

## Were there Astronomical Rituals at the Minoan Peak Sanctuaries on Crete?

Peter E. Blomberg

Norrtrullsgatan 31, SE 11327 Stockholm, Sweden ([peter@mikrob.com](mailto:peter@mikrob.com))

**Abstract.** The Uppsala Group have studied the so-called *Peak Sanctuaries* and other Minoan buildings on Crete for the past 10 years or so. The study has been directed towards indications of a Minoan interest in the sky i.e. the movements of the heavenly bodies, sun, moon, stars etc. It is found that almost all studied buildings have parts that were directed towards celestial events making it possible to adjust a calendar correct for the solar year. The finds from the peak sanctuaries indicate a Minoan interest in the sun, moon, stars and constellations making it possible to use the stars for navigation and calendaric indications. During the last few years papers have been presented on a new understanding of the Minoan peak sanctuaries, an interpretation indicating some kind of ritual on those peaks. The kind of ritual has however not been explained in those studies. This paper discusses this new approach. It is shown that the ideas and method presented in those papers indicate an astronomical orientated ritual and supports the understanding of the peak sanctuaries as places used for understanding and studying the stars and other heavenly bodies.

### 1. Introduction

There are a substantial number of publications on the definition of Peak Sanctuaries and suggested use and performances on those places. Camilla Briault presented 2007 a critical analysis on how Peak Sanctuaries are studied with a substantial bibliography on the subject. She says: “The aim of this article is to move away from the traditional concern with topography, by suggesting instead that the equipment used in peak sanctuary rituals was more significant for their performance and transmission than the physical characteristics of the landscape in which they took place” (2007, 123). She also showed that the definition of these places are understood and defined very differently by the many scholars that have worked with these places. Some scholars list definitions of sanctuaries and thereafter make lists of sanctuaries that do not fulfil those definitions. However, her paper is most interesting as she is inclined to look at the finds in order to define the ritual, instead of only looking on their physical position. She notes that the peak sanctuaries were used during a long period, at least 500 years (2007, 123) for some of them, indicating a very long life length for these, mainly, simple constructions, a true ritual tradition. But there was a change in the Second palace period when palatial centres began to “monopolize previous ‘popular’ cult places” (Briault 2007, 123 with ref. to Moody 1987, 238 and Peatfield 1987, 92). She says that this change is manifested by an increase of traditional peak sanctuary artefacts.

Briault studied also “sanctuaries” situated in places similar to Cretan Peak sanctuaries on the mainland and Aegean islands. In doing so she underlines the variation in defining peak sanctuaries, the number of such sites has varied during the years, from two from the beginning and to-day twenty-five are seen as been in use during the First Palace period, eight or nine in the Second palace period and only two at the end of LMI and also thereafter.

Kyriakidis in his book *Ritual in the Bronze Age Aegean, The Minoan Peak Sanctuaries* (2005) discusses ritual in detail and finds that there is a lot of confuses on this subject. There are scholars that discuss only some forms of ritual, e.g. Victor Turner (1967, 28) says that ritual is ‘formal behaviour for occasions not given over to technological routine, having reference to beliefs in mystical beings or powers’, however he thus is leaving out all its secular aspects. Radcliffe-Brown (1952, 143) says, “ritual acts differ from technical acts in having in all instances some expressive or symbolic elements in them.”

Kyriakidis stresses on symbolism, “a proper frame of mind”, traditionalism, types of sign, and ‘symbolism’, and ritual (2005, 30-40). He is stressing that a ritual can be secular, not only connected to some sacral performance. This is very important in understanding what happened on the Peak Sanctuaries, as we cannot connect the finds nor the constructions to one local known sacral cult. If we look for known religious aspects we need to combine some different cults that normally is not performed together, i.e. a fertility cult, a healing cult, and a cult to one or more gods or goddesses (Blomberg P., 2000, 312-314).

After Kyriakidis presented his method for identifying a ritual, with examples of how to use it on archaeological sites. He studied sites on Crete that he understands as peak sanctuaries. He makes his study on 27 different sites and some sites not on Crete as well. The problem he thus runs into is that those 27 sites are situated on hills all over Crete, inland and on the coast, close to Minoan settlements but also away from known settlement. However, he finds that there was some kind of ritual on these places but cannot point to any specific ritual or use. Part of his problem is that the publications of these sites differ substantially and the excavators have had different goals for their excavations. There are excavations made in a hurry, more for rescue the material, some made almost 100 years after the first search on the sites and some modern excavations starting from scratch. In several cases he has not had access to all material found etc.

