



## **MINOAN 'HORNS OF CONSECRATION' REVISITED: A SYMBOL OF SUN WORSHIP IN PALATIAL AND POST-PALATIAL CRETE?**

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### **ABSTRACT**

In this article a previously proposed interpretation of Minoan 'horns of consecration' as a symbol of sun is reexamined. A clay model of 'horns of consecration' from the peak sanctuary of Petsophas, the results of astronomical research on Minoan peak sanctuaries, the idols of the so-called 'Goddess with Upraised Arms' and a clay model of 'horns of consecration' from the Mycenaean cemetery of Tanagra are put forward as evidence for a possible adoption - or a parallel development under the influence of adjacent cultures - by the Minoans (and by the Mycenaeans, at least after 1400 B.C.) of religious notions related to the Egyptian symbols of the 'mountain' and the 'horizon', both connected with the Sun in Egyptian cosmology and religion. It is concluded that the 'horns of consecration' may represent a practical device as well as an abstract symbol of the Sun, a symbol of catholic importance, which embraced many aspects of Minoan religious activities as represented on Minoan iconography.

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**KEYWORDS:** Symbol of 'mountain', Symbol of 'horizon', peak sanctuaries, Goddess with Upraised Arms, bull, consecration, Minoan, Mycenaean.

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## INTRODUCTION

In 1934, in the final publication of the Minoan villas at Tyliisos, Joseph Hazzidakis mentioned the discovery of four models of 'horns of consecration'. Driven by this find, he suggested that Minoan 'horns of consecration' might have derived from the Egyptian symbol of the 'mountain' or the 'horizon', and thus have constituted the symbol of a Minoan sun deity. Such a deity, he continued, may either not be represented in Minoan iconography, because its presence was considered evident by the Minoans, or it may be recognized on a seal coming probably from Chania and published by Evans (Hazzidakis 1934, 101-3, Pini 1975, 156, Nr. 201). On this seal a male figure wearing a belt is depicted, floating over 'horns of consecration' and flanked by a winged goat and a daemon (Fig. 1).



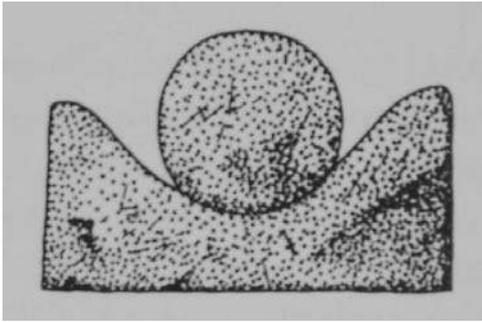
Fig. 1. The seal from Chania with the depiction of a male figure floating over horns of consecration (Pini 1975, no. 201)

With this suggestion Hazzidakis threw doubt on the interpretation of Evans (1901, 135), established by then, that the 'horns of consecration' represented real bull horns.

Hazzidakis was not the first to do so. Already in 1904, Karo (127, Footnote 1) had denied the interpretation of Evans, without discussing his reservations though; and in 1922, Gärtel first associated the Minoan 'horns of consecration' with the Egyptian symbol of the 'mountain'. Driven by his conviction of the primary role of a female goddess of nature in Minoan religion, however, he ascribed a different – and, from his point of view, a wider – meaning to them than that they had acquired in Egyptian religion, namely that of 'land' (81-2). The interpretations of the aforementioned scholars, however, did not exert any influence on scholarship, which continued to be dominated by the interpretation of Evans.

In an article published in 1977, Powell questioned the established interpretation of the 'horns of consecration' as a symbolic representation of real bull horns afresh. After a short though comprehensive survey of the opinions expressed by different scholars, related one way or another to the interpretation given by Evans, he turned to an alternative approach, pointing out the similarity, observed already by Hazzidakis, between the Minoan 'horns of consecration' and the Egyptian symbol of the 'horizon'. In Egypt, the horizon was conceived as the place from which the sun disk

rises between mountain peaks; and the sign of the 'horizon' was composed by two pointed ends, interconnected at the lower part, with a disc between them (Fig. 2).



**Fig. 2. The Egyptian symbol of the 'horizon' (Wilkinson 1992, 134, fig. 1)**

Again, the attempt of Powell to direct attention to a different explanation of the 'horns of consecration', being of a preliminary character, has not exerted any influence on scholarship, with only two exceptions: Watrous (1998, 23) touched upon this suggestion while largely discussing the relations between Crete and Egypt in the beginning of the 2<sup>nd</sup> millennium B.C.; and MacGillivray supported the same view in two instances, first, while discussing the meaning of the Palaikastro kouros (2000, 129), and secondly, while discussing the significance of the Knossian labyrinth in connection with astronomical observations made by the Minoans, who, he believes, used three different calendars, a solar, a lunar and an astral one, for the measurement of time (2004, 331). In the first case indeed, MacGillivray (2000, 128, 169)

