of dragons on tomb tiles (fig. 123 A & B) and on pre-Han mirrors, even though the backs of the mirrors did provide wider surfaces (pls. 248, 254-256 and fig. 122 C-D and F). This is perhaps in order to accentuate its viciousness and movement.

This convention seems to have persisted through the centuries. It contributed a great deal to the formulation of the 'S' motif on the Chinese stone sarcophagus in Kansas City, and to that of the stemmed 'blue and white' cup depicted in fig. 122 H which is the nearest parallel to the 'S' motif in Islamic art.

Related motifs seeped into Islamic art through centuries of trade with China, on commodities that did not survive or are yet to be unearthed; they probably also reached Islam - as the patterns first appear on Saljuk works of art - through the assimilation of Chinese motifs by the Turkish stock of Central Asia.

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(1) Bulling, op. cit., fig. 32.
(2) This cup is datable to the Yung Cheng period (1723-1735); see H. Garner, Oriental Blue and White, pl. 78A.
The 'Y' motif.

A good number of the existing Iraqi minarets exhibit narrow bands composed of identical units interlocked with each other in the form of a chain.

The units forming the chain are in the shape of an angular letter Y, or rather like an angular wish-bone (fig. 16 G).

The 'Y' units are rendered alternately in black and white, or turquoise and white kāshī (ceramic faience).

This feature seems to be peculiar to minarets decorated with kāshī; these are mostly minarets of the 'New Style'\(^{(1)}\) and occasionally minarets of the 'Intermediate Style.'\(^{(2)}\) This is most probably due to the qualities of kāshī: the shapes of the units could be enhanced by alternating colours, in contrast to brick-work where such a design can be achieved only by two-level baṣīrī, and even then the pattern would not be discernable at a distance.

The appearance of this pattern on the minaret of the Gailānī mosque and that of Shaikh Ma'rūf seems to have been the result of later restorations\(^{(3)}\).

This is further confirmed by the lack of similar motifs on all the known minarets - whether in Iraq, Persia, or elsewhere - which are executed and decorated exclusively in brick-work, such as the minaret of Mūjīda, the minaret of Tāwūq, that of Arbīl, of Sūq al-

\(^{(1)}\) The pattern occurs on the minarets of the following mosques: the Almādiya, the Ḍapallāniya, the Khāṣṣaki, the ʿAṣsāliya, the Ṣaʿīdiya, the Faqāl, and the two minarets of the ʿAskarīyān at Sāmarrā' (pls. 58, 132, 151, 49, 93, 89 and 124).

\(^{(2)}\) E.g. the following mosques: the Gailānī (al-mādāra al-Nāṣirīya) the mosque of ʿAli Afendi, the Marjānīya madrasa and the tomb of Shaikh Mārūf al-Karkhī (pls. 83, 75, 81 and 57).

\(^{(3)}\) The various restorations which were carried out on both minarets are discussed \(\&\), above.
Ghazal, as well as the medieval minarets of Isfahan. (1)

In Persia, exact parallels to this band occur on minarets (2) as well as on a number of domes (3); the earliest existing example can be seen on the springing of the dome of the Masjíd-i Sháh at Mashhad (4) (1418).

No exact parallel to this motif can be seen on the existing monuments of Turkey or Turkestan.

In miniature painting, an earlier example of this motif makes its appearance in a miniature datable between 1360 and 1374, attributable to the school of Tabriz, in the University Library of Istanbul; here the motif is depicted on a bed cover in the form of an all-over pattern. (5)

In Iraq, the only parallel to this border design appears on the metalwork of Mausil, such as the vessel shown in pl. 257 (6), where such a band can clearly be seen immediately above the inscription.

(1) See H. B. Smith, 'The Mausolae of Isfahan,' Athar-e Irân 1/2 (Paris 1936), pp. 311-358.
(2) Such as on the minarets of the shrine of Mâhân near Kirmân (Pope, Persian Architecture pl. XVI and caption).
(3) Such as on the springing of the dome of the shrine of Qadam Gâh near Nâshâpur (1643), the drum of the dome of the Madrasa Mâdir-i Sháh (1706-1714), and the springing of the dome of the Congregational mosque at Qâzvin (Pope, Persian Architecture, pls. 311, 312, 317; Hill and Grabar, op. cit., pl. 251).
(4) Pope, Persian Architecture, pl. 270.
(5) This miniature (from Kâllîla wa Dimna) was found in an album at the Imperial Palace of Yildiz, and is particularly interesting, for a number of Chinese objects and motifs are clearly depicted without the slightest alteration. Examples are the Chinese vessels depicted in the niche to the left, the Chinese garden fence which is lacquered, and the post of this fence which exhibits a lotus finial as well as a base composed of joo-e heads (see Gray, Persian painting, pl. on p. 39). Another miniature from the same manuscript exhibits similar features as well as a bed cover with typical Chinese cloud patterns (Gray, ibid., pl. on p. 38).
The interlocked 'Y' motifs are slightly different from the minaret motif of fig. 16 C; that is, the right angles imposed by the shape of the kāshī and by the technique of brick bonding were replaced by obtuse angles.

This later version of the 'Y' motif band appears in abundance on Saljuk monuments of the first half of the 13th Century in Anatolia, such as on the blocked-up doorway at Karatai Hān (1230-40), the eastern entrance of the Huand Hātūn madrasa at Kayseri (1237-8), and the gate of the Sāri Hān near Avanos.

On the outside wall of the Karatai Hān, a vertical strip in high relief can be seen (pl. 258). The Karatai band clearly indicates that this border motif is in fact only a strip from an all-over pattern composed of two superimposed and interlaced all-over patterns of hexagons, which might have been rendered in two different colours on the original material from which the motif was borrowed (most probably silk fabrics). This is further confirmed by the appearance of this motif in the form of an all-over pattern on an engaged pillar at the side entrance of the 'Hātūn Hān' at Pazar (1238-9).

Although the Hātūn Hān pattern is vertically stretched, it does reveal that the border design under consideration also occurs in an all-over pattern. This seems to provide the explanation for an important pattern which occurs on the metalwork of Mauzil as well as in stuccoes and other media: that is the Y-shaped pattern proper, or the triagram. This motif will be dealt with shortly.

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(1) See Hill and Grabar, op. cit., pl. 491.
(2) Ibid., pl. 484.
(3) Ibid., pl. 507.
(4) Ibid., pl. 351.
It should be noted that the Mausil vessel of pl. 257 exhibits another band immediately below the inscription. This is in fact a half of the 'Y'-shaped band on the upper side of the same inscription. This border motif is generally referred to as "the 'Z'-shaped motif." (1) The earliest example of this border motif appears during the 9th Century at Samarra as a stucco border design. (2) It also occurs on the entrance of the Aqzikara Han (3) in Anatolia (1236-46). It should be noted that in one example at the Ak madrasa at Niyrle (1409) a split border pattern occurs, but both halves are retained as well as the dividing line. (4)

It has been maintained that the so-called "Z-shaped motif" at Samarra was developed from the 'T-shaped' fret, and eventually replaced it. (5) It has also been maintained that the 'T-shaped' motif was a development during the Umayyad period from the Hellenistic and Byzantine key fret. (6)

It seems that this assumption was not based on Hellenistic or Byzantine parallels, but on a technical phenomenon, that is the doubling of the lines, which Hamid terms a Hellenistic technical convention. As it occurs in some of the Samarra 'T-shaped' frets he concludes that the 'T-shaped' pattern fret must be of Hellenistic and Byzantine origin. (7)

The triagram all-over pattern (the so-called 'Y'-shaped pattern) which appears on the metalwork of Mausil such as on the brass ewer of

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(1) Hamid, op. cit., p. 175 and figs. 3 and 4.
(2) Ibid.
(3) Hill and Grabar, op. cit., pl. 467.
(4) Ibid., pl. 459.
(5) Hamid, op. cit., p. 175.
(6) Ibid.
(7) Ibid., cf. the discussion of this motif in the analysis of the decoration of the Sūq al-Ghazl minaret, supra, pp. 136 and 137.
the British Museum dated 1232 (pl. 148) and other works following
the same tradition executed in Syria or Egypt, such as the Qaytbay
vessel (pl. 259) and others, does not appear on any of the surviv-
ing minarets of Iraq. It does however appear on the mihrab of the
Nūrī mosque of Naṣṣil (now in the Iraqi Museum). (1)

The pattern in this mihrāb appears on the two small engaged
columns which are enclosed by the arch of the left-hand niche. Thus
during the 12th Century at Naṣṣil this pattern was in use for archi-
tectural ornament as well as for metalwork.

Numerous parallels to this pattern appear on eastern Islamic
monuments during the 11th and subsequent centuries, such as on the
tomb towers of Kharragān (460/1067-68 and 486/1093), (2) the Gunbad-i
Surkh at Maraghah (542/1147-48), (3) the Cifte Minareli medrese at
Erzurum (late 13th Century), (4) a 13th Century Saljuk tomb tower at
Erzurum, (5) and on the portal of the khānqāh of Naṣṣil (1316-17). (6)

The same pattern appears on the portal of the māristān at
Granada (dated 1367) as does a "square Kufic" inscription (pl. 261).
Both features are uncommon in the repertoires of North Africa and al-
Andalus.

However, the earliest depiction of this motif appears on the
stuccoes of Sāmrāt during the 9th Century in the form of enlarged

(1) The building of this mosque was commenced in 566/1170 and com-
pleted in 568/1172. The stucco decoration of the mihrāb was
most probably executed in 568/1172 for decorative work was
usually left until the actual construction was completed.
(2) Scherr-Thoss, op. cit., pls. 18 and 19 and captions.
(3) Ibid., pls. 30 and 31 and captions.
(4) Ibid., pl. 104 and caption; Hill and Grabar, op. cit., pl. 332.
(5) Scherr-Thoss, op. cit., pl. 102.
(6) Hill and Grabar, op. cit., pl. 266.
(7) E. Kühnel, Moresche Kunst (Berlin 1923), pl. 34. According to
Kühnel, this portal does not exist any more.
concentric triagrams containing curvilinear ornament (fig. 124).

The Samarrā origin of this motif has not been identified, most probably because it has been obscured by the curvilinear ornament.

In Islamic miniature painting this pattern appears as early as 1250 in a manuscript executed at Cairo by a Persian called Qanbar Qalī of Shirāz (2)(pl. 262).

The pattern in this miniature appears as a textile pattern. It is much nearer to the Samarrā' pattern of fig. and its derivation from an all-over pattern of hexagons is clear. (3) It also occurs as a textile pattern in the 14th Century Maqāmāt of Ḥarīrī of the Bodleian Library (pl. 263).

A good number of Turkish (pl. 264, 265 and 266) and Persian miniatures (5) of the 15th and the 16th Centuries exhibit the same pattern in slight variations (e.g. double-lined or single-lined or both). It occurs on the tile ornament in miniatures, and continues down to the 19th Century as a surface ornament for furniture depicted in miniatures (pl. 267). (6)

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(1) E. Herzfeld, Wandschmuck, p. 211, pl. 229, Orn. 272.
(3) For the derivation of the triagram (or composite secondary motif) from hexagonal basic patterns, see 'Polygonal ornament' (supra, p. 217). It is interesting to note that Blochet in his caption to pl. XXXIII makes the following remarks on this miniature (pl. 262):

"The head of Iblis with the crown and white hair is copied from a Chinese idol; the sons of Iblis are copied from Hindu demons ...."

In fact, not only the crown (of three Joh-e's) and the physiognomy of Iblis are Chinese, but also the pattern of his silken garment (and on the dresses of his sons) and his quībqāb (wooden slippers or sandals).

(5) Gray, Persian Paintings, pls. on pp. 54, 86-7, and 123.
Fig. 124: Samarra stucco exhibiting 'Y' pattern. 9th century. After Herzfeld.
In Islamic art this 'Y-shaped' pattern appears in the following variations:

A - Triagrams composed of single lines of reasonable width such as in the Naqāmāt miniature (pl. 263), on the vessel of pl. 259 and on the Turkish miniature of pl. 265 where the motif is derived from two simple all-over patterns of hexagons superimposed and shifted half a space in any direction. The triagrams may also be interlaced. This method is demonstrated by the superimposition of leaf 1 and leaf 2, in the multi-leaved diagram below (fig. 125).

These triagrams are often enhanced by thin lines, incised or damascened with silver, running along the axis of the arms of the triagrams to meet at their centres. These thin lines are in fact the framework of the original hexagonal patterns from which the 'Y' pattern is derived.

B - Triagrams with arms ending in arrow-shaped forms interlocked with their counterparts from neighbouring triagrams. This variation occurs on the mīhrāb of the Nurī mosque, the 1232 ewer in the British Museum, the ġaytbāy vessel, the Turkish miniature of pl. 264, and the Persian miniatures mentioned above.\(^{(1)}\)

This variation is derived from two patterns of concentric hexagons; the tips of the arms of the triagrams (which are the sides of the larger or basic hexagonal pattern) are fused with the corresponding inner corner of the lesser hexagon, and thus the arrow-shape is achieved.

C - Triagrams alternating with hexagons, such as in the miniature by Qanbar CAll of Shīrāz (pl. 262), and the Persian picture (pl. 267). The 'Y' pattern in this variation is obviously derived from a hexa-

\(^{(1)}\) See footnotes 1 and 2, supra p. 11.
Fig. 125: The utilisation of superimposed hexagonal patterns to obtain other patterns.

Fig. 126: Superimposed hexagonal patterns.

A. Superimposed hexagonal patterns resulting in 'Y' pattern. Sikhim, Tibet. After Hummel.

B. Superimposed hexagonal patterns resulting in six-pointed stars. Sikhim, Tibet. After Hummel.
gonal pattern but in this version the triagrams are formed by the fusion of three neighbouring hexagons, or by joining three adjacent spaces which are left by three neighbouring concentric hexagons between the outer and inner hexagons.

The Sāmarra triagram of fig.124 belongs to this version.

The extent to which the superimposition of hexagonal patterns can be utilized for the formation of a wide variety of patterns can be observed in pl.268, where four variations of such a pattern can be seen. These are the simple hexagonal pattern; the 'Y-shaped' pattern alternating with hexagons on wall tiles; the pattern of concentric hexagons in openwork (e.g. in wood); and the diamond pattern used in the pendentives. This latter pattern is particularly interesting because it is achieved by the superimposition of three hexagonal patterns (see fig.125) and secondly because from this design the Islamic six-pointed star (or rosette), which is composed of six diamond-shaped petals, is derived (see pls. 272 and 273).

All the variations of the 'Y'-shaped pattern in Islamic art discussed above do occur in Chinese art and in arts exposed to Chinese influence, such as Japanese art and the art of Tibet, pls. 269-71 and fig. 126 A and B. In all of these arts this pattern occurs as a textile design (pls. 269-271).

The pattern of pl. 271 (1) seems to be the prototype of the Islamic version B. In this example the arms of the triagram are not fused to the corresponding angles of the inner hexagons, as is the case in the Islamic pattern.

In the 11th Century Chinese painting (on silk) of pl. 269 which depicts Eighty-seven Immortals, the pattern consists of an interlace

of leather thongs. (1) The same pattern and the same usage reappears on a 16th Century Wei-T'o (2) in the Royal Scottish Museum.

In the Japanese portrait painting of Abbot Shoichi-Kakushi (1352 to 1431) the 'Y'-shaped pattern appears on the silken material covering his chair (pl. 271) (3). Japanese wood-block prints of the 18th and subsequent centuries abound with variations of this pattern (pl. 274) as well as other motifs derived from the all-over patterns of hexagons in Islamic art, such as the six-petalled star or rosette mentioned above (pls. 272 and 273).

Though the all-over pattern of hexagons occurs in the arts of other nations, such as Assyrian art, most probably in imitation of the natural 'honey-comb', none of these nations, other than the Chinese, has attached any particular significance to it.

This pattern is known in China as the Tortoise-shell pattern (4) (pl. 275) (5).

According to Lacker, the tortoise was a supernatural animal. Its shell was used in divination. The tortoise was an emblem of longevity in China as well as Japan. Lacker quotes the following Chinese phrase: "Hwei-ho-tung-Chun," which signifies: "May your days be as long as the tortoise and stork." (6)

The tortoise in Han times is one of the "Ssu Shen or Four Supernatural Beings" (7) (Tortoise, Dragon, Phoenix and Tiger), which preside over the Four Quadrants of the vault of Heaven (North,

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(1) Those parts of Chinese and Japanese armor which cover the abdomen were traditionally made of leather (cow-hide) for greater flexibility and comfort.
(2) A guardian figure placed at the entrance of Buddhist temples.
(3) Lee, op. cit., pl. 496.
(4) Chubanshe, op. cit., (Dolby's translation, p. 4).
(5) D. Gure, op. cit., pl. 30.
East, South and West). They surround the circumpolar Central Palace of the supreme ruler T'ai-i, just as the Four Directions of terrestrial space surround the palace of the Emperor on Earth. They (the Four Celestial Quadrants) also correspond with the Four Seasons (Winter, Spring, Summer and Autumn) respectively.

Furthermore, the Four Supernatural Beings symbolize the four classes of animals: shell-covered, scaly, feathered, and hairy creatures, as they were divided in the Han period. These Beings were also associated with the Four Elements (Water, Wood, Fire and Metal) and with the Four Colours (Black, Green, Red, and White) respectively.

Accordingly, the tortoise is the symbol of the North, Winter, Water and Black (or Darkness).

It is also considered (for anatomical reasons) as a female only (2) and is thus "the very essence of Yin." (3)

The tortoise, according to Willetts, from very early in Chinese history was considered to have supernatural powers. (4) According to Chinese legends, she emerges from the waters of the Yellow River bearing magical writings on her back. (5)

Willetts maintains that with the advent of Buddhism the Sau Shen (Four Supernatural Beings) gradually lost ground until about the 6th Century when they briefly regained popularity. After that

(1) All the information cited in the previous paragraph is derived from Willetts, op. cit., loc. cit.
(2) Willetts explains this by mentioning that the genitals of the tortoise are hidden in a sort of cloaca which leaves no visible organ to mark the sex of the tortoise, and for that reason the idea of the tortoise being female only, and capable of impregnation only by another animal, the snake, came into being. He also relates that the portrayal of the Sau Shen in the Han and later periods show the tortoise and snake coupled in sexual embrace (Willetts, op. cit., p. 283).
(3) Ibid., p. 283.
(4) Ibid.
(5) Ibid.
their meaning was lost so that they became mere emblematic figures, except for the tortoise which was separately incorporated in new cults, (1) and became the deity of latter-day Taoism. (2)

Bulling maintains that the tortoise is intimately connected with the moon, and related to the North and the cold season. He also relates that the Black Warrior which is the sign for Winter consists of a tortoise entwined with a serpent; and on coins the Dipper is sometimes shown together with the tortoise. (3)

Bulling's ambiguous statement is clarified by Goepper who calls the tortoise 'The Dark Warrior of the North' and explains this Chinese designation as follows:

"the Tortoise is described as a warrior because it is clad in armour ......." (4)

He also clarifies its connections with the stars and with Earth by relating that the tortoise, from archaic times, was thought to be a cosmic animal; its rectangular under-belly symbolized the Earth, whilst its round arched carapace was the symbol of heaven. (5) He draws attention to a rubbing he has published of a tortoise copulating with a serpent; on the tortoise's shell stars and constellations were drawn. (6)

This seems to form conclusive evidence of the importance of the tortoise in Chinese culture from the Han period onwards and probably much earlier. This was due to its cosmic, magical, mythological, and

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(1) Ibid., pp. 274-5.
(2) Ibid., p. 283.
(5) Ibid.
(6) Ibid., pl. 117.
The 'tortoise-shell' pattern occurs in a number of variations: simple, concentric (pl. 275), stretched (fig. 127 A), elongated (fig. 127 C), superimposed (fig. 126 A and B), and interlaced (pls. 269 and 270). Many of these patterns (apart from the interlaced one) contain filler motifs such as stars or rosettes (fig. 127 A and B), and other forms. Often such patterns are fragmented into small units of hexagons grouped in a particular formation, fused or separated in threes and in sixes (fig. 127 C).

Most of these patterns occur in Islamic art in various periods. In fact, it is very difficult not to find parallels to the Chinese variations in the Islamic repertoire.

The re-emergence of the 'tortoise-shell pattern' (which encloses twelve-pointed stars) as a 'land-pattern' on an official group

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(1) This pattern is an exact parallel to the stucco pattern of Bisalast.

(2) In this group of carved lacquer objects landscapes are depicted. Each of the landscapes contains three distinct types of diapers: 'Air-diapers,' 'Water-diapers,' and 'Land-diapers'. The 'Air-diapers' are mostly composed of incised horizontal lines; the 'Water-diapers' are formed by humped waves arranged in trellis form, and the 'Land-diapers' are composed of squares, diamonds, lozenges or hexagons containing stars or rosettes (see Garner, 'Diaper Backgrounds,' passim). Both of the former diapers are symbols of Yin, the North, the Night-sky, winter, darkness, and Earth (Rolling, op. cit., pp. 82 and 85). Thus the three 'Land-diapers' on these carved lacquer objects fit this context and all of them represent earth.
Fig. 127: Details from early Chinese textiles depicting variations of hexagonal patterns (the Tortoise-shell pattern). After Chubenshe.
of carved lacquer objects of the 15th Century (fig. 128 A-C) seems very appropriate indeed, for the tortoise is the symbol of Earth, as mentioned above, and the use of its stylized shell-pattern to depict the ground strengthens this meaning.

However, Garner does not seem to be aware of the symbolic significance of this pattern, for he expresses his surprise at its appearance as a land-diaper. While he mentions similar patterns on a recently discovered carved lacquer box from a Yuan tomb (1280-1368) in Kiangsi; in 'The manual of building construction', where it is used extensively for the decoration of buildings; and lastly in a painting by ang Chen-P'eng (active ca. 1312-20), he seems to be oblivious of the hexagonal pattern itself and focuses his attention on the secondary motifs of stars. He thus seems to be in agreement with Pope who has found connections between the eight-pointed-star in Islamic art (which is supposed to have cosmic significance) and the so-called Ming porcelain in Muslim style.

(1) Garner maintains that the uniform features of this group were strictly prescribed by strong official control (Garner, "Diaper backgrounds" p. 188).
(2) Ibid., fig. 23  A-C.
(3) Ibid.
(4) The Yin-tao fa-shih, which was compiled originally by Li Chieh in 1091 (Ibid., p. 183).
(5) Ibid.
(6) Ibid.
Fig. 128: Diner background patterns (land diapers) on Chinese carved lacquer. After Garner.
It should be pointed out that the stars in the Land-diaper under consideration, and those of the Bistām stuccoes, are both twelve-pointed stars formed so that the alternate points of the star fit the angles of the enclosing hexagons. They have no connection whatever with the eight-pointed stars "constructed from two squares set at angles of 45 degrees to each other." (1)

(1) Ibid.
The eight-pointed star

The eight-pointed star appears as an architectural ornament as early as 691 on the arches of the Dome of the Rock,\(^{(1)}\) and continues to appear in subsequent centuries at Lämmä\(^{(2)}\) and other monuments such as a Seljuk building excavated at Rayy.\(^{(3)}\) It is also found much later on the parapets of the haws of most Iraqi minarets of the 'Intermediate' and the 'New Style'\(^{(4)}\) as well as in other media. Recent excavations in China carried out by the Chinese authorities in 1959 brought to light a number of Chinese silks datable to 683 (fig. 129)\(^{(6)}\) and 778 (fig. 129 D)\(^{(7)}\). These showed variations of eight-pointed stars forming the centres of thoroughly Chinese floral patterns.\(^{(8)}\)

Thus a possible evolution of such eight-pointed stars from such patterns (fig. 129 A-E, especially figs. 129 D and E) can be suggested. The eight-pointed star motif in Chinese Taoist mythology has a very well defined cosmic significance.

Perhaps one of the oldest depictions of an eight-pointed star figure in Chinese art appears on a bronze mirror datable to the second part of the Chou period.\(^{(9)}\) Bulling maintains that the eight points represent the "Eight Pillars of the Sky" which were supposed to stand at the horizon, four at the corners of the universe and four at the middle of the sides between them."\(^{(10)}\)

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\(^{(1)}\) Ettinghausen, Arab Painting, pls. on pp. 18 and 23.
\(^{(2)}\) Herzfeld, Der Handschmuck, Abb. 234, Orn. 221.
\(^{(3)}\) Ettinghausen, The Beveled Style, pl. XV 1.
\(^{(4)}\) Eight-pointed stars containing "square-Kufic" inscriptions appear on the old minaret of the Gâlânî mosque, that of the Ahmadîya, and others.
\(^{(5)}\) Chubanshe, op. cit. (Dolby's translation, p. 8).
\(^{(6)}\) Ibid., pl. 40.
\(^{(7)}\) Chubanshe, op. cit., pl. 44.
\(^{(8)}\) Ibid. (Dolby's translation, p. 8.)
\(^{(9)}\) Bulling, op. cit., fig. 16a.
\(^{(10)}\) Ibid., p. 34.
Fig. 129: The development of the eight-pointed star in early Chinese textile patterns. Aft 1 Chubenshec.
Fig. 130: Design on the back of a bronze mirror. Chinese. Second part of the Chou period. After Bulling.
The pillars are supposed to be connected with the 'Central Post' or 'Pillar of Heaven' by means of ropes.

In the west, the earliest occurrences of the eight-pointed star seem to be on silks, such as the 4th - 6th Century Antinoe piece (fig. 131 A) of the Kunstgewerbe Museum. This piece is included by Von Falke among a group of late Greek silks. In this piece the eight-pointed star, similar to the 7th Century Chinese star of fig. 129 D and E, is rendered around a central flower.

In another 6th Century silk fragment from Antinoe (fig. 132 B) there is a striking similarity in the composition and the rendering of the motif to the Chinese motifs of fig. 129 D and E, where both motifs are surrounded by four stylized so-called palmettes. The resemblance to the Chinese silk of fig. 129, where palmettes alternate with four leaved branches, is especially close. The centres of the eight-pointed star in both designs are occupied by floral motifs of varying stylization.

