



Volume 1-Number 2

DECEMBER 1963

CONTENTS

NOTES AND EXHIBITION SCHEDULE	2
A SOUMAK-WOVEN RUG IN A 15TH CENTURY INTERNATIONAL STYLE. Charles Grant Ellis	3
PRINCIPLES OF TEXTILE CONSERVATION SCIENCE, NO. III. CLASSIFICATION OF FIBERS FOUND IN ANCIENT TEXTILES. James W. Rice	21
TIAHUANACO TAPESTRY DESIGN. Alan R. Sawyer	27
HORSEMEN IN TAPESTRY ROUNDELS FOUND IN EGYPT. Rudolf Berliner	39
PRINCIPLES OF TEXTILE CONSERVATION SCIENCE, NO. IV. The Conservation of Historical Textile Colorants. James W. Rice	55
THE PAST AND FUTURE OF THE TEXTILE MUSEUM	62
CHARTER MEMBERS OF THE TEXTILE MUSEUM	63
BOARD OF TRUSTEES AND STAFF	64
e	••

All drawings by Milton Franklin Sonday, Jr. in collaboration with the authors.

."

HORSEMEN IN TAPESTRY ROUNDELS FOUND IN EGYPT

RUDOLF BERLINER

In addition to the Alexander roundel, on which I wrote in the last issue of this *Journal* (Berliner 1962), the Textile Museum has four other tapestry woven "Coptic" roundels representing horsemen at the hunt. Without analyzing every detail, I shall here try to find out whether comparisons of the five roundels lead to a deeper understanding of the designs and whether they help in our search for solid foundations for a classification. I shall call the Alexander roundel (No. 11.18) TM I; No. 72.173 will be TM II; No. 72.168, TM III; No. 31.7, TM IV; No. 11.17, TM V a; and No. 11.24, TM V b.

To limit comparisons to these five roundels because they happen to be in the same museum would be like limiting fundamental research to books which a library happens to own. We therefore illustrate five roundels, from other museums, which are especially important for our investigation. I shall refer to Cooper Union Museum No. 1902-1-71 as CU: Smith College Museum No. 1922-26-1a as SM; Metropolitan Museum No. 90-5-690/1 as Met I and Met II; and Victoria and Albert Museum (Kendrick 1922:24, No. 669) as V&A. To restrict comparison to other textiles would be to willfully inhibit the full understanding of the artistic and historical significance of the tapestries. They deserve better than a priori relegation to a chapter of the history of weaving and must be considered in relation to other relevant art forms-mosaics. ivories, architectural decoration and the like.

The design of TM I (Fig. 1) stands apart from the other four Textile Museum roundels, even from the three with pairs of hunters, for the TM I horses are addorsed against a plain background, whereas the horses in TM II, III, and IV are shown facing each other, in a landscape setting, in some moment of an actual hunt. TM II (Fig. 2) depicts two different actions. While the rider at the left is still galloping, possibly in pursuit of a worthier prey than the small animal killed by his dog, his companion, having speared a lion, seems to have brought his horse to a halt. The difference between the two halves is considerable. However, branches and parts of plants, which the designer believed to be sufficiently naturalistic indications of landscape, connect the two. The decorative balance of the composition is secured by equivalent motifs in each half, and by emphasis on the central decorative pattern which is formed by the details facing each other around a bowl motif. A variation of this motif appears at about the same place in TM I. In TM II, the two arrow leaves on either side help to stress the horizontal middle zone.

Basically, TM III (Fig. 3) follows the same scheme of composition as TM II. Though the composition is symmetrical, if viewed as a static decoration, two independent individualized men are depicted, if their suggested movements are taken into account. Both the decorative value of the X-scheme symmetry and the decorative use of the coloration prevent an overly naturalistic interpretation. The space occupied is not subjected to the limitations of realism. The horses will not collide. A few decorative motifs indicate the separation of the spatial zones in which they move.

TM IV (Fig. 4) is a fragment of a tapestry which was evidently a hanging rather than an ornament for a garment. The design of the roundel is essentially the same as that of TM III, but the details are less numerous and much less naturalistic. The horsemen and the animals are strictly identical symmetrically, and the plant motifs are reduced to three in either half. The only decorative connection between the halves is the pattern formed by the details facing each other. The compulsion is very strong to regard the foreparts of the horses and the fluttering ends of the scarves as ornament. The stylization of the horses' eyes and trappings, the pattern on their breasts, the inexpressive forelegs, ropelike, as are the legs of the men, show clearly the designer's preoccupation with the requirements of a flat decoration. Though the essence of the Hellenistic motif of the foreshortened galloping horse is otherwise better preserved than in the other roundels, their heads are in profile, and they would surely collide if they moved.

By now it should have become evident to the reader that the designs so far described belong to various strains of an evolving sequence. In my opinion, any such evolution, which is more than a mere disintegration, is not ruled by a force of nature like the leaps of a waterfall. It is a sequence of designs in each of which a creative artistic intelligence is demonstrated. A challenging problem has been solved variously, depending on the training and skill of each designer and conditioned by the contemporary taste and style, as well as by his own personal taste. A symmetrical composition, far from making tapestry weaving easier, adds to the limitations which prevent the weaver from "draw-ing" or "painting" with his threads as he might wish. His reason for using a symmetrical design must have been its appeal to the taste of the period. TMI did not aim at competing with painted representations of hunters in a landscape. It endeavored instead to preserve something of an originally sculptured representation. This becomes especially



Fig. 1. TM I

evident (Fig. 1) in the use of background between the heads of the horses and the bodies of the Alexander figures.

This type of representation belongs to the cycle emphasizing the valor of a Roman emperor. By sheer repeated suggestion, it has nearly become an axiom that any textile design representing hunting horsemen, especially if characterized as rulers, must be derived from Sassanian art.¹ Whatever influence the relevant representations of Persian kings have exerted in the Roman Empire, they did not initiate in Rome the predilection for hunting scenes or their inclusion in the imperial iconography. In the second century, probably between A.D. 134 and 138, Emperor Hadrian had himself and his companions represented in roundels (Bulle 1919: 144 ff.) after killing a lion or hunting a wild boar. These roundels were re-used as parts of the decoration of the Arch of Constantine in Rome. The Roman interest in hunting did not need accentuation from the East.



Fig. 2. TM II

There is no evidence that conditions were different some centuries later. That the roundels of the Textile Museum belong basically to the Western tradition becomes evident if they are compared with a hunting scene of about A.D. 350 from a Spanish floor mosaic (Fig. 5, after Garcia 1953: fig. 12) and a typical hunter (Fig. 6) painted in the Sassanian tradition (Schlumberger 1946-48: Pl. B, facing p. 96) for an Islamic ruler (at Quasr el-Heir) during the period of the Omayades (622 to 750). Neither Sassanian originals, nor copies of them, are known in which the king is shown hunting with dogs or in an elaborated landscape

setting. On the other hand, we can assume that, during the period with which we are dealing, any "Western" designer of hunting scenes used, and combined freely, accumulated motifs for such compositions, regardless of their national origin, a concept of limited concern to the art of the first millennium of our era. The basis of the figurative and ornamental arts, at least of the heart lands of the Roman Empire and their eastern neighbors, was a common heritage of many motifs, compositions, and modes of visualization. Art was of a cosmopolitan character, not overly subjected to considerations of national pride.