referred to the same seal from Chania as Hazzidakis, to support his interpretation of the male figure depicted on it as Orion. In the second case, in a very stimulating article, he clearly identifies the Egyptian symbol of the 'horizon' with Minoan horns of consecration and states that the latter was also used as an artificial device "to standardise the points where the solstices and equinox appeared yearly" (MacGillivray 2004, 33). Very recently, the possible connection of Minoan 'horns of consecration' with the Egyptian symbol of the 'horizon' reappeared in two instances (MacDonald 2005, 68-69, Moss 2005, 160, 210-213). In the former, it is merely referred to as a possibility; in the latter, it is more widely discussed on the basis of general iconographic similarities as well as in connection with the appearance of 'horns of consecration' on the headdress of a female idol from Gazi belonging to the type of the 'Goddess with Upraised Arms' (see further below in this article), associated with the goddess Hathor, and so, indirectly, with the Sun.

It seems, therefore, that the interpretation of Minoan 'horns of consecration' as a symbol with a meaning similar to that ascribed to the symbol of the 'horizon' by the Egyptians deserves a fresh discussion with special reference to the interpretation proposed by MacGillivray (2004); all the more so, that thirty years after the article of Powell, the origin and the significance of this important Minoan symbol

remain obscure (Gesell 1985, 3, Marinatos 1993, 5).

## OBJECTIVES

The aim of the present article is to trace the significance of Minoan 'horns of consecration' during the 2<sup>nd</sup> millennium B.C. back to parallels from Egyptian cosmology and religion based on evidence from Minoan Crete (and Mycenaean Greece). It also constitutes a working hypothesis, which, if tested on other aspects of Minoan religion, may provide a more cohesive picture of it than this we have today.

A direct derivation of the Minoan symbol from the Egyptian one at that time is, however, not proposed, because the possibility of the Minoan symbol to have existed before the 2<sup>nd</sup> millennium B.C. cannot be excluded; Egypt, also, is not the only area in Eastern Mediterranean to search for a probable origin of the symbol, although it offers the most firm and lucid paradigm (see below). Moreover, there is nothing to exclude the possibility that the symbol, if adopted by the Minoans, may have incorporated local, semantic associations or dimensions (Hodder 1995, 93-4), which have favored its acceptance; in other words, we may have to do with a free adaptation of an Egyptian symbol by the Minoans, as Powell himself emphasized (1977, 73-4), or even of an idea circulating in the Eastern Mediterranean in the first half of the 2<sup>nd</sup> millennium B.C. and consolidated in Crete during the palace period.

## METHODOLOGY

According to the aim stated above, I am going to investigate the probability of:

- 1) the existence and the first appearance in the Minoan-Mycenaean world of a symbol similar to the Egyptian symbols of the 'mountain' and the 'horizon';
- 2) the implications of this probability for the character of Minoan religion.

### *The Egyptian paradigm*

In Egyptian cosmology and religion, the symbol of the 'horizon' (adjet) is closely related to the symbol of the 'mountain' (djew), from an iconographic as well as a semantic point of view: The two pointed ends of the former represent the two mountain peaks, on the east (Bakhu) and on the west (Manu), which support the sky, and resemble the mountain peaks surrounding the Nile valley from east and west, respectively. By addition of the solar disc between its pointed ends, the symbol of the 'mountain' is transformed into the symbol of the 'horizon', from which the sun rises or sets every day (Wilkinson 1992, 132-134) (Fig. 2).

The sun disk constitutes the immediate symbol of the sun. The sun occupies a fundamental position in Egyptian pantheon since the Pre-dynastic period (Wilkinson, 1992 128-129), through its successive associations with the gods Horus, Re and Amun. All three constituted popular variations of the Sun in the course of Egyptian history, according

to the religious or political power of different places of the Egyptian state or of the preferences of its kings. Thus, in the period of the Middle Kingdom (2035-1720 B.C.), Horus had already been fused with Re, who incorporated many aspects of him (Wilkinson 2003, 201). In turn, a little later Re merged with Amun (Wilkinson 2003, 92-93). The sun disk proper acquires divine status during the reign of Akenaten, an act that reflects his reformatory intentions in the political as well the religious domain, through the displacement of the priesthood and the concentration of power to his hands by support of the army. A second symbolic act of this kind was the foundation of his capital city in a new place, Amarna (Aldred 1987, 165-167).

Other important symbols of the sun, in different phases of its daily course, were the scarab (in the morning), the bull (at noon?) and the goat (in the evening). The snake, the lion, the sphinx and the griffin were also connected with the sun in different ways. Especially, the bull seems to have constituted the main symbol of the sun (at its culmination?) already in the period of the Old Kingdom (5th – 6th Dynasty, 2465-2150 B.C.), as it makes its appearance under the name 'Bull of Re' in the oldest known Egyptian text, the so-called Book of the Pyramids. Moreover, representations of the bull with the solar disc between its horns were very frequent, especially in the period of the New Kingdom (1550-1070 B.C.). In these cases, the bull is depicted still, with its head erected (Wilkinson 1992, 56-57).