## 2. Were there a ritual on Petsophas and Traostalos?

This study will however concentrate on two, Petsophas and Traostalos, two sanctuaries where altogether over 2400 items has been available for studying. The analysis of those finds has been discussed and published elsewhere (Blomberg 2000), here those finds will be used in relation to the suggested methods presented by Briault and Kyriakidis. Both sites situated on the Cretan east coast.

If we use Camilla Briault’s suggestion to use the finds and Kyriakidis’ suggested method to identify a ritual we get for the important factors in his method for identifying a ritual:

*Traditionalism and repetition:* Here is a problem, as there are no texts from the Minoan time indicating a long, standing ritual. We shall, however, remember

that the Peak Sanctuaries were used during a long period of time, several generations. Kyriakidis (2005, 45) writes: “The sense of tradition may be traces by the use of relics (artefacts belonging to earlier periods), and the continuous use of certain spaces or types of items for the same activity.”

We find a tradition amongst the finds for a substantial time and the peak sanctuaries were used for a few hundred of years. There seems not to have been a change in the type and design of the found items during that period. The repetition of an act is one of the most common aspects of a ritual. In our case we can observe this by the many figurines of limited forms made during a long period. This indicates a repetitive use. These figurines were also made in the same style over a long period and show similarities all over Crete. Not all types of figurines are found over the island, the composition of types vary but not the style and form, e.g. on one peak sanctuary only one type is dominating, Atsipades, where only arms are found to be compared with Petsophas where a substantial number of types have been found, amongst which are a number of arms (for different types found on Petsophas see Rutkowski 1991 and Blomberg 2000). We find that the finds indicate a tradition and that something was repeated over a long time.

*Invariance* is another sign for indicating a ritual. Invariance demands the accurate repetition of an action every time a ritual takes place. On peak sanctuaries invariance can be seen by the use of the same type of equipment, similarity in the types of items brought or used. On the two peaks, Petsophas and Traostalos, the figurines found are very similar in size, material etc and within the types e.g. they are extremely similar. There are very few types with only a few examples but the material and size and styles of those are also pointing to only one idea behind the figurines. We find that there is invariance amongst the finds.

Another factor of ritual is *Rule-governance*; in a culture with no left documents the rules are not easily understood. However, this can be indicated by studying similarities in principles for buildings, in style for decorating pottery and how trade between different areas seem to have been made. However, none of Kyriakidis suggested methods (2005, 33) to identify *rule-governance* could be used for the peaks sanctuaries, as there are no texts or traces of pictures. In the different buildings spread all over Crete built in a similar technique and planning, we can identify rooms and places where the stars, sun and moon were studied during a substantial time. This together with the style of the pottery found all over the island indicates that there seem to have been a general culture on the island indicating a “rule government”.

*Formality* is another factor, but it is also hidden for us, as we have no texts etc telling us what happened on the peak sanctuaries, nor at the interesting parts of the Minoan buildings.

However, formality is shown by the finds as they are made in the same style, the same material and size. This kind of figurine are rarely found outside the peaks, but when found on peak sanctuaries other than the two that are studied here they are similar in style, motif, and material. Interesting is e.g. on the peaks a large number of bovine figurines are found but no animal is shown as a cow. Cows, however, are found in caves where some kind of fertility ritual has been suggested (Jones, 1999). It seems to have been a uniform, very formal, way to design the figurines for the peaks. A few human figurines have been found outside the peaks sanctuaries, e.g. the Palaikastro kouros found in the

settlement below Petsophas (MacGillivray, 2000). He is unique in Cretan art but clearly of the same type and style as those found on the nearby peak but is much more advanced in size and material. He may indicate a movement of the ritual from the peak down into the settlement, as he is later. I will come back to this possibility. We find that there is clearly a formality amongst the figurines found on peak sanctuary.

*Symbolism* and *Type of signs* are two factors rather easy to understand. Signs can be of any type, uniforms, flags etc but “in religious ceremonies signs involving some kind of representation of the supernatural (the deity/deities, the dead or other) often occur” (Kyriakidis 2005, 37). He also says: “The study of signs and especially of the symbols used in ritual is one of the few ways archaeology can infer the underlying belief system(s).” (2005, 46) He underlines the difficulty to understand if many items are symbols or had some other value. A clue is if the finds can be used for something or if it in itself has no practical use; compare the sickle used in harvesting and in the flag. From the peaks, however, we have a large number of small figurines that cannot be used for any practical use but must be symbols.