Fig. 3. TM III





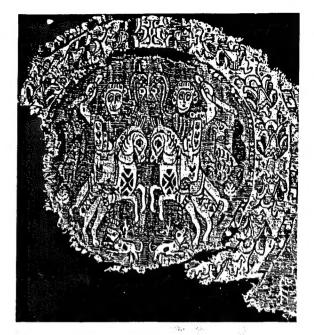


Fig. 4. TM IV

The fact that "Coptic" tapestries attest the preiconoclastic combination of hunting with martial scenes in representations of the majestic glory of the East-Roman emperor has escaped observation. When André Grabar (1936) published a book dealing with the development of the representations of the Byzantine emperor he had not extended his investigation to the "Coptic" tapestries, nor did he (Grabar 1951) when he later returned to the theme.² Still later (Grabar 1956), although he discussed in detail the relevant Byzantine tapestry in Bamberg (Bassermann-Jordan and Schmid 1914: No. 48), probably of about A.D. 1060,³ he ignored the "Coptic" textiles, as he did the equally important Barberini diptych (Delbrueck, 1929: No. 48), and the Aachen rider. In the Barberini diptych, an emperor is shown returning victorious from war.





The identification of the Aachen rider (Fig. 7) as a ruler, possibly an emperor, is not the usual one, although the diadem held over him by two boyish descendants of Nikes, together with the smallness of the game makes any other interpretation improbable. Nothing indicates the miraculous power of a saint. In discussing the Mozac fabric,⁴ Grabar (1956) rightly stressed the primarily symbolic char-

Fig. 7



acter of the representation in showing the emperor less in the act of fighting a lion than in the state of having vanquished it (Fig. 8). In the Barberini diptych, he is returning with a captive and bringing the galloping horse to a halt. The wish to express the "triumphal character" of such representations (Grabar 1936: 143), to show the emperor simultaneously in and after the hunt, lead in one strain of the evolution to postures of the horse which are self-contradictory. In the Aachen ivory and the Mozac fabric, the hind legs are still galloping whereas the forelegs have come to a halt. No horse can gallop with his head turned backwards. TM I stands apart from the other roundels in evidently intending to show the horses simultaneously in motion and at a halt, both motifs being supported, and visually suggested, by the moving dogs and the stationary genii respectively.

Fig. 8

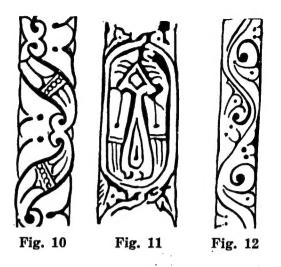


43



Fig. 9

An ivory relief (Fig. 9) recently acquired by the Walters Art Gallery of Baltimore, is important for our investigation. A restorer assembled its fragmentary authentic parts together with parts not originally pertinent. It is not appropriate to discuss the relief exhaustively here, but I must make some remarks. The trunks and the legs of the genii are sufficiently well preserved to show that the carver followed a purer late classical tradition than the weaver of TM I. The anatomy lacks any trace of "Coptization" and the wing is growing from the shoulder blades and not from the base of the neck. Unlike the weaver, the carver did not cover the entire lower part of the right leg of the genius at right. (The hole there, and its counterpart between the forelegs of the horse, prove the destination of the relief as an applique.) The remnants of the genius' hairdress seem to be very different from the hairdress in TM I, but are similar to that of the men in TM II, or even more to those of TM IV. Most important, there was a landscape setting. The awkward position of the hind legs of the dogs is explained in a surprising manner by the ivory. In the relief, the horse and the dog are jumping down from conventionalized ridges, which Miss Dorothy Miner (verbal communication) compared correctly with the usual Byzantine representations of rocks. The preserved ear of the far side of the dog in the ivory proves that its head, too, was turned backwards. Plants and bushes indicate a shrubby veg-The little holes in them correspond to etation. those which, in ornamentation, became customary in order to emphasize the branching-off of plant details. Originally a means of heightening the effect of the design, through contrast with the dark-



ness of the void, the holes evolved to become a positive decorative motif. In the ivory relief, the holes are still used for a naturalistic effect which finds its counterparts in ornamentation of the early Islamic period. A few examples may show that designers of "Islamic" ornaments could still be conscious of the naturalistic meaning of the hole or dash during the ninth century. A detail (Creswell 1940: Pl. 110) from the window soffits of the mosque of Ahmad ibn Tūlūn of A.D. 876-879 (Fig. 11) and the capital No. 7663 of the Museum in Cairo, classified in Strzygowski's (1904) catalogue as Coptic from the Arab period, are the examples most closely related to the ivory relief. The painted wood illustrated in Fig. 10 (after Herzfeld 1923: orn. 189 b) originated in an Islamic capital between A.D. 836 and 883. In design it belongs to the evolution of Byzantine motifs which we shall have to discuss later. I do not know of any evidence that in the seventh century holes could be so badly placed as they are in the relief. The very earliest possible date seems to me to be the eighth century. I am unable to guess in which region, actually still belonging, or already lost, to the Byzantine Empire, the carver worked. That does not diminish the importance of the evidence that he copied a model which showed the emperor, or some other ruler, simultaneously hunting and triumphantly halting in a landscape. The originally different types, the galloping and the halting regal hunter, had been merged. It is unfortunate for my investigation that V&A (Fig. 13) has not been studied with the that variation in the state of Museum, such a reading does not seem to be possible. He suggested instead a corrupted inscription "nika" with the mirror image of the word to the right of the head. If such a reference to victory were assured, then the model, from which the roundel must be assumed to be a copy, could be dated A.D. 602 to 610, the years of Phokas' reign.



Fig. 13. V&A

(Actually he was the opposite of a conquering hero.) Due to our lack of knowledge, no one can at present convincingly assert or deny that the model and/or the roundel ⁵ were products of Egypt. Nor can we be sure that a weaver in Egypt or somewhere else did not use the model at some later date with the intention of representing another, or quite generally, the emperor. It would be surprising if representations of the emperor did not belong to the themes of popular iconography, but I am not aware that attention has been given to this problem, with the exception of Delbrueck (1929: 274). Grabar touched upon it in 1956, when mentioning the occurrence of anonymous portraits 6 of emperors and discussing the Mozac fabric (Grabar 1956: 18 and 22). So far as its subject matter is concerned, V&A is quite unequivocal, irrespective of the reading of the inscription. An emperor wears triumphal apparel with crown, scepter and globe. The position of the horse's legs probably indicates that it is pacing. Behind the horse walks a prisoner of war whose hands (and neck?) are supposed to be fettered at the back with a rope ending at the emperor's wrist. The prisoner's costume is that of a "barbarian" of high rank. A similar prisoner faces the horse. Three horizontal pieces of his fetters are shown. They were probably fastened to the breast-band of the horse in the original model. An otherwise inexplicable black line, beside the foreleg suggests interpretation as a remnant of such a cord. The prisoners are pulled forward by a superior force. The wrong direction of the figure on the left indicates that a textile designer adapted

45

a model to the exigencies of his decorative design.