### *The Minoan version*

The working hypothesis underlying the present article requires, first of all, the dissociation of Minoan 'horns of consecration' from bull horns. This association goes back to the pioneers of prehistoric archaeology in Greece: To Schliemann, who first equated the 'horns of consecration' with horns, to Evans, who, driven by the apparent importance of the bull as a sacrifice animal in Minoan ritual, first clearly equated them with bull horns and gave them their present name, and to Nilsson, who accepted the previous interpretations and added that the 'horns of consecration' signaled sacred places or places of worship. Since then, minor interpretative attempts (summarized by Powel 1977, and most recent by Giannouli 2000, see also below) followed the same direction, constantly considering the 'horns of consecration' as a symbolic representation of bull horns, because of the primary role of this animal in Minoan sacrificial ritual. From this role the sacredness of the animal proper also derives; in turn, because of the sacredness of the animal, all buildings surmounted by bull horns are to be considered sacral too.<sup>1</sup> All the aforementioned interpretations, however, do not deal neither with the meaning underlying the choice of the symbol as such nor with the reason of its increasing importance and its various connotations during the 2<sup>nd</sup> millennium B.C. Finally, the interesting attempt of Agata (1992) to follow the development of the

symbol's form and its associations through time remained in a preliminary state and it did not touch on the matter of its provenance or its significance.

The dissociation of the 'horns of consecration' from bull horns was recently attempted by Giannouli in an extensive temporal and spatial review, which showed how insufficient the existing evidence is to support a rash equation of the 'horns of consecration' with bull horns (Giannouli 2000, 236, 244). She also stressed the variety of horned species or their representations found in different contexts of a usually though not exclusively sacred character, among which representations of goats predominate during the whole Minoan era (*ibid.*, 248-249). In this respect, it is maybe worth noticing the cautiousness that the words of Evans proper indicate as he writes: "At times these terminations (of the horns of consecration) have the appearance of being actually horns of oxen, but more generally they seem to be a conventional imitation of what must be regarded as unquestionably the original type" (Evans 1901, 135).

The 'horns of consecration' make their first, doubtful appearance in the form of a clay model from the cemetery of Mochlos, which dates from the EMI or the EMII period (Seager 1912, 81-82, 93, Fig. 48, although it is referred to among finds scattered on the ground among later graves, Evans 1921, 57, where it is stated that the model comes from a votive stratum and dates from the EMII-III period, Diamant and Rutter

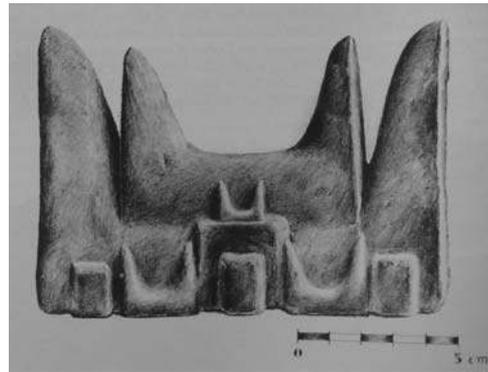
1969, 171-172, Zois 1972, 431 for the interpretation of the model as a boat, Zervos 1956, 151, Fig. 141-143, where its representation together with models of boats makes their differentiation obvious). After that, the oldest, undoubted example of 'horns of consecration' is to be found on clay models attached to two vases from Phourni, dating from the EMIII-MMI period. The first one is a teapot, it dates from the EMIII period and has five pairs of 'horns of consecration' attached around its lip. The second one is referred to as dating in the MMI period, without more details (Sakellarakis Y. and E. 1997, 390 and 546, Fig. 546, 546 and 550 respectively). Other examples come from the Sanctuary at Malia and date from the MMII period (Poursat 1966, 534, Fig. 26) and from Phaistos (Levi 1976, Tav. 149). 'Horns of consecration' also surmount the well-known MMII building models from the Loomweight Basement at Knossos as well as their MMII-III parallels from Piskokephalo (Shoep 1994, 192-194 and 197). Again, it is worth noticing that in the last two cases the models are interpreted as representations of shrines because they are surmounted by 'horns of consecration', an interpretation which goes back to the aforementioned theory of Nilsson. We will return to this matter further below. At present, let us keep in mind that, with the exception of the doubtful model of Mochlos, almost from their first appearance the 'horns of consecration' surmount architectural models or are represented surmounting buildings.

In Neopalatial times, 'horns of consecration' are often represented surmounting buildings or altars in front of which various ceremonies are taking place (see, for example, Shoep 1994, 204-207 for the former and Marinatos 1986, 53, Fig. 42, 1993, 176, Fig. 178, Papapostolou 1977, 69-71, Table 38 and Sakellariou 1964, 124, Nr. 108 or 204, Nr. 231 for the latter); the most known Helladic example – with double pairs of horns – provide the golden plates representing tripartite shrines from the Grave Circle A at Mycenae (Karo 1930, Tafel XXVII, XVIII).<sup>2</sup>

#### *A Minoan symbol of the 'mountain'?*

A unique and probably early find, which may present a symbolic value attached to the Minoan 'horns of consecration' analogous to that they had acquired in Egyptian cosmology and religion and also explain their appearance on top of sacred buildings, is a clay model of double 'horns of consecration' found at the peak sanctuary of Petsophas (Davaras 2003, 254, Abb. 25c) (Fig. 3). On its front side a façade of a tripartite shrine is plastically rendered, which finds a strong parallel in the Miniature Fresco from Knossos (Preziosi and Hitchcock 1999, 96, Fig. 54) as well as in the stone rhyta from Zakros and Gypsades (for drawings see Rutkowski 1986, 83 and 105).

