

CHAPTER IX

THE FIRST GREAT EXPANSION OF AEGEAN COMMERCE¹

THE DISTRIBUTION OF MIDDLE MINOAN OBJECTS IN THE ORIENT²

The first great expansion of Aegean culture took place in the Middle Bronze age when Crete enjoyed far flung foreign contacts,³ and engaged in a lively export trade. The success of Middle Minoan Cretan merchants can be gauged by the distribution of the most durable of their wares, the fine, thin Kamares pottery, which was unequalled by the products of any contemporary Near Eastern potters. A number of Egyptian sites have yielded Middle Minoan sherds.

At Harageh, three large heaps of rubbish (not actual town deposits) were found between three cemeteries. Although the only dated object found in these heaps was a stela of Sesostris II, the debris evidently came from the town occupied by the workmen who built the pyramid of that king at Lahun.⁴ Approximately twenty MM II A sherds were found in these rubbish heaps.⁵ Among the sherds are examples of barbotine work, as well as others with dentate band, tangential loop or rosette decoration.

At Abydos in a homogeneous group containing cylinder seals bearing the names of Sesostris III and Amenemhat III also yielded a transitional MM II A/B bridge-spouted pot, decorated with wavy lines and rosettes with round-ended rays.⁶

¹ Original title, crossed out, was THE FOREIGN TRADE OF MIDDLE MINOAN CRETE AND THE APPEARANCE OF SPIRALIFORM ORNAMENT IN EGYPT.

² This section has been reworked, illustrated and published in Kantor's "The Aegean and Orient in the Second Millennium B. C." AIA Monograph Number 1, pp.18-21. This publication will be abbreviated subsequently as Kantor A&O.

³ Discussed in detail in ArchC, pp. 120-22, 143-5, 172-5 where references are given to pertinent sections in the Palace of Minos. Cf. also D. Fimmen, *Die Kretisch-Mykenische Kultur* (Leipzig, 1924), pp. 98, 107 and especially 156-8.

⁴ *Harageh*, pp. 10-11; Pl. II (map). ArchC, p. 144.

⁵ PM I, 211-14; 228; Figs. 119, a-g, 120; Pl. IX, g.

⁶ ArchC, pp. 144-5; PM I, 268, Fig. 199, a; AA V (1912-13), 107-11; Pls. XIII, XIV. The tomb in question is numbered 416, and, although found in 1907, has never been fully published. Six shafts lead down to as many chambers. Since the narrow walls between these rooms have been broken down, their

A considerable number of MM II B sherds were found at the bottom of rubbish heaps at Lahun, a town which flourished during the building of the pyramid of Sesostris II, and does not appear to have been occupied after the end of the Twelfth Dynasty.⁷ The bridge-spouted jar appears to have been a favorite shape; bowl and cup forms can also be identified and among the patterns occur the typical attenuated rays of MM II B rosettes.⁸

Egypt was not the sole market for Kamares pottery, although up to the present it has yielded the largest number of published sherds. This ware is present in Stratum II at Ras Shamra. The single sherd published belongs to MM II A.⁹ In addition, several other tombs and some houses of level II contained Kamares fragments. A complete "cup" bears spirals and "floral motives."¹⁰ Besides this imported Minoan ware, Tomb 57 contained three vases discussed by Schaeffer as imitations of Minoan forms made in local clay. Of these, one is a bridge-spouted pot completely Cretan in form.¹¹ A second vessel, a beaked jug, is comparable to a Minoan group of forms, and is identical in shape with a jug from

contents could not be kept separate. Only the objects belonging to the "third and sixth graves from the North" could be distinguished. The third grave contained a slate kohl pot, slate and diorite palettes, and a blue-glazed "draughtsman holder" as well as the Minoan pot fragments. All of the objects, over one hundred in number, found in T. 416 belong to the same period. Among the finds listed or pictured are glazed figurines of a hippopotamus, of a hedgehog, of cats, and monkeys. There were also small glazed pots with lotus decoration. There were rough stone, painted figurines showing animals, wrestlers, musicians, and similar motives. Toilet articles such as mirrors with wooden or stone handles, alabaster and "dark stone" kohl pots, and small vases of "blue marble" were common. The mortars, pestles, and palettes should probably go under this heading. In addition various types of beads, including necklaces of globular or long cylindrical types, and amulets were found.

⁷ ArchC, p. 145; PM I, 266-7; Fig. 198, c; PM II, 210-2, Fig. 119, h; BMC, pp. 91-3, Fig. 113, A 518-561. Petrie, *Illahun, Kahun, and Gurob* (London, 1891), p. 9, l. 1.

⁸ In addition to the normal imported Kamares fabric, other sherds appear to be local (?) imitations of the Minoan ware. Cf. BMC, pp. 93-4, Figs. 114-5; ArchC, p. 145.

⁹ Schaeffer, *Ugaritica* I (Paris, 1939), 54-6, Figs. 43-4, T. 36. This tomb was reused in LB times, when the older contents of the chamber were swept together and placed in a pit. Cf. *British Archaeological Discoveries in Greece and Crete*, 1886-1936. Catalogue of the Exhibition, Royal Academy of Arts, London, 1936, pp. 5, 7, 8, 15.

¹⁰ Schaeffer, *op. cit.*, 54. Cf. also Schaeffer, *Cuneiform Texts of Ras Shamra* (Oxford, 1939), p. 12, where a thin-walled "cup" with destroyed decoration is mentioned.

¹¹ Schaeffer, *Ugaritica* I, 60-2, Fig. 50, J; Pl. XIV.

Phaistos.¹² A pot with broad shoulder, bearing a small loop-handle, and with a short neck, is unparalleled in Crete.¹³ Its Cretan connections remain very doubtful.

Aside from the pottery of Ras Shamra, a silver bowl from Byblos, ornamented by two parallel rows of running spirals, connected so as to form quadruple groups, is considered to exemplify Aegean influence.¹⁴

Minoan relations with the Mainland of Greece, possibly by way of the Cyclades, were also established in MM times.¹⁵ Imported MM III (?) vessels appear at Aigina¹⁶ and Asine;¹⁷ imitations¹⁸ were found at Mycenae,¹⁹ Tiryns,²⁰ and Orchomenos.²¹

Such finds are sufficient to show that MM II traders extended their operations over a large area of the Near East. It was the polychrome Kamares style that found favor abroad and this was an exclusively palatial product that was originated in Knossos and Phaistos, while much of the island continued to produce the less spectacular MM I ware.²² As one would expect, these powerful foci of Cretan culture monopolized foreign trade.

Unfortunately, the full extent of their commerce will probably never be known, for much of it probably consisted of perishable commodities.²³ However, the traces of such

¹² *Festos*, 224, Fig. 101, right. Schaeffer, *op. cit.* 62-3, Figs. 50, H; 51.

¹³ Schaeffer, *op. cit.*, 62-3, Figs. 50, D; 52. Cf. also 64, Fig. 53, R, a painted example of the same form.

¹⁴ Montet, *Byblos et l'Egypte* (Paris, 1928), pls. CXI, 746 (Tomb I); CXII, 747 (Tomb II). PM II, 655-6, Fig. 420. Evans considers the bronze loop-handled ewer from the same tomb to be of "very Cretan aspect;" cf. also silver bowl compared by Evans with MM III faience vessel (*Ibid.*, 824-5, Figs. 545-1. In Cyprus a MM sherd was found in LB T. 101 at Curium; MM I A pot occurred at Lapithos (Klio, XXXII (1939), 137, 138, n. 1. BMC I, p. 94, Fig. 116, A 568).

