Materiality, ritual performance and social interactions in Minoan peak sanctuaries during the Neopalatial period

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Cover Figure - Inscribed libation table **PK Za 11** from the Petsophas Peak Sanctuary, MM III- LM I. Currently located at the Heraklion Museum. **Flouda**, 2013.

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Abstract

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Abstract -

Peak sanctuaries, some of the main cult places in Minoan Crete, are known to present changes during the Neopalatial period. The appearance of high-quality votive objects, such as inscribed libation tables, double-axes, and naturalistic-style figurines during this period has been interpreted as a sign of elite influence. At the same time, peak sanctuaries are one of the few cult places known to have housed popular rituals. If both elite and lower strata of society congregated at peak sanctuaries, understanding the ways in which these interactions took place is imperative. Properly appreciating the social dimension of peak sanctuaries during the Neopalatial period entails a detailed understanding of how the material assemblage participated in the ritual, shaped it, and afforded certain social interactions. The paraphernalia utilized in ritual activity constitute a key in the performance of the ritual itself. In this work, stone-carved vases and double-axes from Neopalatial assemblages are analyzed semiotically and in a contextual approach, to acknowledge their importance to ways of socializing during this period that marks the heydey of the Minoan civilization.

Keywords -*Minoan, Crete, Neopalatial, Peak Sanctuary, Ritual, Materiality, Material Culture, Elite, Cult, Popular Cult*

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Chapter 1. Introduction

Peak Sanctuaries are Minoan cult spaces that first appeared during the EM III-MMI[1] period. During the Protopalatial period, many similar sites appeared but fell into disuse by the end of the 17th century BCE. In the next period, the Neopalatial, less than a dozen remained in use[2]. These received some architectural additions, such as monumental buildings and ramps, and seem to be topographically linked to nearby settlements. Another change during the Neopalatial period concerns the peak sanctuary assemblage. Ceramic figurines of people and animals, votive limbs, and ceramic vessels for ceremonial drinking are among the most common findings.[3] The appearance of double-axes, stone-carved vessels, and libation tables with Linear A inscriptions, alongside architectural elaboration, highlights the change even further. This has been interpreted by some as evidence for the reinforced presence of Minoan elites, a conclusion based on the fact that the artifacts dating from the Neopalatial period have a palatial aspect or quality to them[4] – many appearing to have been crafted in special workshops, such as those attached to palaces.

Nevertheless, very little is known about how the introduction of elaborate cult devices affected the performance of rituals at peak sanctuaries and what peak sanctuary ritual represents to understanding social interactions during the Neopalatial period. The effectiveness of the ritual depends upon its proper execution. Ritual, as a system of symbolic communication[5], consists of a sequence of words and acts, expressed in different media. Tambiah laid down features that define ritual as essentially a performative action[6]. It, being a staged action, mobilizes different material media to get participants immersed in the experience[7]. Thus, understanding the significance of the objects utilized in ritual is a necessary investigation that will allow a broader comprehension of how elite objects were integrated into cult activities, how people interacted with them, and to what extent these objects shaped ritual performances. Furthermore, it is worth asking what types of ritual and social interaction these objects could afford.

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[1]Peatfield 1987, 89-90.
[2]Soetens et Al. 2001, 8.
[3]Briault 2007, 125.
[4]Karetsou 1981, 145.
[5]Tambiah 1979, 119
[6]Tambiah 1979
[7]Bell, 1997

A rather similar approach to material culture has been developed by Carl Knappett in his "Thinking through material culture" (2005). Knappett demonstrated how different Minoan drinking vessels afforded and attained an active role in social interactions. Subsequently, his work is very pertinent as a methodological framework for the present study. It consists of approaching material culture from the point of view of its materiality, namely, its composition, the technological processes of manufacture, physical affordances for handling, storage, use, and so forth. Knappett's examination has proven that objects, in their multitude of contiguities, find themselves within complex networks[8], and that investigating these can contribute a lot to understanding the centrality of material culture. Similar to Kamares-ware objects, other high-quality objects also originated in specialized workshops – e.g. stone-carved vases and double-axes. These come from a context of an elite that promotes the specialization of artisans and the production of these very items. The votive figurines are another example of special objects, many of them reasonably large, more standardized in style, and with remarkable construction techniques reminiscent of palatial ivory carving[9]. Furthermore, as revealed by the presence of square, support bases, these figurines were meant to be displayed[10] or, at least, stood upright. These properties allow us to investigate their handling and placement, aspects of their physicality, i.e, how they relate to the other artifacts on the site, and their adjacencies. The stone-carved objects, such as rhytons, libation tables, and kernoi – usually found in fragments – have properties of their own, and their strong role in elite propaganda during the Neopalatial period via relief imagery has already been discussed by Logue in 2004. Their production, iconography, and importance in Minoan society were also investigated by Warren in 1969. Equally important is to understand these vases' presence as meaningful and what they made possible in regard to the interactions taking place at these sites.

The current research on peak sanctuaries is yet to reach a definitive answer to the extent of elite influence on these sites. If for many it is clear that Palaces took over peak sanctuaries during the Neopalatial period[11], for others, nothing in the assemblage is conclusive evidence of this – no object or building being outside the capabilities of a mobilized community[12].

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[8]Knappett 2005, 166.
[9]Spiliotopoulou 2016, 9-10.
[10]Morris et al. 2019, 61; Murphy 2016, 5
[11]Peatfield 1987, 93.
[12]Haysom 2018, 22.

Despite uncertainties regarding the topic, it is a fact that peak sanctuaries made possible new, different forms of material and symbolic exchange[13]. That is, different relationships between humans, artifacts, and space emerged, and these sacred spaces retroactively fostered the production of specific cultic paraphernalia, used by people in collective ceremonies. More nuanced interpretations seem not to embrace or reject a palatial-elite influence completely[14]. Instead, scholars have recently started to focus on the ambivalence of the material assemblage and see peak sanctuaries as arenas of a confluence of different societal segments, namely the elite and average people. How this elite is represented by the ritual paraphernalia that engineered new forms of social interactions is a topic in need of a greater understanding. In a nutshell, peak sanctuaries and their unique properties afford us new possibilities for understanding to what extent material devices "behave" in ritual contexts, engineering varied forms of effective social relationships[15] and, ultimately, Minoan society itself. Answering these questions seems to be an appropriate and logical next step to the already well-established understanding of patterns of distribution, topography, and elite presence in such sites.

To this end, the present study has been structured in the following way: This initial chapter consists of an introduction to the object of study and a presentation of the questions that are addressed in the following chapters. Chapter two consists of a summarized presentation of more than one hundred years of research on peak sanctuaries, with an emphasis on what has been discussed about the elite influence on peak sanctuaries during the Neopalatial period. Chapter three contains the methodological framework necessary to investigate the material record with the appreciation proposed. Chapter three is structured according to the main concepts that are utilized throughout this study: (1) The understanding of ritual as performance; (2) The centrality of material culture in ritual action; (3) The importance of material culture in social interactions as appreciated by Carl Knappett. Following is chapter four, in which the selection of objects analyzed is justified and the relation of sites mentioned is given. Chapters five and six consist of case studies, with the application of the methodological framework discussed in chapter 3. Finally, a conclusion in chapter seven, where the results of this study are discussed.

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[13]Zeimbeki 2004, 351
[14]For instance, Vavouranakis 2018; Haysom 2018.
[15]Bell 1992, 197

Chapter 2. History of research on peak sanctuaries

Only a few peak sanctuaries have been excavated and published, which renders the study of these sites a challenging endeavor. Stratigraphic sequences at these sites are often contaminated or of difficult interpretation. All peak sanctuaries are exposed to the elements, and archaeological remains are often poorly preserved. This renders site dating difficult and restricted to the stylistic analysis of often relegated potshards. In spite of these difficulties, research has established the key features of these Minoan cult sites: Peak sanctuaries always occupy a prominent location, not necessarily at the very top of a mountain, but always elevated[16]. They are extra-urban, open-air spaces of cult naturally demarcated and without or with minimal architecture[17]. Their material assemblage is usually characterized by votive body parts, human and animal figurines of clay, and fine and coarse pottery[18].

Much has been accomplished since the discovery of the first peak sanctuary with **Myres' 1903** excavation at Petsophas. Since then, developments have been done in cycles of approximately one decade each. To highlight the main advances in the field, a review of past research follows. **Sir John Myres** quickly identified Petsophas as a sacred site. He noted how there were many types of figurines and interpreted them being votive offerings representing votaries instead of deities[19]. Petsophas would soon be followed by Juktas, excavated by **Sir Arthur Evans** in **1909**. Evans saw the sanctuary at Juktas as the place of worship of the so-called Minoan Mother Goddess who, according to him, presided over the Palace of Minos[20]. This idea was derived from an association of the site with the famous gold signet ring where a female entity appears flanked by two lions on top of a hill. It is also in Evans' report that the term peak sanctuary appears for the first time[21].

Almost twenty years later, **Nilsson's** seminal **1927 "The Minoan-Mycenaean religion and its survival in Greek religion**" represented an attempt to provide a narrative to Minoan iconography, one devoid of text. His metaphor of Minoan religion being a picture book

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[16]Peatfield 1992, 60.
[17]Kyriakidis 2005, 31.
[18]Jones 1999, 5
[19]Myres 1902-1903, 380.
[20]Evans 1921, 159.
[21]Peatfield 2009, 251.

without texts survives to this day[22]. He distinguishes peak sanctuaries from sacred caves on the basis of their distinct topographical categories and also points out that, while sacred caves may have their origins in rocky shelters, peak sanctuaries could not have originated from habitations[23]. Discussing Juktas and Petsophas, the only sites known at the time, their similarities and, much like both Evans and Myres[24], he tried to identify the deity worshiped at these sites. Despite confessing that as for the deities or daemons venerated in these places we are groping about in the dark"[25]Nilsson agreed in part with Evans's ideas, and offered his own idea, a nature-goddess, mistress of animals, prototypical of the later Artemis. More than a decade later, in **1942**, Swedish scholar **Axel Persson** published **"The Religion of Greece in Prehistoric Times"** with a focus on iconography that would have a lasting impact on the interpretation of Minoan Religion in the following decades.

The idea of Minoan-Mycenaean religion as the predecessor of later Greek mythology has led scholars to look for mythological figures and try to make sense of iconography, transforming images into narratives. This changed somewhat with **Picard's 1949 "Les Religions Prehelléniques."** More cautious in his attempts to explain rituals and provide images with texts grafted from the Near East, Picard offered an extensive list of critical literature alongside synthetic descriptions of cults and rituals. He developed more on the distinctions between the nature of social engagement in Minoan and Mycenaean rituals. Differences were to be expected, given the cultural differences between Minoans and Mycenaeans, and how these must have influenced their respective religions[26]: while Minoan rituals seem to have been public in nature, and acted in open-air spaces, Mycenaean were more secluded, similar to mysteries.[27]Working within an iconographic framework, Picard noted how Mycenaean religious parades are rare on wall paintings, gems, seals, and bezels.[28]The current paradigm owes a lot to these advances, and from this point onwards,

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[22]Marinatos 1993, 9.
[23]Nilsson 1927, 71.
[24]Evans (1921) imagined a mountain goddess, based on the aforementioned gold signet ring. Myres (1903) was fond of a healing deity, a conclusion drawn from a large number of ex-votos he found at Petsophas.
[25]Nilsson 1927, 72.
[26]Picard, 1949, 222.
[27]Kyriakidis 2005, 7.
[28]Picard 1949, 254.