Firstly, that a symbolic value was assigned to the 'horns of consecration' is beyond doubt, judging by the autonomy and the size of the model.



**Fig. 3. The clay model of 'horns of consecration' from Petsophas (Davaras 2003, 58, fig. 25c)**

Secondly, the find spot and the similar representation on the rhyton from Zakros make very probable, that the front side of the model represents the façade of a peak sanctuary (plausibly of the very peak sanctuary of Petsophas). In this case, however, one wonders what the purpose of the plastic addition of the façade – more precisely, of the embodiment of the façade into the sizeable, autonomous model of the 'horns of consecration' was, given that, if the intention of the craftsman was to represent the specific peak sanctuary (or a peak sanctuary in general), he could have contented himself with the creation of a model of the peak sanctuary itself or a representation of it on another object – like the aforementioned clay models from Knossos and Piskokephalo or the stone rhyta from Knossos and Zakros – with the 'horns of consecration' represented merely surmounting the building; unless his intention was to declare the close symbolic relation of the 'horns of consecration' with peak sanctuaries. It is reasonable to assume that such a symbolic identification of

the 'horns of consecration' with a peak sanctuary would reflect their real, spatial and religious relation, that is to say, that *the 'horns of consecration' of the model from Petsophas may constitute a symbolic representation of the actual space, namely the peaks of the mountains, in which the peak sanctuaries were erected, mingled with the religious significance of the symbol itself.* In other words, the model of Petsophas may constitute a symbol analogous to the Egyptian symbol of the 'mountain', derived from similar religious conceptions.

As mentioned above, in Egyptian cosmology and religion, the symbol of the 'mountain' is closely related to the symbol of the 'horizon' as the place of the rising sun. In this respect, the discovery of the aforementioned model at the easternmost peak sanctuary of Crete, with an unhindered view to the east may be indicative of an analogous conception in Minoan cosmology and religion too; all the more so, as it is soundly argued that the choice for the erection of the building excavated at Petsophas as well as the arrangement of the place as a whole were dictated by their suitability for carrying out astronomical observations, namely by the necessity of securing exact observations of solstices and equinoxes. The conical peak of the mountain Modi, seven kilometers to the west, as a system of reference (Henriksson and Blomberg 1996) and the mountain of Kali Limni on the island of Karpathos, 160 kilometers to the east, as another probable system of the same kind (Henriksson and

Blomberg 1997-1998) were important factors for such a choice. It has specifically been argued, that observations of the sunset on the spring and the autumn equinoxes (Henriksson and Blomberg 1996, 104-110, Fig. 2-4) as well as to the sunrise on the summer solstice (Henriksson and Blomberg 1997-1998, 149-150, Fig. 2) respectively. The suitability of peak sanctuaries for carrying out astronomical observations is further supported by MacGillivray, who believes that this was exactly the "primary function of peak sanctuaries" (2004, 131) and also by Goodison, for the peak sanctuary of Petsophas as well (2004, 348).

The year 1876±47 B.C. and the time around 2000 B.C. were determined as the most suitable dates for the observation of the sun based on the aforementioned natural marks respectively – and thus for the construction of the walls of the sanctuary; however, the results of the observations would have been of use during the whole Middle Minoan period, because of the slow mutation of the earth axis (Henriksson and Blomberg 1996, 107-109). These dates correspond roughly with the archaeological evidence: The pottery and the votive offerings from the peak sanctuary of Petsophas show that the sanctuary was in use from the MMI to the LMI period (Rutkowski 1991, 16, where the opinions about the duration of the use of the sanctuary are summarized). As far as the model of the 'horns of consecration' proper is concerned, its exact find spot or date of discovery is not given; it was

probably found during a rescue excavation undertaken by Davaras in 1972 around the remains of the building excavated by Myres in 1902, which dates from the MMIII-LMI (Rutkowski 1986, 79) or from the LHI (Davaras 1972, 653) period.