Other Chinese motifs in so-called "Byzantine" silks.

The attribution of the Antinoe piece of fig. 131 B to an East Roman provenance is completely unfounded, for the design exhibits other features peculiar to Chinese art. Among them are the cloud elements (shown in fig. 131 B1) on the sides of the pear-shaped element.

(1) Ibid.
(2) Ibid.
(3) Von Falke, op. cit., pl. 11.
(4) Ibid. (caption).
(5) Ibid., pl. 14.
(6) Ibid. (caption).
(7) This piece is now in the Kunstgewerbe Museum in Berlin. (Ibid., caption).
Fig. 131: Details from western textiles depicting Chinese elements. After von Falke.
Fig. 132: Details from western textiles depicting Chinese elements. After Von Falke.
A. From a 4th-6th century silk. Late Greek.
B. From a 6th century silk from Akhin. Coptic.
which forms the main body of the so-called palmette, and the cloud band containing its rounded end. In fact these cloud elements are so peculiar to Chinese art as to make any attribution of this fabric or at least of the original design to any art other than Chinese highly suspect. (1)

Von Falke gives a late Greek provenance (4th - 6th Century) for another clearly Chinese piece of silk.

This piece is in Sens and was probably found in Antinoë (fig. 132 A). (2) Its diaper pattern is composed of lines of three-petalled devices. The points at which these lines cross each other are decorated with a large lobed-leaf motif with small trees at the axes acting as bosses. The centres of the squares of this diaper are decorated with four-petalled flowers. Each petal is formed by another very typical Chinese motif, the Jo-o-e head. These four-petalled flowers are ingeniously formed by four Jo-o-e heads surrounding a central circle. The variation of the Jo-o-e heads in this pattern is so well defined and accurately rendered that they could not possibly be mistaken for anything else.

Von Falke includes another 6th - 7th Century piece of silk with distinct Chinese characteristics amongst a group of Coptic silks from Akhmim. The design of this piece is composed of a diaper pattern enclosing roundels.

The roundels contain affronted or addorsed birds flanking a central tree (fig. 132 B). (3) This all too familiar feature does not at first strike one as unusual in the textile patterns of this period.

(1) An exact parallel to these cloud forms can be seen on the 10th - 11th Century Chinese casket of pl. 316.
(2) Von Falke, op. cit., pl. 13.
(3) Ibid., pl. 42.
However, a closer study of the designs reveals the following facts:

a - the confronting birds in the roundels are in fact crested Chinese phoenixes; their tail-plumes sweep upwards and forwards, to end in a backward curl according to the Chinese convention.

b - The addorsed birds in the lobed roundels as well as the phoenixes are in fact perched on the branches of the trees and not merely placed on both sides.

This brings to mind the phoenixes on the Central Anatolian carpet (pl. 328) and the eternal relationship between the Chinese phoenix and the Wu-t'ung tree. (1) In fact all the other decorative elements in this piece of silk are wholly Chinese, such as the so-called 'arabesque' meanders (2) forming the diaper pattern, and the hexagons enclosing four-petalled flowers. (3)

The identification of these purely Chinese motifs on silks attributed to late antique Byzantine and Coptic textile art seems to suggest two possibilities: firstly, that these textiles are actual Chinese silks which have been wrongly identified; and secondly, that they are in some features exact copies of Chinese silks which were available for the local weavers to imitate.

In both cases, the following important conclusions assert themselves: a) Chinese woven fabrics did exist in the West as early as the 4th-6th Century, contrary to the belief that only silk yarn was imported; and b) the textile art of the West was influenced by Chinese art motifs and not Hasmian art as has usually been maintained.

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(1) This relationship has been fully discussed when dealing with the Chinese phoenix in Islamic art (infra, pp. 359-371).
(2) See Chapter VII ("The Arabesque").
(3) For the significance of the hexagon in Chinese art see above (supra, pp. 292 - 295).
These conclusions are further supported by the appearance of Han silks in Palmyra and their identification as such.\(^{(1)}\) The Palmyra silks indicate an older date for the appearance of Chinese silks in the West, that is between 83-273.\(^{(2)}\)

The astounding persistence with which Chinese art motifs keep emerging in the textiles of the West until modern times can best be illustrated by the 11th - 12th Century Byzantine silk of St. Peter's Church in Salzburg (fig. 133 A).\(^{(3)}\) In this textile the main motif is enclosed by two symmetrically arranged two-headed dragons, their bodies forming semi-circles. Both extremities of the bodies end in snarling heads. The bodies are decorated with evenly distributed concentric roundels between two narrow borders. As far as I know there has never been a close parallel to this motif in Sasanian art nor in the ancient arts of the Near East. But an almost exact parallel (apart from the single head) can be found in a Late Chou period Jade dragon (fig. 133 B),\(^{(4)}\) which predates the silk by about 1600 years.

The astonishing similarities in almost every detail: the postures, the flatness of the bodies, the thin borders, the roundels, and the snarling heads cannot possibly be ignored; they can only confirm the descent of the Byzantine motif from the Late Chou dragon, probably by means of Chinese silks which did not survive or are yet to be unearthed.


\(^{(2)}\) The two dates mark the building of the tomb of Jamblichus, where some of the Palmyra silks were found; and the abandonment of Palmyra (O. Haenchen-Helfen, "From China to Palmyra," Art Bulletin XXV, No. 4 (1943), p. 358).

\(^{(3)}\) Von Falke, op. cit., pl. 192.

\(^{(4)}\) Late Chou-Chin-t'sun in the collection of R.C. Bull (La Plante, op. cit., pl. 80, p. 20).
Fig. 133:

A. Detail from an 11th-12th century textile. Byzantine. After Von Falke.

B. Chinese jade dragon. Late Chou-Chin-t'sun. After La Plante.
Pl. 246: Detail from a carved standing stone depicting the so-called 'Celtic key' pattern.
Found at Golspie, Scotland.
After Salven.

Pl. 247: Bronze Hu, found at An - Yang. 12th Century B.C.
After Pope.
Pl. 248: Loyang type mirror depicting 'slanting T' pattern.  
3rd Century B.C. After Karlgren.

Pl. 249: Textile showing 'slanting T pattern'. From Skog.
        After Salven.
Pl. 251: Han silk depicting key devices. Found in Kurgan.

The Hermitage Museum. After Lubo - Lusnichenko.
Pl. 253: Turkish jug. 16th Century. The Victoria and Albert Museum. After Aslanapa.
2nd Century B.C. After Watson.

Pl. 255: Bronze mirror. Loyang type, depicting dragon scrolls.
Chinese. Late 3rd - early 2nd Century B.C. After Watson.
Pl. 256: Bronze mirror, depicting dragon scrolls. Chinese.

2nd Century B.C. After Watson.

Pl. 258: A section of the outside wall of the Karatai Han. 1230-40. After Hill and Grabar.

Fl. 261: Detail from the portal of the máristán at Granada.

1367. After Kühnel.
Pl. 262: Detail from an Islamic miniature.

Cairo, c. 1250. After Blochet.
Pl. 264: 'The Funeral Procession of Bayazid II.' From the Selim Nameh of Shukri. Turkish. 1521-4.

After Stchoukine.
Pl. 265: 'Shīrīn at the coffin of Farīhad.' From Khamseh of Nūrānī. Turkish 1530-1. After Stchoukine.
Pl. 266: 'Damascus besieged by the Turks.' From the Selim Nameh of Shukri. Turkish. 1524.

After Stchoukine.
Pl. 267: Holy men boiling an egg during the feast.

Late 19th Century. After Finder Wilson.
Pl. 268: 'Scene in a mosque' from Majalis al-ʿUshṣāq.

Persian. 959/1552. The Bodleian Library

(OUS. Add. 24, fol. 79 VO & 54).
Fl. 269: Detail from a painting on silk (Eighty-Seven Immortals). Chinese. Early 11th Century.

After Lee.
Pl. 270: Wei-T'o. Chinese, Ming dynasty, c. 1600.

The Royal Scottish Museum.
Pl. 271: Portrait of Abbot Shoichi-Kokushi.

Ink and colour on silk. Japanese.

1352-1431. After Lee.


Probably 18th Century.
Fl. 275: Han bronze vessel with Sung jade lid
depicting an all-over pattern of hexagons
(the tortoise-shell pattern). After Gure.
As is unfortunate that similar inscriptions of this kind have lost their meaning for most people of today, and are considered as a mere
expression of alienism; while any careful observer will also notice that, while the other inscriptions are generally in
that the master-masons of minarets themselves take the same attitude as the above towards it, copying literally from existing old minaret texts
that have already been corrupted by previous repairs, with disregard
to their correct spelling, or to their legibility. It was probably
accessible from their point of view to translation-writing and to fill
the available spaces with coloured designs of tiles, as one can see
in a number of new minarets, such as the minaret of the Khayyat
mosque in Baghdad, which was built about 937, where the square
Kufic text on the lower cylinder reads (٥) "Allah MaWb" instead of " Illah, Illah, Illah". In the minaret of the Qasim mosque (4) in the Madrasa al-Khaqan (a suburb
of Baghdad), the "square Kufic" texts are impossible to read.

THE ORIGIN AND ORNAMENTAL FUNCTION OF SQUARE KUFIC.

is correct, but it has been rendered upside down. It reads: Illah, Illah, Illah. Read by experts, these are supposed among the
surface of its upper cylinder. The only words which are correctly
spelt are 'Illah' and 'Muhammad'. But as to the other of the Hadith-
eya minaret they have not enough correspondence. The two words have been used alternately on almost all the minaret inscriptions since 937.

Built after 1937.
It is unfortunate that Kufic inscriptions of this kind have lost their meaning for most people of late, and are considered a form of customary ornamentation of minarets, without any special meaning other than that. What makes the matter more distressing is that the master-masons of minarets themselves take the same attitude towards it, copying literally from existing old minarets texts that have already been corrupted by previous repairs with disregard to their correct spelling, or to their intelligibility. It was probably enough from their point of view to resemble writing and to fill the available spaces with coloured squares of tiles, as one can see in a number of new minarets, such as the minaret of the Ḥarithiya mosque in Baghdad, which was built around 1957, where the square Kufic text on the lower cylinder reads ( $$\text{الله محمد}$$ ) "Allāh, "Muḥammad". On the minaret of the Drāgh mosque (1) in the Madīnat al-Mansūr (a suburb of Baghdad), the "square Kufic" texts are impossible to read.

On the upper cylinder of the minaret of the 'Assā[f, the text is correct, but it has been rendered upside down. It reads: $\text{لا إله إلا الله محمد}$. But as in the case of the Ḥarithiya minaret they have not escaped corruption. The two words have been used alternately on almost all the minarets which have been built since about 1950, such as the minaret of Fārūq mosque, of the

(1) Built after 1957.
Ju‘aifir mosque and others. (1)

The inability of the masons to realise the fact that this 
Hasīri decoration is mostly composed of Qur’ānic texts has led to 
the loss of a good number and to the corruption of the rest, as happened 
in 1963 to the minaret to the left as you enter the Shrine of the 
Imāms at Sāmarrā mosque; at that time repairs required the removal 
of the outer surface of the cylinder. When the minaret was restored 
to its previous state, the masons failed to restore the "square Kufic" 
text (this formed a band immediately below the head of the minaret) 
to its original state. But they did so in what we may call "mock 
Kufic," although the twin text on the twin minaret was intact and 
legible. (2)

The prospects of the inevitable obliteration of all existing 
texts has prompted the reading and recording of whatever text I 
could find, whether on a minaret or a wall, provided that it was in 
square Kufic. This should be an easy task assuming that all religi-
ous texts could be read, no matter how badly damaged, provided that 
one or two discernable words can be found. But it was not as easy as 
it at first appeared, because it was not always possible to see the 
whole text on the minaret as it curved around the cylinder.

It was necessary to copy the whole design, brick by brick, on 
sectional paper in order to flatten the cylinder and try to read the 
writing.

The first impression was that all the texts had been corrupted

(1) A large building programme began with the establishment of the 
Development Board in Iraq in 1950 (M. Khaddūrī, Independent 
Iraq, London 1951, pp. 356-359). This Board has decided to 
spend 75% of the oil revenue on internal development. This has 
led to the acquisition of great numbers of houses and old props-
erties for large sums of money as compensation to enable the 
people to build new houses. Consequently, a good number of 
building projects and satellite towns were started and the demand 
for new mosques and minarets for those towns came to the fore.

(2) The cylinders of the two minarets of Sāmarrā were covered with 
gold a year or two after these repairs.
at least partially. But on closer scrutiny of the original examples, it was found that the majority of what were considered as spelling mistakes, were in fact artistic innovations on the part of the designers. They seem to have had complete understanding of the limitations of their material and to have achieved mastery over these limitations.

The material used is kāshī. It was used in many ways: carved, raised in relief, or cut into various shapes to form a certain design or pattern. Any one of these methods could be used alone, or combined with one or more of the others.

Flat tiles seem not to have been used widely on Iraqi minarets, whether for decoration, or for the rendering of texts. Until very recently, only two minarets appear to have been covered with flat tiles, the old minaret of the Suhrawardi mosque (pl. 276) and the minaret of the Murādiya mosque (pl. 79). (1)

Square Kufic occurs on all parts of these minarets except the heads and the niches of the muqarnas. They occur principally in the following places, forms and orders:

I - In the form of a band which surrounds the upper part of one or both cylinders, just below the head of the minaret, or below the muqarnas.

On the minaret of the Saray mosque (2)(pl. 105) three such bands are depicted (fig. 13 A1-3). The first band is from the upper cylinder and the second and third from the lower cylinder. The correct versions of the texts are as follows:

(1) See Appendix. XI
(2) Also called Jadīd Ḫasan Fāsha and Jāmi' al-Fāsha too. That is to differentiate between this mosque and Ḫasan Fāshā's mosque, otherwise known as the al-Ḥāzir mosque.
Fig. 134: Bands of square Kufic inscriptions from the following Iraqi minarets:
1. "Wa'allakun minkum ummatun: yadquna ila al-Khair wa ya'maruna bil-ma'rif wa yankawna Qan al-munkar."

This āya translates as follows:

"And that there may be among you a people who invite to the Good, and enjoin the Just, and forbid the Wrong." (1)

2. "Wa man yattaqi 'l-läh, Xaj'al lahu makhraja, wa yarzuqhu min ṣaithu la ya'htasib. 1233".

This translates as follows:

"And who so feareth God, to him will He grant a prosperous issue and will provide for him whence he reckoned not upon it." (2)


This translates as follows:

"And for him who putteth his trust in Him will God be all sufficient. God truly will attain his purpose. For everything hath God assigned a period." (3)

The fourth band (in fig. 134A) is from the upper cylinder of the minaret of the Naqshāniya mosque (pl. 86), and the fifth from the northern minaret of the al-Gailāni mosque (pl. 182). They read respectively:

4. "Allāhu akbar. La ilāha illa Allāh, wa Allāhu akbar, wa Janā al-ḥamīl."

This translates as follows:

"Allāh is most great. No God but Allah, and Allāh is most great, and God be praised." (4)

5. "Ilāhi yaqCdaw al-kalimu al-ta'ayybu wa al-Qamalu al-qāliḥu yarfa'hu."

This translates as follows:

"The good word riseth up to Him, and righteous deed will He exalt." (4)

(1) Qur'ān, S. III, V. 104.
(2) Ibid., S. LXV, V. 2 and 3.
(3) Ibid.
(4) Ibid. S. XXXV, V. 10.
The first text (fig. 134 A 1) has been corrupted in two places, the word Ya'mūnā, where a part of the nūn is missing, and the word bi'l-ma'rūs which has been rendered thus instead of . The corruption of the first word might have been caused by the glaze peeling off, as in the case of the upper band of the Ḥaidar Khāna minaret, but the corruption of the second word must have occurred during previous repairs.

There are other irregularities in the spelling which might be considered as mistakes, but on closer scrutiny it becomes clear that they are not.

The second line has the following corrupt version of the words haithu la yaṭasib' and it is quite clear that the change happened during repairs. The corrupted words are so near to the figures giving the date, that it too might be considered with some doubt, especially because of the fillings between the numerals, which might be read as 1383 instead of 1233/1817 (1383). This date—however one reads it—should give the date of the building of the present minaret.

The third line has only one corrupt word. This occurs at the beginning of the third ðāya, where an unnecessary alif has been added at the end.

On fig. 134 B there are seven square Kufic bands from different minarets. The first is from the upper cylinder of the minaret of the Sayyid Sultan, it reads as follows:

1. "Qul huwa Allāhu aḥad, Allāhu al-ẓāmān, lam yalid wa lam Yulad, wa lam yakun lahū kufuwan aḥad fi sanat 1357".

This translates as follows:

"Say: He is God alone: God the eternal! He begetteth not, and He is not begotten, and there is none like unto
In the year 1357 (1538).

This text has not been corrupted yet, most probably because it is fairly new.

The second band is from the lower cylinder of the minaret of the Sirāj al-Dīn. It reads as follows:

"Fī buyūṭīn adhīna Allāh an turfa' wa Yūdhkar šīha ismih Yusabbah lahu šīha bi'1-ghudumī wa'l āsāl, rejalīn lā tulhīhim tijārātun wala bi'1-dhikr Allāh wa iqām al-ṣalāt, wa itā' al-zakāt."

This text translates as follows:

"In houses which God hath allowed to be reared, that His name may therein be remembered, do men praise Him morn and even.

Men whom neither merchandise nor traffic beguile from the remembrance of God, and from the observance of prayer, and the payment of the stated alms." (3)

This text is not corrupted, and it is one of the best examples of its kind, because of its even distribution and spacing.

The third band is from the upper cylinder of the minaret of the Khāṣṣakī; it reads:

"Ya ayyuha al-ladhīna āmmū, idha nūdiya li'1-ṣalātī min yawm'1-Jumu'atī, fa'saw ilā dhikr Allāh wa dharū'1-baq."

This translation of this text is:

"O ye who believe! When ye are summoned to prayer on the day of The Assembly, haste to the commemoration of God, and quit traffic." (4)

This text has escaped corruption and the apparent spelling mistakes are due to the glaze peeling off.

The fourth band is from the upper cylinder of the minaret of Munawwar Khāṭūn mosque, which reads as follows:

(1) Ibid., s. CXII, V. 1–4.
(2) This date indicates the re-building of this minaret or at least a major restoration at that date.
(3) Qur'ān, s. XXIV, V. 36 and 37.
(4) Ibid., s. LXII, V. 9.

"Apart from Ma shah Allah" (this is) what God has willed (to be built or erected, according to this context) and the basmala (In the name of God, the compassionate, the Merciful), and the date, this text is identical with the first text (of the Sayyid Sultan Ali minaret) quoted earlier.

The few missing parts from this text could be attributed to peeling glaze rather than to corruption during repairs, as one can see from the general condition of the text. (1)

The fifth band is from the upper cylinder of the Ahmadiya minaret. (2) This text depicts Surat al-Ikhlas (3) preceded by the basmala as in the previous band.

This text is almost perfect. The last word has lost one mura-ba'a only, and the waw of wa.lam which should have been elongated to match the other waw in order to fill the apparent gap.

The sixth and the seventh bands are from the lower cylinder of the Aqifiya minaret. (4) They read respectively:


This text translates as follows:

"In the name of God. Verily, God and His Angels bless the Prophet! Bless ye Him, O Believers, and salute Him with salutations of Peace." (5)

(1) This date (1167/1753) clearly contradicts the date of the building of this mosque which is in fact a hundred years later. The correct date (1267/1850) is contained in the following historical verse:

"قلت إذ ابتكه بالله ارخ جامع الامور نشأت منور " 1267/1753

(2) Also called the al-Kahia mosque, or Ahmadiya mosque.

(3) Qur'an, S. XXII, V. 1-4.

(4) This mosque is also called the Mawla Khana mosque.

(5) Qur'an, S. XXXIII, V. 56.
In this text, four spelling mistakes can be clearly seen, the first of which occurs in the second word from the right (Allāh). In this word, the ʿalif is rendered in the normal position (i.e., vertically). The second part of the word, which consists of two lāmā and a round hāʾ (hāʾ mudawara), is rendered vertically. The tops of the two lāmā of this part are connected to each other by mistake. The result of this mistake is that this part of the word appears in the form of two superimposed squares connected to each other by a bar, as can be seen in fig. 134B 6. The second mistake occurs in the fifth word (malāʾikatuḥū). In this word the hamza is connected to its kūraʾ. The third spelling mistake occurs in the tenth word (al-ladhīna). In this word, a hāʾ mudawara has been added at the end. The fourth mistake occurs in the twelfth word (ṣallū). In this word, the lām is connected to the loop of the waw without being connected to the preceding wād. Furthermore, there are a number of insertions irrelevant to the text, such as the hāʾ mudawara above the haʾ of malāʾikatuhū, the nūn above the ʿin of sallīmu, and the dāl above the ʿin of tasālim. The purpose of such insertions is no doubt to fill the spaces in a badly designed text.

Band seven depicts Surat al-Ikhlāṣ followed by "Wā la ghalib illā Allāh" (None predominate but God).

This text has one spelling mistake which occurs in the fourteenth word of Surat al-Ikhlāṣ (kufuṣn). In this word the loop of the fāʾ has been broken and a short vertical line has been attached to it. There is also an ambiguous word at the end of the text, which might be read as fāʾ, though it comes after the date; it seems from other examples that the proper sequence of words in a text is not always rigidly adhered to.
These spelling mistakes (of band 6 and band 7) may be considered as part of the inscriptions as originally drafted. They are not corruptions of later date, because the minaret was built in 1341/1922 and this part has not been touched since. The date of the building is depicted in two places on the minaret. These are at the end of text (band) 7, and in one of the stars of the parapet of its lower hawd.

II - In the form of a square plaque, or seal, which appears in the following forms:

1. One word within a square or an eight-pointed star (1) accompanied by the article Ya. These words are normally the virtuous names of God and the Prophet. In conjunction with the article Ya they form supplicatory phrases, such as those depicted in fig. 135 which are from the parapet of the hawd of the Khassaki minaret. The phrases of fig. 135 read (from right to left) as follows:

Ya Allah (O Allah); Ya Rahmaan (O Compassionate);
Ya Allâh (O Exalted); Ya Mujir (O Supporter);
Ya Hâmid (O Praise-Worthy); Ya Madad (O Aid-Giver);
Ya A’kam (O Most-Wise); Ya Halim (O Indulgent);
Ya RabbI (O My God); Ya Razzâq (O Provider);
Ya zahrâhar (O Vanquisher); Ya Hu’min (O Believer);
Ya Nudabbir (O Organizer); Hakan (Judge!); Ya Rahim (O Merciful);
Ya Malik (O King); Ya Salam (O Peace).

(1) Called by the Baghdadi masons Zahrat al-murabbâ, literally "the flower of the square". It is so called because these so-called eight-pointed stars are flowers to the Baghdadi U斯塔 (Ustâd or master) and not stars. Another reason for the name may be that they are actually formed by two concentric squares of equal dimensions, with their diameters crossing each other at right angles, as can be seen in fig. 71B.
Fig. 135: Square plaques of square Kufic within eight-pointed stars from the parapet of the hawd of the al-Gallaf minaret II.
2. Two identical words or phrases arranged in an upside-down relationship to each other. Pl. 277, from the Sarāy mosque, depicts both kinds. The upper square contains the word Allāh twice written in the previously mentioned manner. The middle square contains the Kalimat al-tawḥīd, similarly twice repeated. The third square contains the phrase Ya Muḥammad, repeated twice in this manner. In some of these compositions the letters on both registers are interconnected.

3. A whole Qur'ānic verse (Aya) or a supplication to God (Du'ā') arranged in a square form, such as the plaque depicted in fig. 136 from the mawṣūla of the summer prayer-place of the Haidar Khāna mosque. The text in this plaque reads as follows:

"Ya Dawūd! Innā jalānaka Khālīfa ṭan fī 'l Arq. Fa'rīkum baināl-Nasi bī 'l-Ḥaq."

This text translates as follows:

"O David! Verily we have made thee our Vicegerent upon earth. Judge therefore between men with truth."(1)

One may assume that this plaque was installed when the mosque was first built by Dawūd Pāshā. This can be justified by the fact that the text itself contains the name of Prophet Dawūd, and by its obvious connection with his namesake Dawūd Pāshā.

This form of inscription (within a square) is normally referred to as muḥr (seal). This hints strongly at the possible origin of square Kufic—especially in this form—which looks so much like Chinese seal-writing that one cannot ignore the possibility of direct influence from China.

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(1) Qur'ān, S. XXXVIII, V. 36.
Fig. 136: Square Kufic inscription in the form of a square plaque from the mibrāb of the summer prayer-place of the Ḥaidar Khāna mosque.
Diacritical marks are uncommon in such texts, but they are applied when there are spaces which need to be filled.

III. Square Kufic texts which are repeated over all of one or both cylinders of a minaret. This occurs in three forms:

1. The repetition of one word in a chequerboard pattern set at 45°, such as can be seen on the upper cylinder of the al-Qapli-āniya minaret (pl. 132 and fig. 137), where the word ʿAlī recurs repeatedly.

2. The repetition of one word grouped in fours, to cover the whole surface of the cylinder, as in the upper cylinder of the minaret of the ʿAdila Khätün mosque (pl. 139 and fig. 138).