Minoan and Mycenaean religions can be studied as coherent autonomous distinct systems, not primitive prefigurations of Greek cults.[29]

In **1951** came **Platon's "Το ιερόν Μαζά και τα μινωικά ιερά κορυφής"** with an examination of the sites known and thought to be peak sanctuaries at the time.[30]Platon's work is one of the first remarks on the topography and visibility of peak sanctuaries in the literature, on his comments on the intervisibility between Endichti, the Palace of Malia, and the plateau of Lasithi[31]. Around this time and in the following years, as Kostis Davaras refers to him, tireless French scholar Paul Faure extensively surveyed the island, mostly concerned with caves and the diachronic use of Cretan sites[32]. The various results of **Faure**'s travels were published over the next decades in *BCH*, from **1956 to 1978**. On many occasions, the author devoted his attention to peak sanctuaries*,* with a publication in 1963[33] containing comparisons between sacred caves and 24 peak sanctuaries. He also commented on the deities worshiped at different sites, but was satisfied with drawing a general, superficial notion of what kind of deity these could have been.[34] Faure was opposed to the idea of a monotheistic cult or a single great goddess[35]. With a diachronic understanding of sites, Faure was able to notice and draw comparisons across different phases of site use, to interpret the nature of the cult in question. He would go on to conclude that the cults in caves and peaks observable from MM I onwards were part of an essentially popular religion[36]and greatly different from cults near or in wealthy Minoan villas. In doing so, he somehow anticipated ideas that would be also reached by Peatfield on rural cults during MM periods many decades later.[37]

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[29]Marinatos 1993, 10.

[30]These being: Anthropolithoi, Christos Volakas, Chamezi, Endichti, Juktas, Karfi, Katrinia Piskokefalo, Koumasa, Maza, Petsophas and Profitis Ilias.

[31]"...η κορφή του Εντίχτη είναι κατάλληλος ως 'βίγλα' δια την επαγρύπνησιν της παραθαλασσίου περιοχής, όπου το Ανάκτορον των Μαλλίων και ταυτοχρόνως του οροπεδίου του Λασιθίου" (Πλάτων 1951, 141 footnote 109, as cited by Soetens 2006, 8)

[32]Davaras 2010, 72.

[33]In this same year, Pyrgos Tylissou was added to the list by Alexiou in a short report (Αλεξίου 1963)

[34]Faure (1967, 148-149) suggests celestial deities for peak sanctuaries; groundwater deities for sacred caves; and deities of the land or the sea at countryside and shore sites.

[35]Faure (1967, 148) expressed it was evident that a person that went to rural chapels did not worship the same deity there as they did in a cave full of weapons.

[36]Faure 1967, 148.

[37]Peatfield 1992, 59-87.

Adding to the discussion on peak sanctuary chronology, **Rutkowski's** brief article **"The Decline of the Minoan Peak Sanctuaries"** from **1968** focused on the changes that took place in MM III-LMI sanctuaries, both on mountain peaks and in caves. Namely, the drastic reduction in the number of peak sanctuary sites at the turn of the Neopalatial period, the increase in the number of sanctuaries placed in the depths of caves around the same time, and the flourishing of many underground crypts in home sanctuaries[38]. All this he attributed to repeated earthquakes that shook not only the island but also the faith in the power of the gods during the MM III-LMIB periods[39]. Another scholar preoccupied with the issue of chronology was **Dietrich**, who discussed peak sanctuary's temporal limit of occupation. As it had already been established in the literature, by Faure and Rutwkoski, cult activity emerged in peak sanctuaries around the MM I period. Throughout the entire Middle Minoan period activity can be noticed in the sites and usually, there is an overlap with LM – when the number of sites was severely reduced[40]. Concerned with a return to the analysis of the material and a reinterpretation of the different types of Minoan shrines, Dietrich called attention to the need to answer the degree of distinction between the cult performed on mountaintops, domestic shrines, and others.

Even though he was preoccupied with tracing the similarities in cults across sites, he could not overlook the features that differentiated these cults. He raises the same point as Nilsson did four decades earlier, stating that the deities worshiped at peaks and in caves, and therefore their cults, could not have been identical. Prior occupation of caves might have resulted in chthonic cults, which were not possible in peak sanctuaries, never previously inhabited[41]. Furthermore, to him, the variety of figurines and body parts seemed to indicate a somewhat apotropaic cult of a divinity associated with animals. Still, a great deal of attention was given to the discussion of the deities worshiped in peak sanctuaries. That kept in touch with the common tendency in the literature to pursue the peak sanctuary deity. Dietrich's conclusions would be questioned by **Rutkowski** in a following *Historia* issue[42]. A vigorous reply arrived in 1971[43], in which Dietrich challenged Rutwkowski's assumptions of a wild impact on Crete of the natural disasters post-Santorini eruption.

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[38]Rutkowski 1968, 158-159.
[39]Rutkowski 1968, 159.
[40]Dietrich 1969, 260.
[41]Dietrich 1969, 264.
[42]Historia 18.
[43]Dietrich, 1971. Can be seen on: http://www.jstor.org/stable/4435221

The seventies began with this heated discussion, but also with **Sakellakaris's** publication on the controversial[44] peak sanctuary of Thylakas. The site had been identified at the beginning of the century by French excavator A. **Reinach**. In **1967 Faure** incorporated the site into his list of peak sanctuaries[45]. Many years later the site's status as a peak sanctuary would be questioned by **Davaras**. The Greek scholar did significant research on peak sanctuaries from the **1970s onwards**. From his work under Platon's supervision at Kofinas[46] and rescue excavations at some sites, he was able to gather information sufficient to elaborate his own, although brief, ideas on peak sanctuaries, as seen in his **1976 "Guide to Cretan Antiquities"**. According to him, peak sanctuaries were visited on fixed dates, when devouts would climb the mountain, bringing offerings and votive figurines. He interpreted the animal figurines as possible substitutes for sacrifices, and the human ones as simulacra of the worshippers themselves. In regard to body parts and limbs, he did not deviate from the most usual interpretation as petitions for a cure. On the gods and deities worshiped, it sufficed to Davaras saying only that it is a subject of controversy amongst scholars.[47]

At this time, **Karetsou** was conducting excavations on Juktas, from which came many reports during the following years in Πρακτικά της Αρχαιολογικής Εταιρείας[48]. These culminated in her report published in **1981**, the first major work on the site after Evans' preliminary excavation. Important conclusions came from this, most noticeably the evidence for MM IA use of the site, attested by a multitude of sherds found in fissures of the bedrock and further evidence for a closer relationship between the sanctuary and the palace of Knossos from the MM III onwards[49]. Following Karetsou's publication came **Peatfield's 1983 "The Topography of Minoan Peak Sanctuaries",** where he emphasized the variation in altitude between sites – which can be as radical as between 200 and 1160 meters[50].

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[44]A conversation reported by Davaras (2010, 79) between Krzysztof Nowicki and himself comes to show how delicate and a heated subject peak sanctuary definition can be. Nowicki expressed the difficulty in removing Thylakas from the peak sanctuary category, since it has been for so long in it, to which Davaras replied "this is a question of evidence, not of democracy!".

[45]Faure 1967, 129

[46]Platon and Davaras, KChron 1960, 5

[47]Davaras 1976, 250.

[48]Karetsou, A., ΠΑΕ 1974, 228-239; 1975, 330-342; 1976, 408-418; 1977, 419-420; 1978, 232-258; 1980, 337-363; 1981, 405-408; 1984, 600-614.

[49]Karetsou 1981, 145.

[50]Peatfield 1983, 274.

Notably, regardless of location, all sanctuaries appear to be in specific areas of vegetation[51]. He also delved into topics such as the selection of locations for sanctuaries and the relationship between sanctuaries and pastures/arable land, stressing the relationships between the sanctuaries and their surrounding areas.[52] Also interested in the demise of peak sanctuaries, Peatfield, similarly to Rutkowski in 1968, proposed that the mountaintop sanctuaries lost strength during the aftermath of the natural catastrophes that occurred around the MMIII, but reminded that this does not imply the cessation of cult, as it continues at important sites such as Juktas and Knossos in LM III[53].

Peatfield's following work, a paper presented in 1984, drew attention to the issue of the palace and peak relation. This relation had already been briefly addressed by John Cherry some years before, in his 1978 "Generalization and the archaeology of the state" and once again six years later. Cherry understood the decline in the number of sanctuaries and elite-related paraphernalia at the turn of the Neopalatial period as an indication of a political and economic interest, which in turn is revealing a fragility of the social order at that moment – what to him is an explanation for the very sudden rise on the energy input directed at concentrated sites[54]. In both instances, authors argued for a connection between the emergence of the first peak sanctuaries in the MM I period and the first palaces. The occasional topographic alignment between the central court and peak[55] is also seen not as mere arbitrariness. Cherry noted that the assemblage in many sanctuaries resembled that of the palaces, which he saw as evidence of an attempt to unite people not by force, but by belief, symbols, and ritual[56].

Peatfield, on the other hand, did not attribute the emergence of peak sanctuaries to that of the palaces. Instead, he offered an alternative model situating the origins of peak sanctuaries in EM tombs[57]. This was explained by the overlap in the use of sites in the transition from EM to MM periods. He also addressed how the assemblages of Protopalatial remote

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[51]Rutkowski (1986, 74) stated that all peak sanctuaries occur within Region II in the classification of vegetation zones in Crete. That is, they are all situated in regions with evergreen vegetation, regardless of the altitude.
[52]Peatfield 1983, 275.
[53]Peatfield 1983, 277-78.
[54]Cherry 1978, 429.
[55]Cherry 1984, 34.
[56]Cherry 1984, 35.
[57]Peatfield 1984, 90.

sanctuaries seem to point to a cult of agrarian, rural aspects, related to the fertility of the land and animals, something that he attributed to a possible expansion of farming activities[58]. In the same sense, the wealthier and more standardized assemblages from Neopalatial sites occur in the areas around palaces or large settlements. Expanding on Rutkowski's dating for the institutionalization of peak sanctuaries in the MM III, Peatfield goes on to suggest that the sanctuaries evolved as a natural progression of the EM popular religion and suffered a process of centralization in the turn from MM II to III. In this, he emphasized the importance of ritual activity, as he argued peak sanctuaries were places of communal events, perhaps seasonal. The taking over of sanctuaries by the elite is, in this sense, part of a larger phenomenon of expansion of their influence and power, expressed in the economy as well through the Villa network[59].

Rutkowski's 1986 "Cult places of the Aegean" presents an environmental approach[60] to the subject, studying the progression of open-air and nature sanctuaries – such as caves, enclosures, and peak sanctuaries. This approximation of the subject via analysis of the ecological niches where sites would be later deepened with GIS studies in the early 21st century[61]. Rutkowski attempted to reconstruct the structures of the sites with drawings oriented by the iconography of stone-carved vases and the rare instances where there are architectural remains[62]. His study consisted also of a general discussion of the material assemblage, an investigation of temene in peak sanctuaries, and a catalog of 37 such sites.[63]

In **1988** came the development of this catalog, presented in his "**Minoan Peak Sanctuaries: The Topography and Architecture**", which consisted of developments on his studies of space and architecture, and a comprehensive description of fifty sites, divided into three categories. Twenty-four were presented as certain, unquestionable peak sanctuaries[64], seventeen as likely to be peak sanctuaries, and fifteen sites defined as being sometimes

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[58]Peatfield 1984, 92.
[59]Peatfield 1984, 93.
[60]That is, concerned with the vegetation and ecological zones in which peak sanctuaries are commonly located.
[61]See Soetens 2006.
[62]Namely the Neopalatial peak sanctuaries of Juktas, Kophinas, Petsophas, Pyrgos, Traostalos, and Vrysinas.
[63]Rutkowski 1986, 96-98.
[64]Some of these being: Atsipadhes, Jouktas, Kophinas, Modi, Petsophas, Plagia, Prinias, Pyrgos, Thylakas –which would later be removed from the list by Davaras (2010), mainly based on questioning the dating of the material –; Traostalos, and Vrysinas, among others.

discussed as peak sanctuaries, but certainly of different nature[65]. Rutkowski's criteria at that time were implicit and concerned with worship space and the architecture of peak sanctuaries. **Watrous' 1987 "The role of the Near East in the rise of the Cretan palaces"** elaborated on the hypothesis that the peak sanctuary model would have been imported from the Near East, where mountain gods and cults were known to be worshiped[66]. He pointed out similarities between the two areas regarding cult images, such as the Minoan Snake goddess and Canaanite Asherah[67]. Moreover, he saw the high density of peak sanctuaries in East Crete as an indication of them being a Near-eastern influence[68]. On this, **Peatfield** expressed concerns with chronological issues[69]. Similarities might be purely coincidental, creating no reason to appeal to diffusionist explanations.[70]As with the start of the 1990s, it was clear that there were problems with the chronology of peak sanctuaries, mostly regarding their emergence and the events that took place in the MM III-LMI transition.