¹⁵ Cf. Karo, in *Reallexikon der Vorgeschichte* (M. Ebert, ed.), VIII, 389-390. PW Sup. Bd. VI, 584. Schgr. pp. 308-9; ArchC, p. 145, MM II A and B sherds were relatively common at Phylakopi.

¹⁶ AA, 1925, 318-9, Fig. 4. G. Welter, *Aigina* (Berlin, 1938), p. 19. Evidently a fairly large number of Kamares vessels were found; Welter enumerates pitchers with beaked spouts, bowls, cups, and pot covers, ornamented by a number of characteristic designs.

¹⁷ A. Persson, *Bull. Soc. R.*, Lund (1924-5), 76-7, Pl. XXIX.

¹⁸ The place of manufacture of these sherds is still unknown, but is not be found in the Argolid, according to Karo, *op. cit.*, VIII, 390.

¹⁹ *Mykenische Thongefäße*, Pl. VI. EPH., 1918, 52ff.

²⁰ Schliemann, *Tiryns* (London, 1888), Pls XXVI, d; XXVII, d.

²¹ Cf. Reisinger, *Kretische Vasenmalerei* (Leipzig-Berlin, 1912), pp. 7, 11ff., but see ArchC, p. 122, n. 3.

²² ArchC, pp. 94, 126.

²³ Very few objects remain to show what the Cretan traders and travellers brought back with them from their foreign journeys. MM I offers a few scarabs, some beads, and an ape amulet derived from Egypt,

vanished goods may perhaps be found in the spiraliform designs, apparently of Cretan origin, which first came into common use in Egypt during the Twelfth Dynasty, the same period which saw the importation of Kamares pottery. If such patterns were imported from Crete, it is probable that they were carried to Egypt by the medium of perishable textile goods, products which may well have played as important a role in the exchange of ornamental motives during early phases of history as they did in less remote periods.²⁴

THE APPEARANCE OF SPIRALIFORM ORNAMENT IN EGYPT²⁵

The origin of the spiral designs of Egypt has been the subject of much controversy, excellently summarized by Fimmen.²⁶ His conclusion that the Nileland must have originally derived its spirals from the Aegean is based upon the sharp contrast between Egypt where he could find no basis for spiral ornament before its sudden appearance in the Twelfth Dynasty and Crete which possessed a well developed spiraliform tradition which probably began as early as EM II. This argument is as valid now as then, though it must be slightly amended because of the accumulation of some new material in the development of scarabs, stamp seals and their decoration.

while two cylinder seals belonging to the First Dynasty of Babylon style were found at Platanos and west of Candia (ArchC, pp.120-1). In addition, a limestone head from Knossos may be of Mesopotamian origin (*Ibid.*, Pl. XX,3). A scarab from the Diktaian Cave seems to belong to the MM II B phase, and though imported from Egypt, bears a Minoan design on its base. However, the most important Egyptian object of this period, found in a II B deposit at Knossos, is the fragmentary statue of a private Egyptian, dated by Evers to the time of Amenemhet I. As Pendlebury has pointed out, this must be a sign, not of simple trade, but of a personal connection of an Egyptian with Crete (ArchC, p. 143).

²⁴ Cf. CS, pp. 316-7.

²⁵ This section has been expanded, illustrated and published in Kantor A&O, pp. 21-23.

²⁶ Fimmen, *Die Kretische-Mykenische Kultur* (Leipzig, 1924), pp.198-200. He summarizes the views of Newberry, Evans and Montelius. Evans at first derived the spiral decoration of Crete from Egypt; although he abandoned this view, he still found the origin of a number of Cretan designs in Egyptian models. Not all of these connections will stand the test of close scrutiny. Pendlebury refers to the "scroll work" which was elaborated in both countries, but neither can be considered to have borrowed from the other, but he does note that "the original idea may have been Egyptian." (ArchC, p. 145). Matz does not hesitate to assume that the c- and s-spirals of the scarabs reveal Aegean influence; he does not discuss the subject in detail (Matz, *Die frühkretischen Siegel* (Berlin-Leipzig, 1928), p. 178).

The detailed history of the scarab class, now known from excavations at Qau, has revealed the use of a few incipient spiral designs on primitive classes of scarabs. As Newberry has pointed out, the scarabs bearing names of Fourth and Fifth Dynasty kings were made much later in the Eighteenth Dynasty or later.²⁷

Here we follow Fimmen's view that the Egyptian system of spiral ornamentation was developed on the basis of stimulation from the Aegean. The sudden growth of spiral form design in the early Twelfth Dynasty occurred at a time when the scarabs, which had been fairly recently introduced, possessed as yet no adequate and long entrenched traditional system of design. The materials now available from the cemeteries at Qau and Badari support Newberry's opinion that scarabs were not used until the end of the Sixth Dynasty, and were very rare until the reign of Amenemhat III, at which time they quickly became popular.

At Qau the first stage in the development of the scarab is represented by a small series of crude, glazed amulets in the shape of the beetle, but without ornament on the base. Some possess a Fifth-Sixth Dynasty range; a number of others belong to the Sixth Dynasty and a few persist into the First Intermediate Period.²⁸ The first true scarabs with designs on their bases are rough, glazed objects characterized by their flat backs and sides without legs. They occur throughout the First Intermediate Period.²⁹ These coarse types are followed by more carefully made, high-backed forms with legs, which appear in force in

²⁷ Newberry, *Scarabs* (London, 1908), pp.66-69.

²⁸ Brunton, *Qau and Badari* (London, 1927), II Pl. XCVII, 40, C 3, H 3 (Dyn. V-VI); 40, C 6, C 12, C 15, C 18; 40, H 3, H 6 (Dyn. VI); 40, C 9, C 12, H 3, H 9 (First Intermediate); 40, H 12-18 are variants unrecognizable as beetles (First Intermediate).

²⁹ Brunton, *op. cit.*, p. 56; Pl. XXXIII, 141-154, 157. The existence of this group was known to Newberry; he compared a scarab bearing the name of Mernera, the fourth king of the Sixth Dynasty, with some examples of this class. He believes this scarab to be the only one contemporary with the reign of the king with whose name it is inscribed (Newberry, *op. cit.*, pp. 68, 70, Figs. 56, 59).

the later part of the First Intermediate Period.³⁰ Rare examples had already been deposited in burials of the early First Intermediate Period.³¹

During the First Intermediate Period scarab bases were ornamented in a primitive manner. Maze patterns, some of which became very degenerate, irregular geometric figures, schematic human and animal figures, as well as a few papyrus or water lily motives were used.³² Many features of this miscellaneous repertoire appear to be derived from designs current on stamp seals.³³ These sometimes show a curious general resemblance to patterns on EM seals, although there does not seem to be sufficient identity in specific details to prove direct connection.³⁴ Accordingly the new scarab class offered an excellent medium for the development of spiral design, which in its turn was well suited to provide a variety of patterns fitting the oval space of the scarab base.

The earliest scarab with a well developed spiral motive, a continuous s-spiral frieze, bears the name of Sesostris I.³⁵ Earlier and much simpler forerunners of the Twelfth Dynasty spirals, have now been yielded by the Qau cemeteries. Two scarabs belonging to the later part of the First Intermediate Period show primitive spiral curls connected with bud-tipped bands (Kantor A&O, Pl. I, A, B),³⁶ and a small spiral curl fills one side of a circular seal-amulet of the same date (Kantor A&O, Pl. 1 C).³⁷ Another contemporary stamp seal bears a roughly drawn quadruple spiral (Kantor A&O, Pl. 1 D). Other specimens of spiraliform patterns, presumably belonging to the end of the First

³⁰ Brunton, *op. cit.*, Pls. XXXIII, XXXIV, 158-165, 169-202.