The association of the 'horns of consecration' with the sun, as indicated by the model found on Petsophas, may also explain the presence of 'horns of consecration' on the top of buildings, considered sacral for this same reason. Egypt offers a good parallel in this case too: In Egyptian script, the sign of the 'horizon' is associated with signs of buildings, thus indicating the supposed sacral character of the latter. It has specifically been argued, that the towers flanking the central entrance of the temples of the New Kingdom, which faces east, might symbolize the two ends of the symbol of the 'horizon', that is to say, they might mark two points of the horizon between which the sun rises during the year; and this architectural feature reflects the importance and the influence of the cult of Re in the New Kingdom (Aldred 1987, 165, Wilkinson 1992, 135, Redford 2001, III, 372). Similarly, the presence of 'horns of consecration' on the top of Minoan buildings might have lent a sacral character to them, as it has been widely suggested on the basis of Minoan iconography; the 'horns of consecration' might even have had a practical purpose too, namely pointing towards the sun and thus facilitating astronomical observations made for practical reasons or on special

occasions (MacGillivray 2000, 129; 2004, 331); and we must keep in mind that contacts of Crete with Egypt were intensified in the MMIB-II period (Watrous 1998, 21-22) and remained close in the Neopalatial period as well (Karetsou 2000). Therefore, the fact that 'horns of consecration' crowning buildings appear on Crete at this very time may not be a pure coincidence.

Finally, the association of 'horns' with the religion or the worship of the Sun is also attested beyond Egypt, for example, on a Babylonian sealstone showing the Sun god Shamash standing between 'horns' (Marinatos 1993, 179), which appear very much like the Minoan 'horns of consecration' (Fig. 4). It seems, therefore, that the association of horns with the Sun was not confined to Egypt, although it is in Egypt that this connection can be continuously and closely followed.



Fig. 4. Akkadian sealstone with the Sun-god Shamash standing on 'horns' (Marinatos 1993, 179)

#### *A Minoan symbol of the 'horizon'?*

It has already been mentioned, that in Egyptian cosmology and iconography the symbol of the 'mountain' is closely associated with the symbol of the 'horizon'; in fact the latter derives from the former when a

disc, an eloquent sign of the rising sun, is added between the two peaks. So, one has to look for a probable Minoan symbol of the 'horizon', that is for objects or representations combining the 'horns of consecration' with a disc. A review of the available evidence makes clear that an exact parallel does not exist. Nevertheless, an indirect connection may be pointed out on the basis of a combination of 'horns of consecration' with discs to be found on an impressive category of female idols, that of the so-called 'Goddess with Upraised Arms'. To this category belong sizeable, wheel-made female idols, with a cylindrical lower body and horizontal arms, bending upwards, usually at a right angle. Their heads are covered with different types of cover, to which a variety of objects are attached, variously interpreted as poppies, tassels, snakes or birds. All idols found so far are dated to the Postpalatial period, from the end of the LMIIIB to the Subminoan period. Alexiou (1958), who studied these idols thoroughly, believes that they represent different aspects of one and the same female deity, mistress of earth, sea and heaven (*ibid.*, 252-275, esp. 263-268) and interprets their gesture as a prayer, based on parallels from Mesopotamia and Asia Minor (*ibid.*, 243-252) (Fig. 5).

Among these idols, of special interest are the idols no. 11042, no. 11043 and no. 11044 from Karphi (Alexiou 1958, 192-195, Table F, Fig. 1, Zervos 1956, 487, Fig. 806, 485, Fig. 804 and 484, Fig. 803, respectively), the idols no. 9306 and no. 9308 from Gazi



**Fig. 5. The idol no. 11042 of the 'Goddess with Upraised Arms' from Karphi (Sakellarakis et al. 1994, 159, fig. 25)**

(Alexiou, *ibid.*, Table E, Fig. 3, Zervos, *ibid.*, 465, Fig. 773 and 463, Fig. 771, respectively) as well as the head of an idol from Gortyn (Alexiou, *ibid.*, 197, Table H, Fig. 3).<sup>3</sup> The head of the idol no. 11042 from Karphi bears a relief band with discs rendered plastically all around. In addition, from the upper part of this band three discs are sprung, alternating with birds. A similar headband crowns the head of the idol no. 11043, topped by three birds. A simple headband crowns the head of the idol no. 11044, topped by a pair of 'horns of consecration'. Behind it, in the centre, a semicircular bulb emerges. The idol no. 9306 from Gazi is crowned with a pair of 'horns of consecration', behind which a conical bulb emerges, flanked by birds. The idol no. 9308 is crowned with tongue-

like, forked ended objects alternating with discs. Finally, discs emerge from the jagged headband crowning the head of the idol from Gortyn. The headbands of the first two idols are interpreted by Alexiou as diadems and the plastic discs as metal ornaments. The conical bulb on the head of the idol no. 11044 is interpreted as a tiara, however of a unique type (*ibid.*, 193).

As seen from the above presented evidence, the heads of the idols of the 'Goddess with Upraised Arms' are crowned with various ornaments, among others with birds, 'horns of consecration', flowers, interpreted as poppies, tongue-like objects, interpreted either as wheat stalks (in the case of the idol no. 9308 from Gazi, see Alexiou 1958, 190) or as snakes (on four idols from Gortyn, Alexiou, *ibid.*, 185, 195-196) and discs. Among the aforementioned objects, birds and 'horns of consecration' predominate; they also are the most usual items found scattered among the idols or fragments of them in the excavations (Alexiou, *ibid.*, 185, 195-196), which indicates a more frequent use of them as crowns than this ascertained by the examples preserved.<sup>4</sup> As far as the discs proper are concerned, the relevant opinions considering them as heliacal or astral symbols are summarized by Alexiou (1958, 193, footnote 54), who himself does not exclude the possibility of them being so.<sup>5</sup> Finally, it is the alternating or complementary presence of the aforementioned objects as crowns of the idols that gave rise to the interpretation of the idols themselves

as representations of the different aspects of one and the same female deity (see above).