In the following years, **Peatfield** addresses all of the above questions. For the origins of the sanctuaries, he maintained a stance on the continuity between EM tomb shrines and peak sanctuaries[71], linked in terms of space and by the material record, mainly votive body parts and offerings[72]. He anchors this on the fact that the increased complexity in EM II tomb rituals meant that they were starting to extrapolate the funerary dimension[73]. This is mostly supported by figurines of deities from burial sites and tombs[74] that appear to be related to non-traditional funerary rites[75]. As the earliest peak sanctuary material comes from EM III/MM I when funerary rites progressively decreased in popularity[76], a gradual replacement of one for the other could have taken place. In his **1992** publication on the sanctuary on

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[65]Rutkowski 1988, 95.
[66]Watrous (1987, 68) presents as examples three Canaanite deities he deemed pertinent: Anat, Astarde and Asherah.
[67]Watrous 1987, 68.
[68]Watrous 1987, 69.
[69]Peatfield 1990, 123
[70]Peatfield 1990, 123.
[71]Soetens (2006, 30) disagrees with Peatfield, on the basis that the chronological overlap seems insufficient to explain glaring differences between EM tombs (especially of the tholos type) and the absence of built structures on the first peak sanctuaries, one expecting at least some forms of architectonic continuity and tradition to remain.
[72]Peatfield 1990, 125.
[73]Peatfield 1990, 124.
[74]Phourni, Koumassa, Trapeza Lasithi and Mochlos to name a few.
[75]Peatfield 1990, 124-25
[76]Peatfield 1990, 124; 1992, 71, citing an unpublished 1989 PhD dissertation

Atsipadhes Korakias, Peatfield elaborates more on a Prepalatial emergence, harnessing the EM II sherds found at Juktas by Karetsou[77] as further evidence. In **1994**, **Nowicki** published a "tripartite" set of defining criteria for peak sanctuaries. The first is the well-known characteristic of these sites, their elevated and isolated location. Secondly, they are not contained within a building or settlement, nor adjacent to one. The third refers to the finds, which are mainly pottery, figurines, votive offerings, and scattered pebbles[78], the latter being noted and discussed by Peatfield in the case of Atsipadhes Korakias[79].

Two years later, **Marinatos** dedicated a portion of a chapter on her **"Minoan Religion: Ritual, Image and Symbol"** to peak sanctuaries. Pertinent to the aims of this study are her ideas of puberty rites being performed at peak sanctuaries[80]. While she recognized that we are not entitled to project later practices on the Minoan period, she saw enough similarities between sanctuaries such as Kato Syme and the later Greek iconography of puberty rites to suggest that Minoan nature sanctuaries could have been the stage for such rites.[81] However, this and other "adventurous comparisons"[82], many between Crete and the Near East, have been described by some as an agenda of identification of gods based on Near Eastern and Egyptian analogies[83].

The remaining years of the decade saw an intensification of the interest in relations between the elite and peak sanctuaries during the Neopalatial period, as inspected by **Krattenmaker**[84]. She explored through seal iconography how the power of ruling or divine authority might have been legitimized through a symbolic bond between the palace and peak sanctuary.[85] There are clear indications in the archaeological record of elite presence in these ritual spaces, where also the remaining segments of the society would gather communally, perhaps for feasting[86]. If the ruler or elite sought to validate their authority via an association

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[77]Karetsou, Mycenaean seminar 1987 as cited by Peatfield 1990, 125 ; Karetsou as cited by Peatfield 1992, 71.
[78]Nowicki 1994, 34-35.
[79]Peatfield 1992, 68.
[80]Marinatos 1993, 123.
[81]Marinatos 1993, 123.
[82]Kyriakidis 2005, 9.
[83]Peatfield 2001, 53.
[84]Nowicki, 1994; Krattenmaker., 1995.
[85]Krattenmaker 1995, 56-57.
[86]Soetens 2006, 14.

with the divine realm, mountaintop sanctuaries could have been the ideal place to do so as places where all meet.

The above-mentioned topic "palace-peak", initiated by Cherry and as seen, developed further by Peatfield, Nowicki, and Krattenmaker, would receive more attention by **Haggis in 1999.** He argued for a concomitant development of peak sanctuaries and palaces, but not in the same sense as Cherry. Haggis defended a model in which both phenomena appear in the MM period and develop in rather diverse ways, and with unique trajectories from region to region.[87]Furthermore, he stood against a divorce between secular and sacred spaces, one that according to him fits the Bronze Age as much as it does the Classical world,[88]understanding peak sanctuaries as instrumental elements of the economic organization of Crete from EM III onwards – going as far as suggesting the sanctuaries could have functioned as centers of redistribution[89]. In describing peak sanctuaries as places where the community would gather for management of the resources and surpluses[90], Haggis creates a framework that is of particular interest. It represents an attempt at going deeper into what kinds of social interactions took place at peak sanctuaries, certainly mediated by reasonably standardized rituals, as it seems evident for the Neopalatial period. Standardization, in turn, was further inspected by **Jones**, who was also interested in comparisons between different cult sites. This interest resulted in his **1999's** effort to point out the distinctions and similarities between cave cults and hilltop sacred sites. The finds from both types of sites were listed in several tables, leading to the conclusion that there is indeed overlap in material assemblages from the two sanctuary categories. However, the repercussions of such an idea were not further developed. Another conclusion was that the differences noted in the material record point to a certain level of decision-making by centers or institutions[91], implying an active process of curation somehow. These decisions had to do with what to offer and to which sanctuary to dedicate it.

The **2000s** saw a peak in the interest in the topography of sanctuaries. The subject was discussed via the use of GIS by **Soetens** in his doctoral dissertation. His database of peak sanctuary sites revealed an intricate system of intervisibility[92], allowing for further

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[87]Haggis 1999, 76.
[88]Haggis 1999, 74.
[89]Haggis 1999, 78.
[90]Haggis 1999, 80-81.
[91]Jones, 1999, 40.
[92]Soetens 2006.

understanding of the distribution of sanctuaries across the island, both in relation to other sanctuaries and settlements. This led to the cognizance of peak sanctuaries as a markedly regional and popular phenomenon[93]. **Nowick** once more made remarks on peak sanctuary topography, and explored issues such as the number of peak sanctuary visitors and people capacity of sites, especially on rural sites such as Atsipadhes Korakias, expanding Peatfield's work. Another relevant aspect of his study is that intervisibility between peak and settlement, common to all the sites dealt with in his investigation[94], constitutes the main factor for the selection of peak sanctuary location.

On the other hand, **Briault** made a case for a look less enthusiastic about topography and landscape. Although she recognized the importance of these as a whole for the category of peak sanctuaries, she proposed an inspection directed more towards the material record, making a case that the set of mobile objects to be used in a ritual space might be more relevant than the landscape around it[95]. Briault's discussion is illustrative of the several works preoccupied with the materiality of peak sanctuaries, their assemblage, and their repercussion for studies of ritual.

Particularly focused on peak sanctuaries as ritual sites, **Kyriakidis** published his **2005** "Ritual in the Bronze Age: The Minoan Peak Sanctuaries", which included his list of peak sanctuaries, no more than thirty, with minor changes to the "classical corpus" and a set of criteria for the site type[96]. More importantly, he raised the fundamental question of "how to attribute ritual value to activities?" seeking to expand on Colin Renfrew's methodology[97]. All the specificities linked to the archaeological record's nature are addressed, to create a methodology that affords safely defining peak sanctuary activity as one of ritual nature. In

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[93]Vavouranakis 2018, 2.

[94]Nowicki (1991) discusses the following MM sites: Ag. Kyriaki Gremnakas (MM), Spili Vorizi (MM), Atsipades Korakias (MM), Xerokampos Vilga (MM), Anatoli Pandotinou Korifi (MM/LMI) and the Archaic-Classical site of Sougia.

[95]Briault 2007, 137.

[96]Kyriakidis (2005, 15-16). Criteria being: (1) **Location**; (2) **Ease of access**, yet another element, according as well to Davaras (2010, 73) to preserve their aspect of popular cultic spaces; (3)**Visibility** – there must be lines of visibility between the shrine and the settlement it serves (see also Davaras 2010, 73) and, whenever possible, with other peak sanctuaries in the region; (4) **Assemblage**, often unique at each site: human and animal figurines, and votive limbs (See also Briault 2007, 125). Note that while all sanctuaries present finds of one or another category, not all types of such figurines are found across all sites.

[97]That is, the methodological approach to the identification of ritual in the archaeological record presented in Renfew's "Archaeology of Cult", from 1985.

addressing the criteria for defining peak sanctuaries, the author demonstrated how all the expected fundamental traces of ritual are present[98]. His vision was that ritual at peak sanctuaries was particularly well established in terms of formality, so much so that it could even be compared with institutions[99]. In our goal to investigate how the material assemblage shaped ritual action, Kyriakidis' understanding of the standardization of material assemblages opens the possibility to comparisons and analysis of materials from different sites of the type.

Some other works were more concerned with the processes involving the production of objects, echoing earlier, 1980s studies that had a marked interest in the specificities of the material record and its production[100]. In particular, figurine production technologies, their distribution, use, and implications have been intensely addressed. **Zeimbeki** discussed votive production through Juktas' animal figurines[101], while **Murphy** raises the possibility of a peak sanctuary network[102]. Besides well-known connections in visibility and topography, she assesses the materiality of figurines, common to all sites, to explore the pan-Cretan aspect of peak sanctuaries. **Spiliotopoulou** approaches technology and construction by examining anthropomorphic figurines from peak sanctuaries and offering ideas on the exchange of techniques and know-how between artisans of different crafts during the Neopalatial period[103]. As recently as **2020**, **Murphy** once more discussed figurines, concerned with how they might have been assembled and constructed through an experimental approach.[104]

Up until the 2000s, the main themes of past research were the origins and emergence of peak sanctuaries, the topographic relation to settlements and landscape, and the connection between "peak and palace" during the Neopalatial period. The latter requires further investigation. In the last few years, the pro and non-elite interpretations have been visited over and over. It is certain that elites were more present in peak sanctuaries during the Neopalatial period, but it remains unclear to what extent the elite influenced or controlled the sites. Furthermore, the means through which such influence took place and when the phenomena started and ended are still subject to debate. While some, for instance, John Cherry, proposed

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[98]Kyriakidis 2005, 59.
[99]Kyriakidis 2005, 111.
[100]Studies such as Sakellarakis' on Animal Sacrifice (1970) and Warren's article "Of baetyls" on Baetylic ritual (1990).
[101]Zeimbeki 2004, 351–361.
[102]Murphy, 2016.
[103]Spiliotopoulou, 2016.
[104]Murphy, 2020 (EXARC Journal Issue 2020/3).

a peak-elite/palace connection since the very beginning of both phenomena[105] others, such as Peatfield and Soetens, argued that the peak sanctuary phenomenon was one of rural, popular nature, only becoming institutionalized during the Neopalatial period[106]. In between the two ends of the spectrum, more nuanced approaches interpret the palace and peak as co-evolving[107] and as polyphonic spaces. These envision peak sanctuaries as multiple in meanings and discourses, from which elite and popular expressions emanate[108], binding both approaches.