³¹ *Ibid.*, 166, 167; possibly 158.

³² *Ibid.*, Pls. XXXIII, XXXIV.

³³ Cf. *Ibid.*, Pls. XXXII, XXXIII; Petrie, *Buttons and Design Scarabs* (London, 1925), Pls. II, III.

³⁴ Cf. comparisons made in PM

³⁵ Newberry, *Scarabs* (London, 1908), p. 79; *Dec. Art*, p. 21; Gautier and Jéquier, *Fouilles de Licht*, (IFAO, VI, Cairo 1902), p. 50, Fig. 49.

³⁶ Brunton, *op. cit.*, Pl. XXXIV, 192 (gr. 1216), 195 (gr. 4981; both Dyn. "IX"). A possible Cretan analogy for Kantor A&O, Pl. I B is an ivory seal from Platanos (Xanthoudides, *Vaulted Tombs of the Mesara* (Liverpool, 1924), Pl. XIV, 1059; EM III), but the resemblance is probably coincidental.

³⁷ Brunton, *op. cit.*, Pl. XXXIV, 226 (gr. 1672; "IX" Dyn.). An accidental analogy is offered by a circular seal from Knossos covered by a large spiral that returns upon itself and is much more finely drawn than on the Qau example (Matz, *op. cit.*, Pl. XV, 7 = no. 184).

Intermediate Period, are a scarab with two spiral curls (Kantor A&E, Pl. 1 E), and an oval bead with a series of concentric circles connected by bands, so that the resulting design simulates running s-spirals (Kantor A&E, Pl. 1 F). An Eleventh Dynasty seal is decorated by a spiral connected with a bud (Kantor A&E, Pl. I G).³⁸ Such evidence is sufficient to show that the beginnings of Egyptian spiral design must be sought in the First Intermediate Period, at which time there occur incipient native approximations to spirals. The fact that spiraliform designs do occur in Egypt earlier than the Twelfth Dynasty does not place chronological difficulties in the way of the theory of their Aegean derivation. In Crete spiral ornament is well developed in EM III and may have begun in EM II.³⁹ Period examples underline the fact that the real development of spiraliform design did not take place before the Twelfth Dynasty. Among the patterns that became frequent at that time, there are a few which compare so closely with Cretan motives as to seem of undoubtedly Aegean derivation; accordingly it seems justified to treat their appearance as circumstantial evidence of Cretan-Egyptian relations.

³⁸ F. Max Müller mentions a statuette of Mentuhotep, whose base is adorned by a spiral band (*Egyptological Researches* II, p. 7); this object, formerly in the Theodore Davis collection, has not to our knowledge been published. Fimmen doubts that spiral ornament could have been applied in the Eleventh Dynasty (Fimmen, *op. cit.*, p. 198, n. 4).

³⁹ For EM contacts with Egypt, cf. ArchC, pp. 53-5, 74-5, 89-91 and PM I. Some of these connections are based on comparisons of designs on stamp seals. Certain of these have been given undue emphasis of value and some have no validity. Cf., for instance, PM I, 201: "the pattern on the Cretan prism-seal , Fig. 150 F, represents a secondary stage of the Egyptian motive, Fig. 150 C." Nevertheless, this resemblance is accidental. The design on the Cretan prism is a clumsy rendering of a spiral from which fly two drops (cf. Matz, *op. cit.*, Pl. XIX, 3 a and Fig. XI.11). Egyptian spirals often have long, papyriform-tipped stems attached, which were probably derived from the sinuous papyrus of the unification symbol, a common scarab pattern (Petrie, *Illahun* (London, 1890), Pl. X, 120, 6 - 123, 125, in 124, and possibly also 128, the symbol is shown twice in a simplified form with a smaller number of papyrus stems). Other scarabs exemplify the decorative use of the arched papyrus stems derived from the unification symbol (Petrie, *op. cit.* Pl. X, 131, 132, 143). It was these stems, sometimes greatly lengthened, which were also utilized as adjuncts of spiral designs (Petrie, *op. cit.*, Pl. X, 146; *Button and Design Scarabs* (London, 1925), Pl. VIII, 177, 179-183; 203. Newberry, *Scarabs*, Pl. XIX, 11-13, 29). Such stems could depend from each curl of an s-spiral (Petrie, *Button and Design Scarabs*, Pl. VIII, 175, 176), and these are practically identical with Evans' Fig. 150, C, save that there the connection between the two spiral ends has disappeared. The Egyptian and Cretan designs are both closely connected with the decorative styles of their respective countries, and are completely unrelated.

INTERLOCKED C-SPIRALS⁴⁰

Despite the Aegean derivation of the interlocked c-spirals, Egypt not only offers more examples, but retained and elaborated this design for a longer time than Crete. This apparent anomaly may possibly be explained by the assumption that while in the Aegean this was only one variant among a large number of spiral patterns, Egypt, since it possessed a derivative and rather limited repertory of spiral designs, tended to make a liberal use of those patterns it did possess.

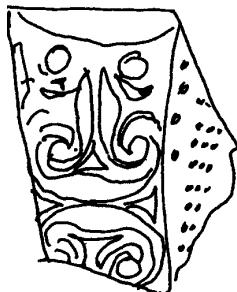


Fig. IX.1

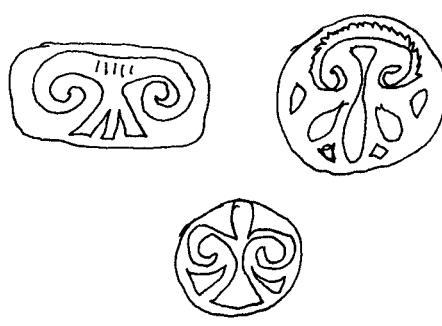


Fig. IX.2

Such designs are formed when the ends of two axially symmetrical c-spirals are canopied by other c's. MM Crete provides only one example on a mural fragment from the MM II palace at Knossos (Fig. IX.1).⁴¹ Black spirals curl around red centers on a white background. To offset the rarity of the design itself, possibly owing only to the chances of preservation, a number of instances may be cited where its main formative principle, the use of c-spiral canopies, has been applied. The part played by c-canopies in producing the sacral ivy design was an important one, and began in EM III.⁴² An EM II ivory seal from Platanos shows a triquetral design formed on this principle. (Kantor A&O, Pl. IV H).⁴³ The same pattern with four members appears on MM II-III seals or impressions (Kantor

⁴⁰ This section is reworked, illustrated and expanded in Kantor A&O, pp. 26-30.

⁴¹ PM I, 201, 231; Pl. I, K.

⁴² Cf. Chapter VII, pp. 307f. and Mpot, pp. 140-141, where the fairly frequent MM II papyriform unit is considered to be a derivative of a c-canopy.

⁴³ Xanthoudides, *The Vaulted Tombs of Mesara* (Liverpool, 1924), Pl. XIII, 1029 (= PM II, 199, Fig. 109).

