Abstract: In his ‘Natural History’ (36.84-93), Pliny the Elder lists four buildings termed ‘labyrinths’. His second labyrinth, which came directly after the Egyptian one, was built by Daedalus in Crete, not far from Knossos, and appears on Knossian coins as the symbol of Knossos. The main aim of this article is to discuss the differing forms of this labyrinth and their origins. The first coins of Knossos appeared around 470 BC and bore a pattern of four meanders to indicate a labyrinth. A square labyrinth pattern followed and this was finally replaced by one of circular form.

Keywords: Crete; Knossos; coinage; labyrinth; Minos; Minotaur

Pliny the Elder in his Natural History (36.84-93) lists four buildings which he calls ‘labyrinths’ among his ‘wonders of architecture’. Second after the Egyptian labyrinth (Hdt. 2.148-9; Strabo 17.1.3) Pliny lists (NH 36.85) the labyrinth built by Daedalus in Crete. According to Pliny (NH 36.85) the design of this was based on the Egyptian labyrinth, though it borrowed only the complicated maze-like central part from the prototype.

1 The term ‘labyrinths’ (λαβύρινθος) is non-Greek and most probably of Lydian origin (Plut. Mor.; Plut. Quest. Graec. 45). The ‘Labyrinths’ is treated as a house of the double-edged axe, labrys (λάβρυς). Rouse 1901, 266-274; Hall 1905, 325; Press 1964, 34; Graham 1972, 28. It has also been proposed that the term derives from the Egyptian lapi-ro-hunt, ‘temple in the mouth of a channel’. Here the labyrinth is identified with the famous Egyptian sanctuary on Lake Moeris (Brugsch 1872, 91; Stieglitz 1981, 195-198). More popular is the explanation presented first by Santarcangeli 1982, 57-62. For the older, very rich literature on the problem of labyrinth, and also of the labyrinth as a pattern used on coins, see the works cited in this article.

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The Cretan labyrinth was also smaller, only 1/100 the size of the Egyptian one (Pliny *HN* 36.85; cf. Diod. 1.61 and 97). The Cretan labyrinth is also mentioned by Plutarch in his *Life of Theseus* (19.1). Apollodorus (3.1.4) recalled that the labyrinth was built on the command of king Minos, and was intended as a prison for the Minotaur, as he had been recommended to do by the oracle.

The myth in which Theseus (as an Ionian hero, as opposed to the Doric Heracles; see Plut. *Thes.* 6.7, 11.1, 25.5, 29.3; Connor 1970), the Minotaur and the labyrinth were the principal players, was one of the most popular among the Greeks as well as the Romans (Connor 1970; Tidworth 1970). Theseus, the most famous Athenian hero, killed the Minotaur in the labyrinth, and later exited the building with the help of a ball of thread given to him by Ariadne after his reception by Daedalus (Apollod. *Epit.* 1.8-9). The popularity of this ‘story’ is well attested by the popularity of the motif of Theseus killing the Minotaur in Greek and Roman art (Edwards 1970, 29-50; Daszewski 1977, 30-130; Santarcangeli 1982, 24-54).

The Classical Greeks were fascinated by the mythical splendor of Crete during the reign of the just king Minos (e.g. Connor 1970), who was also regarded as the founder of Cretan power (Hdt. 3.122; Strabo 10.4.8). Herodotus (7.170) tells us of the Sicilian expedition of Minos, and Thucydides (1.4) wrote about the powerful Cretan navy. Knossos was the most important city of Crete (Strabo 10.4.7), as is attested in Homer’s *Odyssey* (19.178). Minos, the Minotaur, and the labyrinth, all appear as symbols on the coins of Knossos (Tidworth 1970, 184; Press 1972, 11). Philostratus (*Vit. Apoll.* 4.34) confirms that the remains of labyrinth in which ‘the Minotaur was kept as in prison’ were still an attraction of Knossos in the 3rd century AD. The labyrinth was used on Knossian coins as a symbol of the city (for general works on Cretan coinage see Svoronos 1890 [at present used rather as a catalogue]; Le Rider 1966; Kraay 1976, 49-51).

Cretan coinage originated and developed in its earlier phase under the influence of Aegina. The first ‘Cretan coins’ were struck in Kydonia, a Cretan colony of Aegina, and imitated Aeginetan (Kraay 1976, 49-50; Stefanakis 1999, 251-257). The first Cretan coins which did not imitate Aeginetan coins were minted in Gortyn and Phaistos.

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2 Another version has it that Theseus’s route out of the labyrinth was lit by Ariadne’s gold wreath encrusted with precious stones; cf. Kerényi 2002, 222-223, 460.