While much of the literature concerning peak-elite relations focuses on neopalatial evidence, the latter approach considers alternative forms of interaction already from the beginning of the Old Palace period. **Vavouranakis** has dedicated attention to the popular cults – exploring the subtleties within the same cult and different modalities of popular cult– particularly peak sanctuaries and the distinctiveness of these sites.[109] Oriented by the concept of multitude, his approach offered an alternate view of the Minoan protopalatial Cult as heterogeneous and active, traditionally perceived in a rather monolithic way. In the same volume, **Haysom** made a case for a finer analysis of the material assemblage from which a merged scenario appears. If tendencies in the literature tended to emphasize a strictly palatial take-over or a completely regional and popular aspect – especially during the protopalatial period – Haysom examines the evidence for both instances, with peak sanctuaries presented as a battleground for popular belief and religious manifestations, and elite ideology.

Another recent movement observable in the research of the past two decades is the departure from theistic subjects and toward ritual studies. Traditionally, many scholars dedicated some effort in, for example, trying to find the peak sanctuary deity – even as recently as in 2016 this effort can be seen, e.g. Nowicki's young storm god protector of Knossos[110] being one of many such attempts. Ritual, of course, has been investigated as well, since peak sanctuaries have been identified as places of ritual activity since the first was discovered. Still and all, the priority was the investigation of possible rituals that took place on mountaintop shrines, such

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[105]Cherry 1984.
[106]Peatfield 1990.
[107]Haggis 1999.
[108]Haysom 2018.
[109]Vavouranakis 2018, 8.
[110]Nowicki 2016, 6.

as Marinatos' guess of coming-of-age rites[111]. The paraphernalia of ritual and cult was examined as a means to reaching and grasping Minoan religion, and not for its own worth. This was a descriptive approach, an attempt to equate knowledge with what is known about religion elsewhere, as in Egypt or the Near East, where detailed written sources exist. It is only recently that research became increasingly more interested in alternative approaches to ritual and what they offer for understanding Minoan society.

A clear turn came with **Peatfield's 2001 "Divinity and performance on Minoan peak sanctuaries"**, in which the way in which studies so far had focused on divinities and beliefs were described as a theistic approach. These approaches were further defined as approximations of the subject in which deities and the search for religious narratives upstage the importance of ritual, and most importantly, its performative aspect and materiality. Even though symbols of divinities are conspicuously absent in the record[112], nearly the whole scholarly investigation seems to have treated divinities as a central concern in peak sanctuary research. Peatfield made a case for how an approach curious about the performative dimension of religion and rituals can shed much light on Minoan society. He stressed that the ritual action figures asmost important, and the objects are not merely relics from the past, but what remains of what was once done, stressing the importance of material culture. These ideas would be developed to a greater extent a decade later in his work with **Morris, "Dynamic spirituality on Minoan peak sanctuaries"**. Authors advocated for the understanding of peak sanctuaries as places where worlds overlapped. The sacred and the secular, the elite and the populace — all layers of Minoan society – expressed themselves through ritual action and performance[113]. This holistic view culminated in the notion that a non-western approach to Minoan ritual and religion is not only possible but instrumental in advancing the field. The exploration of shamanic models and application of key concepts such as "altered state of consciousness" (ASC) was made alongside a turn back to the material assemblage – the human figurines in this case[114].

For the most part, research has focused on four major questions: **(1)** Dating, a complex task restricted mainly to the ceramic material found and comparative analysis of style, also made

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[111]Marinatos 1993, 123, supra n.80.
[112]Myres, 1902/3, 380 as cited by Peatfield 2001, 52.
[113]Peatfield & Morris 2012, 229; 242. Also see Haysom 2018.
[114]Also revisited on Morris, C., O'Neill, B., & Peatfield, A., (2019) through an experimental approach.

difficult by the low number of excavations of the sites; **(2)** Origins and the emergence of sanctuaries – with various hypotheses such as (a) origins in prepalatial tombs, (b) model imported from the Near East, (c) emergence concomitant and connected to that of palaces, and (d) a varied and distinct phenomenon, but related to a general tendency to strengthen ties of coexistence, and the result of a socio-political-economic reconfiguration of the island during the beginning of the protopalatial period[115] – ; **(3)** Interpretation of the findings as sources to reach the Minoan religion and some religious practices – which does not seem viable so far; **(4)** the relationship between peaks and palaces. The fourth can be subdivided into the investigation of this relationship (a) during the protopalatial period, and (b) during the neopalatial period. To a greater degree, (a) has been more concerned with the rural and popular aspects of worship between the MMIA-MMII. While (b) has been focused on the radical reduction in the number of sanctuaries from MM III onwards, and on the visible qualitative and quantitative changes in the findings from these fewer sites.

Almost unanimously it is observed that the elite, in one way or another, devoted more attention to sanctuaries in the Second Palace period. This has been questioned more lately[116]. A trend of the last twenty years is to focus on the ritual aspect of shrines, seeking to contemplate other interpretive models[117]. Furthermore, there exists a greater appreciation for the material assemblage. However, this trend is still very recent when compared to the research corpus that is already more than a century old. The turn to the material culture and its appreciation is yet to advance into a detailed analysis that considers in depth the potential of materiality and its power to foster, engender and influence social interactions – such as ritual. Deepening our understanding of how material culture participated and acted on ritual – once ritual has been understood as performance – can lead to a richer comprehension of the social dimension of ritual in peak sanctuaries and their overall importance to Minoan society. Moreover, in merging a methodological framework of appreciation for the material culture and its importance in social interactions with current understandings of elite presence at peak sanctuaries, this study aims to demonstrate how objects, rituals, and the elite are entangled at these sites during the Neopalatial period.

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[115]Vavouranakis 2018, 8.
[116]For instance, Haysom 2020.
[117]Such as Peatfield's approach (2001), that emphasizes the importance of ritual action and dynamism.

Chapter 3. Theoretical and methodological framework

3.1 Ritual as performance

As a broad term, ritual can be understood in a variety of ways, one of them being systematized actions related to the spiritual dimension. The first interpretations of peak sanctuaries already saw these sites as places of ritual. Thus, the paraphernalia found in them are seen as remnants of ritual activity. A century-long cross-disciplinary fertilization between anthropology, archaeology, and other fields, resulted in a general understanding of ritual as performance. The term performance evokes a sense of action, particularly a bodily and physical one. Despite not all performances being ritual, performance is a *sine qua non* of ritual.[118] Thus, the interpretive paradigm that sees ritual action as performance focuses on the aspects of ritual that are common to other performative activities but highlights its specificities. The transformative capabilities of ritual, altering perceptions and interacting with the body, configure it as a sensorial experience.[119] Another element is the formalization of actions, performed in a rather *framed* way and made possible by conventions. "Framing" is in line with context, that is, ritual action requires a pre-established interpretative framework[120] from participants, through which ritual actions are to be understood. An example is how ritual speech can often greatly differ from a colloquial one, framing ritual action and allowing participants to grasp things for what they are meant to, and not necessarily what they mean in other, informal contexts. For instance, a ritual usually specifies in advance a sequence of events and procedural rules, in opposition to the unpredictable and unequal outcomes of sports[121]. Ergo, ritual is also conventionalized, formalized action[122]. A person witnessing a ritual deploys their conceptual framework and vision of the world, engaging with the action, making sense of it, and apprehending it. In such wise, ritual works also as an integrator of thought and action[123]. This is an all-important element of ritual, for it permits observers and

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[118]Rappaport 1974, 8
[119]Bell 1997, 74
[120]Bell 1997, 74
[121]Tambiah 1979, 118
[122]Tambiah 1979, 123.
[123]Bell 1992, 27-28.

actors to recognize acts as ritual acts by their formality, something expressed by the repetition and stylization of ritual.[124]

Ritual communicates a collection of notions, ideas, and beliefs,[125] but research has distinguished it from mere communication in emphasizing ritual *efficacy*. The effectiveness of ritual has been a major theme in the literature because it affords to place ritual's actions, dynamism, and physicality in a central position. This is in contrast to the secondary role usually given to it, where the ritual is but the realization of tradition.[126] The efficacy is usually considered closely to what many see as the goal of ritual: the creation of a different state of mind and new realities experienced by participants, integrating body and mind. Most agree that one aspect that sets ritual apart from mundane activities is its goal to immerse one in this alternate reality or provoke an intense, transformative experience. Peatfield and Morris discussed this in the case of peak sanctuaries as altered states of consciousness (ASC) where sensation, perception, and emotion are transformed.[127] Likewise, there is the concept of "flow", a state of suspension of awareness that allows such altered states and full engagement with performance[128]. Another factor also explored in the literature is that of "utterance", in which saying something is doing something[129]. Saying – after all a physical action – or the "enunciation of something" contributes substantially to creating the aforementioned new reality[130].

Understanding ritual as performance entails addressing cognitive processes such as communication and recognition, and the integration of the conceptual and dispositional orientations of participants that occurs during the act.[131] Furthermore, it encompasses sensorial features, such as seeing, smelling, and hearing, as well as all the other senses. All these attributes claim for a recasting of rituals between many diverse cultural and social actions within the performative realm. Meant to be seen, ritual comprises several staged movements and skilled performers[132], which is linked to its most formalized facet. It aims at the creation of a different reality, in which participants experience an altered state of

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[124]Rappaport 1974, 6.
[125]Wagner 1984, 143-144.
[126]Bell 1997, 75
[127]Peatfield & Morris 2012, 236.
[128]Beeman 2013, 7.
[129]Bell 1992, 41.
[130]Althans 2010,11.
[131]Bell 1979, 32.
[132]Beeman 2013, 29.

consciousness. It operates mainly via pre-established conventions and dialogues with an individual's collection of memories and ideas. These elements are common to several other performative activities, such as theater, which can be as transformative as a religious ritual. In such wise, ritual activity might be one within a broader genre of performative social practices[133].

One detail is of utmost importance: Ritual is ephemeral. As a phenomenon executed mostly by the living, it exists at the moment it is performed. This creates specific constraints to research. Renfrew's seminal "The Archaeology of Cult: The Sanctuary at Phylakopi " presented the first systematic attempt at defining traits of cult sites, where the ritual took place. It offered a methodological approach to the attribution of ritual value in four headings. One common feature of ritual activity is repetitive behavior, where actions are performed over and over and, usually in the same way. An example might be the repetitive deposition of pebbles, commonly seen in different peak sanctuaries of both palace periods. Yet another example of repetition in a ritual sense is the astonishing numbers in which drinking vessels and ceramic figurines are found – as is notably the case for peak sanctuaries. The quantity of such finds is a sign of sizable participation and repeated activities, echoing also a sense of tradition.[134]

The two defining features of religious ritual are an experience of altered states of consciousness that bring humans in closer contact with the supernatural[135], and worship or adoration. Even though these refer to mental states or predispositions, they crystallize in behaviors, and attitudes that modify the physical space and the material culture engaged in these processes. In many instances, these two aspects are evident in the archaeological record. First, ritual demands of its human participants a state of heightened awareness. A series of preparations take place before the ritual activity itself, and these direct the participants to a state appropriate for the experience they will go through. Moreover, it allows the mind to become predisposed to the ritual journey. This is defined as attention-focusing, procedures often sensorial in nature. Some examples are the use of perfumes and trance-inducing chants or substances, fasting, walking, or pilgrimage[136]. Although challenging to trace in the

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[133]Brown 2003, 8.
[134]Kyriakidis 2005, 53.
[135]Prent (2005, 15) lists some examples of this altered state of consciousness, such as Epiphanies, ecstatic, contemplative experiences, or the ancient Greek *Ekstasis*, *Katachei*, *entheos* and *mania*.
[136]Renfrew 1985, 18.

archaeological records, it is not impossible to infer such pilgrimages, for instance. Architectural elaboration can be a way to spot pilgrimages in the past, as is the case of raised walkways, observed in Phaistos, on the west courtyard, but also in Knossos[137] and Malia[138].