A&O, Pl. IV E, L).⁴⁴ Other MM I designs show variously shaped, often pseudo-floral units, covered by a c-spiral (Figs. IX.2).⁴⁵

Later manifestations of the same traditions of abstract design used in early Crete and the Cyclades are to be found in the LH I shaft graves at Mycenae. One stela shows two of the designs in question, the interlocked c-spiral pattern itself (Kantor A&O, Pl. IV F) and a three-membered circular adaptation using six c-spirals, very similar to the earlier Platanos

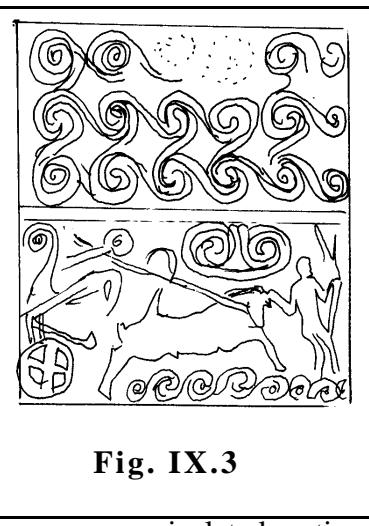


Fig. IX.3

seal (Kantor A&O, Pl. IV J).⁴⁶ Gold-leaf ornaments from Grave V are adorned by four interlocking c's in which the horizontal spirals are much emphasized at the expense of the vertical ones.⁴⁷ A stele fragment bears a design closely related with the interlocked c-spirals, although here the basic unit appears to be a "spectacle-spiral," possibly derived by a secondary link connecting the curls of the two c-spirals (Kantor A&O, Pl. IV G).⁴⁸ The "spectacle-spiral" unit

occurs as an isolated motive on another stela (Fig. IX.3), on the gold ornament from Grave V already referred to, and possibly on still another gold piece from the same grave (Kantor A&O, Pl. IV F).⁴⁹

Mainland variants of the motive of four interlocked c-spirals are probably to be found as the basic pattern in a fairly irregular spiral series on a gold diadem, and in a

⁴⁴ PM II, 200, Fig. 110 A, o (Crete, MM II), p (Zakro; impression, MM III); cf. pp. 199-202 for Evans' discussion of such designs and their Egyptian connections. These forms usually have the center of the circular area marked.

⁴⁵ Cf. Chapter VII, n. 11.

⁴⁶ Schgr, Pl. VI, 1429 = BSA XXV (1921-3), Pl. XX, Stela IV, Shaft Grave V.

⁴⁷ Schgr, Pl. LVI, 649; 650.

⁴⁸ Schgr, p. 32, Fig. 10; Pl. IX, bottom = BSA XXV (1921-3), 139, Fig. 32, a, aa.

⁴⁹ Schgr, Pl. V, 1428 = BSA XXV (1921-3), Pl. XX (Stele V, Grave V). Schgr, Pl. LVI, 649 (also on 650). *Ibid.*, Pl. LV (Grave V; here combined into a series of parallel running spirals; although it is difficult to decide which should be regarded as the basic pattern here, the running spirals or the "spectacle spirals," the former is the more likely candidate (Fig. IX.1Q).

simplified form on another diadem (Kantor A&O, Pl IV K).⁵⁰ Stele 1431 is covered with a running spiral, one of the coils of which contains a fine version of this design (Kantor A&O, Pl. IV M).⁵¹

From the Greek islands come examples of interlocked c-spirals which cannot be separated from the Mycenaean stela fragment with “spectacle spirals.” A fine series of these was carefully carved on a steatite pyxis (Kantor A&O, Pl. IV B),⁵² while a similar design decorates a biconical steatite pot from Kythera found in a LH III chamber tomb (Kantor A&O, Pl. IV D).⁵³

The presence of such designs in the Cyclades and their popularity on the Mainland before the influx of Minoan culture in LH I had displaced many older cultural elements, introduces the much debated problem of the ultimate provenience of spiral design. The possible solutions of this question do not concern us here, where it is sufficient to realize that interlocked c-spirals and related designs were thoroughly at home in the Aegean in general, and in MM Crete in particular. As far as Egypt is concerned, there is no reason to doubt that Crete was the source of the design.

Twelfth Dynasty scarabs bear the first Egyptian interlocked c-spirals. The basic unit of four c's was multiplied or combined with other elements in a number of ways to form patterns fitting within the oval scarab base (Kantor A&O, Pl. V A, B, C).⁵⁴ Similar

⁵⁰ Schgr, Pls. XXXVI, XXXVII, 234, 233 (Grave IV).

⁵¹ Schgr, p. 32, Fig. 11, a; Pl. VIII, 1431 = PM II, 201, Fig. 110 B, a.

⁵² Matz, *op. cit.*, p. 134, Fig. 40 = EPH (1899), 86, Fig. 11 = AM XXXVIII (1913), Pls. VII, 1, 3-5; IX, 2. Matz compares this pyxis with an EM III steatite vase from Platanos, with which he considers the Cycladic forms to be contemporary.

⁵³ PM II, 208, Fig. 117, B (Cerigo) = Delt. I (1915), 192, Fig. 1 = Arch. Anz. (1915), 196.

⁵⁴ Petrie, *Illahun* (London, 1890), Pl. X, 154, 157, 158 (Kahun, town deposits; impressions; three units); 158 (same prov.; single unit filling one half of area); 178 (same prov.; two units). *Harageh*, Pl. XX, 36 (Cem. B, gr. 295, containing only two scarabs and flints; two incomplete units; MK). Petrie, *Button and Design Scarabs* (London, 1925), p. 15, Pls. VII, 73 (two small units separated by a running spiral); 91 (elongated unit with c-spirals in oval ends); 84 (one unit with s-spiral); VIII, 239 (three units; late Dyn XII); XIX, 1525 (Tell el Yehudiyyeh; one unit). *Ancient Egypt*, III (1916), 27, 4 (p. 28, Dyn. XII, three units).

types occurred in the early Eighteenth Dynasty (Kantor A&O, Pl. V I).⁵⁵ In addition, as Evans has pointed out, the Cretan cross-like arrangement of c-spiral canopies, which produced a pattern limited to a circular space instead of the rapport design of interlocked c's, recurs in Egypt (Kantor A&O, Pl. IV L).⁵⁶

The limited space afforded by a scarab was not conducive to the development of the rapport possibilities of this design. Nevertheless, certain rare examples, which Newberry considered confined to the reigns of Tuthmosis I and Hapshepsut, are covered by a large series of interlocked spirals (Kantor A&O, Pl. V K, L).⁵⁷ Such rapport motives are ill adapted to a scarab, and it is highly probable that such examples mirror the use of the motive on a large scale on objects that have now disappeared. Kantor A&O, Pl. V K and Pl. V. L must serve as our only links filling the gap between the Middle Kingdom patterns and the use of the design as architectural decoration in the later part of the New Kingdom. It is remarkable that this spiral motive had been known since the Twelfth Dynasty, but we have no examples of its use as a ceiling decoration until the Nineteenth Dynasty. At that time it occurs in the tomb of Inhrt-h'wi at Deir el Medineh (Kantor A&O, Pl. V N),⁵⁸ the only example possessing a known provenience. Another, practically identical, design has been published by Champollion and Prisse; the former assigns it to the Twentieth Dynasty

⁵⁵ Newberry, *Scarab-shaped Seals* (Cat. Caire), Pl. XIII, 36638, 36715.

⁵⁶ PM II, 200, Fig. 110 A; cf. Petrie, *op. cit.*, Pl. X, 176, probably the fragmentary 180 (Kahun, Group 32, Town rubbish; impressions). He has also compared certain Egyptian designs with a canopied papyrus stem to Cretan patterns already cited (Chapter VII, n. 11). Cf. Petrie, *op. cit.* Pls. VIII, 68, 74 (Kahun, town rubbish; impressions); However, since c-spirals were regularly used as canopies in both countries these coincidences are probably the result of convergence; Pl. X, 156, where the papyrus sign, together with the sacred eye, is surrounded by a continuous frieze of linked c-spirals, could easily be abbreviated to the design shown in *ibid.*, 160, where the papyrus is enclosed within a "spectacle spiral" over which is stretched a c-canopy. An extremely close parallel to this was found in a large group of objects from Tomb 27 at Gurob, which probably belongs to the general period of Amenhotep I (Brunton, Engelbach, *Gurob*, p. 10, Pl. XXII, 6). Other examples where the papyrus is canopied may be cited (Petrie, *Button and Design Scarabs*, Pl. VII, 70; Newberry, *Scarabs* (London, 1908), Pl. XIX, 24).