Between the hindlegs of the horse crouches a lion, and under the forelegs a dog kills a small gazelle. It is something of a surprise that both motifs appear in a variation in Fig 2, but there they are parts of the hunting scenes, whereas here they serve as trophies. Such symbolic use necessarily represents a later phase in the morphological sequence. It cannot be emphasized strongly enough that such a sequence of morphological phases refers to the general evolution and offers at best some help toward finding a terminus post quem for an individual piece, which must always be dated in accordance with its latest characteristics. I shall point to a few details which prove that the design of the horse at right in Fig. 2 is of a later type than that of V&A (Fig. 13), although it belongs to the same sequence.⁷ The two small crosses on the right hindleg in Fig. 2 are materially meaningless, whereas the corresponding ones in V&A are meant as enlivening shadows. The occurrence of a similar configuration of a contour, two shadow lines and an angular form in the opposite direction on the left foreleg of both horses, cannot be attributed to chance. In Fig. 2 the angle has no recognizable relation to the depiction of the horse, whereas its rational explanation becomes pos-sible in V&A. When adapting some model to his purpose, the designer of V&A did not mind the inappropriate intertwining of the horses' legs with the lion and the plant which grows from the vase standing between the animals, nor did he care for a correct spatial illusion. He seems to have strived for a visually solid base for the horse to stand upon.



Fig. 14. SM

The regalia of the emperor had not yet acquired a definite form in the seventh century, not even in official representations. The only explanation I can think of for the top of the scepter is that it is a transformation ⁸ of the letters I and X of the labarum.

SM (Fig. 14) belongs to an earlier type than V&A because the emperor is galloping as if he were hunting, but he carries the regalia and pulls a prisoner along. The scepter is topped by a motif similar to that in V&A. Under the horse is an elaborated jug and plant motif, flanked by two stalking beasts of prey. The one to the right is a lion. A gazelle is shown at the left of the emperor's head. As most of the right half of the roundel is destroyed, we can only guess that further parts of a landscape setting and another prisoner were there. A head near the lower left was sewn there in antiquity to repair a hole. An important detail requires mention: the further side of the breeching is visible, as if the back of the horse were seen from above. The designer seems to have been conscious of the irrationality of such unification of two different views, and in order to make it less striking, he allows the strap to follow the contour of the back. I do not know when such "paratactic" (see Zupnick 1963: 96 ff.) renderings of a horse's back started, nor whether they were prompted by the same motivation—to create the illusion of motion—which led to similar renderings of dancers, as suggested in my earlier article (Berliner 1962) on the Alexander roundel. Certainly they became a rather common feature and had a long survival.⁹

Since fashion dictated whether the subject matter was shown as one unit or was doubled symmetrically, roundels with a single hunter may contain details which lend understanding to the representations of pairs of hunters. In TM V (Fig. 16) the hunter is shown as if standing in stirrups, which are not represented, and he is turned toward a lion 10 in order to kill him with some projectile. He is accompanied by two small hunting animals with very long pointed tongues. One of them crouches upon the horse's rump. It is reported (Hitti 1951: 228) that Caliph Yazid I (born about A.D. 642, died 683) was the first to train cheetahs to do so. This provides a terminus post quem for corresponding representations and indicates the cultural sphere in which the motif originated. I do not know whether the Byzantines accepted the old Oriental and Egyptian customs of hunting with cheetahs. The Romans had not done so. Surprisingly, Coptic weavers and designers seem to have had little direct knowledge of it. In Fig. 4, the design of the bodies and the collars make it certain that cheetahs are represented. The only explanation I can think of for their being half hidden behind a plant is that the designer made the best he could of a motif he did not understand. He wanted to detach the cheetah from the horse, and to make that quite evident he added a second cheetah sitting straight behind the other. One need not stress the difference in the attitudes to exclude the interpretation that the cheetah in front is casting a shadow. Such a motif was unknown in "Coptic" textiles. The reduction to a minimum of the inner design of the animal loses much of its strangeness if we compare it with the ornamentalizations in the design of the horses. Dogs being superfluous at a hunt where there are cheetahs, which are much quicker, their presence points to a combination of different types of hunt representations. It is probable that the animals shown in Fig. 3 were intended for cheetahs. It should be noted that the animal at left is a dark color. The animal at left in Fig. 2 has the same long tongue as the corresponding animal in Fig. 16. However, as the animals in Fig. 2 also have manes, they may have been meant for lions. At any rate, in the sequence of evolution, the location of the animals behind plants in Fig. 4 belongs to a later, rationalized type.

The strangest detail in Fig. 2 is that the hands and arms of the riders, which realistically ought to be on the far side of the horses' necks, are shown from the inside, in front of the neck. The hand of the left rider holds the bridle, while the hand of the right rider clutches the neck. It requires a close analysis to understand what we see. The rider at right is supposed to be seen in a combination of three-quarter and full-front views. The weaver had difficulties filling the space between the horse's neck and the lower parts of the rider's trunk and thigh. Unaware of the possibility of letting the rider stand, and of turning the neck of the horse in profile, as in Fig. 16, he made the neck overlong, as it is in Fig. 3. The contour line which in Fig. 3 belongs to both the horse and the tunic, is out of place in Fig. 2. It emphasizes the lack of interest in a realistic representation of a cuirass, which thereupon becomes a hybrid between a cuirass and a tunic. It has long been recognized (Seyrig 1937: 37 ff.) that "paratactic" representations had again become an accepted part of the structure of Western art even before the beginning of our era. One does not have to search for a special reason every time. To have fighters turned to the front of their horses' necks was an accepted device. I cite a few examples: the painting of the battle of Eben-Ezer in the synagogue of Dura (Kraeling 1956: Pl. 55); the floor mosaics of a mounted archer from Antioch (Stillwell 1938: Pl. 71); and of Meleager from Halicarnassus (Hinks 1933: 129). For the motif of the far-side arm holding fast to, or holding the bridle before, the horse's neck, I know of only Sassanian (Erdmann 1936: 193 ff., figs. 1, 12;

1943: Pl. 65) examples, but they show some Hellenistic influence. If the weaver used his own left arm as a model, it could easily occur that he represented it from the inside. He might have repeated the same motif at right for the mere decorative reason of symmetry in the center of the design.