There is scholarly agreement that these raised walkways served for processions and to regulate movement[139]. In the case of peak sanctuaries, processions have always been discussed, for logical reasons. Any kind of activity that took place at these remote sites must have taken place in exceptional moments and for specific events. Far from next-door parishes, peak sanctuaries demanded long, sometimes strenuous walks to the summit. Soetens noted how the walk (from the settlement to the peak) can be a religious experience on its own[140]. Another source, even more closely related to our case, comes from iconography. In a fragment from a stone-carved vase from Knossos (fig.1), a procession of males takes place at a hilltop sanctuary.

Fig 1. Stone rhyton fragment from Knossos. Men bring offerings to a hilltop shrine. Photograph by the Author, Heraklion Archaeological Museum, July 2022.

Renfrew's second heading is more directly related to the physical space. The scholar finds in the idea of Liminal Space one of the main features for identifying places of cult and ritual. Defined as the space where the mundane, human, and supernatural touch and overlap[141],

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[137]McEnroe 2021, 71.
[138]Driessen 2008, 46.
[139]Driessen 2004, 79-80; Vander Beken 2010, 145.
[140]Soetens 2009, 266.
[141]Prent 2005, 16

spaces of worship have a common characteristic, a transcendent feeling to them. In this, peak sanctuaries and their unique topography are ideal spaces for this meeting between realms to take place. The location naturally inspires contemplative states of mind and propitiates fulminating contact with the landscape. Peak sanctuaries – not showing any signs of habitation and being so remotely placed – are physically distinguished from other mundane places[142]. The sites themselves constitute liminal zones, but one can find smaller liminal zones within another one, in a concentrical fashion. On the peak of Atsipadhes Korakias, we find an area of pebbles with a circle of "immaculate" soil in the center, revealing a space where a cult of importance very likely took place, perhaps of a baetyl. It fits very well the description of liminal spaces as "mysterious and special regions"[143]. Thus, the "sacred precincts", temenoi, found at peak sanctuaries, borrowed from later Greek sanctuary terminology, are typical liminal spaces.

Fig 2. Miniature clay composition depicting the site of the baetyl-cult, hinting at an act of worship, forming part of the epiphany cycle. Hagia Triada, 1500-1450 BCE. Photograph by the Author, Heraklion Archaeological Museum, July 2022.

The preparation of space, the location, all these aspects take the participants to a state in which they are finally ready to start the ritual experience. Most of the time the end of this experience is the deity's presence itself. The indication of this deity can too come in material form. Renfrew's third heading, "the presence of the transcendent and its symbolic focus"

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[142]Kyriakidis 2006, 52.
[143]Peatfield 1992, 76.

finds parallels in the case of Aegean divine iconography. Since the time of Evans, birds have been interpreted as signs of divine spirits' imminent arrivals[144]. Usually, a god or goddess is represented in epiphany scenes in the shape of a meteor, a bird, or even an insect.[145] One example is a LM clay miniature from Hagia Triada (fig.2). It consists of a phallic object-baetyl fixed to the ground between two columns. All over the miniature, we find birds, a sign of divine presence. A seal from Sellopoulo (fig.3) is another example. Depicting a baetylic cult taking place in an open-air space, the seal shows a divine entity, announced in the shape of a flaming meteor and accompanied by a large bird of prey descending from the sky. The hypothesis proposed by Peatfield that the center of the temenos was occupied by a cult image or baetyl[146], joined with this image makes it possible to think that the impression might display something similar to the experience lived by a believer in a cultic site such as Atsipadhes. This, in turn, fits very well Renfrew's heading: the site presents signs that it was originally the place where divine presence was to be met, even if in its aniconic configuration.

Fig 3. Sellopoulo Ring. Ecstatic leaning against holy rock, hailing its deities represented in the shape of a bird and a meteor. After Marinatos, 2009.

The material assemblage also received attention in Renfrew's heading. Of the celebrants, active participation is often demanded some sort of movement, consumption, or *offering*[147].

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[144]According to Evans (1901, 105), spiritual beings would descend from heaven, taking the form of a bird and landing on a tree or near the votary, or in the shape of a rock or meteor, being brought down to earth by the power of prayer and incantation, so as to possess their stony resting-place (1901, 124).
[145]Marinatos 2009, 90.
[146]Peatfield 1992, 68.
[147]Renfrew 1985, 18.

These leave traces that make up the archaeological record. In this way, it is fundamental the comparison between a site's set of artifacts and assemblages from other sites of a known different category, but from the same culture and time. In our case, that of peak sanctuaries, we can count on a gift of contingency: the material once used at peak sanctuaries, especially during the Neopalatial period, possesses a certain level of standardization, which facilitates comparisons and the drawing of safer conclusions. It is in the Neopalatial period that Crete witnessed the greatest homogeneity in religious expression.[148] Other Minoan sacred spaces, such as Caves, can serve as a reference when making such comparisons. Jones demonstrated in 1999 that clay animal figurines are common to both types of sites. Elaborate clay human figures are reported in many Neopalatial peak sanctuaries but not in caves. Ashes, another common find in peak sanctuaries, appear in only two caves, while the opposite is true when it comes to animal bones. Overall, the overlap in types of artifacts is enough to say that if one space was of ritual activity, the other must have been too. But also that the assemblages are different enough to also conclude that these spaces are not of the same category, apart from blatant topographic differences.

The clay body parts so commonly found in peak sanctuaries have also been found in several other sites.[149] These countless ex-votos have been explained in diverse ways. For some, they consist of requests for health and healing of body parts[150], as it's probably the case of the figurine with a grotesquely swollen leg. Nilsson casts doubt on this interpretation, one given by Myres on Petsopha's assemblage, questioning the absence of many body parts and the discrepancy noticeable[151]. The bovine figurines also are subject to much debate, as for some they represent the local economy[152], or requests for the fertility of the flock. In all truth, attributing value to figurines is a challenge, since the same object can be dedicated for a number of different reasons and appear in different contexts. Nonetheless, a religious character can be attributed on the basis of comparison and repetition in the same context. It is not one single category that will place peak sanctuaries within a ritual landscape of Minoan sacred sites. This can only be achieved by the recognition of several ritual traits in the

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[148]Prent 2005, 23.
[149]Jones 1999, 17.
[150]Peatfield 1992, 74.
[151]He goes on to say (1950, 74) "(...) body parts very prominent among later ex-votos in healing sanctuaries, e.g. eyes and female breasts are absent: are we to think that the people of Petsofá suffered only in their legs, arms, and heads?"
[152]Schürmann 1996, 219. Peatfield 1992, 78.

archaeological record. In fact, indications of performance, repetition, formalism, and symbolism are all attested at peak sanctuaries, setting these sites apart from mundane loci[153].

Rituals might happen in naturally demarcated places, such as mountains and caves.	There may be the use of cult images representing the divinities or their aniconic representation.	Special facilities for the practice of ritual, e.g. altars, benches, pools, basins, pits, etc
Ritual may employ attention-focussing devices reflected on architecture.	Presence of votives. The act of offering may entail breakage.	Food and drink may be consumed as offerings or burnt/poured away
Cleanliness and pollution may be reflected in the facilities and maintenance of the sacred area.	"Redundancy": The sacred area may be rich in repeated symbols.	Worship involves prayer and special movements - gestures of adoration- these might be reflected in the iconography or images
Investment of wealth is reflected both in equipment used and in offerings made.	Symbolism may be similar to that seen in funerary rites or rites of passage	Rituals may employ several devices for inducing religious experience

Table 1. List of some archaeological correlates of ritual. After Renfrew 1985, 19.

Renfrew also provided a list of archaeological correlates of ritual[154](table.1). As *potential* material consequences of ritual behavior, these do not apply to every site, nor can be employed as absolute criteria. On this ground, alternative lists have been proposed as well[155]. Since the discipline is mostly constrained by the restrictions of its record[156], contributions such as Renfrew's and Kyriakidis', pointing toward the importance of the material assemblage, represent a major step. Perspectives such as Warren's on Minoan rituals show that the literature has not been negligent in regard to ritual action in Bronze Age Crete. His studies set in motion a religious ritual universe that had been painted as somewhat static – since past research focused on descriptive analysis, comparisons between the BA and later periods, and identifying deities[157]. Drawing cautiously from the iconography, his

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[153]Kyriakidis 2006, 59.
[154]Renfrew 1985, 19
[155]Prent 2005, 20.
[156]Kyriakidis 2005, 41.
[157]Warren 1986, 11-12.

reconstructions of dance, robe, baetly, flower, and sacrifice rituals presented an innovative emphasis on action, movement and processes.

The focus on the procedures of ritual underscores action. Laying out the iconographic record in a series of logical steps, Warren attempted at representing ritual in its dynamic quality, as a series of actions, such as the preparation, the handling of paraphernalia, the movement toward the ritual place, and so forth. In expressing the importance of ritual action, he remarked how the Minoan cosmos was filled with many shrines, apparatuses, and frequent religious iconography[158]. Surely, the performative aspects of ritual – particularly the material consequences of ritual performance– and the importance of material culture have not been forsaken.

3.2 The centrality of material culture in social interactions

> *"(...) This rich zone, like a layer covering the*
> *earth, I have called for want of a better*
> *explanation material life or material civilization*
> *(...) " – Braudel 1992, 23-24*

The role of material culture, however, was to be intensely explored within the realm of archaeology, where it consists of the most important source for knowledge. The need for this perspective is particularly stark in the case of the archaeology of ritual. Many have tried to find in material culture meaning and deepen knowledge in religion, by seeking how cosmologies and world-views can be manifested physically in objects people make. Drawing attention in structuralist fashion to objects' power in communicating meaning, many ended up drifting away from objects themselves.[159] While ritual paraphernalia surely carry meaning and symbolism, the objects crafted for ritual and consumed in it possess a much more active role than previously thought. Objects act in diverse ways, engineering personhoods, identities, and relationships between themselves and social actors[160], going beyond being only expressions of social order and social world-views[161].

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[158]Warren 1986, 35.
[159]Boivin 2009, 270-72.
[160]Carvalho 2015, 2.
[161]Boivin 2009, 274.

As seen, Renfrew stressed the importance of material assemblages with his list of archaeological correlates of ritual. Warren tackled the same topic, and studies such as Morris' and Peatfield's on Minoan spirituality and action, all pointed to the unequivocal relevance of material culture for ritual studies. Nonetheless, when materiality has been approached in research, the ways through which these objects actively shaped ritual action have rarely been explored in detail. However, to say that the material record has received no attention would be far from true. Briault stressed how closely related ritual spaces and the objects that pertain to them are, underlining the remarkable degree of stability on objects displayed in cult sites, usually in use for many centuries[162].