On the basis of the aforementioned evidence from Karphi and Gazi, it may reasonably be assumed, that *the common place, the combination as well as the alternating arrangement of birds, horns of consecration and discs on the idols of the 'Goddess with Upraised Arms' indicate that they may symbolically complement each other* (see also Alexiou 1958, 263). Thus, on the idol no. 11042 from Karphi birds alternate with discs, whereas on the idol no. 11044 from Karphi behind the 'horns of consecration' a semicircular bulb emerges. This bulb, doubtfully interpreted as a tiara, if seen from the main, front side of the idol, gives the impression of a disc rising between the 'horns of consecration'. This arrangement cannot be easily rejected as fortuitous, because the careful, symmetrical arrangement of the symbols is a primary characteristic of all idols of this category. In addition, on the idol no. 9306, birds, 'horns of consecration' and a conical bulb coexist. As far as the last two idols mentioned above especially are concerned, Moss points to the iconographic similarity of their headdress with symbols crowning various aspects of the Egyptian goddess Hathor and ascribes an analogous nature to the Minoan deities represented by these idols, namely that of the guardian of the Sun and of the assurer of its renewal, without further discussing the possible existence in the Minoan pantheon of a Sun god though (2005,

12-14 and 160). The following remarks may be made to elaborate upon this: The Egyptian religion offers two good parallels of important female deities closely related to the Sun: The goddess Nut, who is depicted as a cow with the sun-god Rhe on her back, that is as the celestial deity who gives birth to the sun and the other stars; and the goddess Hathor, who is depicted as a cow, often bearing the sun disc between its horns (Hastings 1912, 249, Wilkinson 1994, 58-59, 2003, 140-141) (Fig. 6) and closely related to the sun god Rhe whom she accompanied on his daily journey (Wilkinson 2003, 140). Hathor, however, was usually represented in anthropomorphic form and beyond her role as a goddess related to the sun, she was also associated with motherhood and the afterlife; simultaneously, she was considered as the goddess of joy and happiness as well as the goddess of foreign lands, that is she represented many different aspects of world and life, a fact which made her one of the greatest and most popular deities throughout Egyptian history (Wilkinson 2003, 139-144). This is another point of possible connection with the 'Goddess with Upraised Arms', whose properties may have varied too (Moss 2005).<sup>6</sup> Moreover, the gesture of the 'Goddess with Upraised Arms' can be considered as invocative of another, probably superior deity, according to Babylonian or Egyptian examples; in the case of Egypt indeed, this gesture may be directed to the sun (Alexiou 1969, 240 and 241-242, respectively).



**Fig. 6. One of the models found at the cemetery of Tanagra, composed by 'horns of consecration' with a disc between them, crowned with a fantastic creature (Aravantinos 2003, 223, no. 202)**

To sum up, in the case of the last two idols of the 'Goddess with Upraised Arms' presented above, the arrangement of the specific symbols is strongly reminiscent of that of the Egyptian symbol of the 'horizon', in particular of the iconography of Egyptian female deities related to the sun; and generally, the coexistence or the complementary appearance of 'horns of consecration' and discs on the idols of the 'Goddess with Upraised Arms' makes their close symbolic relation very probable. Therefore, the possibility of the existence of a Minoan sun deity, iconic or abstract, cannot be excluded.

Again, a hint for a similar relation of a female deity with 'horns of consecration, beyond Minoan Crete and Egypt, is offered by a Babylonian seal cylinder found at Enkomi, Cyprus. On this, a female deity crowned with horns is depicted, in a

stance very similar to that of the Minoan "Goddess with Upraised Arms" (Alexiou 1958, 240). This find suggests another possible route along which symbols with a probable similar meaning were circulated in Eastern Mediterranean as far back as the first half of the 2<sup>nd</sup> millennium B.C

### *A Mycenaean parallel*

That the Aegean world may have adapted - or created under Egyptian influence - the symbol of the 'horizon', is further supported by a category of finds from the Mycenaean cemetery of Tanagra, dating in the LHIIIA-B period. There, in some graves and in close association with the larnakes used for burials, clay models of 'horns of consecration', with an oversized clay disc between them, were found (Fig. 7). The disc itself was in some cases crowned with a bovine-headed, snake-tailed, winged fantastic creature (Spyropoulos 1969, 9-10, 13, Aravantinos 2003, 223). According to the excavator (Spyropoulos, *ibid.*), these models might have crowned the corners of some larnakes.