TM V a (Fig. 16) represents a type of hunting scene which differs from the other roundels. It seems to show a stronger influence from Sassanian design, and there are details for which I have not always been able to find other corresponding representations. Such are the bow-knots in the mane of the horse, the short trousers, the peculiar leggings, and the strangely shaped saddle. No such details are known to me from other representations. The design of the lion's nose seems to belong to an evolution of motifs originally Sassanian (compare Stchoukine 1936: Pl. 23 a), but I do not know of any other example of a similar unification of a lion's nostrils with the upper lip. The indication of a landscape through some trees and twigs with leaves was a familiar device in antique art. As in the case of the missing stirrups, one wonders at how little was evidently necessary to stimulate the fantasy of the observer of such depictions, and how much cooperation could be expected from him. The fish was enough, for instance, to suggest the presence of some water. For a contemporary of the weaver, the hunter was shown in a landscape full of the manifold life of nature. That the hunter was a person of high rank must have been obvious, but whether he identified him with some ruler we cannot know.





Fig. 15. TM V b





A roundel in Moscow (Fig. 17, after Gerspach 1890: Pl. 76) shows a Christian ruler upon a galloping horse (Volbach 1963: 448, No. 618). He holds a scepter and a diadem, and we are entitled to assume that he represents the emperor. He is not actually hunting, but animals of the hunt are still included-two collared animals with leashes, a lion as a trophy, and four birds, of whom three are meant to swim. A single, much stylized plant form, and possibly two more intended as such, indicate the landscape of which other details are replaced by crosses and letter shapes. Such motifs have been cited as proof of lack of skill among Coptic weavers. In reality, these motifs were a common device of the floor mosaicists as early as the late Roman period, another reminder that the requirements to stimulate a visual illusion are not the same in different periods, and another warning not to blame the weavers prematurely for something which more complete knowledge may show in a different light.

To the same evolutionary sequence, though types of an earlier phase, belong CU (Fig. 18) and No. 74 illustrated by Lucia Guerrini (1957). If CU is put into the correct iconographical context,¹¹ it is no doubt possible that again a triumphant Christian ruler, most probably the emperor, is represented. He carries the same regalia as in Fig. 17. The motifs of the lion are nearly identical; both show a twig emanating from the mouth. Corresponding in each design are the lack of a bridle, the unification of a cheekpiece with the throatlatch, and the diskshaped ornament on the breeching. But for having long trousers, the costume is nearly the same as in Fig. 16. I am not aware that such close-fitting, possibly one-piece, garments, which are usually shown with a belt, have been studied by anyone.¹² I do not know examples for the cut of the garments other than in tapestries, the usual costume of the emperor being either some form of a cuirass or a tunic. I cannot offer any other suggestion for the

Fig. 17

solution of the riddle than that it somehow had become a hunting garment.¹³ It is always made of a fabric with a pattern of small disks or dots. Ernst Herzfeld (1927: 72) classified it as Sassanian. though without documentation. That the garment was characteristic of a type of representation of the emperor is evidenced by Cooper Union No. 1902-1-22 (Fig. 19). Its relationship to the concept of the triumphant emperor is substantiated by the inscription, in Greek or Coptic letters, beside the lower rider, ZECHC, equivalent to "viva" or "long live." ¹⁴

I shall make only two more comments on CU and its counterpart in the Museum of the Campo Santo Teutonico in Rome (Stegenšek 1902: 173). Here again are the two prisoners, the dog and the lion, and, new to us, hyenas (?) and elephants (?) designed by someone not familiar with either of them. The emperor sits upon a galloping horse in three-quarter front view. His left hand holds the bridle as in the Barberini diptych. This confirms what one could already deduce from the Aachen and Baltimore ivories (Figs. 7 and 9), that there was a tendency to combine the motifs of the statuesque triumphant emperor with the actually hunting emperor. The horse in CU belongs to this evolutionary sequence. Its weaver, though not outstanding himself, followed a well-designed model. I am not able to allot a definite place in the evolution to the leaf on the inside of the right hindleg. It could indicate that in the original model the horse jumped through bushes. That CU belongs to the same evolutionary strain is definitely proved by Met I and II. Though poorly preserved, they allow us to recognize the triumphant emperor of V&A between two dancing girls with unfettered hands. As in CU, the leaves indicating plants are not shown from above as usually, but in profile view. This is a solemn representation. Grabar (1951: 45 ff.) explained the representation on the enamels of the



Fig. 18. CU

diadem in the Budapest Museum of about 1045 as recording an idyllic scene of the private life of the Emperor Constantin XI and his co-regents Zoë and Theodora, which was influenced by Islamic customs. But the "Coptic" tapestries attest an early tradition in pictorial representations of the Byzantine emperor in majesty together with dancing women. Now we can surmise that the four female figures in Fig. 17 are also representing dancers. According to Grabar (1951: 44), no literary documentation of such a ceremony exists. This only enhances, to my mind, the value of the evidence transmitted by the tapestries. It is improbable that they were the sole pictorial representations showing the victorious emperor welcomed according to a tradition arising from the reception of David (I Sam. 18:6). Moreover, Eusebius (Schade 1963: 5) reports that in honor of the victory of Constantin the Great over Licinius in A.D. 323 the populace everywhere expressed their joy by dances and songs. Schade (1963: 5 ff.) points out that these were not social dances but religious in nature. In Met the arms of the girls are clearly bent in front of their bodies. In CU faulty weaving creates the impression that the hands have been replaced by belt buckles. The indication of dancing by the angularly bent legs is not known from representations in the antique tradition but has its counterpart in Samarra (Herzfeld 1927: Pl. 2). Whether it was inspired by the position of the legs of the prisoner at left in V&A, or whether the influence worked the other way around, I dare not decide. The girls wear leotards without skirts in CU, with skirts in Met I and II. They are made from the same fabric as the emperor's dress or the prisoner's in Fig. 19. It reappears in a roundel in Brussels (Errera 1916: No. 243) which is closely related to CU. This textile would indicate the battlefield 18