The web of social practices and materiality was discussed in an entire volume with contributions ranging from ontological discussions to case studies such as the material correlates of ritual practice's dissemination[163]. Blake delivered a concise review of the material expressions of ritual on several Mediterranean cult sites, including peak sanctuaries. Deliberately focusing on the material remnants of ritual, she avoided delving into the investigation and description of cosmologies and belief systems concerned exclusively with the assemblages – and not with what she describes as virtually impossible reconstructions of religions[164]. Studies that unite the performative aspects of ritual and the material remains of such activities are not, by any means, a novelty in Bronze Age Aegean Archaeology. Similarly to what this work intends to do, an investigation of the roles of material culture in Mycenaean funerary performative rituals has been conducted by Michael Boyd[165]. It resulted in the understanding that the goals of ritual, its objects, and ritual actions – that ultimately debouch in transformation – are intrinsically related. The processes of change that the dead individual undergoes, fundamental to the funeral rituals in question, and the acts carried out by the living are reconciled through ritual performance. This performance, in turn, is mediated by a particular set and with strategies of use associated with this material record[166],and in this degree – for social interactions such as ritual acts – the role of objects is of the greatest importance.

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[162]Briault 2005,165.
[163]Stockhammer & Maran, 2014.
[164]Blake 2005, 123.
[165]Boyd 2014, 192-205.
[166]Boyd 2014, 201-202.

The understanding that non-human agents can authorize, allow, affect, afford, encourage, permit, suggest, determine, and prohibit[167]interactions is instrumental in the investigation of the material record of past rituals. It invites alternative approaches, such as Knappett's, that present a particular focus on one aspect of materiality and the relation to humans, which is the bodily, physical nature of things and people, enabling a "somatic" understanding of ritual, acknowledging that the material world is an embodied one. To comprehend such a world one must scrutinize the capacities and qualities of the bodies that act and experience, – as much as the mind that apprehends and imagines– for interactions are the meeting of the materiality of peoples' and objects' bodies[168]. It is through an investigation of the embodied nature of material things that one might grasp the elusive and unknowable at the margins of these experiences.[169]

3.3 A semiotics of material culture

Such an alternative methodological instrument – that highlights the *active,* embodied aspects of material culture, as well as situates it within a broader scenario of relations between humans and artifacts – has been deployed over MM Minoan artifacts by Carl Knappett. The author's departure is the triadic scheme elaborated by the American 20th-century philosopher Charles Pierce. Pierce's model for semiotic analysis is, among many semiotic models, the best well-suited for material culture and action-centered investigations. It consists of three categories, **icon**, **index**, and **symbol**[170]. An **icon** is an operation through which a sign stands for its referent – the referent being something a sign always refers to – via means of *similarities*. Such similarities occur at many different levels and can range from blatantly clear visual resemblances to other sensual aspects, such as smell and sound. An **index** designates the connection between sign and referent when it is based on a different relationship than one of the similarities. An indexical association is in place when the operation of mediation between a thing and what it stands for is made possible by *contiguity* and *causality*. Here, an emphasis on the physicality of the relationship is evident. Things may be caused or provoked by others, bringing to mind cause and effect, or appear

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[167]Latour 2007, 72.
[168]Dant 2006, 17.
[169]Boivin 2009, 284.
[170]Knappett 2005, 85-106.

close to each other, that is, contiguous. Moreover, these connections may take place at different levels, both spatially and temporally. A third category, that of **symbol**, presents a more closed system as it relies not on physical qualities or properties, being less easily readable. Instead of operating through sensorial associations or physical entanglement between components, it functions by means of *convention*, as a formal or not, but somewhat agreed-upon link, independent from any physical characteristics[171]. Nevertheless, objects may appear operating by more than one category, such as the case when indexes and icons overlap. This is exemplified by any photograph, both an icon to what the image represents, and an index, linked by physical circumstances under which they were produced that resulted in a factual correspondence to nature[172]. In fact, the concomitant occurrence of any possible combinations between the categories and relations established so far is possible. That is due to the establishment that no object is an icon, index, or symbol, on itself, being these classifications wholly dependent on intention, context, and social agents[173]. Along these lines, a simplified, schematic model can be presented, illustrating how these theoretical elements relate to each other.

Semiotic Category	*Relationships*		
Icon	Similarities (Visual, olfactory, tactile, sonorous, and so forth.)	Factorality (The property of being a factor or a part of a whole)	Affordances and Constraints (Allowances and prohibitions imposed both by cultural norms and physical attributes of an object)
Index	Causality and Contiguity (Physical, spatial or temporal proximity)		
Symbol	Convention (Any convention, such as the alphabet letters and the sounds they stand for).		

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[171]Knappett 2005, 88-91.
[172]Peirce 1955, 106 as cited by Knappett 2005, 97.
[173]Deacon 1997, 70-1.

More relationships can be added, occupying separate spaces on the table, that stand for the fact that these are somewhat supra-category, being of possible application to different semiotic categories simultaneously. *Factorality* defines a link between sign and referent when one is a factor or a part of the other. Knappett exemplifies this with the case of portraits, where the painted image of someone is an icon of them, through visual similarities, but also a factor, for only a portion of the person (the whole) is depicted.[174] Moreover, possible physical, logical, semantic, and cultural *constraints* are also raised as elements to be considered, as well as the *affordances* provided by objects. These refer to relations and interactions with an object that are, respectively, forbidden or allowed, be it by cultural norms or physical properties of objects. In this, we meet again the bodily aspect of material culture. Because objects are related to others[175], the analysis of these qualities is a necessary step in this proposed investigation. Knappett's work goes beyond analyzing the mere presence of handles in goblets and inferring modes of handling. It is about an attentive look at the materiality of an object in all its minutiae and nuances, and, at the same time, placing it in a broader context of a network of objects and agents.

In Knappett's examination of Minoan drinking vessels, these semiotic categories and relationships were employed as questions to be posed to the archaeological record in order to understand where these objects situate themselves as a category in the Minoan world[176]. The archaeological record of peak sanctuaries can be approached in a variety of ways. Much of the material has been examined within a broader agenda – more similar to a scholarly inclination than a conscious decision – of a search for religion, gods, narratives, and institutions[177]. Figurines are seen as a source for adorant behavior and gestures[178]. For others, it is an assemblage that is highly informative regarding production technologies[179]. For many more, the elaborate figurines, and the libation tables inscribed with Linear A are evidence of the elite presence in the sites and the starting point for a discussion on power and society in

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[174]Knappett 2005, 99.
[175]Knappett 2005, 142-44.
[176]Knappett 2005, 166.
[177]Peafield's & Morris's 2012 critique on the theistic approach to peak sanctuaries.
[178]Myres's (1903) preoccupation with the variety of positions seen in the figurine assemblage of Petsophas.
[179]In reference to a number of publications concerned with figurine production technology such as Zeimbeki's (2004), Spiliotopoulou's (2016) and Murphy's (2016).

Neopalatial Crete[180]. Knappett's and other alternative approaches to material culture[181] draw attention to the intricate relationships between the material world and human agents. To comprehend the central role of material culture in ritual performance, an understanding beyond typological interests is necessary. One that consists of enlisting such knowledge alongside information on material culture production and Minoan society as a whole. As it was Knappett's concern to overcome the binary between mentalist and materialist approaches, so it is the goal of the present study, with the notions laid out above being instrumentalized as methodological tools and research undertakings, to further investigate peak sanctuary assemblages. This is part of a consideration that turns to this assemblage highlighting its sensual qualities and understanding what they render possible is the footpath to achieve such an appreciation.

To this end, the following chapters encompass: Chapter 4 is a description of the sites where the objects analyzed come from, to provide a context to such finds and to further justify the selection of artifacts from peak sanctuaries; Chapters 5 and 6 are case studies in which double-axes, stone-carve block vases are examined according to their materiality through a semiotic approach, looking into aspects such as affordances and constraints, iconicity, indexicality. In chapters 5 and 6, the following semiotic relationships are investigated: (a) Sensorial similarities; (b) relationships of physical, Spatio-temporal proximity; (c) relationships between factor and a whole; (d) allowances and restrictions presented by the material qualities and properties of the objects. The examination of such semiotic relationships requires a close inspection of objects, with illustrative examples of artifacts serving as a reference for discussion of the type in question. Once the possibilities offered by the materiality of the object are stated, contextual analyzes will inform possible ways to search for the active function of these objects in social interactions, especially rituals. Moreover, it will provide an opportunity to investigate their role in the dynamics between the elite and the "rest of the people" and it will make it possible to advance a little further the understanding of the role played by peak sanctuaries as sacred and congregational spaces during the Neopalatial period.

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[180] E.g. Cherry's 1978 brief comments.
[181] But also Briault, A. Peatfield, Morris, G. Vavouranakis, and Haysom, among others.

Chapter 4. Sites, finds and justification of selection

Despite inconsistencies between lists of sanctuaries offered by authors[182], arguably less than ten peak sanctuaries were still active midway through the Neopalatial period. Overlapping such lists reveals that sites such as **Jouktas, Kophinas, Petsophas, Piskokephalo** – that albeit being situated on a slope, has been regarded in the literature as a peak sanctuary, being a matter of topographic criteria –**, Prinias, Pyrgos, Traostalos, and Vrysinas** can be safely recognized as having intense neopalatial use. Other names that figure in one or two lists, such as Kastelli-Liliano, Plagia – destroyed[183] –, Modi, Karphi, and Maza, are strong candidates as well. However, due to unclarity regarding the dating of the material and site classification, the aforementioned sites are to be prudently left out of the list present in this work on Neopalatial peak sanctuaries.
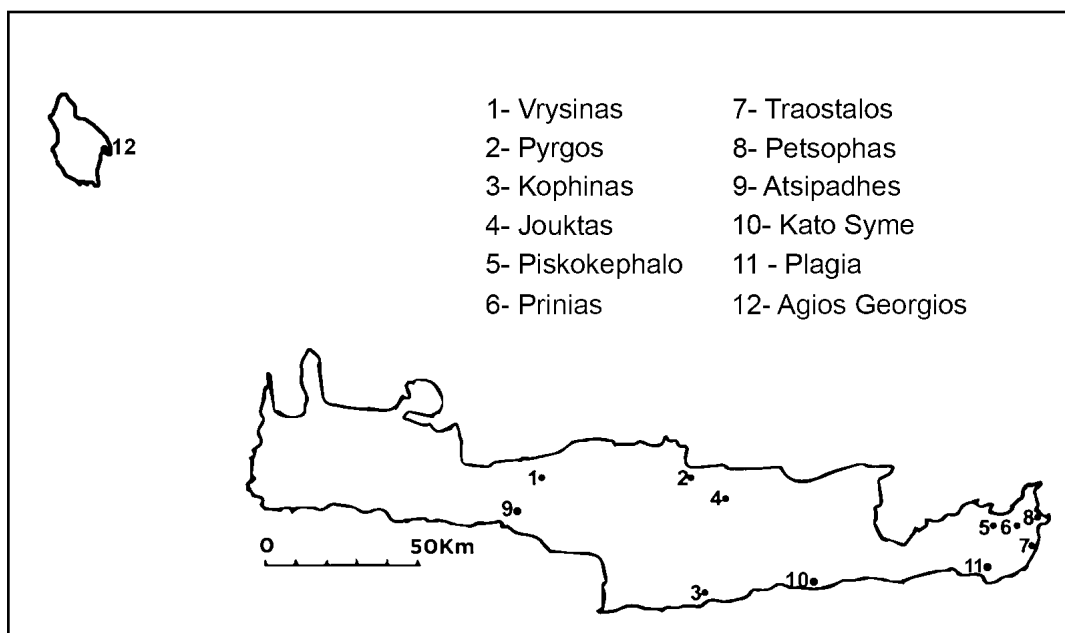

Fig 4. Sanctuary sites mentioned in the text, including peak sanctuaries, the extra-Cretan peak sanctuary of Agios Georgios, and the rural sanctuary of Kato Syme. Author, 2022.