3 On the tablet KN Gg 702 and the ‘Lady of labyrinth’ see Andreev 2002, 474-475.
The first coins of Knossos appeared ‘a little later’ around 470 BC (Stefanakis 1999, 257; cf. Le Rider 1966, 175). Part of them were struck on Aeginetan staters (Kraay 1976, 52; Le Rider 1966). From the first emission (Pl. 2: 1) onwards, a Minotaur in archaic style dominated on the obverse of these Knossian coins. The reverse was covered by a pattern of four meanders, or by four doubled meanders (Pl. 2: 2) arranged together to form a cross. A star-like symbol was placed inside the square formed in the centre by the meanders. Four deep square holes, visible on the reverse between the meanders, were made for technical reasons at first. Over time they lost their practical role and were incorporated into the composition of the drawing, and the pattern of a cross formed by the four meanders was reshaped into the form of a linear square (Pl. 2: 3).

Less numerous than the coins with the labyrinth on the reverse, are pieces with the Minotaur on the obverse and a woman’s head enclosed in a square border formed by a meander pattern. The same could be said about the staters bearing a female head (perhaps inspired by the Arethusa head on the Syracuse coins of Euianetos) and a seated Minos (or Zeus) on the reverse (Le Rider 1966, 175-176). The meander pattern border is very popular in the iconography of Theseus and the Minotaur. Examples occur frequently in Attic vase painting (e.g., Cook 1914, 473-475, figs 329-331). It cannot be ruled out that the meander pattern symbolizes the labyrinth (Elderkin 1910, 185-190; Cook 1914, 476-478; Sippel 1987, 32-35). If this supposition is correct the female head placed inside the meander border on the Knossian coins can be identified as Ariadne. The elaboration of the iconography on coins bearing the Minotaur and the head of Ariadne suggests that these coins should be placed among the earlier issues, maybe among the very last of them, struck before 360 BC. In the second half of the 4th century BC the iconography of Knossian coins was changed (Pl. 2: 4-5) (Kraay 1976, 52-53).

A labyrinth formed from meanders in the shape of a cross predominated during the first period of Knossian coinage. In the largest number of cases the star-like symbol was located at the center of the design, in the square built from meanders.

The star-like symbol was connected with the sun, and the cult of sun is connected with the Cretan cult of the bull (Cook 1914, 467-469 and 490-496). J. N. Svoronos (1894, 115) connected the ‘star’ with the Minotaur’s name Asterios (Apollod. 3.1.4) or Asterion (Paus. 2.31.1) (Cook 1914, 493-496). The Minotaur was the Solar king-bull (Armstrong 1943, 72;
Andreev 2002, 380). This opinion finds support in the fact that on the smaller coins of the series, a star-like symbol placed in the square border is the sole element (Pl. 2: 6).

As a result of Sir Arthur Evans’s archaeological discoveries at Knossos there were strong grounds to identify the labyrinth with the Knossian Minoan ‘palace’ (cf. Nichols 1975, 118). The ‘palace’, re-built and supplemented by new constructions added to the earlier part, was amenable to identification with the ‘idea’ of a labyrinth, with its maze-lake layout of rooms and corridors: a complicated system of building with numerous halls and corridors on various levels.

The labyrinth on the earlier coins of Knossos, built from meanders with a star-like symbol in the centre, is easily identified with a Minoan ‘palace’ plan, elaborated in the Middle Minoan period. The main element of the plan is a courtyard located in the center of the complex, as is visible in Knossos, Phaistos, Malia, for example (Graham 1972, 27, 73-83; Press 1973, 1-11; Press 1967, 175).

Even with a significant dose of scepticism, it is not possible to reject outright the similarity of the labyrinth visible on the Knossian coins with the image of a central rectangular court of a Minoan ‘palace’ (e.g. Press 1973, 9-10). While the subject of how the central court in these Minoan ‘palaces’ was used is still under discussion, the idea that they were used for religious purposes (Graham 1957) has support in Minoan iconography. The cult of the bull, so well documented in Minoan culture, is included in the Knossian frescoes themselves (Cook 1914, 464-469, 490-496; Andreev 2002, 386-400).

It is possible to conceive of the labyrinth as it is represented on the earlier coins of Knossos as being reminiscent of the idea of the Minoan ‘palace’. In a labyrinth of this form an entrance is not indicated. At this point it is worth noting the suggestion proposed by K. Kerényi (2002, 459), that Ariadne’s thread marked an idea of return to a certain entrance among many, not to a single entrance.