Fig. 19. CU

as part of inspiration for designers of relevant decorative art objects. The horseman of the Brussels roundel holds in his lowered left hand a spear and raises with the right hand a similar indefinite object, as in Met I and II and Fig. 16. He is hunting accompanied by a dog. A bird and some small game represent the wild animals. On the ground lies a severed head, reminiscent of the insertion in SM (Fig. 14), which therefore probably derives from a counterpart of SM. In the middle of the breeching is a circular ornament as in Figs. 17 and 18. The shanks of the riders in these three roundels are the only ones which are raised in the tapestries cited thus far. The preservation of this very Hellenistic motif (Falke 1913: 64) is especially striking where combined with the "paratactic" design of the breast and the eyes staring out of the picture, which is at least avoided in Fig. 17 and Guerrini No. 74. The latter shows the emperor and the lion of Fig. 17 between the girls of CU. It is a much damaged, "debased" piece in which, for example, the halos have become head-dresses, and a bird looks like a bottle on two feet. But the circle on the left hindleg of Fig. 17 is preserved. Preserved also are the contrasting color strokes for modeling seen in CU which in Fig. 3 are beginning to be transformed into ornamental motifs, a development which Fig. 17 shows further progressed. They are lying aesthetically in the same plane as, or even upon, the bodies to which they originally belonged organically. They take on the value of independent forms, like the contrastingly colored parts of the trunks of the genii in TM I, or the ornament upon the horses' breasts in Fig. 4 which now appears as an organized pattern inspired by something similar to the horseshoe motifs in Fig. 3 or the crescents in Fig. 16 rather than a misplaced brand. What appears as crudity of design in Fig. 3 is in reality an indication that the work belongs to the final phase of the influence of antique impressionistic painting. The Byzantine neo-classic polish is lacking which is so evident in the Textile Museum's other roundels with pairs of hunters, though these others may be dated no later than TM III. Its type is earlier, including naturalistic motifs of which later forms appear in other roundels. The trees in Fig. 3 are nearer to those in the relief of Hadrian's boar hunt (Bulle 1919: 162) than any of the stylized plant forms. Though less evident, it is even more impressive to see in what form the two-pronged rein, as shown at right in Fig. 3, has survived beneath the arm of the rider at left in Fig. 2.

It may be surprising how many common traits can be found even in otherwise very different pieces. The designs belong to one evolution, however much split into several sequences it was. One of the means of making this inter-relationship possible may by indicated by V&A. Whether woven during the reign of Phokas or not, it proves that this type of triumphant emperor was then known. It is a synthesis of two necessarily older representations of the emperor, victorious in war and in the hunt. Representations of hunts considered appropriate

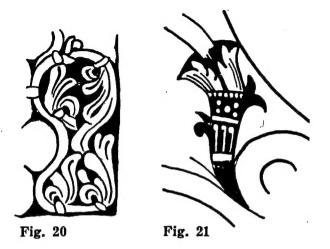
(for example, see Cabrol and Leclercg 1913: col. 1094) even in churches, it is not far-fetched to imagine them, and their more serious counterparts, as favorite decorations for important government buildings. I am thinking of wall paintings which inspired the designers who created the textile patterns. This hypothesis offers some explanation for several problems: the continuity of evolution for a composition though executed in unrelated stylistic phases and in different regions; its corresponding influence upon the non-official iconography; and the occurrence of identical motifs in various materials. Certainly it does not solve all of our problems. For one like me who believes that most of these roundels were woven after the Arab conquest of Syria and Egypt, it remains a riddle as to whether one can assume that the Arab rulers had no objection to depicting almost provocatively attachment to the emperor or another Christian ruler. Should it be assumed that such tapestries were woven inside the Byzantine Empire and came to Egypt because they were worn by foreigners? To the best of my knowledge, neither an affirmative nor a negative answer can at present be proved. Is it significant that in none of the Textile Museum's roundels is the hunter characterized as the emperor? I see no reason to doubt that TM II and V were woven in Egypt. A cuff of the tunic to which TM V a belonged is preserved in the Textile Museum (No. 11.24, Fig. 15); both have the same border. Dionysus stands between stripes which are crudely interrupted to make room for him. He is pouring wine from a pitcher into a panther's mouth, a frequent motif in Coptic tapestries. Rarely both his arms are lowered and one of them is leaning upon a support. The legs have suffered the most curious transformation and are incomprehensible unless seen in an evolutionary sequence. In the original model, Dionysus stood upon his right leg. It was crossed by the raised left one, which was shown in profile. When the motif was altered, the knees remained where they had been. To make matters worse, the weaver indicated the kneecaps in the middle of the thighs. As significant as this difference in quality of design in contemporaneous works of the same workshop, is the mixture of models. The mode of representing trees is very different in Figs. 15 and 16. Cypresses were a common motif in late antique landscapes. Similar indications of treetops, as in Fig. 15, I have seen only in the Dumbarton Oaks roundel No. 46-17, in which the design of the lion's nose is also similar to that in Fig. 16, though less schematic.

In a recent effort to define the study material for the workshop of a twelfth century Byzantine mosaic painter, Ernst Kitzinger (1960: 49) used information gathered from the incompletely published and insecurely dated life of St. Pancratius, whose earliest manuscripts are from the tenth century: "In this life we hear of tablets and papyri expressly painted to serve as guides for the decoration of churches, and there can be no doubt that this reflects a widespread practice." Kitzinger (1960: 58 and 84) assumes that "iconographic

guides" and "sets of standard formulae or patterns for individual motifs" were needed for "all the secondary and individual elements." He (1960: 84) believes it "not likely" that these "motif books" were "available in a physically exportable form" in Byzantium, but were "an individual artist's exercises, studies he made . . . in the process and for the purpose of acquiring his own vocabulary," the "contact with the stylistic source was a 'live' one." In the case of the "Coptic" weavers of tapestries, the problem is a different and more complicated one. They had not to develop a personal "vocabulary" but to keep up with both changing fash-ions and evolutionary processes. They did not work under the supervision of a leading artist. Every ambitious workshop needed a stock of designed and of woven patterns, most probably not limited to its own productions, period, or country. Such workshops belonged to refined civilizations in which the means of communication between distant members consisted, not of traditional knowledge, but of something represented on the materials in use for such communications.

The Egyptian pre-Coptic squared designs for sculpture (Erman 1909: col. 197 ff.; Borchardt 1918: col. 105 ff.) make it probable that squared designs for tapestries existed. But as I earlier wrote (Berliner 1962: 12): "there is not the slightest hint of the existence of . . . full-size . . . cartoons on squared papyrus." These alone make tapestry weaving with complicated designs, or with more than three colors, decisively easier. A master weaver was much more dependent on his own technical skill than was a painter. But even the most skilled weaver needed at least a "motif book" of ornamental patterns, which hardly any artist is able to invent by himself, however able he may be to evolve motifs. It is simply expecting too much, even of the outstanding master weaver, that he be also an accomplished student and designer of ornamentation. I believe that we have to assume the availability of "guides for the decoration" of textiles designed by specialists in a leading fashion center.