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[182]Different authors have presented different lists of which peak sanctuaries can be identified as operational during the Neopalatial period. Some, where such lists can be seen, are Peatfield (1987); Jones (1999); Adams (2004) Soetens et al (2002); Kyriakidis (2005).
[183]Infra 219.

4.1 Sites

Vrysinas, close to Rethymnon, first described as a peak sanctuary by Faure in his 1963 "Cultes de sommets et cultes de cavernes en Crète", was excavated by Kostis Davaras in 1972 and 1973, and in 1988 figured in Rutkowski's list of sites certainly used as peak sanctuaries. More recently it was excavated by Iris Tzachili. The excavations yielded a large amount of human and animal figurines, and ceramics. Also, fragments of horns of consecration and double-axes[184] – and a fragment of a libation table inscribed in Linear A published in 1977[185]. A stone-carved feline head (fig.5) is yet another example of an exceptional item found at Vrysinas[186], as are the rare bronze figurines of worshippers and miniature ceremonial axes[187]. The pottery was later on studied in a quantitative analysis by Tzachili[188]. The findings are indicative of ceremonial drinking, with conical cups composing the overwhelming majority of the fragments, around 80%. In addition, the low number of vessels for storage[189] is in agreement with the sporadic use of the site, even in its periods of more intense use. This, in turn, appears to be the MM III period, which produced the only closed vessels and stirrup jars from the site.

Fig 5. Stone head of a feline from Vrysinas.[190]

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[184]Rutkowski 1988, 90.
[185]Davaras & Brice 1977,5-6.
[186]Tzachili, 2014 online special issue from https://www.archaeology.wiki/
[187]Tzachili, supra.
[188]Tzachili 2003, 327-34.
[189]Pithoi fragments correspond to only 5% of the total (Tzachili 2003).
[190]Taken from, accessed in 27/05/2022 :
https://www.archaeology.wiki/blog/2014/12/08/peak-sanctuary-vrysinas-south-rethymnon/

Pyrgos, closely linked to the settlement of Tylissos, was excavated in the 1960s by Alexiou and produced figurines, both animal and human, horns of consecration and building remains, concretely pointing to activities such as feasting, drinking, and fire[191]. The site, as most peak sanctuaries, is endangered, with the already few walls displaying visible signs of destruction resulting from illegal attempts at finding valuable antiquities[192]. Blomberg and Henriksson have investigated the site within their broader agenda of archaeoastronomical studies, interpreting Pyrgos as, at least partially, a place for celestial observations, and housing celebrations related to important dates of the astronomical calendar[193]. The finds seem to support an intense use during the protopalatial period, but the architectural elaboration is more likely to come from the MM III and onwards use of the site[194].

Kophinas has been more extensively studied, explored in 1961 by N. Platon in one of his many rescue excavations, with subsequent excavations by Karetsou and Rethemiotakis during the 1990s. Its assemblage of figurines, especially the human ones, is remarkable both in size and in variety and style. Some stood individually on bases, while others were grouped on a single base, e.g. dancing worshippers.[195] Some figurines were as tall as half a meter, but the majority were of small size. The ceramic assemblage presents an abundance of types ranging from storage vessels to bull-shaped rytha[196]. The pottery was used to determine the phase of use of the site, namely the MM III, as well as its terminus, LMIA/LMIB[197]. The substantial architectural remains are further evidence of a Neopalatial use of the site. The natural features of the sanctuary also appear to have played a role in the longer duration of the site. Kophinas shares with other known neopalatial peak sanctuaries certain topographical qualities and special features – e.g. a chasm, extreme lines of visibility, cliff, springs – that might have placed these sanctuaries in a special category in the Minoan understanding[198], facilitating their longevity.

Sharing many of these special features with Kophinas is **Jouktas**, by far the most

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[191]Alexiou 1963; Kyriakidis 2005, 24-26; Megaw 1962/1963, 30-31.
[192]Blomberg, & Henriksson 2003, 128-129.
[193]Blomberg, & Henriksson 2003, 133-34.
[194]Faro 2008, 274-75.
[195]Faro 2008, 268.
[196]Rutkowski 1988, 83-84.
[197]Spiliotopoulou 2014, 168.
[198]Soetens 2009, 268.

well-studied of all peak sanctuaries. The site has been known since the 15th century AC[199], but it was Sir Arthur Evans who first excavated it in 1909. Later, a decade-long research conducted by Karetsou in the 1970s resulted in much of what is known about the site. Jouktas is the longest-lived of the peak sanctuaries, with dating ranging from the EM II down to the subminoan period. The assemblage is also, by far, the most diverse and the largest of any peak sanctuary. Jouktas' architecture is also the most elaborate known, boasting several rooms, terraces, ramps, and cyclopean walls, dating to the MM III-LM I[200], or at least rearranged in the Neopalatial period[201]. This is indicative that the Neopalatial is the period of most intense use of the site. Jouktas is the only sanctuary to yield evidence for all activities related to peak sanctuary ritual and cult, as well as material from every category – .e.g. figurines of all kinds, votives, consumption and storage vessels, double-axes, horns of consecration, objects inscribed in Linear A, bronze artifacts, stone-carved objects, among others.

Piskokephalo had already been discovered by Sir Arthur Evans in 1894, but would only be excavated in 1931 by Marinatos after information reached the Heraklion Museum that artifacts of reported origin from the site were being handled and sold by private individuals freely[202]. In 1952 Platon conducted another rescue excavation of the sanctuary, which resulted in more finds, including more of the Neopalatial figurines of exquisite quality and characteristic style displayed currently in the Heraklion Museum. Platon's publication listed some of the finds, especially the human and insect – mostly beetles – figurines, but the majority of them remain unpublished. Neighboring Piskokephalo in the Siteia region is the **Prinias** peak sanctuary that, much similar to its neighbor, represents another tragic instance of systematic looting. Despite not being located at the highest position in the region, its commanding location made its excavator Kostis Davaras state that it must have been the main Peak Sanctuary in the area of Siteia[203]. That is because, despite having been extensively plundered, it still yielded a rich assemblage of artifacts. The site was first noted by Faure during his survey of the island but would only be excavated in 1972 and produced many ceramic fragments from MM periods[204], as well as a rare and remarkable beetle-shaped

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[199]Rutkowski 1988, 81.
[200]Faro 2008, 264.
[201]Karetsou 1981, 151.
[202]Πλάτων 1951, 126.
[203]Davaras 1988, 45.
[204]Faro 2008, 273.

rhyton[205].

Still in the eastern region of Crete is the **Traostalos** peak sanctuary was first studied by Kostis Davaras with rescue excavations in 1963, 1964, and 1978, saving from oblivion important artifacts – e.g. bronze figurines – that safely date the main phase of use to the MM III period[206]. A Neopalatial use is further evidenced by a number of walls corresponding to three different buildings, an elaboration typical of the period. The famous figurine of a seated woman with a swollen leg comes from this site and offers the best evidence for the hypothesis that it housed some form of healing cult practice[207]. The peak sanctuary of Traostalos likely serviced the population of the nearby town of Zakros and its later palace. A second rescue excavation was conducted by Chryssoulaki in 1995, which produced several fragments of stone-carved vases and offering tables[208]. Particularly interesting are the several objects related to the maritime sphere, e.g. seashells, fish, and boat models, which led the excavator to assume that invocation associated with maritime activities must have happened – representing beliefs related to the sea[209]. The possibility that Traostalos, alongside the neighboring Petsophas sanctuary and Pyrgos, was used as a place for astronomical observation has been discussed as well. Authors argued that a function as an astronomical observatory would not go against the ritual function of peak sanctuaries, but be complementary to it[210].

Not far from Traostalos, to the North, is **Petsophas**. Excavated by Myres in 1903 and decades later once again by Kostis Davaras (1971 and 1976), Petsophas is one of the two – the other being Jouktas – best-known peak sanctuaries. It was without a doubt related to the nearby coastal town of Palaikastro, no more than a 30-minute walk from each other. During the Neopalatial period, the older protopalatial structures were rearranged and rebuilt into a sanctuary complex[211] boasting five entire rooms and four terraces over an extensive area[212]. The erection of walls and the addition of the built annex have been examined by Vavouranakis in a 3D reconstruction of the peak sanctuary at Petsophas[213]. The reconstruction was done as

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[205]Davaras 1988.
[206]Rutkowski 1988, 89-90.
[207]Faro 2008, 277.
[208]Chryssoulaki 2001, 61.
[209]Chryssoulaki 2001, 63.
[210]Blomberg, & Henriksson 1993, 103.
[211]Rutkowski 1988, 85.
[212]Faro 2008, 271.
[213]Vavouranakis 2012.

an investigation of the relationship between human agents, landscape, and architecture. The case of the sanctuary at Petsophas seems to be inscribed within a Neopalatial tendency towards intense architectural activity, likely to be the case for other peak sanctuaries in the period. Petsophas has also produced a vast quantity of objects, including many offering tables with inscriptions, miniature vessels, and sherds of cups, but the highlight in the research has been its rich figurine assemblage. Special artifacts, such as a unique specimen of quadruple horns of consecration and some fragmentary offering tables have been published[214]. Still and all, the anthropomorphic figurines received a great deal of attention from the site's first excavator, but also an entire volume by Rutkowski and many papers, and the remaining material has been somewhat neglected in the literature. All of the above-discussed sites have clearly shown to house ritual activities of varied nature from MM III onwards. These may include gatherings for feasting and drinking, preparation of meals, deposition of a number of offerings and votives, ceremonial fires, pouring of liquids, fumigating[215], and perhaps astronomical observations[216]. In the performance of all such activities, certainly, a large number of objects were employed. This leads to the impossibility of discussing the whole of the archaeological record in-depth, thus, presenting the challenge of selecting from the material assemblage the categories of artifacts that will be analyzed.

4.2 On the particularities of peak sanctuary assemblages

To the intent of justifying the selection of double-axes and stone vases as objects for analysis, a look into the particularities of peak sanctuary assemblages is required. Going through the 2012 volume "Philistor: studies in honor of Costis Davaras", one can hardly miss how in the introductory sections of many papers, authors[217] made sure to emphasize the importance of the rescue excavations carried out by the scholar over several decades of work. The large number of rescue excavations, both under the direction of Davaras and others, is due to the fragile nature of peak sanctuaries. Uninterrupted human occupation on the island, environmental forces[218], installations carried out during times of war and the military

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[214]Davaras 1980; 1981.
[215]Kyriakidis 2005, 24-25.
[216]Henriksson & Blomberg 1996.
[217]E.g. Nowicki (chapter 16) , Rethemiotakis (chapter 19), and Tzachili (chapter 25).
[218]As Tzachili (2012, 233) noted, this is the case of Vrysinas, with deposits being trampled by animals and humans, and subject to erosion for centuries.

dictatorship[219], and the systematic looting[220] of these sanctuaries permanently compromised many of these sites' archaeological integrity. The above-listed facts constitute an existential threat to this knowledge and heritage, creating an urgent need for documenting the sites and their assemblages, thus, the number of rescue excavations conducted over the last century. The movable material record (objects such as double-axes and other votives) is arguably the most affected by looting and other harms. However, the fragility of peak sanctuary assemblages and the many disturbances they suffer are seldom taken into account in the several checkbox lists for what defines a peak sanctuary assemblage. Selected from the material for discussion in this present study are Minoan double-axes (often made of bronze and even of gold[221]) and stone-carved vessels – valuable items not only to ancient Minoans but to looters as well.