⁵⁷ Newberry, *op. cit.*, pp.145-6; Pl. XVIII, 24. Petrie, *op. cit.*, p. 14; Pl. VII, 86 (not dated by Petrie).

⁵⁸ FIAO, Vol. VIII: Deir el Medineh (1930), Pl. VI, bottom, panel 8 (T.359).

(Kantor A&O, Pl. V O).⁵⁹ A secondary variant of the motive is presumably also to be dated to the later part of the New Kingdom. In this the black outline of the spirals have coalesced into continuous sinuous lines. The colors filling the areas delimited by the lines are distributed in such a way as to produce the effect of a series of interlocking vertebra-like patterns. The basic c-spiral pattern is greatly obscured (Kantor A&O, Pl V P).⁶⁰ The rarity and intermittent chronological distribution of the New Kingdom interlocked c-spiral designs suggest that only scattered examples of their use have been preserved.

QUADRUPLE SPIRALS⁶¹

The frequent and characteristic design consisting of four spirals connected so as to outline a roughly quadrilateral area first appeared as decoration on objects of EM III date, such as ivory or gold seals and a stone bowl from the circular ossuaries of the Mesara (Kantor A&O, Pl. II B).⁶² A steatite ring of unknown provenience bears quadruple spirals.⁶³ Siteia in East Crete yields an EM biconical pyxis of Cycladic type, ornamented by this design.⁶⁴ Such designs continued in use as exemplified by a sealing from a MM I A deposit at Knossos.⁶⁵ Other examples, probably of MM date occur on steatite buttons from Kaphonisi⁶⁶ and Agios Onouphrios (Kantor A&O, Pl. II D).⁶⁷

⁵⁹ Champollion, *Monuments de l'Egypte et de la Nubie* (Paris, 1835, 1845), Pl. CCCCXXXVII, bis = *Art Égy.* I, Pl. XXXVII, 5. Since this seems to show only slight difference from the *Inhrt-h'wi* example, known only in an unclear photograph, the two designs may actually be identical.

⁶⁰ *Art égy.* I, Pl. XXIX, 7.

⁶¹ This section has been reworked and illustrated in Kantor A&O, pp.23-26.

⁶² Xanthoudides, *op. cit.*, Pls. XIII, 1104 (Platanos B); IV, 516 (Kumasa B; bird and young on top); VIII, 391 (Kalathiana; XI, 1904 a (Platanos) = PM II, 194, Fig. 104, B.

⁶³ PM I, p. 113, Fig. 81, b (Crete).

⁶⁴ JHS, LVII (1937), 139, Fig. 11.

⁶⁵ PM I, p. 202, Fig. 151; II, p. 202, Fig. 111.

⁶⁶ AM (1886) 16, 23, Beilage I, 1 (Island, south of east end of Crete; site of murex fisheries, imported MM II pottery; cf. ArchC, pp. 126-7, 281.

Quadruple spirals are prominent on MM I pottery at a number of sites.⁶⁸ Two elaborated examples were produced by Kamares potters, the best known being on a jar from Phaistos; the connection of this design with that of the MM IA sealing, previously cited, has often been pointed out.⁶⁹ In the other design from Knossos, the spiral curls have been changed to flower-like rosettes.⁷⁰ LM IA has yielded three examples where the motive was still used as the chief ornament; as a rapport pattern it covers the upper part of pithoid jars (Kantor A&O, Pl. II N).⁷¹ The gap between the MM II and the LM IA ceramic examples of the motive is somewhat filled by a painted plaster relief from Pseira showing a seated woman wearing a skirt patterned with a lozenge network, alternate rows of which are filled by individual quadruple spirals.⁷² A fragment of stone with a carved frieze of quadruple spirals occurred at Knossos.⁷³

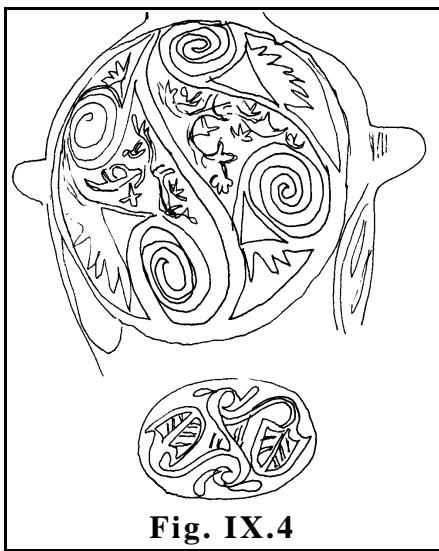


Fig. IX.4

The quadruple spiral design on the MM II Phaistos jar and an elaborate MM II seal pattern (Fig. IX.4) have served Evans as bases for the reconstruction, in analogy with later usage, of ceiling patterns formed by unending quadruple spiral rapport patterns.⁷⁴ However, actual remains of ceiling patterns do not occur before LM I. At Knossos there were found fragments showing white quadruple spirals in

⁶⁷ JHS, XIV, 59, Fig. 50 (Southern Cretan site; some pottery from Agios Onouphrios is listed as MM, ArchC, p. 292).

⁶⁸ R. B. Seager, "The Cemetery of Pachyammos, Crete," *University of Pennsylvania Museum, Anthropological Publications*, vii, 1, 1916, Pls. III, VII, XI, XX. H. B. Hawes, *Gournia, Vasiliki and other prehistoric sites* (Philadelphia, 1908), Pl. VI, 42. ArchC, p. 112, Fig. 18. 88, Pl. XIX, 4 d.

⁶⁹ Festos, Pl. XXXII = PM I, 257, Fig. 192 b.

⁷⁰ PM I, 262, Fig. 194, e.

⁷¹ PM II, 423, Fig. 245 (Northeast House, Knossos). Seager, *Excavations at Pseira* (Univ. of Pa., 1910), pp. 27-8, Fig. 9 (House D, Room 5; a larger "duplicate" example was also found).

⁷² Seager, *op. cit.*, Pl. V = PM III, 28, Fig. 15 A.

⁷³ PM IV, 256-8, Fig. 191 a (well 21 m. w of NW corner of the "Theatrical Areas", LM I).

⁷⁴ PM II, 203-6; Figs. 112, a; 114, 116, 117 A.

plaster relief curling around small rosettes, and set upon a blue background. Yellow rosettes fill the quadrilateral areas outlined by the spirals (Kantor A&O, Pl. II G).⁷⁵ A fairly wide-spread use of the motive in this position is suggested by its occurrence on the Mainland at Orchomenos in a LH II context (Kantor A&O, Pl. II H).⁷⁶

This design had already been popular on the Mainland before the time of the Orchomenos ceiling, as shown by the shaft graves at Mycenae where it occurs on grave stelae,⁷⁷ gold foil ornaments,⁷⁸ and a gold pitcher with cut-away spout.⁷⁹

The quadruple spiral was clearly a common Minoan motive and its popularity during EM III-MM II makes its transference to Egypt at that time easily understandable, even though we have no proof as to the exact medium by which the design was carried to the Nile.⁸⁰ Although the earliest Egyptian example (Kantor A&O, Pl. I D) is on a scarab dated to the later part of the First Intermediate Period, the design is very rough and drawn with unsteady lines.⁸¹ Precisely engraved examples belong to the Twelfth Dynasty and bear one or two quadruple groups, often showing the diagonal line dividing the quadrilateral space into two triangles, a feature which had also been common to Crete (Kantor A&O, Pl. III A-D).⁸² Similar types continue into the early Eighteenth Dynasty,

⁷⁵ PM III, 29-31 (Eastern basement room in Northwest insula; cf. p. 19, Fig. 9. The deposit contained objects ranging from the end of MM III to LM II. Painted reliefs do not seem to have outlived the end of LM I A (ArchC, p. 198).