Whereas the frames of Figs. 17, 18, 19, and Errera (1916: 110) No. 243 are not remarkable, those of Figs. 2, 4, 13, 14, 15, and 16 are out of the ordinary. Some of these have a surprising eighteenth century flavor, and all point to an origin during a creative period of ornamental design. The result is a strange incongruity of style between their spontaneity and the evolutionary traditionalism of the framed representations. The strangest pattern is that of the middle stripe of Fig. 4. I am unable to cite any lotus blossom closely related to that depicted here (or related to the blossom between the roundels in Fig. 4). I can say only that superficially it is reminiscent of those in Herzfeld's (1920: 116 ff., fig. 30, 1-9) fourth group, especially No. 4, on the Sassanian capital of Kala i Kuhna (dated by him around A.D. 600). But the differ-ences are fundamental. The most characteristic traits in Fig. 4 have no parallels: the predilection for smooth, round outlines; the naturalistic crookedness of the stem; the stunted calyxes; the little twigs



growing from, and accompanying, the blossoms. The very Western motif of small parts of plants growing from some larger part reoccurs in the border of Fig. 2. There they are combined with halves of acanthus leaves. These were a favorite motif during the period with which we are dealing, but it is not often that the outer contour of the leaf faces the hollow of the waved rinceau. Exceptional is the disk from which the leaf grows. It could be interpreted as the section of a knob on what looks like a twisted stem. It is more probable, however, that the motifs are evolved forms of the waved ribbon and the ring, rendered in perspective, holding little twigs, as in Fig. 14. Closer in the evolutionary sequence, though unmotivated rationally, are, in my opinion, the corresponding rings in a motif (Fig. 20) from the mosque in Qairāwān (Tunisia) built in A.D. 862-863 (Creswell 1940: Pl. 88 b). The story of this ring motif has not yet been told. For small leaves growing from acanthus leaves, M. Alison Frantz (1934: 74) was unable to find parallels when writing on the second painting of the Paris Psalter (cod. Par. gr. 139). They exist. A Byzantine draftsman used the motif at the end of the ninth century (Weitzmann 1935: 40, fig. 376 from cod. Par. gr. 1470, dated A.D. 890; fig. 274 from cod. Par. gr. 1476). The folded acanthus leaves grow directly from a schematized waved band. In an evolutionary sense this is a later form of the motif than is shown in Fig. 2. I can cite only one exact parallel for the ornament in Fig. 2, a poor repetition where a hunt (!) is represented (Pfister 1932: Pl. 42).

The other ornament which seems to be "dated" within narrow limits is that in the frame of Figs. 15 and 16. The scheme and the standing leaf shaped like a flame are the same as in Fig. 13, but the acanthus is replaced by a cornucopia with a leaf. I am not aware that anyone has studied the development of the cornucopia rinceau. Herzfeld (1927: 22) dates its origin in the time of the Emperor Heraclius, but it was known many centuries earlier (see H. Stern 1957: No. 80 B; Garcia 1953: fig. 15). The replacement of the acanthus by cornucopias suggested itself easily if the stem had the shape of repeated elongated calyxes as shown, for



Fig. 22

instance, by No. 135 Ia (about A.D. 150) and No. 3 (3rd century) in Victorine von Gonzenbach (1961). But to depict plant motifs growing from a cornucopia is characteristic for the phase of Byzantine decoration as represented in the (Islamic) Dome of the Rock in Jerusalem of 691-692. I am illustrating (after Creswell 1932: fig. 182) a detail (Fig. 21) which shows both the tendency toward reducing the contrast between the wide opening and a narrow rising stem, and excrescences from the body of cornucopia. These are simplified to hooks in Figs. 15 and 16, and a single two-lobed leaf is rising. The combination of a cornucopia with such a leaf was, in my opinion, the motif from which the evolution started which led to the "blossom-horns" 16 of the Islamic ornamentation of the ninth century (Figs. 12 and 22). The dots and strokes upon the leaves are a surface decoration, part of which has lost any structural meaning. This loss is most apparent in drawings in a Coptic papyrus (Brit. Mus. pap. or. 8812. Cramer 1959: papyrus (Brit. Mds. pap. or. 6312. Cramer 1939: 32, fig. 9) of A.D. 883 (Fig. 23 a), in cod. Vat. Palat. gr. 44 (Weitzmann 1935: 34, fig. 234) of A.D. 897 (Fig. 23 b), and cod. Vat. Reg. gr. 1 (Weitzmann 1935: 40, fig. 276) of about 900 (Fig. 23 c).¹⁷ I do not think it is possible to date the ornament of the frame before around A.D. 700, but I believe that the ninth century is a more probable date than the eighth. The great stylistic difference between the contemporaneously woven designs of Figs. 15 and 16 resulted from the fact that the hunting scene belongs to a much older tradition. The ornament of the frame in Fig. 14 reoccurs in a slightly varied repetition of V&A in Vienna (Egger 1956: fig. 27).18

My assumption that woven fabrics usually may have belonged to the stock of models of tapestry weavers is based on their influence on the design of Fig. 4, though in this case it may have been an indirect one. The weaver seems to have worked after a sketch in a motif book, because he evidently misunderstood the patterned part of the saddlecloth and the roundel, marking the knee as ornaments belonging to the tunic. We lack evidence that this heart pattern was ever actually used so sporadically. By chance some depictions of the same type of fabrics are known which the presumed sketch reproduced. The most closely related designs are those of the archers shown by Falke (1913: figs. 72, 73). Their tunics have an over-all pattern of hearts, the band around the waist, the knee roundels.

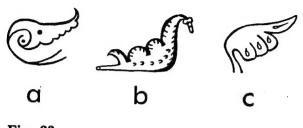


Fig. 23

In fig. 72 the clavus is omitted. The eyes of the horses have lost a definite anatomical shape, revealing a tendency which reached its climax in Falke's (1913) fig. 89. Falke classified the fabrics as Alexandrian and Syrian or Byzantine respectively, dated sixth to seventh century and about A.D. 600. The year 835 is a terminus ante quem for his fig. 89. and A.D. 600 is a probable terminus post quem for all these fabrics. An exceptional motif in the representation of the hunters in Fig. 4 is the slingshot. It does not seem to occur in any of the known relevant representations of hunts, and, in any case, it could not alter the fact that the design of TM IV fits into the Western tradition. Elizabeth Riefstahl (1941: No. 221) listed it in the catalogue of the Brooklyn exhibition, "Pagan and Christian Egypt," as a sixth century copy of a Sassanian model, whereas an anonymous classification in the files of the Textile Museum reads, "Mesopotamia, ninth to tenth century." I am unable to suggest any specific region of the Near East as the place of origin, but I feel the appropriate date to be eighth to ninth century.

To sum up: A newly found ivory relief corroborates my dating of TM I to the eighth or ninth century. TM II and V appear to be Coptic of about the same date. TM III, IV, and V&A cannot be claimed for Egypt with any degree of probability. As designs of hunters, TM III and IV correspond to traditional ones in textiles, but they show two uses of the coloration different from the other roundels. Both represent final phases of antique impressionism. Whereas the transformation of color shading into decorative patterns is well under way in TM III, much of the technique of mixing various shades for modeling is preserved in the design of the horse in TM V a. Though unusual as a composition, V a is of a type which explains the ways hunting animals are shown in the other roundels. The arrangement of the animals makes it improbable that any of the roundels can be dated before A.D. 700. But the ninth century cannot be excluded, especially not for TM V itself. The ornamentation of its border is relatively dated by decorations of Islamic buildings. In the evolutionary process it is later than those of the Dome of the Rock and somewhat earlier than those at Samarra. Again, about A.D. 700 is a terminus post quem, and some date in the ninth century is not impossible. The investigation led to the conclusion that in Byzantine iconography before A.D. 600, symbolic representa-

tions of the emperor simultaneously triumphant "Coptic" over enemies and beasts were known. tapestries evolved in strains of great variety. The types represented by TM I, II, and V a are examples of both this variety and the loss of an evident connection with imperial iconography which III and IV do not have at all. TM IV especially is related to a woven silk of hunters.