The pattern of a labyrinth formed from meanders (Pl. 1: 1) has also been identified on a fresco in a corridor in the Knossos Residential Quarter (Graham 1972, 202; Press 1967, 21, 175 and inv. no. 21); a seal from Agia Triada (found in a grave) has a pattern other than that which appears on the fresco (Press 1964, 39; Press 1967, 21, 175 and inv. no. 11). The labyrinth, as it occurs on the Knossian fresco, is similar to the iconography of labyrinth patterns known from Egypt (Santarcangeli 1982, 74).
Some rectangular courts, such as the so called ‘Theatral-area’ in the northwestern part of ‘palace’ at Knossos, were linked together with a system of steps, which have been interpreted as places for spectators, in line with what is depicted on the frescos (Press 1967, 211). Analysis of both texts and iconography was the basis for the hypothesis of A. B. Cook (1914, 479), that such places were used for a dance imitating the path one had to take inside the labyrinth (cf. Armstrong 1943, 71-76; Press 1967, 212; Willets 1977, 106-107; on the François Vase see Edwards 1970, 29-31). It is worth noting at this point, leaving aside the other texts assembled by A. B. Cook, Plutarch’s (Thes. 21) information that Theseus, after killing the Minotaur, performed a dance on Delos (which has been identified as the Crane Dance, Geranos) imitating his way inside the labyrinth (Naerebout 1997, 285 and 131-132 which gives further literature on the subject). The information given by Plutarch should be combined with that in the Homeric Iliad (18.585-585; cf. Paus. 9.40.3) mentioning a floor decorated with the pattern of a dance (the Dance of Ariadne), prepared by Daedalus for Ariadne at Knossos (also Paus. 9.40.4). According to Pausanias (9.40.3) in Knossos visitors could see a white marble relief presenting the steps used in a dance – this relief was linked with the work Daedalus did for Ariadne. For Lucian, in his dialogue On dance (49) the labyrinth was an element in the art of dance.

As a generalization, it is possible to say that the tradition linking the form of labyrinth with the Minoan tradition of Crete was still alive in the 5th century BC (cf. Coldstream 1998; Kraay 1976, 49; Stefanakis 2000a, 86-88).

Between c. 330 and 280/270 BC (Le Rider 1966; cf. Mørkholm 1991, 88) a large number of silver coins were struck on Crete. The weight standard of these pieces (11.5-11.9) is similar to that of Aeginetan staters (c. 12.3g). Following the opinion of O. Mørkholm (1991, 88), these coins were produced in 28 mints working over the whole area of Crete. The most important mints were in Gortyna, Phaistos and Knossos. For the production of Cretan coin foreign pieces were used, above all those of Cyrene. Such pieces were produced mostly in the mints in Gortyna and Phaistos (Le Rider 1966, 133-198; Mørkholm 1991, 89). The popularity of Cyrenaean coins used for the production of Cretan coins was connected with the return of Cretan mercenaries, who fought in Cyrene c. 332 BC (Le Rider 1966, 144-146; Mørkholm 1991, 67; MacDonald 1996, 41-47). In general, the employment of Cretan mercenaries, mostly archers,
by Alexander the Great and the Diadochoi, was an important element for coin production in Crete, down to the peace of Apamea which banned Antochus III the Great from employing Cretan mercenaries.

During this period Knossian coins, as has been indicated above, received a new iconographic treatment. On the obverse a woman’s head is shown in two ‘versions’ (Pl. 2: 4-5). The head is very difficult to identify with certainty, but it is probably a new version of Ariadne. On the reverse is a labyrinth in the shape of a cross, generally similar to the older style, but new in the details of its form. The new labyrinth resembles a square, in the form of a long ‘corridor’, entered from one side and leading to the centre of the design (Pl. 2: 7) (see Stefanakis 2000b, 54).

If one follows the observations of J. N. Svoronos (1890) and G. Le Rider (1966), it is possible to maintain that the two ‘versions’ of the woman’s head on the obverse represents Ariadne (?) (cf. Le Rider 1966, 30), and it is accompanied on the reverse by two forms of labyrinth, one in the form of a cross built from meanders, the other in the form of a square (with a K or head of the Minotaur in the centre), and the legend ΚΝΩΞΙΟΝ. Over time the square labyrinth replaced the older form. The arrowhead and sword placed at side of the square labyrinth can be attributed to the activity of Cretan mercenaries.