⁷⁶ ArtC, p. 18, Fig. 25 (Tholos, side chamber, ceiling). Cf. also Schliemann, *Orchomenos* Leipzig, 1881 Pl. I, 2; JHS II (1881), Pls. XII, XIII.

⁷⁷ Schgr, pp. 277-8; Pls. V, 1428 (three rows of spirals); VI, 1429.

⁷⁸ *Ibid.*, Pls. XV, 7 (Grave III); LXXIX, 278 (Grave IV; two registers, each containing three rows of spirals; gold overlay for sword); LXXXII, 276 (Grave V; decoration at tang of sword).

⁷⁹ *Ibid.*, Pl. CIII, 74 (Grave III).

⁸⁰ As has been said above, Egypt must have derived this (and other designs) from Crete, since the former country was within the orbit of Minoan trade in the period when this, and other spiraliform patterns appear in force for the first time. Of course it is not impossible for such patterns to arise independently. A much earlier example of a quadruple spiral from Ur is completely unrelated with the Minoan or Egyptian series (Woolley, *Royal Tombs of Ur of the Chaldees* (Philadelphia, 1928, MJ V.19), Pl. CXXXVIII, G 10954; grave of Shub-ad; head of pin).

⁸¹ Brunton, *Qau* and Badari I (London, 1927, Pl. XXXIV, 201; cf. Qau II, Pl. LXVI, Tomb Register Dynasty IX-X. Grave 1595 contained a hemispherical bowl (*Ibid.*, Pl. LXXXIX, 7 R) and a drop-shaped jar (*Ibid.*, Pl. LXXXIX, 30 L).

⁸² Petrie, *Button and Design Scarabs* (London, 1925), Pl. VII, 63.

and one example from Palestine may belong around the period of the Nineteenth Dynasty.⁸³ Two scarabs without provenience, as well as a broken impression from a Twelfth Dynasty cemetery at Abydos (Kantor A&O, Pl. III G) and a complete one from Kahun (Kantor A&O. Pl. III F), are unusual in that they are covered by a rapport design of quadruple spirals. The same kind of pattern covers a cylinder seal, formerly in the MacGregor Collection, dated by Newberry to the early part of the Second Intermediate Period (Kantor A&O, Pl. III K).⁸⁴

INTERLOCKED CROSS PATTERN⁸⁵

MEANDER DESIGNS⁸⁶

A rather prominent genus of Egyptian designs is formed by various meander patterns. Cursory comparison of these with Cretan meanders that appear in EM III is sufficient to reveal the essential dissimilarity of the two groups. In some Minoan designs the fundamental element is the swastika;⁸⁷ others emphasize the interlocking nature of the rectilinear forms produced by a winding band (Kantor A&O, Pl. X A, B, C).⁸⁸ A few seals bear twisting bands and may perhaps be termed curvilinear meander. Simple patterns formed by combinations of concentric quadrilaterals or crosses also occur.⁸⁹

⁸³ Newberry, *Scarab-shaped Seals* (Cat. Caire), Pls. XII, 36720; XVI, 37157 (all early Dynasty XVIII). Newberry, *Scarabs* (London, 1908), Pl. XVIII, 20, 21 (Dyn. XII-XVIII). C. W. Firth, *Archaeological Survey of Nubia*, 1908-09, II, Pl. XLII, 6, 41 (Cem. 58, gr. 526 D). Rowe, *Catalogue of Egyptian scarabs in the Palestine Archaeological Museum*, p. 190, Pl. XX, 801 (Tell el Fara).

⁸⁴ Newberry, *op. cit.*, Pl. VII, 9. The rest of this section is missing in the original manuscript, but it has undoubtedly been used to conclude the section in Kantor A&O, pp.25-26.

⁸⁵ Pages are also missing in this section. The few that exist in the original manuscript are incorporated in the section on Kantor A&O entitled INTERLOCKED C-SPIRAL PATTERNS, pp. 26-28..

⁸⁶ This section has been reworked and illustrated in Kantor A&O, pp. 28-30.

⁸⁷ Xanthoudides, *Vaulted Tombs of the Mesara*, (Liverpool, 1928), Pl. VIII, 648 (Porti; ivory seal). Matz, *Die friihkretischen Siegel* (Berlin-Leipzig, 1928), Pl. XI, 21 = no. 68 (= PM I, 121, Fig. 90,a; Hagia Triadha).

⁸⁸ Matz, *op. cit.*, Pl. XI, 8 = no. 69 (= PM I, 121, Fig. 90, b; Hagia Triadha). Xanthoudides, *op. cit.*, Pls. XIII, 1106 (Platanos; ivory seal), VIII, 821 (Kalathiana; the long, narrow seal base shows a simple interlocked series).

⁸⁹ Xanthoudides, *op. cit.*, Pls. VIII, 652 (Porti), 814 (Kalathiana), XIV, 1094 (Platanos), XV, 1094 (Platanos).

In Egypt the first meander-like designs occur on a class of round, square or oblong stamp seals now dated to the First Intermediate Period by examples from Qau. Nowhere on these seals do the characteristic torsional or interlocked Minoan designs recur.⁹⁰ Elementary division into a cross with four segments haphazardly filled by some sort of linear scrabble are found.⁹¹ The most interesting of this group are the oblong forms bearing a design that is in reality merely an s-spiral interpreted in rectilinear terms (Kantor A&O, Pl. I H).⁹² More numerous are other stamps which appear to bear less perfectly worked out, or more degenerate versions of the same motive.⁹³ These squared s-spirals of the First Intermediate period give the clue to a probable explanation of Egyptian meander patterns. Geometric designs formed chiefly of rectilinear elements are extremely characteristic of Old Kingdom and Middle Kingdom surface ornamentation; and such Old Kingdom patterns often occur on representations of textiles or matting.⁹⁴ With this background of rectilinear design it must have appeared natural to the Egyptian craftsman to transmute the imported spiral into an ornament formed of straight lines.⁹⁵ The result of the operation is exemplified by the Qau seal-amulets, where the change yielded a decoration conforming closely to the outline of the stamps. The more complex meander designs of the Middle Kingdom are apparently the result of the adaptation of exotic spiral designs to the conservative Egyptian taste by the means of rectilinearization, a development which apparently began almost immediately upon the introduction of spirals.⁹⁶

⁹⁰ Petrie, *op. cit.*, Pl. IV, 247 is the only example even faintly approximating the interlocked form.

⁹¹ Brunton, *Qau and Badari I* (London, 1927), Pl. XXXIV, 228 (gr. 1653; Dyn. IX). Petrie, *op. cit.*, Pl. IV, 221, 223 (Abydos?), 224, 225.

⁹² Brunton, *op. cit.*, Pl. XXXIV, 207 (gr. 3421, Dyn. IX), 215 (gr. 3421 A, Dyn IX).

⁹³ Ibid., Pl. XXXIV, 206 (gr. 1672; Dyn IX), 210 (gr. 1602; Dyn IX), 216 (gr. 3422; Dyn IX). Petrie, *op. cit.*, Pl. IV, 248, M. 319, 249 may also form part of the same group.