Our investigation proved blocked quite often because too many facts relevant to, and concerning, "Coptic" textiles are unknown. Grube (1962) emphasized the same difficulty in his article. In my opinion, many of Falke's (1913) classifications of the fabrics of the first millennium can no longer be accepted as valid. His book was a remarkable feat when it appeared fifty years ago, but it no longer offers a trustworthy starting point. Grube (1962), writing as an historian of Islamic art, treated the subject of "Coptic" textiles with great caution. I do not see how one can escape his conclusion that a pure Coptic tradition survived at least into the tenth century, whereby the term "pure Coptic" covers all quality levels from products of Coptic folk art to those aspiring to meet the standards of contemporary Byzantine art. But that is not the whole story. A gradual transformation from the non-Islamic to the emerging Islamic style also occurred. The border of TM V is an early example, and in my (Berliner 1962) article on the Alexander roundel, fig. 12 (identical with Grube's (1962: Pl. XVII, 13) shows a much farther progressed phase. It has been the accepted theory that, after some decades of Arabian rule in Egypt, the history of "Coptic" tapestries tells nothing but decay and debasement. This is a blinding supposition, and we have found, on the contrary, evidence of creative developments and of great stylistic diversity.

NOTES

¹ An exception is the important article by Ernst J. Grube (1962: 84) which puts the "motif of the hunting horseman" into the "Roman tradition."

¹³ Bulle's (1919) article escaped Grabar's attention. ¹³ In my opinion, Schmid (Bassermann-Jordan and Schmid 1914) surmised correctly that the tapestry was a gift of the

Byzantine to the German emperor. 'I share his (Grabar 1956: 22) preference for a later date for it than the usually chosen eighth century. ^o Personally, I do not believe in the roundel's Egyptian

^rersonally, I to not believe in the rounder's Egyptian origin, because the ornament does not look Coptic to me. ^{See} also Grabar (1960: 124). The much damaged Cooper Union specimen No. 02-1-105 contains a medallion with the bust of an emperor. ⁷ The Kansas City Museum owns an almost identical counterpart (No. 49-17) of TM II except that the horse has a heat in it tail

has a knot in its tail.

⁸A strange form of such a transformation seems to be represented on a very late coin of the Emperor Heraclius (A.D. 610-641). See Sabatier (1862: 228, Pl. 30, No. 20). *Compare the bronze medallion published by Whittemore

(1954: 184 ff.). Its earliest theoretically possible date is 1057. According to Whittemore, it represents one of the later emperors with the name Isaac.

¹⁰ A fragment of a roundel with the same lion is in the Seattle Art Museum.

¹¹ Florence Day (1954: 238) did not do this, although she correctly denied that a saint is represented. She dated the

correctly denice that a same is represented. She dated the roundel seventh to eighth century. ¹² It is also worn by the prince or princess in the Islamic tapestry of the Textile Museum (No. 721.14) which Richard Ettinghausen (1943: 121, fig. 25) dated tentatively ninth

to early tenth century. ¹³ Garments with the same fabric are also worn by the hunter in a roundel illustrated by Kendrick (1922: 82, No. 822) and the Amazons in the silks of the Muslim period which Grube (1962: 77 ff., Pl. 14) recently discussed.

¹⁴ For the Greek formula of good wishes, spelled accord-ing to the Latin pronunciation, see Hermann Vopel (1899: 80 ff.); Cabrol and Leclercq (1923: col. 1824).

¹⁵ The Cooper Union roundel, No. 1946-103-1, represents a phase of the evolution in which two horsemen with swords, two lions, and two heads are included in a highly organized ornamentalization of a tree (Akashi 1955: Pl. 18). organized ornamentalization of a free (Akashi 1955; Pl. 18). A medallion in Leningrad combines the galloping horseman with two birds, a dead lion, and a severed head (Volbach 1963; 339, No. 354). ¹⁶ The terminology is Herzfeld's (1923). Fig. 12 is after his orn. 167; Fig. 22 is after his Fig. 61 A. ¹⁷ I cannot discuss here the problem of the variously changed heles in heaveners in they enter the set of the

shaped holes in leaves as they appear in some silks of the snaped noises in leaves as they appear in some sites of the workshop of Zacharias, whose activity must have extended into the second half of the seventh century (Pierce and Tyler 1934: 192). See Grube (1962: 76 ff.) on the "Zachariou" silks. The genitive case of the name excludes any other interpretation than that it is a simulation. any other interpretation than that it is a signature. does not prove that the workshop was Egyptian.

¹⁸ Represented is, according to him (Egger 1956: 27), a winged mythological horseman! For my interpretation of the emperor as Phokas see Berliner 1962: 13.

Figure 9-Courtesy of the Walters Art Gallery. Figs. 18 and 19-Courtesy of the Cooper Union Museum. We were unable to obtain a photograph of V&S from the Victoria and Albert Museum. All the drawings are by Milton F. Sonday, Jr.

BIBLIOGRAPHY

Akashi, Kunisuke, ed.

- 1955 Coptic Textiles from Burying Grounds in Egypt, Vol. 1. Kyoto
- Bassermann-Jordan, Ernst and Wolfgang M. Schmid 1914 Der Bamberger Domschatz. Munich.
- Beckwith, John
- 1959 Coptic Textiles, Ciba Review, Vol. 12, No. 133, pp. 1-27. Basel.

Berliner, Rudolf 1962 A Coptic Tapestry of Byzantine Style. Textile Museum Journal, Vol. 1, No. 1, pp. 3-22. Washington, D. C.

Borchardt, Ludwig 1918 Ägyptische Abteilung: Sphinxzeichnung eines ägyp-tischen Bildhauers. Amtliche Berichte aus den königlichen Kunstsammlungen, Vol. 39, No. 5, cols. 105-110. Berlin.

Bulle, H.

1919 Ein Jagddenkmal des Kaisers Hadrian. Jahrbuch des Deutschen Archäologischen Instituts, Vol. 34, pp. 144-172. Berlin.

Cabrol, Fernand and Henri Leclerq

- 1913 Dictionnare d'archéologie chrétienne et de liturgie, Vol. 3, pt. 1. Paris.
- 1923 Dictionnaire d'archéologie chrétienne et de liturgie, Vol. 5, pt. 2. Paris.