The square labyrinth is attested for the first time in the Mycenaean culture. A drawing of one was found on a clay tablet with linear B script (Cn 1287) dated to the 13th century BC, discovered in the Palace of Nestor in Pylos (Pl. 1: 2). The labyrinth was placed on the reverse side of the tablet; the obverse bears a list of ten men, which was information used for trading purposes (Lang 1958, 190). The Pylos tablet is only one of a group of tablets bearing different drawings (Bartoněk 1983, 103), but this is the oldest representation of the labyrinth in its square form (Andreev 2002, 476). The form of clay indicates that the drawing was made before the text was inscribed on the obverse. The square form of labyrinth can thus be ‘identified’ as Greek, as opposed to the labyrinth built from meanders, which had a pre-Greek (and non-Greek) origin (cf. Hutchinson 1962, 23).

Why was the form of labyrinth placed on Knossian coins changed? The answer is not easy. Perhaps the appearance of the square labyrinth could be correlated with the emergence of Crete from its isolation, about which Aristotle has written in his second book of *Politics* (1272b). According to Aristotle the ending of Cretan isolation took place in the second half of the 4th century BC (commentary: Willets 1965, 60-64; Huxley 1971);
this phenomenon being connected with the Phalaikos expedition in 343 BC (e.g. Willets 1965, 60-64; Le Rider 1966, 176).

On the later coins the woman’s head, presumably that of Ariadne, was replaced by the head of Hera, wearing a *stephanos* (Pl. 2: 8), the image being copied from the coinage of Argos. On the reverse appear a square labyrinth and the legend ΚΝΩΣΙΩΝ.

After 200 BC the Knossos mint produced coins of new type. On the obverse of the tetradrachms appears a bearded man’s head, probably that of Minos, and on the reverse the square labyrinth (Pl. 2: 9). But on later coins minted between 200 and 67 BC, a circular labyrinth was placed (Heller 1961, 57-62). On the obverse was placed the head of Apollo, which should be attributed to the Apolline cult in Crete, and a return to the tradition of Minos, the Minotaur, Theseus and Ariadne. But a labyrinth of circular form appears on Knossian coins for the first time (Pl. 2: 10).

The oldest drawing of a circular labyrinth (Pl. 1: 3) comes from Triagiatella in Etruria, on an *oinochoe* dated to the 7th century BC (Andreev 2002, 480-481, 502). The word TRVIA is visible on this image. This should not to be linked with the name of Troy, but is rather an Italian word for ‘floor for dance’ (Santarcangeli 1982, 63-64; Weber 1974). A description of the dance in question is given in Vergil’s *Aeneid* (5.545-603).

The circular labyrinth represents the form which is most popular in Italy (cf. Plin. *NH* 36.91). The presence of the circular labyrinth can be associated with the increase of Roman influence on Cretan affairs (Willets 1965, 154), which can be dated to the early 2nd century BC onwards (de Souza 1998). The circular labyrinth could be closer to Roman conceptions of a labyrinth, though the labyrinth in a square form was also popular (Tidworth 1970, 184-185).

In summary, the form of the labyrinth on the coins of Knossos reflects political, economic and perhaps also settlement changes, from pre-Greek concepts, through a purely Greek one, and finally one which is acquired through Italian influence.
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Pl. 1. 1 – Labyrinth on a fresco decorating a corridor of the Knossos Residential Quarter.  
Drawnig by E. Górska after Press 1964, fig. 5
2 – Labyrinth on a clay tablet from the Palace of Nestor in Pylos, 13th century BC. Drawnig 
by E. Górska after Press 1964, fig. 6
3 – Circular labyrinth on oinochoe from Tragliatella, 7th century BC. Drawnig by E. Górska 
after Santarcangeli 1982, 245

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Pl. 2. 1 – Knossos, AR, stater, c. 470 BC. Reproduced from Svoronos 1890, pl. IV: 24
2 – Knossos, AR, stater, c. 470 BC. Reproduced from SNG Copenhagen 368
3 – Knossos, AR, stater, after 470 BC. Reproduced from Svoronos 1890, pl. IV: 32
4 – Knossos, AR, stater, c. 330-300 BC. Reproduced from Hess Nachfolger 1918, 
no. 623
5 – Knossos, AR, stater, c. 330-300 BC. Reproduced from Hess Nachfolger 1918, 
no. 624
6 – Knossos, AR, hemidrachm, after 470 BC. Reproduced from Svoronos 1890, pl. IV: 26
7 – Knossos, AR, stater, c. 330-300 BC. Reproduced from Hess Nachfolger 1918, 
no. 625
8 – Knossos, AR, drachm, c. 300-270 BC. Reproduced from Hirsch 1907, no. 2424
9 – Knossos, AR, tetradrachm, c. after 200 BC. Reproduced from Naville & Cie 1925, 
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10 – Knossos, AR, tetradrachm, c. 200-67 BC. Reproduced from Riechmann 1924, 
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