3. The repetition of two different groups of words: one group would take the shape of a net, and the other group would be used to fill the resulting spaces within that net, as in the lower cylinder of the minaret of al-Qāsifīya mosque (pl. 94) and the lower cylinder of the Shaikh Ṣūhrawardī’s minaret (pl. 96). The texts which form the nets of square Kufic on both minarets are illegible. This is because they have been wrongly copied from the original text. This original text appears on the lower cylinder of the minaret of the Imām al-ʿAbbās in Karbalāʾ; here a net of complex groupings of the word "Muḥammad" occurs. The first ʾalām of the word is shared by a group of four Muḥammads, as their first letter ʿalām. They stem from it towards the four directions of the compass, forming a short armed cross. The last two letters of each word have been turned in such a way as to make the second ʾalām of each word point towards one of the cardinal points of the compass. The last letters of the four words are in-
Fig. 137: The square Kufic inscription decorating the upper cylinder of the minaret of the al-Qaplıণiya minaret.
Fig. 138: The square Kufic inscription of the upper cylinder of the minaret of the Ādiliya mosque, composed of the word Allah, grouped in fours.
verted and made to fit the available spaces between the first \text{mim} and the \( \text{bā'} \) of each word (pl. 278) and (fig. 13B).

These groups are made to form a net or diaper pattern by placing them in such a way that the first \text{mim} to form the points of intersection (as in fig. 13B) and the second \text{mim} of these groups are superimposed on each other to form the sides of the squares.

By superimposing the "Diaper square Kufic" in both minarets (the \text{Abbās} and either the \text{Aṣifiya} or the Shaikh \text{Umar}), the derivation of the \text{Aṣifiya} and Shaikh \text{Umar} form becomes very clear, and the reason of the corruption also becomes clear. This is that two maddas have been mis-placed, and two more have been dropped entirely. Two glazed bricks were taken (so to speak) from the lower stroke of the \( \text{bā'} \) just after the place where the upper stroke joins it, and added to the end of the upper stroke. By that, the upper stroke of the \( \text{bā'} \) was changed into a square: \( \text{sq} \) as appears on the later minarets (fig. 139 A).

This one faulty copy has led to another and it is most probable that this will lead to further corruptions in future. (1)

The other glazed bricks which were dropped are those that form the second \text{mim} and connect the groups with each other. This has made recognition more difficult.

One of the texts that fills the spaces within the net of square Kufic on the minaret of al-\text{Aṣifiya} consists of a group of four Muhammad. Each is so written as to fill a corner (or quarter) of the square. Their first \text{mim} were placed around the centre. The other consists of a grouping of four \text{Allāh} presented in a similar manner to alternate with the previous grouping.

(1) The \text{Aṣifiya} minaret was built in 1361 A.H., and the minaret of the Shaikh \text{Umar} was built in 1368 A.H. They both bear dating inscriptions.
Fig. 139:

A. Analytical drawing of the diaper pattern composed of square Kufic on the minaret of the Asifiya mosque.

B. Analytical drawing of the diaper pattern composed of square Kufic on the minaret of the al-Imam al-'Abbás at Karbalā'.
There are other parts of squares in the shape of triangles situated near the upper and the lower extremities of the cylinder; these contain parts of squared square Kufic, from which one or two words could be discerned.

The Kufic within the net design on the Shaikh Qāsim minaret is clearly and correctly written on some squares - e.g. that which reads rasūl Allāh. But other irrelevant insertions have been made, such as the word lā which was put in the same square with the former sentence. On another square, the words Allāh and Muhammad are depicted.

IV. Square Kufic texts in spaces which are not square.

The minaret of the Širāz al-Dīn mosque and that of the Saray mosque display the so-called "Zigzag Lozenge" motif in a net form. Square Kufic inscriptions fit the spaces within the lozenges (fig. 41 A - D).

The text on the left hand side is yā Qādir from Širāz al-Dīn, and the other from the Saray, which it was not possible to read.

On fig. 42 the so-called "zigzag lozenge" has been rendered in a double line. The square Kufic words on the left hand side are Allāh (from the minaret of Ḥusain Fāsha), whilst those on the right hand side are from the Šarānān minaret. The words are Allāh and Muhammad which alternate diagonally, but they are limited to the central part of the lozenge, while the other parts are filled with squares.

On the minaret of the Ḥābd al-Salām mosque the word Muhammad has been hinged in the middle, in order to fit the space available (fig. 140).
Fig. 140: The pattern decorating the upper cylinder of the minaret of the 'Abd al-Salām mosque, Baghdad.
V. "Square Kufic" texts covering the whole surface in the form of successive diagonal lines. Since each of these texts is framed in an oblong, the whole composition gives the appearance of a great spiral around the cylinder. Fig. 141 shows the text on the upper cylinder of the minaret of the Munawar Khâtûn Mosque, which consists basically of two lines of text which are repeated to cover the whole cylinder. The lines read as follows:

1 - Lâ  ilâha  illâ  Allâh (no God but Allâh).
2 - Muḥammad Rasûl  Allâh (Muḥammad is the Apostle of Allâh).

The inscriptions on the lower cylinder of the minaret of the Hasan Pâsha (al-ýazîr) mosque are similarly designed. The texts on it are (fig. 142):

1 -  Ḥasbiya  Allâh  wa  niçma  al-nâṣîr. Innahu,
2 - Niçma  al-nawâlû  wa  niçma  al-nâṣîr.

The first text translates as follows:

"Sufficeth mi God ans He is the Best of Guardians. He is."

The second text translates as follows:

"(He is) The Best Protector and the Best to help."

These spirals of "square Kufic" occur in two types of design. The use of these two types seems to have been necessitated by the height of the cylinder. These types are:

a) One-register Spiral text.
b) Two-register

The two registers are normally separated by a band of Slanted-Squares (not lozenges; the diameters of the square are equal to each other, whilst those of the lozenge are not), or by a band of Oblique-Swastika meander (as in figs. 29, 143 and 144).
Fig. 141: The square Kufic inscription decorating the upper cylinder of the minaret of Munawwar Khâtûn's mosque.

Fig. 142: The square Kufic inscription decorating the lower cylinder of the minaret of the Wazîr mosque.
Fig. 143: The kāshī ornament of the lower cylinder of the minaret of the Saray mosque, Baghdad.

Fig. 144: The kāshī ornament of the lower cylinder of the Ḥaidar Khāna mosque, Baghdad.
The two-register spiral treatment is by no means peculiar to minaret decoration. It has been used by calligraphers right up to the present day (cf., es, pl. 279, where it could more appropriately be called oblique, rather than spiral).

An aspect peculiar to the lower register of the "two-register spiral" text is a form which one may call the "reorientated-spiral" text (cf. pls. 93, 97 and 108). This spiral is used, but not for texts, on a number of architectural features, such as portals and pillars. Examples are the spirally-grooved pillars of the Masjid-i Wakīl, Shirāz, where the directions of the spirals are symmetrically arranged on both sides of the mihrab.

The square Kufic texts illustrated schematically in figs. 141 and 142 have framing lines at the beginning and the end of the inscription. But there is another type where the text ends arbitrarily at the upper rim of the cylinder, and is cut off by the head of the minaret. Examples are the uppermost cylinder of pl. 94 and the uppermost cylinder of pl. 96.

In fig. 145 the three types of spiral arrangement for accommodating the texts are shown.

The rendering of the slanting texts is unlike the previous types which are rendered in entire bricks on a horizontal or vertical axis. The slanting texts are rendered in a manner which resembles textile design.

In these slanting texts the lines are rendered by placing independent squares next to each other obliquely, i.e. by placing each square glazed brick on the next tier of bricks, one header to the left or to the right. This kind of pattern has a striking effect. It is lively, vibrant, and light. In contrast to the bold heavy square Kufic of the eight-pointed stars and horizontal bands, which inspire tremendous internal energy and movement, they display solidity
Fig. 145 : Spirals
and stability as can be observed in pl. 280, a wall-plaque of square Kufic from the Maqṣūna mosque. (see fig. 146A).

The style of brick-work decoration is a forced style. Since the bricks had only rectangular dimensions they had to be laid horizontally and in tiers. Moreover, each brick had to lie on the two bricks immediately below, for reasons of structural stability. All this leads to the near-impossibility of forming an integrated, genuine straight line in the vertical axis, other than at the corners of a construction. This challenge must have led builders to explore all the possibilities of the material. Their conclusion appears to have been that the most flexible unit is the square. Clearly the designer intended to use no other skills than those of the mason.

It is possible to put two squares next to each other to make an oblong. By increasing the number of squares along the same axis, a straight line is achieved. A dotted line can also be created by a similar process. In short, the use of the square allowed designers to use all the shapes that consist of straight lines and right angles.

Curvilinear designs can only be achieved through the subject-ion of the curvilinear to the rules imposed by the limitations of the material. This will inevitably lead to stylization. Thus the pattern is forced into shape or re-interpreted in terms of the new material.

This should not lead one to conclude that the use of Kufic on brick buildings led to the creation of square Kufic. Nor should one regard square Kufic as a stylization of other types of Kufic scripts. The limitations referred to above made themselves especially
Fig. 146: Square Kufic inscriptions from the Na'māniya mosque, Baghdad.

A. In the form of a muhr (seal).
B. = = = = an oblong plaque.
felt on minarets, because of the limited wall-surface available to the designer. This was even more the case when the challenge of incorporating a given text had to be met. The ingenuity of the designer was then put to the test. No doubt he came up with a number of ingenious solutions to his difficulties; some of them can still be seen on the minarets of Baghdad and on minarets in other parts of the Islamic world.

The following methods of adapting inscriptions to the space available were used on the existing minarets of Baghdad, which I have been able to observe:

1 - Bending: This method was often used in fitting a word into a confined space, and in order to distribute the text evenly on the available background; cf. pl. 250 from the Naṣrīya mosque, which reads 'al-salātu ǧamī'atu'l-Islām', in which the letter īm of the word ǧamī'a, has been inverted. The lower sweeping stroke has been broken twice before it joins the letter ʿalāf, in another right angle. Similarly, the last word of the square Kufic band from the minaret of the same mosque has been elongated and broken twice, at the part connecting the ḥā' with the ʿāyn of al-ḥamād and the ḥā' with the ẓā' of the word. There are numerous examples of the use of this method, especially in the texts that fill the eight-pointed stars (ṣahrat'l-khurabba) on many a parapet in Baghdad (cf. figs. 135, 139 & 140) and the word Muhammad from the minaret of the ʿAbd al-Salām mosque. Here the sweep of the ḥā' has been broken in a wide angle as if it had been hinged.

(1) Or rather "Squaring", which is more appropriate as we are dealing with "Square Kufic".
(2) See fig. 146 B.
Parallels are numerous and not limited to minarets. They occur on most Islamic buildings where square Kufic was used as part of the decoration.

2 - Joining: This is resorted to for lack of space rather than for the even filling of an area. It takes the form of overlapping letters, similar in shape, which could read differently according to their positions in the different words, or in the same word. An example is the first line from the right on the minaret of al-Haidar Khana (114). In the second word, akbar, the letter alif has been incorporated with the vertical part of the letter kaf of the word akbar, and the lower part of the alif extends downwards to indicate this. Another example is the plaque from the Qapllaniya mosque, which consists of three words: Allah, Muhammad and Allah, joined together. The letter h of the word Allah has been used as a letter mim for the word Muhammad as if the h and the mim were superimposed. Moreover, the upper stroke of the letter alif of the word Muhammad has been used as a lower stroke for the letter camp of the word Muhammad as in 147 A & B. Another example is in 142 in the word Muhammad of the second line from the upper register, where one of the straight lines forming the second mim has been used as an upper stroke for the letter alif, thus:

3 - Separation of letters: Though Arabic calligraphy lends itself to all sorts of twists and turns it is very difficult to believe that separate letters or abbreviations could be used to denote a word. Though abbreviations were used widely for the writing of talismans and other magical writings, they have apparently never been depicted on a monument. The exception is the word which is an abbreviation for a talismanic formula; even this
Fig. 147: Two square Kufic plaques from the Qapllâniya mosque, depicting the following words: Allah, Muhammad, and 'Ali.

A. Blue kāshi on brick background.
A 1. Analytical drawing for the clarification of the text in A.

B. Brick on blue kāshi background.
B 1. Analytical drawing for the clarification of the text in B.
is seen more often written in longhand.

On the upper register of the lower cylinder of the minaret of al-Sarây mosque (fig. 143), where the text 'Mā shā' Allāh Lā quā illā bi'llāh' is divided amongst three frames, one is tempted to regard the text as corrupted, but on a closer examination, a novel approach becomes apparent.

The designer drew the capr separately as an independent letter, so that the remaining wāw became automatically separated from it; so did the tā'-marbūta. The bā' from the word bi'llāh has been separated in the same manner. This leads us to reconsider the uppermost square Kufic band on the same minaret (fig. 434 A1), where a number of such separations occur. These are:— the first word li'takum was cut in halves which were then placed side by side, thus:

\[ \text{The second word minkum was also cut up; its first half was placed on a higher level than the second half, but still within the width of the band.} \]

The third word is the last in the text, al-münkar. This word was subjected to more fragmentation than the other two. The alif and the lam are missing, but there are two horizontal strips, which might have meant the missing letters. The remainder of the word is halved into

\[ \text{4 - Substitution: This is apparently of two kinds.} \]

\[ \text{a - A letter similar in shape to a letter which could not be accommodated in the available space is substituted for it. It is then read twice, once as the original letter, and the second time as the substituted letter. An example is the word rasūl on the upper register.} \]

\[ (1) \text{This translates as follows: "(This is) What God has willed (or wished to be). No Power but with (the aid of) God."} \]

\[ (2) \text{Two of them are in fact corrupted.} \]
of the lower cylinder of the minaret of the Haidar Khāna mosque (fig. 144) where the letter َلām has been left out, and the َلām must act as a substitute for it. It would be a mistake to ignore this phenomenon and to regard it as mere corruption. Because the designers allowed themselves so much licence in reproducing texts, it has become impractical for the reader to attempt to apply any rules, either on the grounds of shape, position, or direction, for the way in which any letter has been rendered. (1) The designers must have relied mainly on the people's knowledge of the Qur'ān. They were not concerned about how the letters were joined to each other, so long as the context enabled the reader to recognize the text. Some sentences were written upside down on purpose (fig. 134B 5). b - The substitution of a part of a letter by another part of a letter from the same word. An example is the word Muhammad from the upper register of the Haidar Khāna minaret (fig. 144), where the upper stroke of the letter َلām has replaced the upper stroke of the َلām.

These practices are by no means unknown in other types of Arabic calligraphy, especially in monumental and decorative texts. (2)

5 - Symmetry: Only a desire for symmetry can explain words written from left to right. These are commonly found whether in mosque, minarets, or private houses (pl. 281 and 282). (3)

(1) See fig. 148, where a number of ways for joining the letter َلām to a word appears.

(2) See Zain al-Dīn, op. cit.

(3) The former is from the al-Gailānī mosque and the latter from the door of the house of al-Sayyid Hāmid al-Gailānī in Bāb al-Shāikh, Baghdad. Both texts are the Bism'llāh rendered in symmetrical order.
Fig. 148: An example of various depictions of the letter "hā" in square Kufic.
As shown above, the reversing of words and sentences was not always limited to symmetrical compositions, but was used on other occasions as taste dictated; as in pl. 283 and fig. 14 from the Applanìya mosque. The text here is ḥā' Allah squared and rendered in reverse.

The interlocking of two symmetrical words is a further development of the use of symmetry in the rendering of square Kufic (fig. 150 A). Here the uppermost inscription shows the word ʿAll rendered in this fashion.

6 - Repetition: This is the most common factor in all Islamic decorative arts. It has little direct bearing on this study of the means whereby the designer broke through the limitations of his material. Nevertheless, it is found in:

a - Identical words
b - Alternate words
c - Groupings of words
d - Combinations of words

The degree of repetition in longer texts of square Kufic is naturally less, but it is still an important factor.

7 - Grouping: The artist used this device to fill spaces resulting from the use of all-over net patterns. Grouping occurs in this context in three forms:

1) Two identical words grouped symmetrically. This means that the word to the left has to be written in reverse (pl. 150 A).
2) Three identical words grouped as a central figure (see pl. 150 C B).
3) Four identical words so grouped that they radiate from a common centre. This is the centre of the enclosing square (cf. the lower figure of fig. 150 where the word ʿAll is depicted in this
Fig. 149: A square Kufic plaque from the Qapllāniya mosque, Baghdad. The text of which is written in reverse (from left to right).
Fig. 150: Various combinations of the word "Ali" in square Kufic. From the minaret of the Khallal mosque.
This grouping is particularly important; it has been referred to by many (1) as the Char-CAli. This is a Persian phrase (2) meaning "Four CAli's". Since this motif is grouped around a swastika, or laid on the basis of a swastika, this nomenclature has been extended to cover all the swastika patterns, and all the Arabic words that produce swastikas when arranged in this manner, be they Allah, Muhammad or Umar.

The name also denotes a certain silken fabric woven in Baghdad until the end of the first half of this century. The term also denotes its design. This fabric was used for Irsrs and CAbas, and was richly woven with silver thread. (3)

There is a theory that the term Char-CAli indicates the quality of the textile rather than the design. Mr. Peue recalls the terms Yak-CAli, Du-CAli and CAliwhich are all Persian terms; these were used for marking the grades of commodities and textiles. The terms are composed of both Arabic and Persian. The word CAli is Arabic and means "high"; the other words are Persian, and mean "one", "two", and "three". So the word CAli in this connection meant "level" or "grade" to the Persians. Thus the three terms mean respectively: Once-high, Twice-high, Thrice-high; the Char-CAli would be Four-times high.

(1) Sarre and Hersfeld, op. cit., Vol. p. 158; al-Kizwini, op. cit., p. 69, fig. 3.
(2) It is called Caliyat in Baghdad, which is the plural of CAliva i.e. swastika, as associated with CAli. Lately it has come to be called "Alamet Hitler" "The Mark of Hitler", that is around the World War II period.
(3) The "Bab-al-Shaikh" quarter of Baghdad was famous for its production, according to Mr. Peue, a well informed merchant of carpets and antiques.
The term C7*I al-C7*I means literally "The highest of the high", i.e. "the very best"; it is still used in the Arab world and in Persia. All this seems to have a bearing on the relationship between the designs on brickwork and those of textiles.

All these forms of "groupings", fall into two categories:

I - Linked Groups. Examples are figs. 139, 150; and pls. 94, 96, and 278.

II - Isolated Groups. Examples are fig. 68 and fig. 138. In this category the whole group becomes a single motif, as on the minaret of Qâdila Khâtun's mosque (fig. 138), (1) where the whole group is repeated in a calculated order, but gives the impression of a haphazardly arranged design. In fact, this group, that of fig. 68, and all similar groups of fours, inspire swirling movement when arranged in a pattern form. They gyrate and revolve around each other exactly as a swastika pattern would, and hint at the possible origin of this type of composite arrangement.

(1) An exact parallel can be seen on the base of the Bûgh-i Qûsh Khana minaret (pl. 181).
It should be pointed out that the term "Kufic" (Kūfī) has been applied indiscriminately by European scholars, as well as Muslims who followed in their steps, to all highly stylized, decorated and angular monumental calligraphic hands. Most of these hands have nothing in common with the early squat Kufic or its predecessor the Ḥārī (also called the Jazm)\(^{(1)}\) except the attribution to the city of Kufa, and their broad thick strokes. Admittedly, Kūfī might have formed the basis for many of these hands, but Kufa was by no means the only centre for the development of calligraphy.

Arab sources mention a good number of hands attributed to various cities within the domain of Islam which were important centres for the development of distinct hands. Such hands have most probably survived to the present day on various media, but the majority of these hands have not been identified as yet, simply because of the lack of accurate description in the texts in which references to such hands were made, and also because of the lack of text illustrations.

According to Arab sources,\(^{(2)}\) the Arabic script was derived from two sources.

The Arabs of the Hijāz from the tribe of Mūṣar, who settled at Hawrān in Syria, adopted the Nabatean script, whilst those who settled at Ḥira in Iraq during the 6th Century adopted a form of Syriac script called 'ṣarjihili'\(^{(3)}\) (which means the hand or the script of the 'Injīl') better known in the west as 'Estrangelo' or "Strangili". This hand seems to have evolved at Ḥira and was referred to by the Arabs as the Ḥārī hand.

\(^{(1)}\) Zain al-Dīn, op. cit., p. 306.
\(^{(3)}\) Ibid.
\(^{(4)}\) Injīl in Arabic as well as Syriac means the New Testament (ibid., p. 210).
Both hands were introduced to Mecca shortly before Islam. Kufi was reserved for the writing of the Qur'an (from the beginning of the revelation), just as its precursor, the satranjili, was reserved for the New Testament and sacred literature. (1)

This seems to have led to the assumption that all the monumental hands of the early Qur'ans are Kufi.

Ibn al-Nadim (died in 385/995), in his account of calligraphic hands used for the Qur'an, provides conclusive evidence to the contrary and shows that Kufi is only one hand among fifteen hands which were in use for the Qur'an.

He lists the following names:

"The Makki, (of) the Madani, the Tu'in, the Muthallath, the Mudawwar, the Kufi, the Bagri, the Mashq, the Tajawid, the Suluti (or alutti), the Masnuq, the Ka'il, the Isfahani, the Sakhi (or Sulfi), and the airamuz" ... (2)

The study of these names reveals that some of them are attributions to cities or regions, such as the Makki, (of) the Madaniyain (which might mean the two "Madina hands''), the Kufi, the Bagri, the Suluti, the Isfahani, and the Sahli. The others are descriptive of shape or form, such as al-Muthallath ("the triangular" or "the three-fold"), al-Mudawwar ("the rounded" or "the circular"), al-Tu'in ("the twin" or "the doubled"), al-Mashq ("the stretched"), al-Tajawid (this most probably means "the improved"), al-Masnuq ("the fabricated", "the made-up" or perhaps "the beautified"), and al-Ka'il ("the oblique"). Other names denoting form, such as al-Masnuq ("the compressed"), al-Manthur ("the scattered"), al-Mugtarim ("the coupled" or "the intertwined"), and

(1) Ibid.
(2) Zain al-Din, op. cit., p. 322 (footnotes 1 and 2).
al-Lu'lu'i ("the pearly") are quoted by Zain al-Din from a book whose author he does not mention called 'Tuhfat 'ulî al-Albâb fî Sinâcat al-Khatt wa l'Kitâb. (1)

One cannot fail to find forms closely related to these descriptions among the wide variety of monumental Qur'ânic scripts unnecessarily covered by the term Kufî.

No doubt, future research in Arabic sources - especially among the few Urjuzas (2) dealing with calligraphy - will yield valuable and specific information.

Similarly, the term Naskh (or Naskhi), and thulth (or thulthi) were applied almost to all cursive hands.

The numerous and well defined calligraphic hands mentioned in the various Arabic sources proves that such designations are not only inaccurate, but indeed arbitrary. Apart from very few cursive hands (which are too distinct to the uninitiated to be overlooked, such as diwâni, fârisî, ruqâ, and perhaps nastâ'liq and Shikasta), hardly any of the important names of calligraphic hands make their appearance in contemporary Arab or Islamic works, let alone European ones. These hands include al-Tûmîr, al-Jalîl, al-kâjmuç, al-Riyâsî, al-Manthûr, al-Mu'tarîn, al-Hawâshî, al-Ashâr, al-Lu'lu'i, al-Chubâr, al-Cûpud. They are never recognized by contemporary scholars (apart from Khatt al-Hawashi), even though some of these hands, if not all of them must have been used in the vast number of existing Islamic manuscripts and other documents.

(1) Ibid.
(2) A poem of varying stanzas, composed of couplets for teaching purposes, which the student learns by heart.
However, in a passage on penmanship, Abu Hayyan al-Tawhidi enumerates twelve basic forms of Kufi hands which were known in Baghdad in his time. Only three of the twelve names given by Abu Hayyan are descriptive, as can clearly be seen in the quotation below. These are: al-Musha'ab ("the forked"), al-Rai'ani, and al-Mujarrad ("the plain" or "undecorated").

"I once was in the house of some high official where a discussion about handwriting was going on... On that occasion I ventured some remarks on the subject, most of which I had learned from Abu Muhammad al-Barbari, the copyist here with us in Baghdad... In their time attention was paid to the improvement of the basic forms of the different kinds of Kufic writing. There were twelve such basic forms: (1) al-ImamI, (2) al-NakhI, (3) al-MadanI, (4) al-AnwalI, (5) al-ShamI, (6) al-QirI, (7) al-AbbasI, (8) al-BaghdadI, (9) al-Musha'ab, (10) al-Rai'ani, (11) al-Mujarrad, and (12) al-IsfI..."

It should be noted that none of the various names given above refer to a square or rectangular Kufic script, though admittedly any of the non-descriptive names which are related to cities, countries or persons could stand for the square Kufic under discussion.

The earliest surviving example of square Kufic in Iraq can be seen on the mihrab of the NurI mosque of Mausil (568/1172), now in the Iraqi Museum (pl. 260). A narrow band of square Kufic appears on the lower cylinder of the minaret of 'arbil (586/1190 - 608/1211) as can be seen in fig. 7 B.

Square Kufic also occurs in the upper niches of the kufI of the minaret of Sinjar (fig. 9).

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(1) Rai'ani is a scented bush known for its long delicate straight stalks.
(3) The square Kufic inscription is situated in the middle of the central niche in the form of an oblong vertical panel. It reads as follows: "Muhammad Abu Bakr, Oumar, Outhman, Oli, Hasan, Oussain, riqwan Allah salaihin ajma'In."
The earliest known example of square Kufic in Islamic architecture occurs on the Tower of Mas'ud III at Ghazna (1089-1115), in the form of square panels surrounding the shaft (pl. 284). In the panel to the right of pl. 284 the phrase al-Sultan al-Asam is clearly discernable, whilst on the square panel to the left the word Mas'ud is clearly depicted. It has not been possible to read the rest of the inscription on the near half of this panel because of the sharp perspective distortion apparent in the photograph. This unusual precedent of the name of Mas'ud over his title leads one to believe that the two panels are depicted around the shaft alternately.

In the subsequent centuries (from the 12th century onwards) numerous examples of square Kufic can be found on Islamic monuments of various regions. (2)

Square Kufic inscriptions also occur on silver coins of the Chaznavids, Ilkhanids and Timurids.