Their similarity with the Egyptian symbol of the 'horizon' is obvious. Moreover, it is worth noting that in Egyptian religion all three animals, from which the fantastic creature on the disc is composed, are closely related to the sun; also, the possible place of the models on top of the larnakes as well as their use in a funeral context strongly remind of Egyptian beliefs and practices associated with the sun disc and the dead (Wilkinson 1992, 153), especially

during the reign of Akhenaten (Aldred 1987, 165-166), when the relations of Mycenaean Greece and Egypt were at closest.

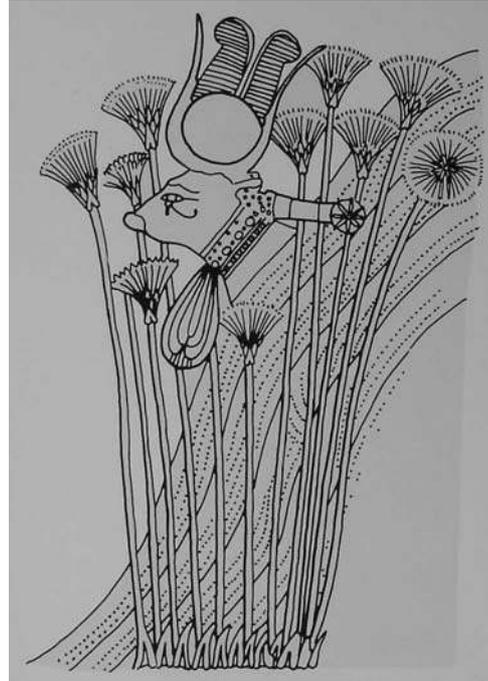


Fig. 7. Hathor, depicted as a cow, with the sun disc among her horns (Wilkinson 2003, 141)

## DISCUSSION

The working hypothesis presented above, has the following implications relating to the character of Minoan religion.

a) If the Minoan 'horns of consecration' had a meaning analogous to that of the Egyptian symbols of the 'mountain' and the 'horizon', then the worship of the Sun would be a strong possibility for Minoan religion.

This is true for the civilizations of Eastern Mediterranean (Egypt, Near East) with which Crete maintained contact during the 2<sup>nd</sup> millennium B.C. It is really difficult to accept how Crete would have remained uninfluenced by cosmic/religious beliefs of primary importance, circulating in its cultural environment (Goodison 2001, 77-78, 2004, 347) or why it would not have developed similar ideas concerning celestial bodies like the sun, whose primary role in the regulation of human activities is generally accepted (Mac Gillivray 2004, 330- 331).

Moreover, the model of Petsophas as well as the presence of 'horns of consecration' on the top of buildings not only point to their function as symbols of mountain peaks from which astronomical observations were originally made, but also to their practical use for the measurement of time and the calendar derived by such observations (the same would be true for oversized examples like that found near the southern entrance of the palace at Knossos), which might have been made in places other than peak sanctuaries too (Blomberg and Henriksson 2000, 2005, Goodison 2001, 83-87, MacGillivray 2004, 331).

b) Given that the 'horns of consecration' are very often represented in a variety of scenes of religious character, the sun worship would be the most important element of Minoan religion, one that would comprise all aspects of Minoan cult, at least in palatial times.

In reverse, if the sun worship was the main element of Minoan religion, one would expect the 'horns of

consecration' to be a religious symbol of primary and catholic importance. Indeed, in several cases the 'horns of consecration' seem to have accompanied almost all religious activities of the Minoans, and, thus, to have had a role exceeding that of the horns of the sacrificial animal of the bull. From the large number of the examples available to support this view, the one considered here refers to a seal impression from Malia showing a pair of 'horns of consecration' floating over an altar, with a sacrificed bull on it (Müller and Pini, 1999, 203, Nr. 173): If one considers the 'horns of consecration' as a symbolic representation of the horns of the sacrificed animal, then their presence over the altar is superfluous and inexplicable. But if one considers the 'horns of consecration' as a symbol with a wider, abstract meaning, denoting the religious framework into which the specific ritual is placed, then their presence over the altar becomes meaningful. In addition, the fact that the 'horns of consecration' are depicted floating in the sky may be a further indication of their celestial meaning.<sup>7</sup>

Furthermore, the function of the 'horns of consecration' as a symbol of catholic importance is shown by the variety of their correlations with other objects having a religious meaning. The following examples constitute a very slight though indicative selection of the Minoan - Mycenaean representations available: a) A well-known seal stone from Routsis showing a pair of 'horns of consecration' placed on a construction,

probably an altar, with lilies between them and a female figure approaching to smell the flowers (Sakellariou 1964, 315, Nr. 279); a seal stone from Mycenae with a palm tree between horns of consecration (ibid., 104, Nr. 88); a seal stone from Thebes with a schematic representation of 'horns of consecration', a palm tree and a bucranium between them and lions and birds over them (Pini 1993, 348, Nr. 353); a seal stone from Vaphio with branches between 'horns of consecration' (ibid., 264, Nr. 231); a clay conical rhyton from Knossos with a similar representation (Dimopoulou-Rethemiotaki 2006, 181); a seal stone from the Metaxas Collection with leaf-bearing "horns of consecration' and a kantharos between them (Sakellarakis and Kenna 1969, 231, Nr. 201, Diamant and Rutter 1969, 173-175); a clay model of a pair of 'horns of consecration' from Knossos, with a hole on the base, probably for fixing a double axe (Dimopoulou-Rethemiotaki 2006, 116); a clay pyxis from Katsambas with a double axe depicted between 'horns of consecration' (Marinatos 1993, 139, Fig. 109); and a seal stone from Chania with a pair of 'horns of consecration' flanked by the horns of a bucranium and with a double axe on top of them (Pini 1992, 142, Nr. 141).