Some are unique to these peaks, see e.g. the hairy heads (Rutkowski 1991, HM 4855, HM 4856) understood as comets (compare the Greek word *kom>>*thj meaning head with long hair), and the small animal AM AE 1846 (Rutkowski understood the figurine as a weasel which lost its legs, it has however no traces of the lost legs but should be compared with early pictures of Cetus, compare the map in the Loeb edition of Aratos pp. 444-447 indicating that something special was performed on these peaks).

*Performance* is another factor. As we have no texts and no pictures or figurines indicating some kind of performance, we can only imagine what happened on the Peak sanctuaries. The number of participants can be traced by the number of items of the same type within any context. On the peaks we have an extremely large number of e.g. oxen. This would indicate a number of participants and a kind of general performance. There are also indications of a terraced area SE of the main construction indicating space for participants (Rutkowski 1991, 18f).

### 3. What kind of ritual took place on these peaks?

When a site is studied there maybe many similar signs (Kyriakidis 2005, 42) indicating an “entire ritual pattern” He uses the words “ritual cores” for items peculiar to a certain ritual and not repeated elsewhere. Interesting is that of the over 2400 finds from these two peaks 99% can be understood as symbols for celestial bodies, both constellations but also comets, the phases of the moon etc. see Blomberg (2006). Figurines similar in style, material and size are also rare outside peak sanctuaries indicating that the figurines from these peaks make a “ritual core” as defined by Kyriakidis.

As seen above those two sites fulfil Kyriakidis definition of having been sites for Minoan rituals, rituals that according to Briault (2007, 123) later was monopolized by palaces and similar buildings. If we now study the analysis of palaces and buildings presented by Mary Blomberg and Göran Henriksson (e.g. this proceeding) we find clear indications of an interest in some of the directions

found on peak sanctuaries in some palaces, directions that could be used for calendaric indications.

This indicates that the sites on Petsophas and Traostalos could have been used not only to study the movements of the heavenly bodies, a ritual in itself, but also understanding the yearly change in position of stars and the sun to make it possible to build the palaces such that the calendaric ritual could move down from the peak down into the palaces.

Several scholars have indicated changes in Cretans ritual practice during the second Palace period (Moody 1987, 238; Peatfield 1987, 92). Schoep (1994, 23) says about Mallia and Phaistos that they lack nearby peak sanctuaries but show materials that are very similar to the material from peak sanctuaries indicate that at these two palaces "a type of public shrine was used, more or less with a similar social function as the peak sanctuary, but, of course, with a different ritual". Briault (2007, 133) very rightly dispute that the rituals were fundamentally different.

The most interesting figurine similar to the standing man from the peak sanctuaries is the kouros from Palaikastro made of ivory and gold. This kouros is understood as a votive figurine by e.g. MacGillivray who sees him, as "the youthful male god who arrived from the underworld to herald the beginning of the Harvest, Diktaian Zeus..." (2000, 169). This kouros could indicate a ritual similar to the one on the peak Petsophas but in the settlement immediately below the peak. The standing man from the peaks has earlier been understood as representing the constellation Boötes or the star Arcturus, a star connected to harvesting the grapes at its heliacal rising, August 27 (for the dates see: Henriksson & Blomberg 1996, 109, comp. Hesiod ll. 609ff. for the suitable season). At the cosmical setting of Arcturus it was time to whet the sickles according to Hesiod (ll. 573ff). Harvesting on Crete ought to have been late October i.e. indicated by Arcturus heliacal setting in mid October.

With the understanding of the figurines found on the peak sanctuaries and the directions found of the Minoan building towards major celestial events it seems clear that there was a ritual involving the celestial bodies during the Minoan times. With the interest in keeping track of the calendar and in the heliacal rising and setting of Arcturus on Petsophas (Henriksson & Blomberg, M., 1996) and the Palaikastro Kouros it seems logical that the later tradition of honouring Hellenic gods and goddesses on special days may have begun with the Minoans.

#### 4. Conclusion

There seem to have been a ritual on the Minoan peak sanctuaries involving the heavenly bodies. A ritual that made it possible to keep the calendar correct and keeping track of the movements of special heavenly bodies, such as the equinoxes, rising and setting of major stars etc.

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