In Islamic miniature painting only a small number of square Kufic inscriptions can be found, such as in the miniature depicted in pl. 133, and in a miniature from the Khawar-nama of Ibn Fusam (Shiraz c. 1480).

In both miniatures, the inscriptions appear as architectural ornament. As far as I know, none of the contemporary Arab scholars have investigated the origins or the evolution of this form of so-called Kufic. This is, most probably due to an assumption that it must have evolved from other types of Kufic hands. Thus the affinities between this form

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(1) Hill and Grabar, op. cit., pl. 148.
(2) Examples occur on the base of the minaret of the Great Mosque of Mardin, datable to c.1176; the minarets of the Cifte Minareli Madrasa, Erzurum datable to 1242, and the façade of the Şehit Cift Minareli mosque datable to 1279 in Turkey (Hill and Grabar, op. cit., pls. 403, 367, and 436). In Iran examples include the mosque of Lir-i Baqrân at Linjan, which exhibits a number of square Kufic inscriptions (ibid., pls. 287, 288 and 290), and also the Congregational mosque at Azvin (ibid., pls. 250 and 251). Square Kufic inscriptions are also found in Syria, such as those of al-Madrasa al-Rukniya at the Caliphya in Damascus (E. Herzfeld, "Damascus: Studies in Architecture III", in Ars Islamica XI-XII, 1946, p. 24, and fig. 43).
of so-called Kufic and Chinese seal script (1) have not been recognized to the full.

A number of European scholars, such as Combe, Herzfeld, and Pope did investigate this script, but they did not reach firm conclusions as to its origin. Although Pope considers this form of Kufic as "the last offspring of the unadorned Kufic script", (2) he hints at a possible Chinese origin, as can be seen in the following passage:

"Its origin is still obscure. Since it first appears as ornamental panels of brick or terra cotta in mosque architecture at a time when Chinese influence was especially strong, it is probable that Chinese script contributed its part to forming this new style of epigraphic decoration, which suited brickwork better than any other material." (3)

Pope does not specify which type of Chinese script was responsible for forming square Kufic, nor does he identify the period in which this form or style of epigraphic decoration was introduced.

It is virtually impossible to give an exact date for the introduction or the adaptation of Chinese seal script into Islamic art. The mere fact that the earliest example of this kind of Kufic (i.e. on the tower of Mas'ud III) appears in a highly developed form, suggests a much earlier date than that of the tower.

It is still equally impossible to establish whether square Kufic was the outcome of a direct imitation of the Baspa script, (4) which was used by the Mongols for paiza or seals, and

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(2) Pope, A Survey of Persian Art II. p. 1747.
(3) Ibid., pp. 1747 and 1748.
(4) Baspa (Budge, op. cit., p. 61), or Phags-pa (Farquhar, op. cit., p. 362), or Hph'ags-pa (P.B. Denlinger, "Chinese in Hph'ags-pa Script", Monuments iserica XXII 1963, p. 407).
(5) According to Budge the "Paizah was a golden tablet which was given originally by the Mongol Kings to members of their family who were deputed to act for them. Budge states that "the word Paizah is derived from the Chinese Pai-ts'en" (Budge, op. cit., pp. 61 and 62).
(6) Ibid., pl. V.
Fig. 151: Specially designed axe, used by the Baghdadi masons for brick cutting.
Fig. 152: Golden paiza depicting Baspa inscription. Mongol. After Budge.
official documents, especially as the Baspa script exhibits strong resemblances to a Chinese rectangular script found on Han tombs - such as the inscription published by Nishihawa Yasushi. (1)

The fact that the name ap iza is derived from the Chinese word P'ai - tseu may indicate that its form and its inscriptions, as well as its use, were borrowed from China too. Thus, the Baspa script may have been heavily influenced by Chinese seal script, and came to be more rectilinear than its prototype, the Tibetan. This suggestion may find support in Denlinger’s statement:

"... h P'laq-pa, especially in its most ornate form, makes many round lines square". (2)

If this assumption proves to be true, that is square Kufic being an imitation of Baspa script, then the appearance of square Kufic before the Mongol invasion does indicate that the use of Baspa was not limited to the Mongols and its influence on Islamic calligraphy may have been brought about by the arrival of the Seljuk Turks. Otherwise one may be tempted to suggest that square Kufic may derive from the Chinese seal script which reached the Islamic world on Chinese porcelain as early as the 8th Century. (3)

The influence of Chinese porcelain on early Islamic pottery at Samarra was not limited to form, glaze and decoration. (4) It even extended to the Islamic artist’s adoption, through what is virtually direct translation, of Chinese ‘good wish’ characters, (5) such as fu (happiness), lu (emolument) and shou (longevity). (6)

(2) Denlinger, ibid., p. 411.
(3) Lane, Early Islamic Pottery, p. 3.
(5) Garner, Oriental Blue and White, pp. 9 and 10.
(6) The same phrases appear on Islamic metalwork of various periods.
APPENDIX XI

The kāshī used for the geometric designs and for the square Kufic inscriptions on the minarets of Iraq which belong to the Ottoman period are formed in two shapes:

1. Headers of \(4\frac{1}{2} \times 4\frac{1}{2}\) centimeters and a thickness of about 7 to 9 centimeters; each of them is called murabbāca by the masons of Baghdad today. The word means "square"; it should be translated "header". There are smaller squares which are made for use on muqarnāsāt. They are used also for the parapets of hāwās. They are made in sections, by moulds made from the parts to be thus covered.

2. Stretchers of \(4\frac{1}{2} \times 13\frac{1}{2}\) centimeters and the same thickness as the headers; these are called madda. The word means, both literally and in the technical sense, "stretcher". These glazed bricks (the murabbāca and the madda) are actually integrated in the wall of the minaret during the building process, unlike flat tiles which are applied to the surface with the aid of ropes. These pass through perforated ridges on the backs of the tiles which are especially designed for that purpose, such as those used for the tiled walls of the Kāzimān mosque.

Only maddas are supplied by the tile-makers, and the mason has to make his own murabbācas by cutting some maddas into shape with a specially designed axe. This instrument is very sharp; it has two thin blades and a bent handle made from "naringe" (citron) wood (fig. 151). The blades are tapered, so that the edge is as keen as that of a razor blade. This kind of axe is used for brick-cutting only, and particularly for various forms which need delicate handling, such as stars and all the geometrical forms that constitute a design, as well as concave and convex surfaces.

An exact parallel to this axe can be seen in a miniature painting depicting the construction of the Castle of Rāwarāq. This miniature was painted by Bihzād in 1494 and is now in the British Museum (Or. 6810, folio 154 verso). This miniature is published by Gray (see Gray, "Persian Painting", pl. on p. 116).
Pl. 276: The old minaret of the Suhrawardi mosque.

Baghdad. 1320/1902.
Pl. 277: Square Kufic plaques on the eastern wall of the Saray mosque, Baghdad.
Pl. 276 : The minarets of the shrine of the al-Imam al-Abbās at Karbalā'.

Pl. 279: Oblique arrangement of calligraphic text.

Baghdad 1276/1859.
Pl. 280: The entrance to the musalla of the Naṣrāniya mosque, Baghdad.

Rebuilt 1338/1919.
Pl. 281: A window in the al-Gailani mosque, depicting symmetrically arranged square Kufic inscriptions. Dated 1309/1891.

Pl. 283: Detail from the Qapllaniya mosque (east wing)

depicting two plaques of square Kufic inscriptions

and a band of 'kaleidoscopic swastikas.'
Pl. 284: Detail from the tower of Mas'ud III, depicting panels of square Kufic. Ghazna. 1089-1115.

After Hill and Grabar.
CHAPTER X.

THE INFLUENCE OF CHINESE ART IN JAPAN.
The Yin and Yang

It seems that in the decorative style of Sämarra there lie quite a number of Chinese elements apart from the meanders and the joone, such as the 'Yin and Yang' motif (pl. 285 and figs. 153, 155A and 156) and the very well known textile pattern of what looks like squares in the centres of octagons depicted in fig. 157 (see the earlier discussion of the all-over pattern of slanted squares).

It is extremely important to draw attention to the fact that both of these elements appear in the wall paintings of Sämarra itself as textile designs rendered on dresses worn by persons depicted in those wall paintings. In fact Herzfeld has reconstructed and redrawn - in colour - most of the textile patterns which he found in Sämarra in buildings or on shards.

It seems that the 'Yin and Yang' in its original pure Chinese form was not recognised by Hamid, because although he mentions the 'Yin and the Yang' he seems to dismiss the idea that the Sämarra decoration uses this motif and maintains that such designs are derived from the bud motif. This has itself been derived from the so-called 'five-lobed vine leaf', which Herzfeld considers as typically Sassanian.

Hamid, in an attempt to illustrate his elaborate theory, gives a number of drawings of related shapes in the wrong sequence (fig. 154) in order to support his assumption. In fact, the exactly opposite sequence proves to be the

(2) See p. 173.
(3) Herzfeld, Die Malereien, pls. LXVI, XLIII (5), and XXIV.
(4) The 'Yin and the Yang' apparently evolved from the whorl-circle which was prevalent throughout the Chou period (Bulling, op. cit., p. 43).
(6) Ibid., Chapter III (The Vine motif).
Fig. 153: Fragment of a wall painting from Sāmarrā depicting yin and yang motif. 9th century. After Herzfeld.
Fig. 1, 2, 3, 4, 6, 7, 10-14: The development of the 'Yin and Yang' from the vine leaf proposed by Hamid.

After Hamid.
Fig. 155: A possible development of the *yin* and *yang* at Samarra.

A. The *yin* and the *yang* as a textile design in the wall paintings of the al-Jausaq al-Khaqani.

B-F. Related motifs in the stucco ornament of Samarra.
Fig. 156: Analytical drawing of the rectilinear looped zigzag band in the Samarrā stuccoes, depicting the yin and the yang motif. (House III. Iraqi excavations. After Hamīd).

Pl. 285: Samarrā stucco ornament, depicting the yin and yang motif within a pattern of octagons with squares at their centres. After Dimand.
Fig. 157: A diaper pattern (a variation of the Chinese 'Tortoise-shell' pattern) on Sāmarrā wall painting. After Herzfeld.
correct sequence of evolution (fig. 155), that is from the simple 'Yin and Yang' to the elaborate circle with two vine leaves and other plant elements.

It should be pointed out that in all the examples given in fig. 155 the design is still completely dominated by the underlying original plan of the 'Yin and Yang', even though at times one of the elements (the Yin or the Yang) grows larger at the expense of the other element, as in fig. 155 E and F.

It seems that the first stage of departure from the original shape was the widening of the line dividing the two elements, as in fig. 155 C. Figs. 155 D - F are well within the old conventional form even though they differ in the degree of elaboration.

In the first three examples (fig. 155 B - D) the eyes of the Yin and Yang (the white spot in the black element, and the black spot in the white element) have survived the new interpretations of the motif to some extent. The motif was changed so often at Lurru alone that it might be useful to recall its original meaning in the Chinese context.

The Yin and the Yang consists of a circle which is divided into two parts by a spiral, one part of the circle symbolizing Yin and the other Yang. The following quotation from Bulling sums up the significance of this symbol:

"The spirals at both ends curve round a dot which represents the sun or moon respectively. This sign now combines within one circle the changes of day and night, of sun and moon, and of winter and summer; in fact, it is the highest possible unification of all the various meanings formerly expressed by a great number of different patterns. It is a sign of the greatest cosmological and metaphysical meaning standing for all changes in the Universe including the orbit of human life". (1)

(1) Bulling, op. cit., pp. 49-50.
The appearance of the 'Yin and the Yang' pattern at Samarra in the wall paintings as well as the stuccoes constitutes conclusive evidence firstly, that Chinese silks were available in Samarra; and secondly, that the motifs of Chinese silks were imitated on the stuccoes of Samarra. Thus the Samarra stucco patterns might well be a valuable source for determining the nature of the Chinese textile patterns during the 8th - 9th Century and, to some extent, of earlier centuries too. Patterns similar to those of the third style of Samarra were widely used in Syria during the Umayyad period.\(^1\) Dimand gives a short description of the ornament of the third style \(^2\) but he does not mention whether such patterns were borrowed from textile designs or from other sources.

Ettinghausen believes - as was pointed out above - that certain ornaments at Khirbat al-Mafjar were copies from textiles of Persian or Central Asian origin. Likewise Hersfeld maintains that "Certain ornamental compositions of Samarra recall ... silk weaving ...." \(^3\) But neither scholar follows up the implications of this resemblance nor seeks to define the similarities more closely.

The patterns Dimand refers to are in fact borrowed from Chinese silk patterns - especially those depicted in pl. VII/2 of his article (pl. 265).

In this panel in particular, two Chinese elements can be seen clearly: firstly the Yin and the Yang symbol in its simplest form.

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\(^1\) Dimand, "Studies in Islamic Ornament II", p. 63.

\(^2\) His description of the designs is: "Here the ornament consists of vine scrolls, pine cones, palmettes and vase motives within geometrical compartments and hexafoil medallions...." (ibid.).

\(^3\) Hersfeld, and Dimand, ibid., p. 65.
and secondly, the polygonal pattern of what looks like octagons with squares at their centres. This appears as a textile pattern in a wall painting from al-Jawzaq al-Khāqānī (fig. 157).

Another typical Chinese silk pattern composed of a 'Y' pattern (4) with hexagons and other secondary motifs appears on another Māmrūt panel (fig. 124). (2)

It seems that all agree in recognising that Islamic decoration imitated silk or textile designs. But they differ in regard to the origin of those textiles. Some scholars — as was pointed out before — consider them Sasanian, others consider them Central Asian. Dimand adds that Christian art as 'the second source' for Islamic art — after Sasanian art(3) he presumably regards Classical art as the ultimate source for both arts.

Rivoira, speaking of the tessellated mosaic pavements of the 4th — 6th Century at Ravenna, claims that they "were the work of Italians, and belonged to a Latin, not a Byzantine tradition."(4) He also relates that Theodoric the Great brought skilled 'marmoratii' from Rome for the basilica of Hercules.(5) He justly praises the workmanship and skill with which the mosaics of the time of Nero and Domitian were executed,(6) but he never points out the origins of the patterns depicted on them. Instead he leaves it to the imagination of the reader to assume their Roman or at least their classical origin. Dalton on the other hand recognises that the

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(1) This pattern is dealt with in Chapter VIII.
(2) Herzfeld, "Der 'andeschmuck', passim, pl. 299 and Orn. 272 (on p. 211).
(4) Rivoira, op. cit., p. 264.
(5) Ibid.
(6) Ibid., p. 267.
principles on which east Christian ornament were based were
different from those of Classical art.(1)

This uncertainty in defining the origin of Islamic and early
Christian ornament is also reflected in the classification of tex-
tiles. Indeed the whole issue of the effect of the 'silk trade'
and the role of Chinese silk in the transmission of Chinese art
motifs to the West has yet to be studied closely.

(1) Walton, op. cit., p. 333.
The Zigzag Band At Sāmarra:

The pattern has not been identified as such by earlier scholars for two reasons. One of these is that it was obscured by the elaborate curvilinear ornament occupying the secondary shapes (parts of the background) formed by the bands. The second reason is that their attention was focused on the evolution of those ornaments in an endeavour to establish a link between 'Style A' and 'Style B'. Herzfeld seems to recognize such rectilinear patterns as the bases of the ornament of Sāmarra, but he dismisses the idea and claims that "it is the surface which is always the pattern." (1)

It has been suggested that all such rectilinear patterns were in fact the remaining part of the background, which was left after the evolutionary process (the enlargement of the so-called main motifs) had taken place.

Speaking of Style B, Al-Kizwīnī states:

"In Style B, pl. 3, the background patterns are diminished until they become mere narrow veins which link the principal elements, these latter nearly lose their connection with each other. Thus the elements develop into big separate units, which are flat and have no stems. Each one completes the other, leaving no space between, so that they fit together like countries, sharing common frontiers. As a result, many interesting shapes were reproduced." (2)

A. Hamīd, dealing with the same subject states:

"The background gradually tightened, turning ultimately into narrow grooves." (3)

It seems that the linear patterns forming the bases of the Sāmarra ornament were not recognized at all, especially in Style C. Instead the secondary motifs, which filled the spaces between the lines of the basic pattern, were considered to be the main patterns.

(1) Herzfeld, Der Wandschmuck, p. 11.
(2) Al-Kizwīnī, op. cit., p. 9.
(3) Hamīd, op. cit., p. 296.
Unknowingly isolating the secondary motifs (filler motifs) from the context of their basic patterns led to serious misunderstandings.

In order to explain the inexplicable, Šahrī and al-Kızwī advocate 'The Art Revolution of Sāmarrā'; Hamīd traces the evolution of the palmette and the border designs, and introduces his outlandish theory of the human face in the ornament of Sāmarrā; and Creswell's "bottle design", which Hamīd calls "bud-like motif surmounted by a palmette." (4)

A good number of closely related examples can be found in the stuccoes of Sāmarrā to illustrate this point.

On a 'Style C' panel from the Jawzaq Palace, a curvilinear zigzag (or meander) pattern forms the basic motif of the panel (fig. 158 A) which is an all-over pattern of the horizontal succession of these bands.

The parts of the background formed between the curves of the curvilinear zigzag (which may be called meander for convenience) take the form of reciprocating deep horse-shoe arches, open at their narrow ends.

In this example, the upper curves of the meander are faulted symmetrically causing the deep horse-shoe space to be lobed. At the same time the open ends of the lower shapes (or downward thrusting shapes) are made to look like segmented spandrels, and their down-

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(1) Al-Kızwī, op. cit., p. 11; P. Shafī'ī al-Kızwī, ibid.
(2) Hamīd, op. cit., pp. 134-144, 16-185.
(4) Hamīd, op. cit., p. 295.
(5) German Excavations; Hamīd, op. cit., pl. XVIX.
Fig. 158: The faulted curvilinear zigzag band at Sāmarra. A, C, and D. In the form of all-over patterns. B. In the form of a single band decorating 'bell-shaped' capitals.
ward shapes look like vases or tungas as in fig. 158 A 1. The
upward thrusting shapes look like covered jars as in fig. 158 A 2.

In figure 158 C, the (2) meander bands are fused with the
bands above and below, forming a net pattern. The shapes enclosed
by the pattern are elongated curvilinear zigzag lozenges, the lower
halves of which are not faulted and are slightly narrower.

The prototype of this meander can be found in a 'Style A' panel
which displays a circular curvilinear meander in the shape of a rosette or lobed medallion as in fig. 159 B (3). In this example the
curvilinear meander is not faulted. This should not be taken to
imply that the derivation of the faulted meander from the non-faulted
meander mentioned above, took place in Āmarrā' itself. Two
reasons can be given for this:

a - The method of faulting the lines of the zigzag goes back to
the Chou period (1122-256 B.C.) in China, as was shown above when
dealing with the zigzag lozenge.
b - An exact parallel for the non-faulted curvilinear zigzag in
question appears on early Chinese pottery in fig. 159 A (including
the cross-hatched 'bottle' motif which appears on the stuccoes of
Āmarrā).

This pattern is frequently found on urns from Čan shan. (4)

In fig. 158 D, the meandering upper curves are not only faulted
(or lobed), but the middle lobe is pointed while the downward-thrus-

(1) The tunga is a porous water container, made of earthenware,
used in Iraq to the present day. An exact parallel in shape
and name can be found in Chinese pottery (pl. 286).
(2) Creswell, "Early Muslim Architecture", pl. 74b.
(3) Ibid., 75b.
(4) Bulling, op. cit., pp. 75-77, fig. 58.
Fig. 159: The curvilinear zigzag band and the so-called 'bottle motif' in the arts of China and Islam.

A. On a Chinese urn from Pan shan. After Bulling.
B. From the stucco ornament of Sāmarrā. After Herzfeld.
Fig. 160: The Sāmarrā meanders (curvilinear zigzag bands).
ting spaces remain.

Thus the first stage of the so-called "bottle motif" is arrived at by sheer accident, and not as an original motif as has been maintained.

The second stage is achieved by manipulating these spaces; firstly by giving them a plastic form through the bevelled technique in order to bring them to the same level as the meander, and secondly by the introduction of filler-motifs.

The filler-motif in this example (fig. 15A) seems to be limited to the open ends of the secondary shapes while the enclosed part was lightly treated by a semi-spherical indentation, and a short incised line pointing towards the opening.

The filler motif which has been taken as a palmette appears to be a Seljuk crown encrusted with five jewels at its lower rim (fig. 16A and B).

This kind of crown appears frequently in miniatures as early as the first half of the 13th Century onwards (pl. 262). Figures 205 and 206 depict a number of such crowns in Islamic miniatures of various periods.

The earliest crown of this kind in Islamic painting appears on the ceiling of the Capella Palatina in the middle of the 12th Century (pl. 287). These crowns are composed of three adjacent identical finials, but due to perspective distortion they appear to be made of one finial, flanked by two half-finials.

A more detailed study of these crowns will be presented below.

(1) Iblis with his sons; 8.1250 (Blochet, op. cit., pl. XXII).
(2) Feasting ruler with attendants; 12th Century (Ettinghausen, Arab Painting p. 45).
Fig. 161: Filler motifs of the Sāmarrā meander depicted in fig. 160.
This arrangement seems to have led to the belief that these finials were petals, and consequently it was considered a three petalled palmette.

These finials (in the given examples) are in fact a very well known Chinese symbol of longevity, the 'Joo-e head' (fig. 93). (1)

In another variation of the curvilinear zigzag (fig. 160D) the lower curves of the meander are cut at their centres. The loose ends are curled symmetrically to form small spirals, dividing the continuous meander into a number of adjacent three-lobed units as in fig. 160 D and E. The so-called 'plank' of fig. 101 A consists of two-lobed halves from adjacent three-lobed units. This method (i.e., cutting the meander into vertical sections) seems to have been employed in other media at Samarra', such as wood (fig. 162 A) and marble (fig. 162 B). The same method was used in the post-Sammarra' period on various materials.

This design seems to occur in two forms:

a - cutting through the apices of two neighbouring (three-lobed) units as in fig. 162 A and B, and fig. 101 A (the plank).
b - cutting through the centres of the intervening spaces between the three-lobed units to isolate a complete three-lobed unit, as in fig. 160 D and E.

Both of these forms, as well as the continuous meander, seem to have had far-reaching effects on Islamic decoration in subsequent periods.

(1) Dealing with "Symbolical Marks and ornaments," J.P.B. Locker states: "No form so universal for decorative purposes as the Joo-e ... Panels and borders have modifications of this form in endless variety. The fungus as emblem of longevity was adopted in this form as the head of the sceptre of longevity, and the Joo-e has remained a classical pattern." Kiao Chi-ien, op. cit., pp. 375-380, fig. II, No. 27 (see fig. 94 J for the symbol depicted by Locker, and figs. 93 and 94 for the various forms of the Joo-e).
Fig. 162: Vertical sections from the faulted curvilinear zigzag band from Samarra.
A. In wood. After Herzfeld.
B. In marble. After Herzfeld.
Form 'a' appears on metalwork as early as 1066-7 (pl. 123) in the form of finials crowning Kufic lettering.

The continuous meander of fig. 160 c appears on metalwork of the 12th-13th Century, such as the bronze plaque (probably the back of a mirror) of pl.288. Also, it appears on a 13th Century lamp from the mausoleum of al-Malik al-żahir Baybars at Damascus (pl.289 and fig.163 A).

In architecture, this meander appears as early as the beginning of the 12th Century, in the stucco decoration of the dome chamber in the Congregational mosque at Īṣṭīnāīa.(4)

On the wall of Rādkān (possibly dated 680/1281) the meander appears immediately above the fluted zone (fig. 164). Wilber describes it as a "cornice, connected at the top by means of a trefoil niche; of fired brick spanning adjacent columns."(6) This description, while accurate so far as it goes, appears to stem from a lack of understanding of the meander pattern. Turkish tiles exhibit similar motifs (pl. 290).

The meander may also have been utilized as a model for bands of free standing lobed arches, as in the miniature of pl.292.

The utilization of the meander for forming lobed arches in adjacent niches appears as early as the second half of the 8th Century on the Baghdad Gate at Raqqā(8) and probably much earlier (fig. 165 A).

(1) Pope, Masterpieces, p. 101, pl. 65.
(2) 12th–13th Century (Pope, Masterpieces, p. 95, pl. 59).
(3) After 1277 (Rice, Studies, XVII, p. 221, pl. 15).
(4) Dated 1113 or 1119 (Pope, "Survey", IV, pl. 305).
(5) Ibid., pl. 47; Wilber, op. cit., pl. 13A.
(6) Ibid., p. 116.
(7) In Dunimarle Castle, Fife, Scotland, Lochtounne, Les Peintures des Manuscrits Safaviehs de 1502 à 1587, Paris 1959, pl. LXIV.
(8) Creswell believes that it was built by al-Ḳanṣūr around 772. He dismisses the dating between 796–808 given by Herzfeld (EM II, p. 45).
Fig. 163:
A. Lobed curvilinear zigzag band or meander on a 13th century lamp from the mausoleum of al-Zahir Baybars.
B-F. Lobed sections of curvilinear zigzag bands from
B) The door of the mausoleum of Mahmūd at Ghazna. C 1030.
Fig. 164 : Tomb tower of Rādkān East. Possibly 1281. Persia. After Pope.
Fig. 165: Details of the Baghdad gate at Raqqa. 8th century. After Creswell.

A. Lobed niches.

B. Niche to the left of the entrance depicting pointed arch and swastika pattern.
Sections of the meander (three-lobed units and multi-lobed units) were utilized in the same manner for individual windows and blind arches at Sāmarrā'. Examples are the windows of the Great Mosque (fig. 166 b) and the blind arches of al-Qāshiq palace (fig. 166 c). It also appears at Ukhaïdir (fig. 166c), and on the minaret of Qādsīa (fig. 167 a and b).