⁹⁴ Quibell, *Excavations at Saqqara* (1911-12): *The Tomb of Hesy* (Cairo, 1913), Pls. IV, VIII, IX, XXIII. L. D. Abt. II, Pls. LXIII, LXIV, a (Saqqara, T.16; Dyn. V).

⁹⁵ This is in accordance with the theory of Böhlau that the meander arose from the transformation of the spiral, particularly when the latter design was used on weaving (A. van Gennep and G. Jéquier, *Le Tissage aux Cartons* (Neuchatel, 1916), p. 110).

⁹⁶ It seems completely impossible to assume that a synthesis of the irregular lines found on many stamp seals could have produced the s-meander.

To provide a background for the meander designs proper, a few rectilinear designs from the scantily preserved repertoire of Middle Kingdom surface ornament may be mentioned. Rows of chevrons adorn kilts worn by Bedu or the saddle cloths placed on their donkeys,⁹⁷ and are used in the design of false doors.⁹⁸ One of the women of the Bedu party at Beni Hasan wears a dress on which three parallel lines form quadrilateral patterns in the course of their downward progress, and this design is somewhat paralleled on a stamp seal.⁹⁹ In Khnemhotep's tomb a design placed high above a door consists of concentric hexagons bordered by straight lines which indent themselves into chevrons at intervals.¹⁰⁰ At Qau thick, axially symmetrical chevron bands enclose circles which are divided into four arcs and contain in their turn stars.¹⁰¹ Simple analogies to this design occur on false doors, and the genealogy of the pattern goes back at least as far as the Third Dynasty.¹⁰² The most complicated Middle Kingdom chevron design so far discovered is from Uahka B's tomb at Qau (Kantor A&O, Pl VI A). The main framework consists of a series of parallel red chevron lines. The basal point of each triangular segment of line is connected with the tip of the triangular segment to the right by a line which makes two right-angle turns. The areas delimited between the main chevrons and this red, secondary line are then picked out by the application of blue and grey, leaving only a linear border of white background.¹⁰³

⁹⁷ *Beni Hasan I*, Pls. XXVIII, XXX and *Anc. Egy. Paint.* I, Pl. XI (Khnemhotep, T.3; Amenemhet II or Sesostris II). Although the Egyptian artist was representing foreigners, details such as the individual textile patterns used, are more likely to be native Egyptian than actual copies of foreign designs. This can be demonstrated clearly by some New Kingdom paintings.

⁹⁸ G. Steindorff, *Grabfunde des mittleren Reich.* (Berlin, 1896, 1901), I, Pls. I, II (outer sarcophagus of Mentuhotep); II, Pl. I (coffin of Sebk-o).

⁹⁹ *Anc. Egy. Paint.*, I, Pl. X. Petrie, *op. cit.*, Pl. IV, 237, 239 (no provenience).

¹⁰⁰ LD, Abt. II, Pl. CXXX = Schäfer-Andrae, *Kunst des alten Orients* (Berlin, 1925), p. 300.

¹⁰¹ Petrie, *The Tomb of Qau, Antaeopolis* (London, 1930), Pl. I, 10 (Qau, Uakha B, T. 18).

¹⁰² Steindorff, *op. cit.*, I, Pls. I, II (panel above false door slit; outer coffin of Mentuhotep). Gautier and Jéquier, *Fouilles de Licht*, "MIFAO," Vol. VI. Quibell, *op. cit.*, Pl. VIII. Cf. also Steindorff, *op. cit.*, II, Pl. I, band of concentric lozenges.

¹⁰³ Petrie, *op. cit.*, Pl I, 4.

It is in such contexts that the meander design appear. Two patterns from the tomb of Hepzefa I at Assiut represent axially symmetrical “s-spirals” enclosing lozenges which contain various filling motives.¹⁰⁴ A design from Uahka’s ceiling is essentially the same save that the lozenges between the individual rows of axially symmetrical pairs are omitted and the two “spirals” are grafted together. Quadrilateral spaces remain only between two pairs of “spirals (Kantor A&O, Pl. VI B).”¹⁰⁵ Despite the rarity of axially symmetrical running spirals, the presumed original form of these designs on scarabs, the explanation of its origin given here does not seem devoid of probability.¹⁰⁶ In the case of the only other Middle Kingdom meander type preserved, from the ceiling of the same tomb, the connection with the quadruple spiral design is self-evident (Kantor A&O, Pl. VI A).¹⁰⁷ This meander pattern was used in the New Kingdom, but never achieved the popularity of its spiraliform sister. The only dated examples are from the tombs of Anena, Senmut and Paheri in the early part of the Eighteenth Dynasty Kantor A&O Pl. VI E).¹⁰⁸ The Assiut design, presumably derived from s-spirals, and with filling of twinned lanceolate lobes, finds a very close parallel in a pattern of unknown, but apparently New Kingdom, date published by Prisse (Kantor A&O, Pl. VI F).¹⁰⁹

¹⁰⁴ These have never been properly published. Wilkinson, *The Manners and Customs of the Ancient Egyptians* (London, 1878), I, Pl VIII, 4 = Matz, *op. cit.*, 178, Fig. 41, reconstructed drawing; cf. his analysis of the design, pp. 17809, 20 . 1; Sesostris I).

¹⁰⁵ Petrie, *op. cit.*, Pl. I, 6.

¹⁰⁶ Petrie, *Button and Design Scarabs* (London, 1925), Pl. VII, 48 (the character of the design is somewhat obscured here by the median line that approximates to the hypothetical axis. Petrie, *Illahun* (London, 1891), Pl. X, 181 (Kahun, town debris; fragmentary sealing) may be an example of this type. Another scarab, found in a group dated to Amenhotep I, but possibly itself of earlier date may be cited as an example of the motive (Brunton and Engelbach, *Gurob* (London, 1927), Pl. XXIII, 2, T.20).

¹⁰⁷ Petrie, *The Tombs of Qau:Antaeopolis*, Pl. I, 5.

¹⁰⁸ Jéquier, *Décoration égyptienne* (Paris, 1911), Pl. XXV, 38 (Qurna 81; Amenhotep I-Tuthmosis III; the background of the meander is of different color from the squares in between, so that each individual meander twist gives the effect of lying on its own solid block of color; rosette filling). MDIAA VI (1936), Pl. VII, b, incompletely reproduced = Prisse, *Art Égy.* I, Pl. XXIX, 2 = Jéquier, *op. cit.*, Pl. XXV, 39 (Senmut, Qurna 71; Hapshetsut; solid block; rosette filling). J. J. Tylor, *The Tomb of Paheri* (London, 1895), p. 23, “Patterns of shrine ceiling, a”. (El Kab. no. 3; Tuthmosis III). Prisse, *op. cit.* I, Pls. XXIX, 4 and 5 (solid block; rosette filling), 8 (linear meander with filling of cross-like radiate patterns; XXXIV, 3 (solid block; rosette filling).

¹⁰⁹ *Art. égy.*, Pl. XXXIV, 2 (Filling as in the Middle Kingdom example).

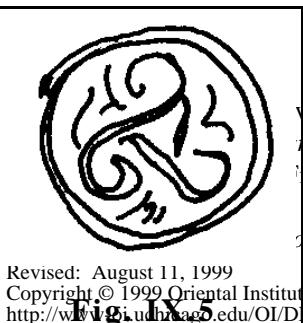
Egypt has provided a fair number of meander designs. In Crete, on the other hand, after EM III the only decoration falling within this category is that of the MM III A Labyrinth painting (Kantor A&O, Pl. IV C),¹¹⁰ which is a rectilinear version of interlocked c-spirals. This is both too late and too different from Egyptian meanders to be susceptible of connection with them or with the much more early and primitive designs of the First Intermediate Period stamps. Accordingly we may conclude that the Egyptian meanders are independent indigenous variations of certain spiral themes ultimately derived from the Aegean, but that the Egyptian designs are not connected with any Minoan meanders.