c) To elaborate upon MacGillivray's suggestion for the practical use of 'horns of consecration' as a device for the standardization of the points of appearance of the solstices and the equinoxes (2004, 331), the 'horns of consecration' could be further considered as a device as well as a

symbol of the sun disc's motion along the horizon. This motion could be assimilated to a pendulum's oscillation, with a period of about 365 days (a year) and an angle of 30° around the place of equilibrium (due east). The sharp edges of a pair of 'horns of consecration' could indicate the exact extreme points of the horizon, where the sun disc appears to stand still (solstices), while the curve between them the sun transit along the skyline (horizon). Roughly halfway, corresponding to the centre of the base of a pair of 'horns of consecration', are the places of the equinoxes. Such a device, aligned east-west, could be used to follow approximately the solar calendar, like the *polos* or *gnomon* used in historical times.

## CONCLUSIONS

In this article the possibility of sun worship in Palatial and Postpalatial Crete was proposed, based on the interpretation of the 'horns of consecration' as a symbol of the Sun. Apart from comparisons with Egypt, this interpretation is based on the clay model of 'horns of consecration' from Petsophas, on some of the symbols on the head of the idols of the 'Goddess with Upraised Arms' and on various representations, all of which support the abstract and catholic character of the 'horns of consecration' against a restricted interpretation of them as the horns of the sacrificial bull, an interpretation that seems to have decelerated rather than promoted research on the matter in the last decades.

Of course, the interpretation of the 'horns of consecration' as a solar device and symbol must be tested against further evidence. For example, it is known that spring begins on the sun passage by the vernal equinox (about 21 March), when the sun disc would appear at the centre of a device in the form of a pair of 'horns of consecration', as described above; in this respect, the frequent appearance of flowers or branches between 'horns of consecration' in Minoan iconography as symbols of the renewal of nature in spring, may be indicative of the broader meaning and the practical use of 'horns of

consecration' as proposed above. Also, the possibility of the existence of other sun symbols in Minoan religion – such as the bull, for example, whose interpretation as a sun symbol is often implied though never explicitly suggested (Azara 2003) - their connotations and correlations need systematic investigation.

This goal goes far beyond the scope of the present paper. The civilizations of Egypt and the Near East offer rich material for comparisons, which may promote our understanding of Minoan (and Mycenaean) religion, in the light of working hypotheses like the one stated in this article.

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## FOOTNOTES

<sup>1</sup> A different approach attempted Diamant and Rutter (1969), who, based on representations of jugs between 'horns of consecration', associated the Minoan symbol with herds or vessel supports, tracing their origin back to similar constructions in Anatolia and the Near East of the 3<sup>rd</sup> millennium B.C. It must be noted, however, that the jug is only one of different objects to be seen between 'horns of consecration' in Minoan iconography, as are the double axe, the palm tree, the bull, plants etc. Moreover, this interpretation leaves without explanation the presence of 'horns of consecration' on the top of buildings.

<sup>2</sup> In this respect, the existence of built altars surmounted by double 'horns of consecration' in the Levant in the beginning of the 1<sup>st</sup> millennium B.C. is also worth mentioning (Hitchcock 2002, 225), as a case of a similar function of the symbol surviving in later times.

<sup>3</sup> There exists an inconsistency in the numbering of the idols among different publications (Alexiou 1958, 192-195, Table F, Fig. 1, Gesell 1985, Fig. 48-49, Sakellarakis 1983, 91 and Sakellarakis *et al.* 1994, 158, Fig. 24). In this article the numbering of Alexiou is followed.

<sup>4</sup> Moreover, plastic 'horns of consecration' are seen attached to a certain type of cylindrical vessels with snake-like handles (snake tubes), which are often found together with the idols of the 'Goddess with Upraised Arms' (Gesell 1976, 256-257, nos 3-5, Plate 41, Fig. 3 from Gournia).

<sup>5</sup> The fact is, however, that a systematic research and study of these symbols covering the whole spectrum of Minoan iconography has not been undertaken as yet (Goodison 1989, 11-15).

<sup>6</sup> This possibility does not contradict the character of the Great Mother, embracing all aspects of the natural world, frequently assigned to the Minoan goddess. It must be stressed, however, that this dominating interpretation may have hindered the examination of other possible aspects of her, as soundly suggested by Goodison and Morris (1998) and also by Goodison (2001, 87).

<sup>7</sup> For a probable identification of floating objects depicted on Minoan seals with celestial bodies see Kyriakidis 2005