It should be noted that both forms of lobing, that is the continuous meander and the three-lobed unit, appear only as surface decoration in the form of reliefs depending for support on the wall in the background. In the case of a free-standing lobed arch they are limited to small-scale constructions. It was not possible to use them in arches on a large scale, such as the arches of portals. These were always constructed in one form or another of the simple pointed arch (two-centred and four-centred arches). This and the most un-architectonic nature of the broken arch (whether scalloped, segmented or lobed) seems to indicate that this architectural feature was borrowed from surface decoration, which has no structural value at all. A similar blind arch occurs in the varjaniyy madrasa (pl. 293).

The large-scale free-standing lobed arch was developed mainly in North Africa and Spain.

A variety of meanders appear in Sāmarrā'; they form the basis of the Sāmarrān style in various materials (figs. 160 & 168). A number of these meanders were utilized for forming the so-called 'bell-shaped' capitals of Sāmarrā', which recur in later periods (fig. 169 a–c).

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(1) Built around 775-6 (Creswell, ibid., p. 98).
(2) Such as the arches of the portals of the Baghdad Gate at Bagh, Jār al-Khalifa at Sāmarrā', and others in Iran, Turkey, Turkestan, and Afghanistan.
Fig. 166: The use of multi-lobed units of the meander in Islamic architecture.

A. On the blind arches of the Qaṣr al-ʿAṣhīq (al-ʿAṣhūq) at Sāmrā. 878. After Creswell.

B. On the windows of the Great mosque at Sāmrā. After Creswell.

C. On a door in the mosque at Ukhaidir. After Bell.
Fig. 167: Pointed lobed arches in Islamic art.

A and B. From the minaret of قَمَا, 11th-12th century. After Herzfeld.

Fig. 168: Other versions of the curvilinear zigzag band in the wall ornament of Samarrā. After Herzfeld.
Fig. 169: The use of the curvilinear zigzag band on the so-called 'bell-shaped' columns.

A. In a wall painting found in the al-Jausaq al-Khāqāni. Samarrā.
B and C. On marble columns found in Samarrā.
D. On the mihrāb of the Juwaijāti mosque, Mausil.
(A-C. After Herzfeld. D. After al-Daiwachi)
Lobing of both curves of the meander (the so-called reciprocating trefoil) does not appear in Sámarra. The same is true of multiple lobing. Both types, however, appear in various guises in subsequent centuries. This should not lead to the assumption that these forms of the meander were a natural development of the Sámarra meander. The prototype of this form occurs in the form of cloud bands on a Han silk boot found in Northern Mongolia. (1)(fig. 170B and pl. 294 A & B).

Multiple lobing of sections of the meander appears at the "Qishq palace in Sámarra" (fig. 166 A) and at Ukhaidir (fig. 166 C). It also appears at various periods on metalwork (pl. 295 and fig. 166 C-E) on tiles (pl. 291) and in miniature painting (pl. 296, 298 and fig. 171). The multiple lobing of the Auto- mata miniature is particularly interesting because of an almost exact parallel found on a Chinese bronze tube in the Hallström collection in Stockholm. This is datable to the Han dynasty (B.C. 206-220 A.D.) and depicts lobed cloud bands or mountain ranges, with combat scenes between cosmic animals. It is extremely interesting to note, that the method by which the succession of lobed meanders (cloud bands) are arranged - that is the shifting of the meanders half a space to one side alternately - is identical with that used in the Sámarra patterns. It is also worth noting that the rendering of the tails of the peacocks in the middle figure are reminiscent of the tails of the Chinese phoenixes. The tail and the movement of the peacock in the bottom figure recall the Chinese peacocks on a 14th

(1) Traver, op. cit., pl. 20 (2) Lubo-Dusnichenko, op. cit., pls. XLII and XLIII. (3) Blochet, op. cit., pl. XXXV. (3) Sullivan, op. cit., p. xii, and fig. 44. See fig. 172 A.
Fig. 170: Chinese cloud motifs.

A. From an embroidered Han shoe sole. After Sullivan.

B. From a Han embroidered silk. After Lubo-Lusni-chenko.

C. A similar motif to that of B as reproduced by Sullivan.
Fig. 171: Peacock from the Cappella Palatina. 12th century. After Von Falke.

Pl. 296: Peacocks from an Islamic miniature painting. 1354. After Blochet.

Century brocade (1) (in Brunswick), and the 12th Century peacock of the Cappella Palatina (2) (pl. 297 and fig. 17). The appearance of such peacocks on Chinese silks and in Islamic miniature painting in the same century suggests the possibility that Chinese silk motifs were frequently borrowed by Muslim artists and craftsmen; a number of craftsmen in Islamic territory were most probably Chinese. In a recent work 1emwu Chubansho relates that in the mid-eighth century (751-762) Du Bei "went to the capital of "Arabia," Yejulu, present-day Mashad-4li (Najaf) in Iraq. From his writings we learn that by those times there was an abundance of Chinese silks in that part of the world and there were also Chinese craftsmen there serving the Arabs. (3)

This statement is highly significant. The abundance of Chinese silk and the presence of Chinese craftsmen in Iraq during the early 'Abbasid period suggests that a similar number of Chinese craftsmen (or even more) may have existed in Syria where the capital of the Caliphate was situated and the pomp of the Caliphs required their services.

One reservation should be made concerning the identification of Yejulu with Mashhad 4li, for the simple reason that Najaf, as a town, did not exist at that date (751-762). In fact, the location of the grave of Imam 4li was kept secret from the date of his assass-

(1) Von Falke, op. cit., pl. 281.
(2) Ibid., fig. 163.
(3) Chubansho, op. cit., in Dolby's translation pp. 2 and 3.
amination at Kūfa until its discovery in 175/791 by Ḥūrūn al-
Rashīd. (1) In connection with this incident, Mustawfi relates that
"a tomb was afterwards erected, and the people began to settle in its
vicinity." (2) In fact it was only after the year 366/977, in which
Cādūd al-Dawla the Būyid had "raised a mighty building over the
grave", that Najaf became "a little town." (3) Thus, if the text of Du Bei, which
I have been unable to consult, identifies Yejulu with the place
where Imām ʿAlī was assassinated, Kūfa and not Najaf (Mashhad Cālī)
would be the correct location.

Kūfa was famous at this time for its silk trade, and for its
wealthy families of silk merchants during that period. Abu Ḥanīfa
was born (701) in such a family and took the silk trade for a career. (5)

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(1) In regard to this discovery, Mustawfi gives the following
account: ... when Cālī had received his death wound, in the
mosque at Kūfa, he gave it as his will that as soon as he was
dead his body should be placed on a camel; then the camel was
to be given its head and set in motion, and whereasover the
beast knelt down, there they should bury his body. This being
done, it came to pass that the camel knelt at the place where
now is the shrine, and here in consequence was he buried. Now
during the reign of the Omayyad Caliph his blessed resting
place could not be disclosed, and so it was under the Abbasids
until the reign of Ḥūrūn-ar-Rashīd, but in the year 175(791)
Ḥarūn happened to go a-hunting in these parts, and his quarry
fleeing from him took refuge in this very spot. And however
much the Caliph urged his horse into the place, into it the
horse would not go; and on this awe took possession of the
Caliph's heart. He made enquiries of the people in the neigh-
bourhood, and they acquainted him with the fact that this was
the grave of Cālī. Ḥūrūn ordered the ground to be excavated,
and the body of Cālī was discovered lying there wounded. A
tomb was afterwards erected, and the people began to settle
in its vicinity.

A hundred and ninety odd years later Cādūd-ad-Calsh the
Būyid, in the year 366 (977), raised a mighty building over
the grave, as it now exists, and the place since became a
little town,...... "

(2) Ibid., p. 38.
(3) Ibid., pp. 38-9.
(4) Ibid., p. 38.
(5) M. M. al-Aʿzamī, Tarīkh Jamiʿ al-Imām al-ʿAẓam (Baghdad, n.d.)
p.13.
The use of multiple-lobed pointed arches for niches in Chinese buildings appears as early as the 10th Century on the 'Miniature Pagoda' of Ling-Yen-sau at Hang Chou (1) (fig. 172 B), and on the 12th Century 'White Pagoda' (2) (fig. 172 C), as well as the two-centred and four-centred varieties of the pointed arch (pl. 299) 

The multi-storied and facetted shapes of these pagodas and their lobed niches bring to mind the close similarities between them and two minarets in Iraq dating from the 10th-17th Century: (the minaret of C'ina (3) (pl. 233), and the Khilaliya minaret (pl. 44) situated about 8 kilometres to the east of C'ina). The shafts of these minarets are divided into many superposed horizontal registers. This feature, together with the lobed blind arches which decorate the registers, suggests the possibility of Chinese influence. This influence may have been introduced directly by Chinese masons or indirectly by Turkish masons who had assimilated Chinese architectural conventions prevalent in Central Asia.

This suggestion may find support in the recorded incidents (which will be discussed presently) in which Turkish architects, and Chinese engineers (6) were responsible for the execution or at least the supervision of works carried out in Islamic countries. The recent discovery at Samarra of graffiti portraying Chinese or Turkish architects may provide a further proof.

(1) Sickman and Rosen, op. cit., pl. 166(B).
(2) Ibid., pl. 175.
(5) Rivoira relates that the original building of the Kilometer in 714-716, "was entrusted to an architect who came from Fergana."; Rivoira, op. cit., p. 148.
Fig. 172: Pointed lobed arches in Chinese art.

A. From a bronze tube. Han period. After Sullivan.
B-C. From the White Pagoda. Late 10th century. After Sickman and Soper.
D. An Imperial Tablet. After Broomhall.
It should be noted that apart from one example, that is the minaret of the mosque of Holy Remembrance in Canton which was built c.900 (pl. 300),(1) all the known Chinese minarets follow the pagoda style, such as the minaret of Sakumon mosque in Manchuria (pl. 301), and the minaret of pl. 302.(3)

Had it not been for the differences between the materials used for the construction of the two Iraqi minarets under consideration (wholly constructed of unworked stones set in mortar), and those used for the Chinese minarets (normally constructed of a brick kural on a stone foundation with a wooden superstructure), the striking similarities of the underlying ground plan and elevation of both types could hardly have been overlooked.

The discovery in 1949 of a subterranean Ming tomb (dated 1624) of a type hitherto unknown in China(4) reveals some new information about Chinese tomb architecture. This evidence is especially valuable in that this tomb was built at the expense of the state in honour of its occupant Ch'í Ping-Chung, a brigadier general who was mortally wounded in battle. He was posthumously awarded several titles, and was granted a state burial.

Bearing in mind the strong adherence to tradition, it seems very unlikely that any foreign influence on such construction would be tolerated.

This tomb consists of a main subterranean chamber and three crypts (fig. 173). The ceilings of these crypts are vaulted and

(1) Broomehall, op. cit., pl. facing p. 109, and caption.
(2) Ibid., pl. facing p. 194.
(3) G. V. Andrews, The Crescent in North-west China (London, n.d.; c.1921), pl. facing p. 36
Fig. 173: Mirg tomb in Sining, 1624. After Rudolph.
the sections of these vaults are pointed arches identical to the four-centred pointed arches of Islamic constructions. The tympana of the crypts are decorated with arabesque scrolls. The whole structure is so similar to Islamic buildings in every detail that it is apt to lead to the assumption that Muslim architects must have been employed for its execution. Yet this assumption seems to be hardly acceptable, owing to the nature and significance of this building.

The general surprise at the appearance of the pointed arch and keel vault in China can partially be explained by the fact that brick and stone constructions in Chinese architecture are limited to certain classes of buildings, such as pagodas, bridges, defensive walls and tombs. Other than that most Chinese buildings are constructed of wood.

In any case very little is known about Chinese skill in the use of brick for tomb construction because previous excavations were often of a random nature and were carried out for commercial reasons. They were carried out in secrecy leading to the loss of a great deal of valuable information. But the skills of the Chinese in the construction of bridges and structures for the control of water were renowned to the extent that al-Jahiz relates that al-'Uqtaqm brought Mubandis al-Itī (water engineers) from China to control the problems of water supply in Samarra.

(1) Illet's, op. cit., II, p. 589.
(2) Ibid., p. 590.
(4) Ibid.
There is no information about the range of their activities in Sāmarrā’, but it seems fairly reasonable to assume that they might have brought with them a team of masons and technicians (unless they themselves were masons).

It seems that the employment of Chinese engineers for irrigation works and the control of the banks of the Tigris continued well into the Ilkhānid period.

Wilber mentions the presence of Chinese engineers in Iraq for that purpose during the reign of Ghāzān Khān. He also mentions the presence of Chinese astronomers, physicians, and theologians at Tabriz during the same period. (1)

In fact new evidence concerning the presence of Chinese masons came to light in 1963. During an excavation by A. Ḥamīd of one of the houses in the neighbourhood of the Great Mosque, a number of graffiti were uncovered on a wall of what seemed to be the lavatory of the house. One of these graffiti represents a Chinese (or Central Asian) mason holding a plumbline. The other represents a Persian mason in the same attitude (pls. 303 & 304). A third graffito portrays another Chinese or Central Asian face (pl. 305).

The significance of this discovery is remarkable even if these faces were not of Chinese masons, but of Turkish ones. The role of the Turks in the establishment of the Sāmarrā’ style of ornament has not yet been defined. It has been suggested that the Turks inspired it, and that the imitation of Turkish horse-trappings and

(1) Wilber does not cite a particular source, but speaking of Rashīd al-Dīn and The History of the Mongols he mentions two learned Chinese who dealt with the material in that language (see ibid., p. 20).
(2) This house was named baʿt al-Zakhārīf ("the house of ornaments").
personal ornam ents gave impetus to its development. (1)

The pointed and cusped contour of a shape similar to the shape of the pointed arch is known in Chinese works of art datable to the 10th Century B.C., such as the Joo-e heads in fig. 92 A, B, and C; and the outline of the ears of the bronze tiger of pl. 306 and fig. 92 D.

The heart-shaped motif (Joo-e head) seems also to have undergone multiple lobing, and a band of adjacent motifs are sometimes cut into vertical sections.

This has made the differentiation between designs contrived from the meander and those which were derived from the Joo-e head very difficult indeed. In fact these designs have not been recognized at all in analyses of the early periods at Qamrā or elsewhere.

Closer study reveals that the base volutes of designs contrived from the meander curl outwards (pl. 292, 293, and figs. 107, 160, 232, 244, 287, and figs. 86-95, 106, and 107), whilst the base volutes of those contrived from the Joo-e head curl inwards (pl. 292, 294, 232, 244, 287, and figs. 86-95, 106, and 107).

A number of such sections appear in the miniatures of the Naqīml of Parīrī of Leningrad (pl. 30, 33, and 34).

These sections appear to be the same. They were ignored completely by scholars perhaps because they were considered as palmettes. The reconstruction of the three sections (fig. 174) reveals that only one section (fig. 174c) was derived from a faulted meander similar to the faulted meander of Qamrā (fig. 160); the other two sections were derived from bands of adjacent Joo-e heads.

Fig. 174: Reconstruction of border strips from which the vertical sections of fig. 107A-C, and D are taken.
The band from which fig. 174B was derived is composed of simple Joo-e heads alternating with lobed (or faulted) Joo-e heads.

The symmetrical sides of the section depicted in fig. 174B were adopted later for the upper part of the shafts of certain letters in some forms of Kufic script (pl. 223).

The miniatures of this manuscript contain a variety of these sections - mostly derived from the Joo-e head - such as those on the table in front of the Governor of Kerb, (1) on the ship depicted in the Thirty-ninth Magama (2) and on the capital of the column in the miniature depicting the Qatt of Sa'da. (3)

Pope does not seem to recognize the difference between the two types. He refers to the Joo-e heads of pl. 213 and pl. 214 as "cloud collar points." (4) In fact Pope's mistake is understandable as he must have based his designation on the use of the cloud forms and Joo-e heads as actual embroidered collars by the Chinese (fig. 93C) and later by the Muslims (pls. 307 and 308). These collars are normally formed by four identical units pointing away from a common centre so that one unit forms a chest ornament, two pieces form shoulder ornaments and one piece forms the back ornament (pl. 307). The identification of the Joo-e head collar is very easy as long as the units are connected physically by means of a clasping motif or by being linked with each other whether they were lobed or otherwise (pls. 225 and 226). It becomes extremely difficult to identify the motif when (as often happens) the outlines of

(2) MS. S23, page 260 (Ibid., pl. on p. 108).
(3) MS. S23, page 250 (Ibid., pl. on p. 107).
(4) J.A. Pope, Chinese Porcelain from the Ardebil Shrine. (Washington 1956), pls. 16, 17 (captions).
(5) This motif has been fully examined by S. Cammann (S. Cammann, "The Symbolism of the cloud collar motif", The Art Bulletin XXIII (1951), pp. 1 - 9, and pls. 1 - 11.)
the Joo-e heads are eliminated and the inner spaces (i.e. the secondary motifs) take the form of connected trefoils or polylobed palmettes outlined by a continuous thin meander (pl. 309, and fig. 94F).

It may be of some interest to point out that such a collar appears on a 14th Century fresco in the Church of Esovo in Serbia (pl. 310) which leads one to assume that such fashions might have reached Europe directly through the Northern silk route. Furthermore, the Joo-e head seems to have been adopted by the Chinese for cloud bands especially in the form that these appear in Persian and Turkish miniatures (fig. 105 B = G).

In a third variation (fig. 101 C) the basic meander pattern has been removed further from the original pattern (the faulted curvilinear zigzag bands) by cutting through the centres of the pointed middle lobes vertically, and by extending and turning the cut ends of the two halves symmetrically outwards to meet their counterparts of the adjacent lobes. With this a new form of decorative unit has been achieved (fig. 175 A & B). The new unit looks like an elaborately formed tall vase standing on two roundels. (1)

A related design, bearing a strong resemblance to a fleur-de-lis, appears repetitively in the form of a compartment pattern (fig. 175 G). This is achieved through the drastic reduction of the height of the basic vase-shaped unit and the corresponding reduction of the curves of its lobes. The repetition of this reduced form was used to contain the coronet-shaped motif in the Samarrā stuccoes.

The pattern appears later in 1253 on engaged columns in the Cifte Minareli mosque at Erzurum. (2) Strips of this pattern appear on the minbar of the Congregational mosque, Na'in (711/1311). (3)

(1) These roundels are developed from the "cut loose" ends of the lower curves of the meander.
(2) Hill and Tabbar, op. cit., pl. 332.
Fig. 175: Analytical drawing of an all-over pattern evolved from the curvilinear faulted zigzag band. A and B) From the Samarrā stuccoes. C-F) Filler motifs of A and B. G) From the minbar of the congregational mosque of Na'īn(711/1311). Gl) From the stuccoes of Samarrā. (E and Gl, after Herzfeld. G. After Ettinghausen)
It appears also as a frame containing the gateway of Izmet of Ibrāhīm Bey (1426-62) at Karaman. (1) The lines of both examples are interlaced.

(2) Shāfi‘ī includes this shape among his three-sepaled calices.

Thus the various forms of the Chinese cloud and the Chinese symbol of longevity, and a number of forms which derive from these, seem to dominate a vast field of Islamic decoration in the various media, and in a vast range of stylizations.

This may explain the apparent unity of style in this field of arabesque design in Islamic decoration.

A variety of such highly stylized cloud scrolls/pranders and jade heads appear on Chinese thrones depicted in Islamic miniatures (figs. 176 and 177 and pl. 311), from the beginning of the 12th Century onwards.

Some of these scrolls seem to have been contrived by halving the above-mentioned 'cloud-oiler' horizontally (fig. 177A and B), or by modifying the three-lobed section of the continuous monander or cloud band.

The other type (fig. 176 C, and fig. 177 D) is particularly interesting. It brings to mind a curiously formed segmented shallow arch (pl. 312). The earliest surviving example of this arch appears in the Congregational mosque of Iṣfahān (3) (perhaps c. 1160).

This type of segmented arch is called the madīnī arch. It has a fairly wide distribution in Iraq, Iran, and Turkey. (4-6)

(1) Hill and Grabar, ibid., pl. 430-9.
(2) Kizvīn, op. cit., pp. 47-9, fig. 11 f.
(3) Pope, "Persian Architecture" pls. 119, 129 and 130.
(4) The Mustangirīya madrasa (1232).
(5) Imāmī Sa‘dī (677/1278-9), alber, op. cit., p. 115 pl. 12.
(6) The base of the minaret of Kārīn (Late 12th Cent.) Hill and Grabar, op. cit., pl. 403; vārefoğlu mosque (1268), ibid., pl. 450; Hausoleum of Erzen Khatun (1396-7), ibid., pl. 392.
Fig. 177: Chinese thrones in Islamic miniatures.
A. Painted at Tabriz c. 1310. After Blochet.
B. = = = = . = .
C. = c. 1263.
Fig. 176: Chinese thrones in Islamic miniature painting.

A. Probably executed at Ghazna about 1150. After Blochet.

B and C. Executed in 1206, probably in Western Persia or Asia Minor. After Blochet.

D. Executed at Tabriz c. 1310. After Blochet.
The only known parallels to this form outside the field of architecture appear on the rims of well-known bronze cauldrons in the Victoria and Albert Museum (pls. 313 & 314). The arrangement of these forms around the rims of the cauldrons in groups of four seem to suggest a drastically reduced collar (or faulted meander or cloud band) motif and thus rules out the assumption of Sasanian origins for these cauldrons. The appearance of these arches in pre-Mongol buildings in conjunction with the appearance of this feature on Central Asian cauldrons suggests a Central Asian origin. The appearance of this form on Chinese thrones suggests an earlier derivation from a Chinese prototype.

Two other segmented arches of a less drastically reduced type which appear on the minaret of Câna and in the mosque of Bistân confirm the derivation of this type of arch from a Chinese model. This question has been examined in the consideration of the šar head (the heart-shaped motif) in Islamic art. (Chapter VII).

A further proof of the derivation of the madûnû arch from a highly reduced 'faulted meander' (cloud band) is found in the miniatures of a 13th Century manuscript, where two such arches form a faulted meander (fig. 111).

Islamic art abounds with a vast number of variations of this motif from the 10th Century onwards, especially on bookcovers, carpets, and ceramics (figs. 50 - 51, 54-57, and 80). The earliest surviving examples appear in panels above the Iwân of the Con-

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1) See Talbot Rice, op. cit., pl. 48 (caption).
2) Parâ'îj Ikhâns-e-Nâfîr, Iraq 1287 (see Httinghausen, 'Arab Painting', pls. on pl. 98 and 99).
3) The term madûnû may derive from the words šar madân. Šar is Persian for "head" and madân in turn may well derive from the Persian words màni ("wine") and dây ("receptacle.") Many Persian mediaeval metalwork vessels have an upper portion which echoes the profile of the madûnû arch and the etymology suggested here, though speculative, would help to explain an otherwise puzzling term.
A number of these Chinese cloud bands were foliated during the 16th Century with the so-called 'arabesques' (split leaves) and some were even completely replaced by arabesques (fig. 55 B, J, K; fig. 55 B, and C; and fig. 56 B, C, and D).

In other examples they were drastically reduced (fig. 55 C) or rendered geometric beyond recognition. This resulted in the so-called 'bird motif' (fig. 54 K D).

This version of the cloud-scroll or band seems to have evolved into its present shape (that of fig. 57 A and B) in China before the Christian era. In fact the earliest depiction of this motif occurs on a 5th Century B.C. hu excavated at T'ang Shan. Another cloud-band in the form of a golden plaque has been found in Northern Mongolia. It is attributed to the year 2 B.C. (2) (pl. 24). The prototype of this form of cloud band can be recognised on a Han silk (fig. 178). It also appears in a less elaborate version on a 10th Century Chinese casket (pl. 316).

The great variety and stylisations which the Chinese cloud motif exhibits in Islamic art necessitates a thorough investigation in order to establish chronologically the evolution of each type; unfortunately such a task is beyond the scope of this thesis.

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(1) Schorr-Thoss, op. cit., pl. 27 (cap.)
(2) Travers, op. cit., p. 42, pl. 24 (7). (In fact Traver has described this object under pl. 24, 1 in the text instead of No. 24, 7).
(3) See Watson, op. cit., pl. 64 b.
Fig. 178: Fragment of polychrome figured silk. Han period. After Andrews.
Fl. 287: Islamic wall painting from the painted ceiling of the capella Palatina. Palermo - 12th Century.

After Ettinghausen.
Pl. 288: The back of a bronze mirror.
Islamic. 12th - 13th Century. After Pope.

Pl. 289: Bronze lantern.
Damascus. 13th Century.
After D.S. Rice.
Pl. 290: Turkish wall tiles depicting the utilization of the faulted meander for lobed twin arches. After Öz.

Pl. 291: Turkish wall tiles depicting multiple lobing of section of a meander. After Öz.
Pl. 292: Safavid miniature from Anwar-i Suhail. 1582.

After Stchoukine.
Pl. 293: Brick ornament from the Marjaniya madrasa, depicting the use of a section from a faulted meander for a lobed blind arch. Baghdad, 1357.
Fl. 294:

A. Han embroidered silk, depicting stylized cloud bands. After Lusnichenko.

B. Detail of A.

After Pope.
Pl. 298: Detail from a miniature in the Pleasure Garden of Sa'adi, depicting a multi lobed arch. Bukhara.

1555. After Blochet.
Pl. 299: A faceted Chinese pagoda with staged octagonal shaft, depicting a variety of pointed arches. After Karlgren.
Pl. 300: The mosque of Holy Remembrance and its minaret
(the so-called "Smooth Pagoda"). Canton. c. 900
After Broonhall.
Pl. 301: The minaret of Fakumen's mosque. Manchuria.