MISCELLANEOUS MOTIVES

Certain rare spiral motives are worthy of brief mention although they may be only the results of convergence or else offer evidence too inconclusive to allow assumption of connection. A round button, unfortunately undated, bears a design consisting of a border

of s-spirals linked to a center point by torsional radii; its similarity to Cretan work has already been noted by Petrie.¹¹¹ The torsional nature of the motive is extremely unEgyptian. A Mochlos seal design reconstructed by Matz is a six-armed whirl motive whose central point is not indicated.¹¹² A much better parallel is the design on a steatite seal from the Cycladic island of Kuponisia, which, though crushed into the rectangular area of the seal base, is essentially the same as on the Egyptian button.¹¹³ Despite the similarity between these designs, we do not presume to suggest the means by which it was produced.

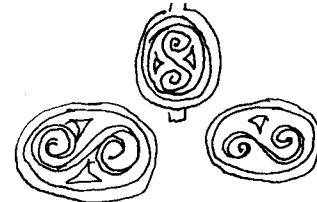
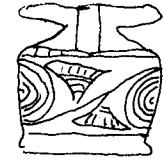
In EM III the running s-spiral, the simplest of all spiral patterns, was occasionally elaborated by the addition of geometrical, triangular fillings in the corners.¹¹⁴ Otherwise this tendency is illustrated, not by running spirals themselves, but by a triquestral (Fig.



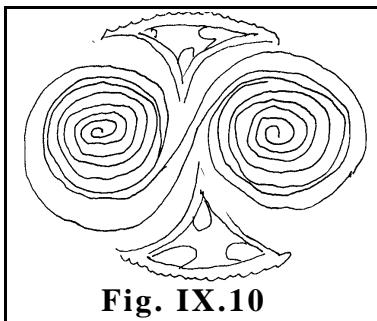
over Eastwest corridor).
in *Scarabs* (London, 1925), pp. 8-9; Pl. VII, 1.
Fig. 39 = No. 35 B.

ombs of the Mesara (Liverpool, 1925), Pl. IV, 528 (Kumasa, ivory seal).

IX.5)¹¹⁵ and a quadruple MM I A design already cited (Fig. IX.4), where the original geometrical filling has been transmuted into leaf-like shapes. On Egyptian scarabs continuous friezes of s-spirals were enlivened by the insertion in the corners of Nymphaea flowers, sometimes interspersed with Nymphaea buds (Figs. IX.6).¹¹⁶ Occasionally a single s-spiral was filled by two triangular blocks (Fig. IX.7),¹¹⁷ and such designs continued on some New Kingdom scarabs

**Fig. IX.6****Fig. IX.7****Fig. IX.8****Fig. IX.9**

(Figs. IX.8).¹¹⁸ The ornament in black paint on a limestone kohl pot from grave 27 at Gurob is a careful rendering of this design; since the triangular blocks are vertically and horizontally hatched, they are apparently meant to be papyrus heads (Fig. IX.9).¹¹⁹

**Fig. IX.10**

This burial is dated by Eighteenth Dynasty pottery and the survival of some scarabs of Second Intermediate Period type approximately to the reign of Amenhotep I. On the Greek Mainland the chief ornament of a LH II ewer from Korakou is a much more sophisticated version of the same

general pattern (Fig. IX.10).¹²⁰ Although these assorted examples bear comparable motives, this provides no reason for connecting them, in view both of their diverse dates

¹¹⁵ Matz, *op. cit.*, Pl. IX, 29 = No. 171 (= *Scripta Minoa*, p. 121, Fig. 54; Central Crete; Evans Coll.).

¹¹⁶ Newberry, *Scarabs* (London, 1908), Pl. XIV, 22, 23, 25, 26 (Scarabs of Dyn. XII-XIV of officials).

¹¹⁷ Brunton, *Qau and Badari III* (London, 1927), Pl. IV, 13 (no number; Middle Kingdom).

¹¹⁸ Harageh, Pl. XXI, 171 (gr. 673). Firth and Gunn, *Excavations at Saqqara: Teti Pyramid Cemeteries* (FIFAO, Cairo, 1935), p. 74, Pl. XLVI, A, 31 (gr. NE 32; triangular blocks have degenerate chevrons). Newberry, *Scarab-shaped Seals* (Cat. Caire) Pl. XIII, 37323 (No provenience, early Dynasty XVIII) 36586 (No provenience; late Dynasty XVIII).

¹¹⁹ Brunton and Engelbach, *Gurob* (London, 1927), p. 10; Pl. XXII, 48.

¹²⁰ Blegen, *Korakou* (Concord, NH, 1921), Pl. V.

and the ease with which their origin may be explained by the invocation of Riegl's principle of *Zwickelfüllung*.

CONCLUSION

The importance of Egyptian spiral ornament for our present study lies in the circumstance that it reveals the surprisingly large extent of Aegean influence on ornamental art, an influence which was exerted concurrently with the importation of Kamares pottery. It shows that, as far as the field of ornament is concerned, even in Egyptian art which is one of the most self-contained and independent artistic traditions known, foreign influence could play a strikingly important part. We must assume that, besides Kamares pottery, Cretan ships were loaded with other goods, among them textiles, and that the continued importation of these exotic and valuable commodities stimulated the Egyptian artist to adapt foreign design to his own purposes. The Twelfth Dynasty is undoubtedly the period when this activity was most lively. However, the early examples of incipient spiral patterns from the First Intermediate graves at Qau, suggest that the well-documented interrelations of Crete and the Middle Kingdom may have been preluded by connections established in the preceding intermediate period. The fact that both the First and Second Intermediate periods were dark, troubled times which have left comparatively little written or archaeological source material has made difficult the realization that these periods of political disturbance, often accompanied on the archaeological side by a decline in craftsmanship, were at the same time of the greatest cultural (as well as political) significance. The disappearance of central power opened up the country to foreign penetration, causing an influx of outside influences. Such factors would probably be in a better position to make an imprint on Egyptian culture during unsettled times and the immediately succeeding years, than when the land was proudly conscious of its unassailed strength and power. Thus, the traits of foreign derivation and the new indigenous artistic creations which appear in the dynasties

succeeding the Intermediate Periods are often to be regarded as the results of developments that took place during those troubled times, when foreigners were in the land.¹²¹

¹²¹ Cf. Erman, *Literature of the Ancient Egyptians* (New York, 1928), p. 113 (Neferroku), 96, 98. According to p. 96, foreign trade with Keftiu and Byblos had ceased.

SOURCES FOR THE FIGURES

- IX.1 PM I, 201, 231; Pl. I, K
 - IX.2 PM I, 201, Fig. 150, d, e, g
 - IX.3 Schgr., Pl. V, 1425 = BSA XXV, Pl. XX
 - IX.4 PM II, 203-6, Figs. 112, a; 114, 116, 117, a
 - IX.5 Matz, *Die frähkretischen Siegel*, Pl. IX, 27
 - IX.6 Newberry, *Scarabs*, Pl. XIV, 22, 23, 25, 26
 - IX.7 Brunton, *Qau and Badari*, III, Pl. IV, 13
 - IX.8 Engelbach, *Harageh*, Pl. XXI, 171
 - IX.9 Brunton and Engelbach, *Gurob*, p. 10, Pl. XXII, 48
 - IX.10 Blegen, *Korakou*, Pl. V
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