Cramer, Maria

1959 Zur Ornamentik in koptischen Handschriften des 4.-16. Jahr. Kunst des Orients, Vol. 3, pp. 29-43. Wiesbaden.

Creswell, K. A. C.

1932 Early Muslim Architecture, Vol. 1. Oxford. 1940 Early Muslim Architecture, Vol. 2. Oxford.

Day, Florence

1954 The Inscription of the Boston 'Baghdad' Silk. Ars Orientalis, Vol. 1, pp. 191-194. Washington, D. C.

- Delbrueck, Richard 1929 Die Consulardiptychen und verwandte Denkmäler. Berlin.

Egger, Gerhart

1956 Stilkritische Untersuchungen an spätantiken Textilien. Jahrbuch der Kunsthistorischen Sammlungen in Wien, Vol. 52, pp. 7-32. Vienna.

Erdmann, Kurt

- 1936 Die sasandischen Jagdschalen. Jahrbuch der preuszischen Kunstsammlungen, Vol. 57, pp. 193-232. Berlin.
- 1943 Die Kunst Irans zur Zeit der Sasaniden. Berlin.

Erman, Adolf

1909 Zeichnungen ägyptischer Künstler griechischer Zeit. Amtliche Berichte aus den königlichen Kunstsammlungen, Vol. 30, No. 8, cols. 197-203. Berlin.

Errera, Isabelle

1916 Collection d'anciennes étoffes Égyptiennes. Brussels.

Ettinghausen, Richard

1942 Painting in the Fatimid Period: A Reconstruction. Ars Islamica, Vol. 9, pp. 112-124. Ann Arbor.

Falke, Otto von

- 1913 Kunstgeschichte der Seidenweberei, Vol. 1. Berlin. Frantz, M. Allison
- 1934 Byzantine Illuminated Ornament. Art Bulletin, Vol. 16, No. 1, pp. 43-76. New York.
- García v Bellido, Antonio
 - 1953 Dos 'villae rusticae' romanas recientemente excavadas. Archivo español de arqueologia, Vol. 26, No. 87, pp. 207-217. Madrid.
- Gerspach, Édouard

1890 Les Tapisseries coptes. Paris.

Gonzenbach, Victorine von

1961 Die römischen Mosaiken der Schweiz. Basel.

- Grabar, André 1936 L'Empereur dans l'art byzantin: recherches sur l'art officiel de l'empire d'Orient. Paris.
 - 1951 Le Succès des arts orientaux à la cour byzantine sous les Macédoniens. Muenchner Jahrbuch der bildenden Kunst, Series 3, Vol. 2, pp. 32-60. Munich.
 - 1956 La Soie byzantine de l'évêque Gunther à la cathédrale de Bamberg Muenchner Jahrbuch der bil-
- denden Kunst. Series 3, Vol. 7, pp. 7-26. Munich.
 1960 Une Pyxide en ivoire à Dumbarton Oaks. Dumbarton Oaks Papers, No. 14, pp. 121-146. Washington D. C. ington, D. C.

Grube, Ernst J.

1962 Studies in the Survival and Continuity of Pre-Muslim Traditions in Egyptian Islamic Art. Journal of the American Research Center in Egypt. Vol. 1, pp. 75-102. Boston.

Guerrini, Lucia

1957 Le Stoffe copte del Museo archeologico di Firenze. Rome.

Herzfeld, E.

- 1920 Am Tor von Asien: Felsdenkmale aus Irans Heldenzeit. Berlin.
- 1923 Der Wandschmuck der Bauten von Samarra und seine Ornamentik. Berlin.

1927 Die Malereien von Samarra. Berlin.

Hinks, Roger Packman

1933 Catalogue of the Greek, Etruscan and Roman Paintings and Mosaics in the British Museum. London.

Hitti, Philip K.

1951 History of the Arabs. New York.

- Kendrick, A. F.
 - 1922 Catalogue of Textiles from Burying-grounds in Egypt. Vol. 3. Coptic Period. Victoria and Albert Museum, London.
- Kitzinger, Ernst

1960 The Mosaics of Monreale. Palermo.

- Kraeling, C. H. 1956 The Synagogue. The Excavations at Dura-Europos. final Report, Vol. 8, pt. 1, edited by M. I. Rostovtzeff and others. New Haven.
- Peirce, Hayford and Royall Tyler 1934 L'Art Byzantin. Vol. 2. Paris.

Pfister, R.

1932 Tissus coptes du Musée du Louvre. Paris.

Riefstahl, Elizabeth

1941 Egyptian Textiles of the Graeco-Roman and Early Christian Period in Pagan and Christian Egypt, pp. 45-86. Brooklyn Museum, Brooklyn,

Sabatier, J.

1862 Description générale des monnaies byzantines frappées sous les empereurs d'Orient depuis Arcadius jusqu'à la prise de Constantinople par Mahomet II. Paris.

Schade, Herbert

1963 Zum Bild des tanzenden David im frühen Mittelalter. Stimmen der Zeit, Vol. 172, No. 7, pp. 1-16. Freiburg i. B.

Schlumberger, Daniel

- 1946-1948 Deux fresques omeyyades. Syria, Vol. 25, pp. 86-102. Paris.
- Seyrig, Henri 1937 Antiquités syriennes. Syria, Vol. 18, No. 1. pp. 1-53. Paris. .

Stchoukine, Ivan

1936 La Peinture iranienne sous les derniers 'Abbasides et les îl-khâns. Brussels.

Stegenšek, Augustin

1902 Ueber angebliche Georgsbilder auf den aegyptischen Textilien im Museum des Campo Santo. Oriens Christianus, Vol. 2, pt. 2, pp. 170-178. Rome.

Stern, Henri

1957 Recueil général des mosaïques de la Gaule, Vol. I. Paris.

Stillwell, Richard, ed.

1938 The Excavations 1933-1936. Vol. II of Antioch-onthe-Orontes. Published for the Committee by the Department of Art and Archeology, Princeton.

Strzygowski, Josef

1904 Koptische Kunst (Catalogue général des antiquités égyptiennes du musée du Caire). Vienna.

Volbach, W. F.

- 1952 Elfenbeinarbeiten der Spätantike und des frühen Mittelalters. Mainz.
- 1963 Koptische Stoffe. In Koptische Kunst, by Theodor Kraus and others, pp. 147-152, 295-352. Villa Hügel, Essen.

Vopel, Hermann

- 1899 Die altchristlichen Goldgläser. Freiburg i. B.
- Weitzmann, Kurt
 - 1935 Die byzantinische Buchmalerei des 9. und 10. Jahrhunderts. Berlin.

Whittemore, Thomas

1954 A Byzantine Bronze Medallion with an Imperial Representation in Studies in Art and Literature for Belle da Costa Greene, ed. by Dorothy Miner, pp. 184-192. Princeton.

Zupnick, Irving L. 1963 "Paratactic" Image in Egyptian Art. The Art Journal, Vol. 22, No. 2, pp. 96-98. New York.