After Broomhall.
Fig. 302: Chinese minaret. After Andrews.
Pl. 303: Graffito from Bait al-Zekharif, Samarra. 9th century
Fl. 304: Graffito from Bait al-Zakhmir. Samarrā, 9th century
Pl. 305: Graffito from Bait al-Zakhārif. Samarrā. 9th century
Pl. 306: Bronze tiger. Chou dynasty. c. 10th Century B.C.

After Sickman and Soper.
Pl. 308: Portrait of Sultan Husain Mirza. 1506.

After Sarre.
Fl. 309: Porcelain flask, depicting a cloud collar. Chinese.
14th Century. The Victoria and Albert Museum.
Pl. 310: The despot Oliver, from the Church of Esnovo.

Serbia. Middle of the 14th Century.
Pl. 311: The feast of Qubilay Khan, 1263. After Gray.
Pl. 312: Segmented arch (madani) on the western outside wall of the Mustansiriya madrasa, Baghdad.
Pl. 313: Bronze cauldron. 13th - 14th Century.

The Victoria and Albert Museum.

Pl. 314: Bronze cauldrons. 13th - 14th Century.

The Victoria and Albert Museum.
Pl. 315: Triangular ornamental plaque of stamped gold foil.

Northern Mongolia, c. 2 A.D. After Trever.

Pl. 316: Chinese casket. 10th - 11th Century.

After Fontain and Hempel.
CHAPTER XI.

FIGURAL MOTIFS, ABSTRACT MOTIFS AND ARTEFACTS OF CHINESE ORIGIN IN

ISLAMIC ART.
The Anqā' and the Sī Murgh

The words 'si murgh' can be translated as "Thirty Birds." The Sī murgh is supposed to live for a hundred years, to eat once a year, and never to alight on the ground. It is believed to dwell in the Jabal Ẓār. (1)

The significance of the term "thirty birds" has been interpreted to mean a bird which is as big as thirty birds or as powerful as thirty birds. It is maintained that this term might have been devised by Firdawsi when writing the Shāhnāma.

Another mythical Persian bird is the Homā. According to legend, when the King dies, the people are asked to assemble and a Homā is released over the crowds until it alights on someone who is then proclaimed King. (2)

This bird is known amongst the Arabs as Tair al-Saqād (the bird of good fortune).

A bird similar to the Persian Sī murgh is also known to the Arabs under the name of al-'Anqā'; it lives on a huge tree in the middle of Bāy al-Zulumāt (the Sea of Darkness).

A third bird - the Fanāq (phoenix) is also known to the Arabs and the Persians under its Greek form and characteristics.

According to White, the Chinese "phoenix" (feng-huang) was a bird of good omen which refused to appear in a misruled country, and which would rest only on a Ju-t'ung tree. (3)

(1) Donaldson, op. cit., p. 166.
(2) Ibid.
(3) White, op. cit., p. 56.
He quotes from the Book of Odes as follows:

"on those high peaks is heard the call of the phoenix, and there is where the Wu-t'ung trees quiver in the morning sun." (1)

There are two more such birds in Chinese mythology. One of them is the Yuan Ch'u which rises in the Southern ocean and flies to the Northern ocean, and the other is the Peng which flies for six months till it arrives at the Southern Abyss where it stops at the Pool of Heaven. (2) It seems likely that China inherited a common Asian stock of such mythological creatures. It seems that the characteristics of the Chinese mythical birds have been distributed among the Arab and Persian ones. The tree, the length of the flights, the mountain (probably the K'un-lun), the good omen, even their names, are all similar.

In Chinese, Feng is the male phoenix, and Huang is the female phoenix. (4) C'ang is most probably an Arabic corruption of Huang.

The Persian sî murgh is most probably a corruption of sîn murgh, sîn being the mis-pronounced Arabic word 'ṣīn' and murgh being bird, cock (or fowl). If this interpretation is accurate the term would mean 'Chinese fowl,' and that is exactly how it is depicted in Persian and Turkish art: (5) (compare pl. 317 and 323 with 318 and 321).

In Turkish, the homa is known as Sacâdat Qushu which means "the bird of happiness". The Chinese phoenix is known as Zulûf C'ang Qushu i.e. "the long side-whiskered C'ang bird." It is also known as Zumrud C'ang Qushu which means "the emerald C'ang bird". The former description defines the Chinese bird even more, because

(1) Ibid., p. 58.
(2) Bulling, op. cit., p. 97 (n.2).
(3) In the later Chou and Han periods the K'un-lun mountain was thought to be situated in the extreme West of the Universe (ibid., p. 82.)
(4) Ibid., p. 96.
(5) See pls. 318, 321, 322, 327, and 328.
the adjective zulūf is the plural of the Arabic word zuluf which means long side-whiskers. The Chinese phoenix is often depicted with two long feathers, stemming from both sides of its head, which look like two plaits.  

The earliest depiction of the ʻAnqa is found in the wall paintings inside the Harun of the Jawzaq (fig. 179 A: ʻ título). (2)

It is not yet possible to find depiction of the Chinese phoenix (ʻAnqa) in Islamic art prior to 836, (3) but one may quote a text mentioning the earliest known appearance of the ʻAnqa in a wall mosaic:

"What was to be built took shape... the king ordered... and the noble... and the two plaits were indeed formed on the head... and the king... in the form of a phoenix..." (4)

which means:

"Upon the completion of his palace in the Maidan, al-Muqtasim...... sat in it and gathered in it the members of his household and his retinue, and he ordered that the šaybū should be worn by all, and he put his seat (throne) in the ʻiwān which was decorated with mosaics and which had a picture of the ʻAnqa on its central (inside) wall......"

This incident took place shortly before al-Muqtasim left Baghdad for Samarra. He built the palace between 218-221/833-836. (5)

Another surviving example of the Chinese phoenix in Islamic art appears in metalwork, as early as the 11th-12th Century, on the so-called bull-headed ewer in the Art Institute of Chicago (pl.295 (6).

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(1) See pls. 325, 330, and fig 18Q
(2) Herzfeld, Die Malereien pls. XXIII and XXVI.
(3) The year in which Samarra became the capital.
(5) Ibid.
(6) Pope, Masterpieces, pl. 62.
Fig. 179: Phoenixes from wall paintings in the harem of the al-Jaussaq al-Khāqānī at Sāmarrā. After Herzfeld.
Fig. 180: Early Chinese phoenixes. (See the following page)
Fig. 180:

A. From a chueh in Lord Cunliffe collection. Late 11th century B.C. After Watson.

AA. From a kuei formerly in the Palace Museum, Peking. 10th century B.C. After Watson.

B. From the Pillar of Shen. Ch'u-hsien, Szechwan. 2nd century. After Sickman and Soper.

C-E. From pre-Han tomb tiles. 3rd century B.C. After White.

F. From a rubbing made from a stone found in Sze-ch'uan. Later Han period. After Bulling.

G. From an embroidered silk. Han dynasty. After Lubo Lusnichenko.
In Islamic pottery the phoenix appears in the late 12th Century on lustre ware (fig. 181 A and B). (1)

Though it was not possible to find exact parallels for the three phoenixes mentioned above in Chinese art, they seem to possess all the characteristics of some of the Han phoenixes. These include the long neck; the tall crest curving forwards, which stems from the back of the head and terminates with a knob-like finial or an eye similar to the eyes of peacock feathers; the raised wing apparently ready for flight; the long primary flight-feathers; and finally the tail feathers (usually three) which sweep upwards and forwards like the crest and terminate with a knob-like finial (fig. 180 B).

From the 13th Century onwards exact parallels (from which the Islamic phoenixes were copied) abound in the various media of Chinese art (pls. 317, 318, 322, and 323). For example, the confronting phoenixes on the Sultänabad bowl (dated 672/1274) (3) of fig. 181 C, have an almost exact parallel on a Chinese silk (fig. 181 E). The rendering of the two phoenixes of the Sultänabad bowl is very interesting indeed and reveals the accuracy with which the Persian potters have copied Chinese subject matter.

Willetts discusses the belief that phoenixes were bi-sexual creatures, needing no partners for mating, their male elements incorporated in feng, their female in huang, and concludes that occurrences of two phoenixes confronted in Han art, especially where one carries a crest and the other does not, show that the

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(1) Lane, op. cit., pls. 54C and 57B. Willetts calls such finials "club-like prominences" (op. cit., I, pp. 280-1).
(2) Willetts, ibid.
(3) Lane, op. cit., pl. 94.
(4) Von Falke believes that this piece of silk shows Islamic influence, presumably because of the confronted phoenixes (Von Falke, op. cit., pl. 96).
Fig. 181: Phoenixes of Chinese origin in Islamic art.

A) Persia (Rayy). Late 12th century; B) Mesopotamia. Lustre ware, 12th century; C) Persia (Sultanabad). Dated 1274; D) Persia (Sultanabad). Early 14th century; E) East Asian silk. Medieval period.
Han artist, baffled by the biological anomaly of a bi-sexual bird, intended the pair to represent male and female. This phenomenon appears clearly on the Sultanabad phoenixes, as one of them seems to be fully crested and the other has scarcely any crest.

A number of Chinese phoenixes appear on 13th and 14th Century lustre relief tiles. An example is pl. 322 from Rayy (2) which seems to be a direct copy from Chinese carved lacquer such as the Chinese Imperial table of pl. 323(3). The Persian phoenix on a star shaped tile from Kāshān (pl.324 (4) seems to be another copy of such work. (pl. 323, 325 ).

In miniature painting, a very early surviving example of the phoenix appears in a miniature from the History of the Mongols. It was executed in Tabriz around 1310. (6) The phoenix is depicted as a textile motif decorating the cushion which forms the back-rest of Yisuhai Bahadur. A combat scene between phoenixes and dragons appears on the flap of a 14th Century book-cover from Herāt (pl. 326 ).

In another 14th Century miniature from a Tabriz Shāh nāma (in the Topkapu Sarāy Library) (7) the phoenix dominates the scene and forms an integral part of the subject matter. This seems to support the suggestion that Firdawsī might have borrowed the theme of the

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(2) This tile has been attributed to Varāmin and to the early 14th Century by M.S. Dimand, A Handbook of Mohammedan Decorative Arts (New York, 1930), p. 135, pl. 69. In the second edition of this book (New York, 1947), he attributed the tile to Kāshān (pl. 132). Pope attributes the tile to Rayy and dates it as a 13th Century tile: A.U. Pope, An Introduction to Persian Art (London 1930), pl. 31. Godard, on. cit., p. 320, realises the impact of Chinese influence on Iran.
(4) 14th Century (Godard, ibid., pl. 173)
(5) Low-Beer, on. cit., pls. 16 and 24.
(6) In the Bib. Nat., Paris (Blochet, on. cit., pl. LIX).
(7) This shows the Sārāfī carrying Zāl to his nest in the Elburz Mountains (Gray, Persian Painting, pl. on p. 41)
Chinese phoenix (the Sin murgh) in the 10th Century for the dramatization of his story, because the phoenix does not seem to appear in the miniatures of earlier periods.

In the 16th and 17th Centuries the phoenix appears frequently in Persian and Turkish miniatures (apart from Shāh-nāma scenes) as an important part of their composition and as a decorative motif on textiles (tents or pavilions), mural painting, and even on the saddle of a horse.  

The Āḥār ibn al-Makhluqāt in the Walters Art Gallery, in Herat in 1613, contains a miniature depicting a scene with a mongoose on a tree; the phoenix appears in a mural. In a manuscript in the Bibliothèque Nationale at Paris, believed to date from 1624, a miniature depicts the arrival of Shārīn before a pavilion of brocade in which Khusrav is sleeping; phoenixes form the decoration of the brocade pavilion.

The occurrence of other animals from the Chinese bestiaries (apart from the phoenix) is considered by Blochet as characteristic of the late 16th early 17th Century in Persian painting.

The phoenix appears on a number of Turkish manuscripts in the British Museum, (such as the Humāyūn-nāme and Nadiqat al Suqadd) amongst other animals from the Chinese bestiaries.

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(1) Ibid., pl. on p. 140 (a scene from a Khamsa of Nisãmdated 1535-40).
(2) Ibid., pl. on p. 165.
(3) Ibid., cit., pl. CLII.
(4) Ibid., pl. CXLIII, caption.
(5) DWS 15153, f. 149a (dated 1589); G.H. Heredt-Owens, Turkish Miniatures (London, 1963), p. 27, pl. XIX.
(6) Or 12009. f. 24b (1600-25); Ibid., p. 29, pl. XXXIII.
Combat scenes between phoenixes and dragons appear on the blades of Turkish swords in the Heeres Museum in Vienna (pl. 322)\(^1\). These swords have been held by some to be Mongolian, originally from Persia; they have been divided between Vienna, Dresden, and Munich.\(^2\)

The phoenix appears on early 15th Century Turkish rugs in the Historiska Museet, Stockholm (pls. 328 and 331). The Marby Rug (pl. 328)\(^3\) displays a pair of rectilinear phoenixes confronting each other between two geometrical clouds (or probably a highly stylized "wu-t'ung tree"). They have typical Chinese characteristics such as the long crests, and the three plumes of the tail curving upwards and forwards remind one of the early 11th Century B.C. phoenixes on the Chou ritual vessel (Fang-tsun) of the Freer collection (pl. 329),\(^4\) and similar Chinese compositions of confronted phoenixes on textiles and lacquers of the Han dynasty, such as the Lo-Lang cup (pl. 330) and the Han silk of fig. 47.

The appearance of confronted animals in the Chou and pre-Chou period and their development into T'ao-T'ieh masks in China strongly suggests the improbability of a Sasanian origin for such compositions in Han textiles, especially as it has been proved in a recent work by M.W. Meister that another motif, the so-called 'Sasanian Pearl roundel' which is supposed to have influenced Chinese textile designs of the 6th Century, had its origin in Han textiles.\(^5\)

\(^{1}\) Sarre and Martin, *op. cit.*, pl. 236.
\(^{2}\) Diez and Glück, *op. cit.*, p. 476 and caption.
On another 15th Century Turkish carpet in the Staatlich Museum in Berlin (pl.331) (1) which is similar to the 'Marty Rug' in style, a combat scene between a phoenix and a dragon is depicted. The highly stylized phoenix is attacking from above. Its three tail plumes are clearly seen behind the dragon's head; its neck is stretched out in a sweep whilst its head turns in a sharp bend to meet the dragon face to face. The two whiskers descending from its head are horizontally and symmetrically arranged to fit the narrow space between the phoenix's head and one of the dragon's limbs.

The appearance of these two purely Chinese themes on two Turkish carpets as early as the 15th Century, together with other typical Chinese conventions such as the borders of 'S' motif bands and the 'latch-key' motif has far-reaching significance. The degree of geometrical abstraction to which the dragon and the phoenix have been subjected can only indicate a long period of assimilation of Chinese motifs by Turkish nomads. These two carpets are probably the work of nomad women who might never have seen an actual Chinese phoenix or dragon on an expensive piece of silk or lacquer, but they drew from their own repertoire without realising its original source.

On the other hand, a good number of Chinese geometrical motifs appear on Seljuk carpets as early as the 13th Century and most probably on earlier carpets which have not survived, e.g. the carpet in pl.332. This motif is a highly geometric cloud fleece with a trailing tail. In the centre of the fleece a swastika is depicted. Two naturalistic versions of this motif appear on 14th Century Chinese damasks (pls.333 and 334) found in Egypt. (2)

(1) Diez and Glück, on cit., pl. on p. 383.
(2) Both pieces are in the Kunstgewerbe Museum, Berlin. For illustrations see von Falke, on cit., pls. 285 and 266.
The motif of pl. 333 (1) is clearly a cloud or a vapour form with a Chinese inscription at its centre as well as on its pointed tip. The fleecy part of the motif in pl. 334 (2) has been turned into a flower form (probably a carnation) with the addition of appropriately shaped leaves to the trailing tail. The close affinities between the three motifs mentioned above cannot be ignored. In the three examples, the rigid adherence to form (especially the rendering of the curves of the trailing tails and the placing of the volutes at fixed distances from the main bodies of the motifs) is astounding. It proves beyond doubt the Chinese origin of the Turkish motif; for once, the chronological order of appearance of the motif on the surviving pieces can be regarded as irrelevant. Besides, this form of cloud (or vapour) is peculiar to China. It appears on a Han silk (3) found at Noin-Ula. This form of cloud has been identified by Trever as a "stocky desert-like plant." (4) Sullivan identifies it as a Ling-Chih (spirit fungus) (5) whilst the shape indicates a rising vapour, probably the vapour of cosmic breath 'Ch'i' or the cloud-breath ('Yun Ch'i') (6). These forms are considered by the ancient Chinese from pre-Taoist times (7) as the visible manifestations of the very essence of life. (8) The Chinese believed that the mountain is the body of the cosmic being, the rocks are its bones, the plants its hair, the water its blood, and the clouds and mists are the vapour of its breath. (9)

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(1) Ibid., pl. 285.
(2) Ibid., pl. 286.
(3) Trever, op. cit., p. 35, pl. 15.
(4) Ibid.
(5) Sullivan, op. cit., p. 178, fig. 3.
(6) Ibid., p. 1.
(7) Ibid.
(8) Ibid.
(9) Ibid.
It seems that no other nation has attached such significance to clouds as the Chinese have, nor portrayed them in so many forms and stylizations.

The phoenix and the dragon do not seem to occur on Persian carpets before the 16th Century. Edwards maintains that the designs of Persian carpets "were almost certainly rectilinear," during the reigns of the Umayyads, the Abbāsids, the Saljuks and the Mongols. (1) This statement does not coincide with what is known of the 'Bahār-i-Khusrau' which represents a garden with trees, streams, and flowers. (2) Godard comes to virtually the same conclusion as Edwards; he maintains that

"in miniatures the decoration of carpets had been geometrical for a long time, but that it ceased to be so in the sixteenth century." (3)

Edwards apparently based his statement, too, on the carpets depicted in miniatures. Erdmann maintains that all the miniatures reproduce rugs of the Mongol period. (4) He also states "what the Persian rug of the Saljuk era looked like is unknown to us." (5) Godard on the other hand maintains that "in contrast to the nomads, Persian taste was not in favour of geometrical decoration"; (6) while Edwards states that the Saljuks introduced the Turkish knot into Azarbajjān and Hamadān. (7)

All these statements seem to lead to the following conclusions:

(2) Godard, op. cit., p. 215.
(3) Erdmann, op. cit., p. 331.
(4) Erdmann, op. cit., p. 22.
(5) Ibid.
(6) Godard, op. cit., loc. cit.
a - The rectilinear designs are characteristic of the Turkish nomads (Saljuks and Mongols).

b - They were most probably introduced into Persia in the eleventh century by the Saljuks with the Turkish knot, and they were reproduced extensively until the 16th Century.

This suggests that the decorative repertoire of the nomadic Turks which prevailed in Central Asia, Anatolia, and later in Persia had already been heavily influenced by Chinese themes and artistic conventions, even if much of it was not an exact imitation of the Chinese repertoire.

It should be noted that apart from the phoenixes and dragons the Central Anatolian rugs abound with other hitherto unrecognised Chinese motifs such as the 'hooked-latch' motif which is a severely geometricalized cloud-curl (or Han curl) pattern, the 'S' pattern bands forming border bands, and the 'Key' pattern (cloud and thunder pattern) which appears on the heads of the so-called Kufic inscriptions of the Konya carpets (fig.98).

It seems that the 16th Century with its craze for chinoiserie in Persia brought about a fresh interest in Chinese themes for the Persian carpet; this time not through the rectilinear approach of the nomad Turks, but through direct borrowings from the 14th Century Chinese repertoire as exemplified on the porcelain of the Ardabil shrine (pl.335), silks, and most probably lacquer.

A number of scholars apply the term Ṣūrḫ to the winged animal depicted on the Sasanian relief of Taq-i Bustān (on the equestrian figure of Khusrau II). (1)

(1) Pope, "Porcelain from The Ardabil Shrine, pl. 17.
It was attributed by some to Babylonian-Assyrian art. (1) Others called it "senmery" (or bird-dog). (2)

This winged and peacock-tailed animal has its origin in Indian Buddhist art as early as the early part of the 1st Century A.D. in the reliefs of the Great Stupa at Sanchi (pl. 336). (3) The relief represents the return of the Buddha to Kapilavastu. The head of the Sanchi animal is a lion's head; the peacock tail is missing (probably chipped away) but the rendering, the posture, the positioning of the forelegs and the wings are very much the same as those of Taq-i Bustan. A similar animal depicted on a drinking bowl from northern India (in the British Museum) has been considered to be of Sasanian origin (or influenced by Sasanian art) even though the oldest example of such animals existed in India two centuries before the establishment of the Sasanian dynasty, and probably much earlier.

Iran was partially a Buddhist country during the Sasanian period. (4) The Zoroastrian religion was strongest in the extreme south and west of Iran, (5) but eastern Iran may well have been subject to strong Buddhist influences. Blochet even maintains that:

"Hindu civilization spread over the Persian land far to the west of the Oxus; Ghazna, Kabul, Kandahar were Buddhist just as Bactria, Samarkand, Bukhara were." (6)

The influence of India on the Sasanian art of Taq-i Bustan has been pointed out by Herzfeld in regard to the occurrence of the Indian lotus in the relief representing the investiture of Ardashir II. (7)

(1) Kendrick, op. cit., p. 15.
(2) Talbot Rice, op. cit., loc. cit., others term it senmery.
(3) On the west pillar of the north gate.
(4) Blochet, op. cit., p. 78, terms Sasanian Iran "essentially" Buddhist.
(5) Ibid.
(6) Ibid.
(7) E. Herzfeld, Am Tor von Asien (Berlin, 1920), pl. XXIX, fig. 15, p. 63.
Fig. 182: Peacock tailed dragon from a drinking bowl in the British Museum. Northern India. Sassanian period. After Ghirshman.

He has also pointed out the realistic rendering of the elephants which he finds quite un-Sasanian. (1) Herzfeld suggested that it was quite possible that Indian artists were responsible for its execution.

Dimand maintains that "Indian floral motives appear also in the design of Sasanian silk garments worn by persons in the reliefs of Taq-i Bustān." He draws attention to the garment of the harp player of Khosrau II which is decorated with Sasanian rosettes and purely Indian lotus flowers. (2)

Dimand also relates a number of incidents confirming close ties between India and Sasanian Iran, such as the Indian physician of Shahpur II, the importation of 'Kalila v Dimnak' (Kalila wa Dimna) by Khosrau I, and the introduction of chess. He also relates an Embassy from India with gifts for Khosrau II, and another for Kubad, with a gift of an elephant, a sword, a white falcon, and a gold brocade. (3)

It seems very likely that such embassies were responsible for the introduction of the Indian motif (the so-called Sasanian ōmurch or senmār) on gold brocades into Sasanian Persia.

(1) Ibid., pls. XLVI-XLVIII.
(3) Ibid.
Lions

A closer study of the animal motifs—especially elephants and lions—on silks found in the West reveals stylistic traits in the depiction of these animals which are peculiar to Chinese art.

It is a fairly well-known fact that Chinese lions look like Pekingese dogs. They are rendered with curly manes, shaggy tails and short squarish bodies. They have grotesque facial features (pl. 337, 338, 339, fig. 183a) and they are endowed with over-dramatic movement and vitality. They are very unlike the almost static poise of the confronted lions of the textiles under consideration (fig. 184, B and C, and pl. 340).

Apart from the curly manes (Han curls) and the short bodies, there is hardly any similarity between the two types.

Nevertheless, similarities can be found between the early representations of the lion in 2nd Century tomb sculptures of the Han period (fig. 185a), the 'Lions of Liang' (fig. 185b) and the representations of 3rd - 4th century chimeras (fig. 186 A and B).

The lion is not native to China. Sickman believes that such early representations might have been executed from descriptions or small-scale prototypes.

The earliest known introduction of lions into China was with a

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(1) Chinese fabric, Ming dynasty (1368-1644).
(2) Chinese lion; 17th century stone sculpture in the Victoria and Albert Museum (1719-1920).
(3) Chinese silk (14th cent.); (von Falke, op. cit., pl. 288).
(4) Ibid., (detail).
(5) Chubanshe, op. cit., pl. 27 (detail).
(6) Sickman and Roper, op. cit., pl. 15.
(7) Ibid., pl. 16B.
(8) Ibid., pl. 17 A and B.
(9) Ibid., p. 28.
(10) Ibid.
Fig. 183:
A. Detail from brocade vestment, Pl. 11.
B-D. Detail from Pl. 339.
Fig. 184: Lions (B and C) and griffins (A and D) on textiles.
A) 12th century. After Pope; B) 8th-9th century. After Von Falke; C) 8th-9th century. After Von Falke; D) 8th-10th century. After Von Falke.
Fig. 185: Early Chinese lions.
A. Stone lion. 2nd century. After Sickman and Soper.
B. Stone lion. Liang dynasty, 518 A.D. After Sickman and Soper.
Fig. 186: Chinese chimeras
A. Stone chimera. 209 A.D. After Sickman and Soper.
B. Stone chimera. 3rd–4th century A.D. After Sickman and Soper.
delegation sent by the Yueh-Chih in A.D. 87. They were called 'fu-pan' probably to differentiate between them and the horned chimeras (figs. 186 A and B) whose form is derived from that of the tiger.

Those lions and chimeras were used in pairs as tomb sculpture guarding the 'Spirit Road' as early as 147 and probably earlier.

It seems that early representations of the lion were fairly naturalistic (fig. 158A); but they seem to evolve within the course of 400 years into the purely Chinese style of the 'Lions of Liang' (fig. 165B) which might have followed, and have been strongly influenced by, the Chimera style for lack of live models.

These lions and chimeras exhibit such remarkable similarities in their details and their stance to the later lions of the textiles in question that it is necessary to explore the reason for these affinities. Among the features which the images of the Chinese beasts and of the textiles have in common, one may cite the strongly developed shoulders, the arched thick neck, the vastly expanded chest, and the backwards tilt of the square head with the widely-stretched jaws and the lolling tongue. This latter feature may have been borrowed from depictions of dragons. Also common to both images are the stylized feathers of the wings, which can be seen distinctly in fig. 184C; they take the form of adjacent triangles stretching from the shoulder-blade towards the flank. They may be seen less distinctly in fig. 184B.

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(1) Sickman and Soper, op. cit., p. 292 (note 14).
(2) Ibid.
(3) T'ien-lu and pi-hsieh (ibid.)
(4) Ibid., p. 29.
(5) Ibid., p. 28.
(6) Ibid.
(7) Ibid., pp. 28-9.
in the form of two small triangles stemming from the geometrically stylized shoulder blade. Among the most distinctive features are the striding forelegs, both of them facing in the same direction\(^{(1)}\).

The only significant difference in the representation of the two types is the rendering of the tails, which is most probably due to the space available within the limits of the roundels.

The Chinese horned chimera recalls the 8th-10th century Byzantine textile with the so-called 'striped gryphon pattern'\(^{(2)}\) in St. Martin's Church at Liège, which is clearly a 'one-horned' chimera (t'ien-lu). This makes it rather unreasonable for von Falke to include it among the Byzantine fabrics rather than the Chinese\(^{(1)}\) (fig. 184 D ).

\(^{(1)}\) Ibid.

\(^{(2)}\) Von Falke, op. cit., pl. 172.
Elephants.

Number of elephant representations are found on textiles of "East Iranian" (fig. 187 A), (1) "Persian" (fig. 187 B - C), (2) and "Byzantine" (fig. 187 E & F), (3) provenance. Though these elephants exhibit some variations in the degree of stylization, some of them (p. 10 and fig. 187) follow the marked Chinese convention for the depiction of elephants (see pls. 357,359, and fig. 183 D).

All of them share a common feature: a marked misunderstanding of the anatomical construction of the elephant, and particular part of the function of its legs. The pastern-joints between the fetlocks and the feet of these elephants are clearly depicted. This makes the legs look like the legs of felines, with clearly marked paw-like feet (fig. 187 B - F).

The same phenomenon occurs in the elephants of the 5th - 7th century wall-paintings in the palace at Varaksha (4) (fig. 188), (5) and in the elephants depicted at Pianjikent. (6)

Although it formerly bred in East China.

The elephant, like the lion, is not native to China. The earliest representations of elephants in Chinese art appear as early as the Shang dynasty (1766-1122 B.C.), such as the 4th Century B.C. elephant town (7) of fig. 189. (8) Though the rendering of this elephant is fairly naturalistic, a number of details suggest that such representations were probably made from small scale depictions or from memory. They include the drastic reduction of the length of

(1) R. Finder, "Island, Islamic Art" (London 1957), pl. 54; D. Talbot Rice, Islamic Art, pp. 55-6, pl. 49.
(2) Von Falke, Z., cit., pls. 97 and 98.
(3) Ibid., pls. 177 and 185.
(4) D. Talbot Rice, Z., cit., p. 99 and pls. 31, 2.
(5) Ibid.
(6) Ibid. (caption).
(7) Chinese ritual vessel used for holding wine. Some of them are in the shape of a complete animal (at son, Z., cit., pp. 23 and 36).
(8) Ibid., pl. 30a.
Fig. 187: Elephants on Western textiles.
A) Elephant on East Iranian silk. 10th century. After Von Falke;
B) From an elephant tissue. Persian 7th-9th century. After Von Falke;
C) From an elephant silk. Persian. 7th-9th century. After Von Falke;
D) From a silk twill. 10th century. After Pinder Wilson;
E) From an elephant tissue. 1006. After Von Falke;
F) From a Byzantine silk. 11th century. After Von Falke.
Fig. 188:

Elephants from wall paintings in Central Asia.

A. From a wall painting at Varakhsha. 5th-7th century. After Talbot Rice.

B. From a wall painting. Central Asia. After Yakubovskey.
Fig. 189: Elephant tsun. 11th century B.C.
After Watson.
the legs; the size and shape of the ears; and the enlargement of the eyes. These features seem to persist in later representations of the elephant in Chinese art (pls. 337, 341, and fig. 483D) as well as in arts influenced by it, such as the Varakhsha and the Piandjikent elephants, and the elephants of the textiles under discussion.

Another characteristic feature which can be observed in Chinese elephants is the misconception of the actual size of the elephant in relation to its rider (most probably a result of the lack of live models). This seems to have led to the reduction of the height of elephants to the height of horses, or even asses, as in pls. 337, 341, and fig. 483D. These two features are quite marked in the elephants of Varakhsha and Piandjikent and slightly less distinct in the elephants of the textiles, perhaps because of the lack of riders or other animals with which to compare them. But one cannot fail to feel the miniature quality of the textile elephants, especially those of the Byzantine stuffs (fig. 187 E and F) even without the aid of an accessory shape, such as the delicate plant motif of pl. 10.

For the same reason, i.e. the absence of live models, the Chinese elephants seem to have been endowed with comparatively long and flexible necks capable of unrestricted movement (pls. 337 and 341). Traces of this feature can be seen in the arched necks of elephants in Byzantine fabrics (fig. 187J).

The accumulation of so many distinctly Chinese stylistic features in these textiles clearly suggests the affinity of these 'textile elephants' to the Chinese elephant and their remoteness from those marvellously realistic elephants of Taq-i Bustan (fig. 190) and consequently confirms the theory of a Chinese rather than a Sasanian origin for the motifs of such textiles, if not for the tex-
Fig. 190: Relief sculpture at Tāq-i Bustān. After Pope.
tiles themselves. (1)

The mere fact that elephant units existed in the Sasanian armies, and their use in battles such as the Battle of al-"Adisiya (2) constitutes a strong argument against such representations of elephants as those of the textiles being rendered by Sasanian weavers. Rather do they seem to be the products of peoples who have never seen an elephant in real life, or perhaps have had only a short glimpse of it on certain occasions, such as the arrival of foreign embassies and delegations bringing tribute.

In Islamic miniature painting, a good number of elephants are depicted. The majority exhibit the same characteristics as those of the textiles and those of the elephants in Chinese art. The elephant of the Shihna (1206) of the Fozzi collection (3) and the elephant of Kitab al-Hiyal al-Fandasiya (1315) (4) of pl. 342 and others are in this category.

(1) It seems that Talbot Rice was the first to recognize Chinese influence in Islamic textiles. Speaking of the Sasanian style of the stuff from Josses-sour-mer, (fig.187D) he makes the following remark:
"Its style is distinctly Sasanian, and were it not for the inscription on the border, in fine, majestic Kufic, it might well have passed as a Sasanian piece. Yet an atmosphere of change is in the air, for the gryphons between the elephants' legs show hints of China and indicate that Far Eastern elements were already beginning to make themselves felt." (Islamic Art, p. 55-6.)

This same textile, incidentally, also contains a depiction of the phoenix.


(3) Blochet, On. cit., pl. XI.

(4) Stimminghausen, O. cit., pl. on p. 93.

(5) Such as the elephant of the Mathnawi ma'na Ma'vawi (Ma'navi i ma'navi) in the British Museum, datable to c.1530 (G.N. Meredith-Owens, Persien Illustrated Manuscript (London 1965), pl. XV); the elephants of the Husaynibin of the British Museum, datable to 1589 (Meredith-Owens, Turkish Miniatures, pl. VI) and the elephant of the Khusrau Shīrīn of the Royal Scottish Museum, c.1540 (Gray, Persian Painting, pl. on p. 134.)
On the other hand, there are a few elephants depicted realistically in some of the miniatures, such as the elephant of *Kalīla wa Dimna* of the Bib. Nat., Paris (c. 1230), (1) and the elephants of the *Manāfīc al-Ḥayawān* of the Pierpont Morgan Library, (2) painted between 1294 and 1299. (3)

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(1) Blochet, *op. cit.*, pl. XXI.
(3) Ibid., caption.
Fabulous Birds.

Similarly, western textiles depicting fabulous birds display stylistic conventions peculiar to Chinese art, such as the carriage of the tail-plumes (fig. 191 A-E & I and fig. 194), the double crest (fig. 191 E fig. 192 and fig. 193), and the double head (fig. 194).

The long tail-plumes, sweeping upwards and forwards, are a most characteristic feature in the depiction of the Chinese phoenix. These tail-plumes appear as early as the 6th Century on the garments of Tāq-i Bustān (fig. 191 A & B), on a piece of figured silk in Berlin attributed by Von Falke to Persia (6th-8th Century), as well as on some Sasanian gem-stones.

This convention seems to occur on many eastern Islamic textiles (fig. 1910-i'W and fig. 192 J), and also on textiles influenced by them, such as the 12th Century silks of Sicily (fig. 191 E and I) and the "Peacock Tissue" from Palermo.

The tendency towards the elaboration and lifting of the tail of the phoenix seems to occur late in the Shang period (1766-1122 B.C.), as on the 11th Century B.C. bronze Chun (fig. 180A). By the Han period, this tendency seems to have developed far enough to become a stylistic convention (fig. 180 B & G) which is fairly closely followed in the representation of phoenixes in subsequent periods (fig. 191 F-H).

(1) Cf. the discussion of the influence of Chinese metalwork on Islamic metalwork (supra, pp. 63-65).
(2) Von Falke, op. cit., pl. 64.
(3) Ibid., pl. 69.
(4) Ibid., op. cit., pl. 69.
(5) Pope, Masterpieces, pl. 70.
(6) Ibid., pls. 159, 164 and 165.
(7) Ibid., pl. V (colour plate).
(8) Atson, op. cit., pl. 10a.
(9) Von Falke, op. cit., pls. 87, 88 and 96.
Fig. 191: Fabulous birds.

C. From a piece of silk in Berlin. Persian. 6th-7th century. After Von Falke.


E. From a piece of Lucchese silk. Sicilian. 13th century. After Von Falke.


G. From a silk in Shoson. East Asian. 7th century. After Von Falke.


Fig. 192: Details from textiles depicting birds. (See the following page).
Fig. 192:


D. From a tissue in Vich. Sicilian. 2nd half of the 12th century. After Von Falke.

E. From the 'Peacock tissue' in the cathedral of Toulouse. Palermitan. 11th-12th century. After Von Falke.

F. From a piece of Luccece silk. Sicilian. 13th century. After Von Falke.


L. From a silk in Lyons. Andalusian. 11th-12th century. After Von Falke.

M. From a silk compound. Persian. 11th-12th century. After Pope.


Fig. 193: Detail from striped brocade.
Venice. 14th century. After Von Falke.
Fig. 194: Double-headed eagles in Islamic art. A) Iraq c. 1200; B) Iraq c. 1200; C) Amida 13th century; D) Konia 1st half of the 13th century; E) Sicily 12th century; F) Baghdad c. 1220; G) Divriği 1228. A-F after Von Falke. G after Hill and Grabar.
and in various media.

The appearance of such a purely Chinese convention on a garment depicted in the Sasanian reliefs of Taq-i Bustan confirms at least the high probability of a strong Chinese influence on Sasanian figured silks. It may even suggest that the garments in the reliefs are actually Chinese. It would be fair to assume that only the highest quality silks from the looms of the Imperial court of China would befit the 'King of Kings' and his retinue, and not imitations turned out by local weavers.

The two characteristic crest plumes stemming from the back of the head of the Chinese phoenix, and turning upwards and forwards play a major role in the textiles of the West (figs. 192, 193 and fig. 194). They seem to have been developed into ears in textiles depicting double-headed eagles (which are really phoenixes) as in figs. 192 and 193 and fig. 194, which date from the 12th Century; they also developed into horn-like shapes (fig. 193).

This two-plumed crest of the phoenix appears in Chinese art very early indeed. It is found on an 11th Century B.C. bronze

(1) (Cf. the discussion on the influence of Chinese metalwork on Islamic metalwork, supra, pp. 361-2).
(2) It should be noted that 'eared heads' of a bird of prey enclosed in pearl roundels appear as a textile motif in the 5th - 6th century wall paintings of Balalyk Tepe (T. Talbot Rice, op. cit., pl. 96) and are reminiscent of the gryphon head of an 8th Century Byzantine textile (Von Falke, op. cit., pl. 171). This motif is attributed to Sasanian influence on the art of Central Asia (Talbot Rice, ibid., p. 111). It is worth noting that this motif decorates the outer garment of the reclining lady in the foreground. The two cup-bearers to the right of the reclining lady are dressed in outer garments decorated with the purely Chinese pattern of 'eared' heads (which look like trefoils enclosed by heart-shaped motifs). An exact parallel for this pattern is found on the outer garments of the four priests depicted in an embroidered Chinese silk discovered in 1965 (Chubanshe, op. cit., pl. 2). These are datable to the Chin-Northern dynasties (265-420) (ibid., Dolby's translation, p. 5). This may suggest that most of the textile patterns of the wall paintings are of Chinese rather than Sasanian origin and consequently that the "eared" bird head has a similar origin.
Chuèh (1) (fig. 180 A), in a highly stylized form. In its most distinct form it appears perhaps for the first time (that is in the form of extended eye-brows reaching far beyond the back-curve of the head to end up in a curl in the direction of the head) on the phoenixes forming the handles of a 10th Century B.C. bronze Kuei (2) (fig. 180 AA).

It also appears in this form on the 3rd Century B.C. tomb tiles of Western Honan (3)(fig. 180DAB). (4)

It is this highly individual and very distinct form which has been reproduced in the wall paintings of Sāmarrā' (fig. 179) and imitated on Islamic metalwork (fig. 1630) and the textiles of the West (fig492 A-C, E-0, 193 and fig. 194 ).

The two crest-plumes of the phoenix seem to have gone through varying degrees of alteration. Some of them were very slight, such as the crest plumes stemming from the outer ends of the eyes instead of the eye-brows (fig. 192 B-C), or the elimination of the end curls (fig. 192 D). In fig. 192 E & F the curls were turned into roundels, and in fig. 192 L they were turned into ears. In fig. 192 H they stem from the base of the wattle, and in fig. 192 M they stem from the top of the head. But the most important characteristics remain, namely that the crest plumes form a pair which reaches backwards beyond the outline of the head. This makes them different from the crest of the peacock for which some of these bird motifs have been mistaken (e.g. fig. 191E & I, 192D and fig. 192J as well as the so-called 'Peacock Tissue' of Palermo).

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(1) Watson, op. cit., pl. 10a
(2) Ibid., pl. 37b.
(4) Ibid., pls. CIIFa, and CIVa.
These depictions possess all the characteristics of the Chinese phoenix.

The weavers who executed the peacock-patterns in the West might not have been aware that they were incorporating elements peculiar to the "Anca" (phoenix) into their peacock representations. They were most probably repeating elements which have saturated the Western repertoire through centuries of silk trade with China and through the presence of Chinese weavers in Western Islam. It would otherwise be difficult to explain the appearance at Samarrā, in the 9th Century A.D., of an exact parallel to an element which is first found in the 10th Century B.C. in China.

**Camels**

The Samarrā stucco reliefs portray dromedary camels. These camels are obviously not Arab. This can only be explained by the influence of the Turks on the art of Samarrā, (2) or - a possibility which Herzfeld did not consider - by influences coming directly from China itself. The strong plastic qualities of the camels in the Sīrāb at Samarrā, their posture with the lifted tail and, above all, the fact that they have two humps, unlike the Arabian camel, recall the Tang glazed earthenware statues of dromedaries.

(1) Chubanshe, om. cit., p. 2.
(2) Herzfeld, Die Malereien, pl. LXXVI.
The Double-Headed Eagle.

Another textile motif which seems to have its origin in Chinese art is the so-called double-headed eagle (fig. 194).

Although this design occurs in the various media of Islamic art, such as textiles (fig. 194 A, B, E & F), architecture (fig. 194 C, D & G), and coinage, it does not seem to have been thoroughly investigated. This is perhaps because of the universal conception of the eagle—likewise the lion—as the symbol of might and grandeur; presumably the double-headed eagle was simply thought to represent greater might and grandeur. The appearance of the double-headed eagle on Byzantine fabrics might have been a reason for this motif to be associated with the Roman eagle. Such an assumption of a classical origin would render further investigation of the motif unnecessary.

The so-called double-headed eagle of Islamic fabrics occurs in a number of variations and degrees of stylization, but all of them exhibit (to a greater or a lesser degree) characteristics inherent in the Chinese phoenix, such as the two crest-plumes, the long tail plumes, and the whiskers of the lower jaw.

In fig. 194 A, C, D, only one crest-plume is depicted, most probably for reasons of perspective (a one-plume crest appears in Han phoenixes, as in fig. 180).

In fig. 194 B & F the crest-plumes are stylized into ears. Such modifications of the Chinese phoenix are frequent in Islamic art, and this has led to the original model becoming slightly obscured. In fig. 194 C however, the long tail plumes do retain a connection with their prototype. On the other hand, the tails of fig. 194

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(1) Von Falke, op. cit., pls. 121, 122, 127 and 161.
(2) Ibid., pls. 123 and 124.
(3) Ibid., p. 20.
though elaborately decorative, seem to have departed from their prototype.

The whiskers and the crest-plumes seem to have remained true to type in fig. 154 e. In fig. 154 a-d they take the form of hanging cheeks (1) and in fig. 154 f they look like a pointed beard, which is fairly near to the original context.

A further proof of the identification of these so-called double-headed eagles as double-headed Ḍānqās (phoenixes) can be found in fig. 154 p, where the two extended primary flight-feathers of the wings end in two dragons. (2) This readily brings to mind the eternal state of conflict between dragons and phoenixes in Taoist mythology. In fact this composition (fig. 154 p) represents such a combat. The double-headed phoenix with the outstretched talons and menacing eyes is descending towards the two dragons, his talons outstretched.

The whole concept of this composition is Chinese, and indeed the double-headed phoenix appears in Chinese textile designs (probably another misinterpretation of the bi-sexuality of the phoenix on the part of the Han artist). The motif occurs embroidered on a Han silk in the Hermitage (pl. 343). (3) A closer study of the des-

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(1) This is, of course, a feature of fowls and not of the eagle. One of the Chinese names for the phoenix is "the flowery fowl."

(2) Von Falke does not recognize that the dragons in this composition are attached to the flight feathers of the so-called eagle and that they constitute an integral part of it. He considers them as separate entities and refers to them as "arabesques ending in dragon's heads" (op. cit., p. 24).

(3) There are five fragments of the same fabric in the Hermitage. Two of them are published by Trever (op. cit., pls. 16 and 18 (2)), and all of them are published by Lubo-Lusnichenko (op. cit., pls. XLIV, XLV, XLVI, LI, and LII). The fragment in pl. 343 LII is the right lower corner of the original stuff, embroidered with a dragon turning its head, probably towards the two-headed phoenix in the fragment of pl. XLIV, which is situated above the dragon at a distance equivalent to the length of the dragon from the right upper corner.
ign (fig. 191 + F) suggests that the attitudes of the phoenix and dragons are foreign to Chinese art. The dragons seem to be oblivious of their assailant. They turn away from it with a threatening snarl directed towards opponents outside the composition. The eyes of the double-headed phoenix seem to be directed towards the same opponents and not towards the dragons; the same is true of their talons.

In this composition the phoenix and the two dragons are incorporated in one fabulous creature; this is probably a symbol of supreme power. The creature is imbued with the courage and strength of two phoenixes as well as those of two dragons; even the harmless feathers of its wings (which end in dragon heads) are as lethal as its two beaks and its talons.

Most probably the heraldic qualities of this creature prompted the Saljuk Turks (1) to take it for their coat of arms; the Artuqids and the Zangids used it for their badges, (2) as did Ǧalāḥ al-Dīn. (3)

Another form of combined phoenix-dragon occurs in Northern Mesopotamia during the 13th Century as an architectural ornament; examples are the intertwined dragons on the entrance to the tomb chamber of the Imam al-Bāhir at Naušil (699/1299) (4) which is now in the Iraqi Museum. These dragons are rendered in pairs, with long snake-like bodies intertwined at intervals, and they end in phoenix heads.

(1) Von Falke, op. cit., p. 20.
(2) Ibid.
(3) Ibid.
(4) Daiwachi states that this shrine was built in the 6th Century A.H. by an "Atabegid King" as a madrasa, and that Badr al-Dīn ʿAbīlū′ converted it into a mashḥad for the Imam al-Bāhir. He also maintains that the mashḥad was renewed in 699/1299 by Mongol converts. (Daiwachi, op. cit., p. 188 and pl. 41).
Such combined dragon-phoenix creatures are found in the art of the Late Chou period, such as the two representations punched on gold sheets which were exhibited in the Stamford University Museum in 1958. La Plante refers to these objects as "tiger with body ending in bird's head." His "tiger" is clearly a dragon and his "bird's head" is clearly a phoenix head, judging by the shape of the horns and the crests.

The depiction of phoenixes and dragons on textiles dates back to the Shang dynasty. Reference to such representations can be found in works compiled towards the end of the Chou dynasty such as the Shang-shu ("Classic of History"). Sullivan quotes the following passage from the Shang-shu:

"I wish to see the emblematic figures of the ancients, the sun, the moon, the stars, the mountain, the dragon and the flowery fowl, which are depicted (on the upper garment); the temple cup, the aquatic grass, the flames, the grains of rice, the hatchet, and the symbol of distinction, which are embroidered (on the lower garment); I wish to see all these displayed with the five colours, so as to form the (official) robes; it is yours to adjust them clearly." (3)

The representation of the phoenix and the dragon amongst the twelve emblems (shih-erh chang) continues throughout subsequent periods on official robes. (4)

Admittedly, the re-emergence of such ancient Chinese motifs and conceptions over great distances in time and space may seem very unlikely if not incredible. These motifs appear amongst dynasties descended from the peoples of the steppes whose continual movement between the Ural Mountains and the borders of China led to the wide dissemination of a number of Chinese elements over a large area. (5)

(1) J.D. La Plante, op. cit., pls. 58 and 59.
(2) Ibid., p. 19 (plates 58 and 59).
(3) Sullivan, op. cit., p. 12.
(4) Ibid.
(5) La Plante, op. cit., p. 11.
These nomads were actually responsible for the transportation of ancient Chinese artifacts, datable to the Late Chou period, to Europe and elsewhere. Thus a Late Chou Hu has been found in Rome, a Chou vessel in England, and Late Chou lacquer ware at the Bagram cache in Afghanistan.

According to La Plante, "these pieces must have found their way westward during the great territorial expansion and international intercourse along the Silk Route during the Han Dynasty. Consequently these elements must have been thoroughly assimilated by the peoples of Central Asia, to such a degree that they became a permanent part of their repertoire. The importance of this discussion lies in the fact that the concept and context of this motif of the combined phoenix-dragon is Chinese; so too are its pictorial details, even though an exact or even close parallel may never have occurred on Chinese silks exported to this area.

Von Falke attributes this so-called double-headed eagle ultimately to Iranian prototypes which do not exist, basing his assumption on what he calls "the Arabesque ending in dragon head" which occurs on the Talisman Gate in Baghdad. Firstly, he assumes that as the dragons appear in Baghdad on this monument and on the textile in question, this motif must be a Baghdad textile convention; and secondly, he assumes that as the silk industry of Baghdad was due to the settlement of Iranian weavers from Tustar, the double-headed eagle

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(1) Ibid.
(2) Ibid.
(3) Ibid.
(4) Ibid.
(5) Cf. the discussion of the combat scene between the phoenix and the dragon on 13th century Central Anatolian carpets (see supra, p. 366 and pl. 334).
must be of Iranian origin. (1)

Pope, in an elusive passage, (2) likewise attributes this motif to Sasanian art (as he is prone to do in other cases too) without citing any parallels or even remotely related work in Sasanian art. He states:

"Some of these traditional designs scarcely depart from their models even in style. Double-headed eagles (pl. 74), which manage by their abstraction to make their few inches seem colossal, are removed from the natural sphere by the impersonality of their arrogance. Less heraldic in poise and contours but no less Sasanian in theme and spirit...

For lack of Sasanian prototypes, he may have been thinking of the Achaemenid capitals with two eagle or falcon heads each flanking a rectangular beam.

In another Chinese fabric (pl. 345), (4) another highly stylized version of the double-headed phoenix is depicted. The striking similarities between this motif and the Samarra stucco ornament of pl. 346 (5) cannot be overlooked.

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(1) Von Falke, op. cit., p. 21.
(2) Pope, Masterpieces, " p. 72.
(3) Ibid.
(4) Lubo-Lusinchenko, op. cit., pl. XIX.
(5) Herzfeld, "Der Wandschmuck", pl. LIX, Orn. 156.
The 'Crumpled Pattern'

The so-called 'Crumpled pattern' has become one of the many subjects of Islamic art which perplex art historians.

Binyon states:

"There is one pattern in particular, which occurs in most of these manuscripts, with curious crumpled forms not directly suggestive of anything in nature, yet not a geometrical abstraction. It really seems as if the crumpled forms assumed by the folds of a heavy dress where it meets the floor had been taken over as the motive for pattern, after long repetition and stylization". (1)

Ettinghausen, dealing with 'The Princely Style in The Persian Manner,' when describing the 'Enthroned Ruler,' of "Kitāb al-Aghānī" (pl. 346) (2) describes the pattern in the following words:

"The use of a peculiar method of indicating garment folds found in Christian manuscripts of the Mosul region point to that important centre in Northern Mesopotamia." (3)

Both statements seem to be partially correct, but they do not explain the pattern.

Binyon is right in considering it as a 'pattern' which has been subjected to a long process of repetition and stylization. His suggestion of its derivation from the folds of a heavy dress (possibly having in mind the drapery of the Sasanian reliefs as a prototype) does not seem fully justified. Neither does his assumption that it is not suggestive of anything in nature; or of any geometrical abstraction.

Ettinghausen's attribution of the pattern to the Mausil region is understandable on account of its earliest appearance in the Jacobite

(2) Ettinghausen, Arab Painting, pl. on p. 65.
(3) Ibid., p. 64.
lectionary. His identification of the pattern as folds cannot be justified. A closer observation of the pattern of the Kitāb al-Aghānī miniature reveals that the only folds depicted in that miniature are those parts of the ribbons protruding from, and above, the fists of the two genii, and on the hem of the ruler’s garment. Moreover, the pattern in question has been used as an all-over pattern, acting as a background for arabesque scrolls (and parrots on the dress of the attendant in the foreground, and to the right of the ruler) on the dresses of all the attendants and the two genii, except the dress of the ruler where the pattern is not dominated by the arabesque.

The crowded rendering of the pattern in this particular miniature does not allow an accurate study; for that reason a similar pattern from the Fables of Bidpai (pl. 120)\(^{(1)}\) may be chosen instead.

The pattern on the dress of the ascetic appears to be composed of registers of adjacent petal-shaped curves with two narrow petals extending downwards from the border lines of the upper register to a distance almost half way down the petal-shaped space situated between the upper and the lower registers. The outlines forming the crowns of these petal-shaped forms are turned into cramped curvilinear meanders,

\(^{(1)}\) Blochet, Musulman Painting, pl. XXII. It should be noted that whenever a patterned textile is depicted in Islamic painting, whether in manuscripts, wall painting or pottery, drapery and folds are kept to a bare minimum if not eliminated completely. Only the contours of the limbs are outlined; the thin lines used do not disturb the pattern in any way. This phenomenon can be seen even in paintings containing figures clad in patterned garments without folds, as well as figures clad in plain garments with folds and crumpled drapery. In other cases, when a plain garment (with folds and crumpled drapery) is depicted with an embroidered collar or a band around the hem, or a "mandarin square," these designs always remain flat and unaffected by the folds.

This phenomenon seems to persist from the earliest miniatures to the miniatures of the 17th century and most probably survives in Persian miniatures of the present day.
as in fig. 195. The arrangement of the registers in relation to each other follows the familiar system of 'half a space shift' to one side alternately which occurs in the Sāmarrā' meanders. The petal-shaped units display considerable uniformity of features and composition in all the miniatures, whether Islamic or Jacobite. The form of these patterns suggests that they are in fact another form of an all-over cloud scroll pattern, possessing all the characteristics of Chinese patterns from the Han period onwards.

The cramped curvilinear meanders of this pattern represent a severely reduced and highly stylized cloud-curl whilst the long curved lines represent the meandering cloud scroll. Only one seemingly odd feature needs to be explained; that is the two narrow petal-like forms occupying the spaces between the successive registers.

This can perhaps best be explained by pointing out two of the most important characteristic features of the Chinese cloud scroll:

1 - The faulting of the meander which appears on the Chou bronzes and was dealt with when dealing with the faulted meanders of Sāmarrā'.

2 - The cloud tufts or curls best known as 'the Han curls' which appear on most of the Han silks (pl. 47, figs. 47 & 196).

In some of the Han silks depicting cloud scrolls or meanders, these are distinct three-lobed curves, the largest of which thrust downwards (pl. 47 and fig. 196). They also have distinct curls in various forms and stylizations. Some of these curls take the form of tendrils especially those which are situated within the three-lobed curves of the cloud scroll. The lines of the scroll are split horizontally into two or more parallel lines. This seems to have resulted in the separation of the two forms of growths (the curls being on the outer line and the tendrils being on the inner line). The tendrils stem...
Fig. 195: Detail of the pattern in Pl. 120.
Fig. 196: Han silk, depicting cloud bands.
Han period. After Andrews.
from those parts of the meander which define the lobes. These characteristics persist in that type of cloud scroll in China.

They appear at Sāmarrā' in the form of volutes and they appear much later in Islamic miniatures which use borrowed Chinese cloud forms.

It seems that at some stage during the Han period there was a tendency to increase the numbers and multiply the rows of the cloud curls. An example is the Han silk of fig. 47. The same phenomenon appears much later in the cloud-scrolls of the school of Herāt in the 15th century (fig. 197 and 198).

In all the three variations of figs. 197 and 198 one can distinctly see that the inner three-lobed convention of the Han pattern was preserved. In fig. 197 the inner meander is merely faulted to form a simple three-lobed inner shape (a secondary shape). In fig. 198 the tendrils appear in an elaborate form resembling flames. In two of the curves there are three such tendrils instead of the conventional two. They make the inner space four-lobed instead of three-lobed. In one of the curves (extreme right and below) there is only one tendril dividing the inner space into a two-lobed shape. In this two-lobed shape, and in this type of the Chinese cloud scroll, lies the clue to the so-called 'crumpled pattern.'

It is in fact composed of highly abstracted lower curves of such a cloud scroll put next to each other to form a band. The multiple curls were completely eliminated and only the outline is retained in the form of the cramped meander mentioned above. The two narrow petal-

(1) For fig. 197 see Blochet, Musulmān Painting, pl. LXXIII; for fig. 198 see ibid., pl. LXXV; for fig. 198 see ibid., pl. LXXXIV.
Fig. 197: Cloud motifs in Islamic miniature painting.


Fig. 198: Cloud scroll from a miniature. Herat. 1436. After Blochet.
shaped forms are the abstraction of the lines forming the one
tendril. The tip of this tendril is cut by the overlapping upper
register of similar units.

The appearance of this pattern almost simultaneously in Jacobite
and Islamic miniatures suggests that Chinese silks or other objects
bearing this pattern were being imported to Mesopotamia certainly by
this date and possibly earlier. The pattern must have gained great
popularity at later periods, for it is depicted widely in the miniat-
ures of subsequent centuries. It should also be noted that this patt-
ern occurs as a textile pattern on Islamic metalwork of the style of
Northern Mesopotamia, such as the so-called 'Baptistère De Saint
Louis' (1290-1310). In this example, out of the 41 human figures de-
picted on this work, 23 figures are clad, partly or wholly, in costumes
decorated with this pattern.(1)

The rest of the garments in this work exhibit typically Chinese
textile patterns, such as all-over patterns of hexagons (tortoise shell),
'Y' shapes, 'Y' shapes interrupted by hexagons, dragon scales, and squ-
ares at the centres of octagons.

The popularity of this pattern seems to have continued in Central
Asia to the first quarter of the 20th century and probably till the
present day. A variation of such a highly abstracted cloud pattern is
worn by the Kirghiz at certain ceremonial and festive occasions (pl.
348).(2)

(1) D.S. Rice, The Baptistère De Saint Louis, A Masterpiece of Islamic
Metalwork (Paris 1953), passim.
(2) Sykes, on. cit., pl. facing p. 118.
The Fillet Scarf.

Pope's assertion that the Sasanians initiated a renaissance consciously based on the national religion and national tradition which "influenced the arts from China to Europe", (1) has been challenged strongly and often in recent years. (2) This necessitates the reassessment of the Sasanian repertoire.

One of these Sasanian motifs of doubtful origins is the 'fillet scarf with long fluttering ends', (3) the most characteristic of Sasanian artistic conventions. It has been maintained that this motive was equally shared by Persia with regions farther east, including the Chinese art of Central Asia, where it reached unusual lengths. (4) But where the priority lay (as Kendrick puts it) is still unknown. Kendrick does not rule out the possibility of a Chinese origin, noting that "such vivacious movement is not uncommon in the contemporary art of China." (5)

Such ribbons appear as early as 1180 in Islamic miniatures, and in subsequent centuries. (6) These ribbons seem to indicate Central Asian or Chinese origin rather than Sasanian (pls. 349 and 350), (7) for in the 13th - 14th century miniature of pl. 349 the ribbons take the form of a Chinese cloud band. The ribbons in the 16th century miniature of pl. 350 are similarly stylized (though less distinct). This suggestion is further supported by the occurrence of other motifs of Chinese origin in the miniatures under consideration, such as the Chinese crowns and the cloud-collar (in pl. 350).

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(1) Pope, Masterpieces, p. 5.
(3) Kendrick, op. cit., p. 8.
(4) A. Stein, Serindia (Oxford 1921), pls. 61, 69 and 80; A von Le Coq, Chotscho (Berlin 1912), pls. 19, 29 and 37.
(6) See Blochet, op. cit., pls. IV, XXXIX, LXXI, LXXXI, LXXXIII, LXXXIV, LXXXV, LXXXVI, CXXX, CXL, CXLII, CXLIII, CXLIV and CXLV; Ettinghausen, Arab Painting, pls. on pp. 65, 91, 147 and 148; Gray, Persian Painting, pls. on pp. 107 and 160.
(7) Pl. 349 after D. Talbot Rice, op. cit., pl. 223, and pl. after Blochet, op. cit., pl. CXLVII.
The Triatna

A number of Indian Buddhist symbols appear on Sasanian works of art, such as the triatna (the Three Jewels)\(^1\) which symbolizes the Buddha, Dharma (the Law), and Sangha (the community). This motif appears on the dresses and ribbons depicted on a 6th-7th century boat-shaped bowl (pl. 351), and on the costume of the King in the so-called 'Cup of Solomon' in the Cabinet des Médailles (Bib. Nat., Paris)\(^2\). It occurs on other Sasanian works as a textile pattern, the silken garment of Ormuzd, and on the orb of the crown of the King, in the high relief representing the investiture of Ardashīr at Ṭaq-i Bustān (fig. 199A and B).\(^3\) This motif seems to go back to the Mohenjo-daro period (3000-1500 B.C.) in India (pl. 352). It appears as a textile pattern then and continues to be used as such in Islamic miniature painting (it occurs on the silken flag of the besieged citadel of Alamāt, pl. 353)\(^4\) until the Ottoman period. During the Ottoman period it appears on ceramics as well as on textiles and carpets (pl. 354 and 355).

It is extremely interesting to note that according to Godard, the Sasanian King portrayed on the cup of Saint Denis (the cup of Solomon)\(^5\) is King Kawadh (Kubad) and the King portrayed on the silver dish of the Cabinet des Médailles (6) is Khusrau II. This seems to correspond exactly with the Indian embassies mentioned before which were sent to both Kings with gifts. These gifts might have included brocades embellished with the pattern in question. The pattern on the

\(^{1}\) Gordon, op. cit., p. 18.
\(^{2}\) Godard, op. cit., pls. 116 and 117.
\(^{4}\) Executed at Tabriz in 1438; Blochet, op. cit., pl. XCIV and caption.
\(^{5}\) Ibid., pl. 116, p. 208 (No. 116).
\(^{6}\) Ibid., pl. 117, p. 208 (No. 117).
Fig. 199: The triatna motif in Sasanian textiles depicted in sculptures of the 6th century.
A. Detail from sculpture in the Taller Grotto. Taq-i Bustan. After Fukai Horiuchi.
B. Detail from sculpture in the Taller Grotto. Taq-i Bustan. After Fukai Horiuchi.
cup of Saint Denis is rendered in exactly the same way as the Mohenjo-daro pattern and not in separate dots as on the other works.

In China the 'three jewels' motif appears in the shape of three eyes reminiscent of three-eyed deities in the Buddhist pantheon (pl. 356).

The same rendering can be found extensively on Turkish textiles of the Ottoman period. It was developed later into deep crescents (fig. 200). The only difference between the Turkish motif and the Chinese is that the three dots (eye balls) point towards a common focus in their midst; whilst the Chinese point in different directions (symmetrically towards the outside). Tahsin ÖZ maintains that this pattern occurred in the Seljuk period, and that it was known as 'Benekli' (dotted).

The 'three dots' motif appears in its most simple form in the manuscript of HarIr (Bodleian Library) dating from 738/1237. The pattern is incorporated with others as a filler motif. In pl. 263 the dots appear on the garment of Abu Sayd; amid a lotus flower pattern; on the garment of the central figure; in the so-called crumpled pattern; and on the garment of the second figure from the left amidst a 'Y' pattern (or hexagonal pattern).


(2) Tahsin ÖZ, Turkish Textiles and Velvets, p. 14.
Fig. 200: The evolution of the triatna motif in Ottoman textiles.
The Endless Knot.

The earliest depiction of this motif on a standing monument in Iraq appears on the 3rd and 4th wide bands of the minaret of Arbil in the form of all-over patterns. The motifs on both bands are surrounded by an extra border following their contours. This gives the impression that the motifs are enclosed by a compartment pattern. The diagonal lines separating the motifs from each other are in fact a secondary motif. This has no compositional significance in this particular pattern (4th wide band), but with slight alterations (i.e. by drawing the motifs nearer to each other so that the extra border lines surrounding the motifs are eliminated, and by introducing connecting bars between the motifs at points situated half way between the squared loops of the motifs) gives the illusion of a new pattern. This pattern is composed of what looks like Maltese crosses, as can be seen on the 3rd wide band of the minaret (Fig. 201). A strip of this pattern (slightly altered) appears much later on the band of the minaret of the Ḥāṣāʿir mosque mentioned above (pl. 62 and fig. 202).

This symbol seems to form the basis of the interlace motif in Islamic art. It appears on a 9th - 10th century bowl from Samargand (1). It appears too in the 'pseudo-Kufic' of the borders of Mongol carpets depicted in Persian miniatures of the 15th century (2); on the 12th - 13th century metalwork of Northern Mesopotamia (fig. 95); and on Central Anatolian carpets of the 15th century (3)(and most probably on earlier carpets). More elaborate forms of it were adopted for the central

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(1) Lane, op. cit., pl. 16a.
(2) Edwards, op. cit., p. 370.
(3) See Erdmann, op. cit., pl. 27.
Fig. 201: Variations of the endless knot on the 3rd and 4th wide bands of the minaret of Arbil.

Fig. 202: The design of the parapet of the minaret of the Ḥaḍā'ir mosque.
zones of 17th century Western Anatolian carpets, \(^{(1)}\) and it also appears on 15th century Mamluk rugs. \(^{(2)}\) It should be noted that this symbol occurs in a rectilinear form as well as in a curvilinear form. Most of its depictions on the above mentioned carpets are rectilinear.

This motif was - at some stage - incorporated with Arabic calligraphy (figs. 96, 97, and pls. 357 and 358 )\(^{(3)}\) probably during the Seljuk period, and at that stage it lost its endlessness.

(1) Ibid., pl. 31.
(2) Ibid., pl. 46.
(3) Pls. 357 and 358 depict wall mosaics rendered in marble. The two panels were recently found at Maupil. The Kufic inscription in both plates incorporate 'endless knots', and bifurcated leaves. The inscription of pl. 357 reads as follows:

\[(M)\text{alik umrū' al-šahrū wa al-šarb, Abu'l ...}\]

\[Faṣā'il, ṭusam ʿāmir al-nu ('minīm)].\]

The inscription of pl. 356 reads:

\[(A)l-Imām āsām al-Dawla Nāṣir.\]

It should be noted that āsām al-Dawla is one of the titles of Ṭq Sunqur.
The Pearl Motif

A number of Chinese designs appear in Syria, at Khirbat al-Hafjar (724-743), and in Ḥayr al-Gharbi (c. 730).

Ettinghausen states (in regard of the Khirbat al-Hafjar motifs):

"a number of decorative designs imitate textiles of Persian and possibly Central Asian origin. The latter were found particularly in the palace, a fact that indicated not only a continued interest in Oriental themes, but again a decided preference for them in a royal context ...." (3)

Though he does not specify the designs in question, it may be assumed that the Swastika patterns of the stuccoes are amongst them.

Ettinghausen is more specific in regard of the 'pearl' frame around Gaea on a floor fresco. This motif as was pointed out earlier is a Chinese silk motif which was introduced into Persia through the silk trade.

It seems highly improbable that with all the decorative imports from China to the Muslim world which are recorded in texts - imports such as silk, porcelain, and metalwork - the art of these imports should have left no impression on the ornamental repertoire of the Islamic world.

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(1) Ettinghausen, Arab painting, p. 33.
(2) Ibid.
(3) Ibid., p. 36.
(4) In the National Museum, Damascus (Ettinghausen, Arab painting, pp. 34 - 35).
(5) See Meister, op. cit., passim.
Crowns

As has been mentioned above, the crowns which appear in the Sàmarrà stuccoes also appear on the Atàbegid copper coins of Maùsil (pl. 359 and fig. 203). In pl. 360 another type of crown appears in a miniature from the Book of Antidotes (Kitàb al-Tiryàq). It has side finials made up of two birds with outstretched wings flanking the central heart-shaped finial (pl. 360). It is difficult to distinguish the shapes of the bodies and tails of these birds from the photograph, but they may well be phoenixes.

The use of phoenixes on Chinese crowns is a very well-known convention (pl. 354). This convention appears later in Central Asia (pl. 362) and Persia during the taifavid period (pl. 363). Commenting on the head-dress of pl. 363, Blochet states:

"It is decorated with the bird characteristic of the head-dress of Chinese Empresses in very early times." (4)

It seems, at all events, that the prototype of the 'three-finial' crown can be traced to the Han period in China. A number of similar crowns and some variants appear on tombs dating from that period (fig. 207 A and B) crowning ‘t`do-t`ish’ masks. (5)

The earliest recorded example of such a Han crown being given to a Turkish (Hun) Chieftain, among other gifts, was in 174 B.C.

Trevor*, quoting an early Chinese source, states:

"In 174 B.C. a Chinese Emperor sent to the Tan-hu (an independent sovereign as yet): an embroidered coat with lining, a long brocade gown, a gold head circlet ...." (6)

(1) Talbot Rice, op. cit., frontispiece.
(2) Lancman, op. cit., pl. 59.
(3) T. Talbot Rice, op. cit., pl. 188.
(4) Blochet, Muslim Paintings, pl. CXX (caption).
(5) Fig. 207 C is after Sullivan, op. cit., fig. 58. Figs. A and B are after Nishihawa, ed., Seiàn hirin (Hsiian Fei-lin); (Tokyo 1966), pls. 9 and 10.
Fig. 203: A copper coin struck at Mausil. 1229.

Fig. 204: Detail from an Arab painting. Egypt. 1334. After Ettinghausen.
This gold head-circlet or coronet may well have been the model for Central Asian crowns in subsequent periods.

It is worth noting that a good number of Turkish textiles, the majority of which are datable to the 15th-16th centuries, exhibit a variety of such crowns (fig. 208). (1)

In both of his works on Turkish textiles, (2) Tahsin Özd attributes these crowns to Italian influence on Turkish textiles. (3) This erroneous attribution seems to be due to the lack of previous identification of these crowns in Islamic art and also to the lack of an established chronology of their occurrence. (figs. 203 - 206, and 208).

It is worth noting that both types of crowns (with Jooe head finials, and with phoenixes) appear in Syrian Jacobite miniatures (4) from a lectionary in the British Museum (5) dated 1216-1220. (pl. 4).

It is extremely interesting to see that the crown of the 'Wise Man' in the centre displays two confronting phoenixes with the characteristic three plumes of the tails sweeping upwards and forwards towards the backs of their heads.

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(1) Öz, 'Turkish Textiles and Velvets', pls. XXXII and XXXIV; idem, 'Turk Kumas ve Kadifeleri' II, pls. XCI, XCII, XLIX, LXXXVIII, and LXXXIX.
(2) See note (2) above.
(3) Öz, Türk Kumas ve Kadifeleri II, p. 131; idem, 'Turkish Textiles', p. 117.
(4) 'The Nativity', MS. Add. 7170, fol. 21; 'The Marriage of Cana', fol. 67.
Fig. 205: Crowns from Islamic miniatures. A) c. 1150; B) 1206; C) 1206; D) c. 1250; E) 1306-1314; F) c. 1310; G) c. 1310; H) c. 1310; I) c. 1310; J) 1388; K) c. 1430; L) 1436. A—after Ettinghausen. B–J—after Blochet.
Fig. 206: Crowns from Islamic miniatures. A) c. 1430; B) c. 1505; C) late 16th century. After Blochet.
Fig. 207: Ancient Chinese crowns.

A-B. Crowned t'ao t'ieh masks. After Yasushi.

C. Gatehouse, depicting crowned t'ao t'ieh masks. After Sullivan.
Fig. 208: Crowns in Turkish textiles. After Öz. B and F- 14th-15th century. A, C-E, and G- 17th - 19th century.
The influence of Chinese metalwork on Islamic metalwork has been accorded scant recognition. (1)

A number of Chinese motifs, such as the 'Y' pattern and the all-over pattern of swastikas (the so-called 'interlocked' 'T's pattern) appear on North Mesopotamian works of the 12th-13th century but they have not been recognised as Chinese (pl. 14B).

A number of bronze cauldrons with strong affinities to early Chinese tings (2) were once considered of Sasanian descent, though they were acquired in Central Asia, (3) and no parallel or near parallel has ever been found in Sasanian metalwork (pls. 364-366).

The stylistic similarities cannot be ignored, especially the rendering of the vertical handles which is peculiar to early Chinese bronzes (pl. 357 and fig. 32), and earthenware tings (fig. 920). (4)

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(1) One of the few to have worked in this field is J.H. Rogers; see his article "China and Islam - the archaeological evidence in the Mashriq" in Islam and the Trade of Asia, ed. by D.S. Richards (Oxford 1967) pp. 67-80.

(2) See pl. 367 (c. 11th century B.C.).

(3) The cauldrons of pl. 365, 364, and 366 of the Victoria and Albert Museum (13th - 14th century) were obtained at Bukhara.

(4) Grey earthenware ting (cauldron) with tripod legs and upright handles in the Royal Scottish Museum, Edinburgh (Han dynasty) No. (1957. 238 and a).

The British Museum.
Pl. 318:  Simurgh (‘Anqā’), from Kitab Manāri al-Ḥayawān.


Pl. 321: Detail of plate 320.
Pl. 322: Persian tile, depicting a phoenix. Rayy.  
14th Century. After Dimand.

14th Century. After Godard.

Pl. 327: Turkish sword blades, depicting combat scenes between phoenixes and dragons. 12th - 13th Century. After Sarre and Martin.

Pl. 329: Bronze ritual vessel. Early Chou dynasty.
(late 11th Century B.C.)
From the Freer Collection.
After Pope.

Pl. 330: Lacquer cup, Pei.
Pl. 331: Turkish carpet (Anatolian), depicting combat scene between phoenixes and dragons. 15th Century. After Gluck and Dies.
Pl. 332: Turkish carpet. Central Anatolia. 13th Century.

After Erdmann.
Pl. 333: Silk damask, found in Egypt. Chinese. 14th Century.

After Von Falke.


After Von Falke.
Pl. 335: Chinese porcelain dish found at the Ardabil shrine.

14th Century. After Pope.

After Grote-Hasenbalg.
Pl. 338: Carved stone


Pl. 339: Chinese silk.

Pl. 240: East Iranian silk. 8th - 9th Century.

After Ghirshman.

The Victoria and Albert Museum.
Pl. 342: Elephant clock. From Kitāb fi Maṣḥifat al-
1315. After Ettinghausen.

After Lube-Lusnichenko.

Pl. 345: Stucco ornament from Samarrā (inverted to show similarities).

After Herufeld.
Pl. 346: Badr al-Dīn Lu'lu'. From Kitāb al-Aghāni.
Pl. 347: Polychrome silk, depicting cloud bands. Han period.

After Willetts.
Pl. 348: Kirghiz women in gala dress. c. 1915.

After Sykes.
Pl. 3.9: Detail of 'The meeting of Humay and Humayun in the Palace Garden.' From the manuscript

Late 16th Century. After Blochet.
Pl. 351: Boat-shaped bowl (detail). Sasanian. 6th - 7th century.

Pl. 352: Statuette. Mohenjo-Daro. 3000-1500 B.C. After Zimmer.
Pl. 353: The besieged citadel of Alamut (Detail).

From The History of The Mongols, by Juwaini.

Tabriz, 1488. After Blochet.
Pl. 354: Turkish Jug, depicting the 'three jewel' motif.

16th Century. After Aslanapa.
Pl. 355: Turkish miniature from the Nusretname of the British Museum, depicting a canopy with 'three jewels' motif. 1578. The British Museum.
Fl. 356: Japanese textile, depicting 'triatna'

(Three Jewels) motif. 2nd half of the 12th Century. After Fontain and Hempel.
Pl. 357: Wall mosaic, rendered in marble. Seljuk period.

Recently found at Mausil. Iraqi D.G.A.
Pl. 358: Wall mosaic, rendered in marble. Saljuk period.
Recently found at Maużil Iraqi D.G.A.
Pl. 359: An Atabegīd copper coin. Maḥṣil 627/1229.
Pl. 360: Detail from the frontispiece of *Kitab al-Tiryaq*.

Iraq. 1199. After Talbot Rice.
Pl. 361: Empress Ma Hou, wife of Emperor T'ao Tzu.
1368–1644. After Lancman.
Pl. 362: Detail from a wall painting of two princesses.

Berkelik. 9th Century. After T. Talbot Rice.
Pl. 363: Portrait of a lady at the court of Tabriz.

16th Century. After Blochet.
The Victoria and Albert Museum.

Pl. 365: Bronze cauldron made by Abu Bakr. Unspecified date.
After Mayer.

After Mayer.

Pl. 367: Chinese Ting. c. 11th Century B.C.
Conclusion

This thesis began with the strictly limited aim of ascertaining the origins of the geometric designs used on certain Iraqi minarets. In the event, this investigation itself unearthed further problems concerning the origins of Islamic ornament and it proved impossible to restrict the discussion to the minarets which had formed the original point of departure. This thesis has tried to show that in one field of Islamic art after another the role of China has been consistently underestimated or even ignored. At the least, it seems that a close and continuous connection between Islamic and Chinese art can be regarded as an established fact. It remains to decide whether this connection is merely coincidental, whether Islam influenced China or whether it was in fact China which provided the inspiration for much of Islamic art, the aim of the chapter detailing the historical and literary evidence for links between China and Islam has been to provide a factual background for the inevitably speculative discussion of the development of ornament. The texts show conclusively that Islam and China were in regular contact. They also provide confirmation that the movement of ideas and artistic influences was from China to Islam rather than vice versa. One may hope that this thesis has provided material evidence of this in the field of ornament. With the renewed recognition of China as a decisive force moulding the development of Islamic art, a comparatively new and fruitful field of research is open to scholarship.
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