The scholarly investigation is here confronted with the possibility that a significant portion of this record must have vanished in obscure sales of antiquities, similarly to what happened to many of the highly sought-after Piskokephalo figurines – due to their visual and technical sophistication of the naturalistic style – as reported by Platon[222]. In many instances, fluctuations between the material record of different sites have been used to establish the *character* of a peak sanctuary (e.g. if a sanctuary has an unusual agglomeration of a particular votive, as body parts, it is defined as a healing sanctuary[223]or as spaces where visitors were preoccupied with the fertility of flocks and so forth[224]). Sanctuaries have been removed from the category of peak sanctuary for not fulfilling prerequisites in regard to material assemblage. The inconsistencies in this categorization of sites are evidenced in the case of Atsipadhes, deemed a simple rural protopalatial sanctuary, but that yielded material from more categories than Neopalatial Traostalos[225]. A black-and-white categorization of sites should be viewed with suspicion, considering how fragile the archaeological record of these sanctuaries is. Instead, overall trends such as monumentalization and the increase in the

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[219]For instance, the German installation during World War II at Korphi tou Mare (Nowicki 2012, 142); the destruction of Plagia (Davaras 1964, 442) and the unfortunate OTE sub-station built at Jouktas in 1952(Karetsou 1981, 145).
[220]Soetens, Driessen, Sarris, Topouzi 2002, 161; Peatfield 1992, 60.
[221]Young 1959, 17-20.
[222]Platon (1951, 126) said that many figurines were brought to the Heraklion museum with the information that many more were in the hands of private individuals and being sold freely.
[223]The case of Traostalos, see Rutkowski 1988, 89-90.
[224]A hypothesis anchored on notions such as regional variation and local tradition. Peatfield 1992, 81.
[225]Briault 2007, 127.

energy input[226] should be interpreted as a sign for more shared similarities, and not the opposite. Facing so many ways in which the archaeological record of peak sanctuaries can be severely disturbed, one must inquire how truly representative of reality the assemblages as found today are. They might lead research to see more differences and a greater level of variation between sites, contradictory to the knowledge that there is a strong level of uniformization across the island[227] during the Neopalatial period.[228] In this sense, are the figurines – note that the most sophisticated types are also not found in all sites – really so deeply more representative of peak sanctuaries than, for instance, the votive double-axes, securely attested in at least five sites?[229]When noted, the aforementioned uniformity seen in peak sanctuaries has been attributed to the authority and centralizing power of palaces, and even to a possible priesthood[230]. Moreover, strengthening a notion of relative homogeneity and as seen previously, peak sanctuaries from the Neopalatial period share many similarities with caves and, despite fluctuations in artifact distribution patterns, the bronze assemblages of peaks and caves show little distinctions[231].

With this in mind, the need for further investigation of components of the material record that have not received as much attention seems clear and appears justified, despite their presence not being transversal across all sites. Since they do not appear in every sanctuary in the same way figurines do, they have been somehow neglected. But, in view of the points raised above, it should be clear that it would be a mistake to ignore such objects and see them as special items that figure only in a few sites. Alternatively, this study suggests that the material assemblage encountered should not be taken at face value. Figurines have been a

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[226]Cherry 1978, 429.

[227]Prent (2005, 23-24) has argued that, due to the centrality of Palaces in Neopalatial society, this period is likely to be when Crete experienced the highest level of homogeneity in religious expression, compared to the still emerging power of palaces during the protopalatial and lack of central organization in the following postpalatial periods.

[228]Peatfield (1987, 93) has also argued for an increasing monopolization of the religious apparatus in the Neopalatial period, a part of an extension of the palace or elite power, which could only have been achieved through cohesion and unification.

[229]Plagia, Kophinas, Vrysinas (Jones 1999, 59-74); Jouktas (Karetsou, 1981); Syme (Kyriakidis 2005, 26).

[230]Jones 1999, 26.

[231]Jones 1999, 8. Overall, caves reveal more bronze artifacts – as weapons, figurines, and double-axes – than peak sanctuaries, but this discrepancy could be explained as well by the more protected and secluded nature of caves. Concealed locations like caves are evidently less likely to suffer interferences in their assemblages – when compared to peak sanctuaries, particularly exposed to all sorts of disturbances.

major focus of research since Myres' excavation of Petsophas – who studied their typology in depth – and have been analyzed in various approaches, some similar to the one proposed here[232]. The consumption vessels, almost ubiquitous in peak sanctuaries[233]do not differ so radically from the ones already examined by Knappet in his own case study[234], the same that serves as a methodological framework for this present work. Hence, this approach holds more potential when applied to classes of objects that have not been so thoroughly investigated.

Stone-carved vases have only been systematically described as a whole in a few instances, some of them being by Peter Warren in 1969, and in Andrew Bevan's 2007 book. Particular objects – such as the Harvester Vase and the Chieftain Cup – have received more attention and have been discussed separately. More recently, the role of stone vases as Neopalatial Elite Propaganda was discussed by Wendy Logue[235] and some of the fragments examined by her were also analyzed by Haysom, within a broader framework of recontextualization of the Minoan imagery.[236] At peak sanctuaries, many stone vases of the type investigated in this study, stone-block vases[237], have been reported. Usually, at peak sanctuaries, they appear in unstratified contexts, which renders dating difficult and many have not been published yet[238]. Other contexts that have yielded such vessels are different shrines and domestic spaces. For instance at **Vrysinas**[239], where a fragment of an inscribed stone vessel (**VRT Za 1**) was found in an unstratified context[240]. But also fragments and specimens of high-quality stone vases have been found at **Juktas,** such as a life-size stone bull's head, besides block vases of libation-table type, or *kernoi*[241]. **Petsophas** yielded many *kernoi* and offering tables[242], many of which are inscribed with the so-called libation formulae. Moreover, **Kophinas** has also produced fragments, which are reported in the preliminary results of Karetsou's excavations, including an inscribed stone base[243].

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[232]As Peatfield, 2001.
[233]Kyriakidis 2005, 52; Peatfield 1992, 60.
[234]Knappett 2005, 133-167.
[235]Logue 2004, 149-172.
[236]Haysom 2021, 12.
[237]These are the offering or libation tables and the block vases with concavities and holes, often called kernoi.
[238]Schoep 1994, 11.
[239]More recently during excavations conducted by Iris Tzachili.
[240]Schoep 1994, 12.
[241]Karetsou & Koehl, 2013.
[242]Driessen 1994 and Davaras 1972.
[243]Schoep 1994, 12.

The double-axe has often been treated as a symbol, but rarely as an object or for its affordances in physical action and performance. Functional analysis of double-axes, their production, and use (as tools) was conducted in 1973 by Maria Lowe Fri, and Haysom devoted a paper to exploring its possible contextual associations. Their presence is well attested in Minoan sacred caves[244], besides large-scale and miniature specimens[245] attested at peak sanctuaries. Many votive double-axes were found at **Jouktas**[246](Fig.6). Twenty-eight of which were small (length 0.12-0.09 m.) and other larger ones consisting of two joined parts (length 0.24 m.).[247]

Fig 6. Double-axes from Jouktas. Karetsou 1974, ΠΙΝΑΞ 172α.

These, however, as must be noted, belong to the protopalatial stratum of the so-called "Ash altar"[248]. Belonging to the Neopalatial period, a small bronze votive double-axe was found in **Agios Georgios**[249], the extra-Cretan peak sanctuary on the island of Kythera[250]. The ceramic material found at Agios Georgios points that the bulk of activity there took place during M

[244]Such as Arkalochori, Psychro, and Phaneromeni.
[245]Miniature double-axes found at Vrysinas. Davaras 1973, 583-84.
[246]Karetsou 1981, 148.
[247]Karetsou 1974, 232-33.
[248]Karetsou 1981, 146.
[249]It is not clear, however, in the text if the double-axe is, indeed, from the LMI undisturbed stratum. See Sakellarakis 1996, 86, second paragraph.
[250]The overwhelming majority of Agios Georgios' artifacts find correspondents on Cretan peak sanctuary assemblages and it could easily pertain to our list of Neopalatial Cretan peak sanctuaries if it was not for its location.

III-LM I/LM I B[251], in the same way as many of the sanctuaries listed in this study. The multi-phased sequence of the rural sanctuary complex at **Kato Syme** has yielded votive double-axes[252]from the MM III period, as has the **Kophinas** peak sanctuary during the 1990s excavation. The Kophinas double-axe consisted of a half-part of a cast double-axe made of lead, likely with silver inclusions.[253]

Fig 7. An illustrative example of the double-axe Faure was presented by locals: The bronze Arkalochori axe HM inv. no. X2416. Photo by Chronis Papanikolopoulos, Flouda 2015, 44.

Plagia figures in Jones's list as certainly having double-axes from the Protopalatial period and maybe also from the Neopalatial[254]. On Briault's list, more recently, it is said to only present figurines, votives, and ash.[255] A bronze Minoan double-axe inscribed with Linear A[256] had been brought to Faure by locals and reported alongside other special artifacts[257] that were brought to the museum of Agios Nikolaos, to which a parallel *could* be the bronze Arkalochori double-axe (Fig.7). The site, discovered in 1962, has now been destroyed,

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[251]Sakellarakis 1996, 87.
[252]Kyriakidis 2005, 26; Faro 2008, 285.
[253]Karetsou 2014, 133.
[254]Jones 1999, 62.
[255]Briault 2007, 129.
[256]Faure (1969, 176); (1972, 393) as cited by Faro 2008, 273.
[257]Fragments of worshipers and animals (lambs, oxen) in clay, a statuette of hard black stone 15 cm high, representing a woman and a fragment of a black steatite vase with a representation of a cult scene (Faure 1967, 119)

rendering any further investigation impossible[258]. Lastly – through multiple systematic excavations[259] – **Vrysinas** produced a solid body of artifacts securely dated to the Neopalatial period, among which two miniature double-axes[260]. In this way, it is clear that both categories of artifacts are present in the record and peak sanctuaries have yielded such objects in many instances. These considerations are laid out in order to establish that such item categories are an integral part of Neopalatial peak sanctuary assemblages, taking into account the (1) high level of disturbance of these sites[261]; (2) their presence in published assemblages, not only from peak sanctuaries, but also from other types of sanctuaries[262]; (3) the evidence for a tendency of standardization of cult and ritual practices during the Neopalatial period[263], with cult being essentially the same across the island, and surpassing regional differences.[264]

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[258]Rutkowski 1988, 86.
[259]Faure in 1962, Davaras in 1972-1973, Tzachili in 2011.
[260]Tzachili et al. 2012, 64; Briault 2007, 129.
[261]Supra 219.
[262]For instance, Jones 1999 and the comparisons between peak and cave assemblages.
[263]There being a form of *koinè culturelle et religious notamment exprimée dans la fréquentation de lieux de cultes situés dans des sanctuaires de sommet et dans des grottes (*Karetsou et Al. 1985, 144).
[264]Peatfield 1992, 61; Supra 227 (Prent); 228 (Peatfield, 1987).

Chapter 5. Minoan double-axes

The term *double-axe* requires disambiguation. It might refer to, broadly, two distinct groups of objects (Fig.8). The first is the set of metal working tools, used for practical purposes. Their typology is ample and beyond the scope of this research[265]. Mainly found in mortuary contexts, habitations, and less frequently, in caves, working double-axes appear to have been a popular tool among Minoans. They possessed very clear advantages that explain their success: a double-axe has two blades rather than one, and excellent swinging capabilities[266]. Experimental approaches and in-depth analysis of the artifacts have shown that the main working activities involving this tool were woodworking, felling trees, stone-working, and butchering[267]. Many manufacturing processes were employed in their production, with moulds of stone, clay, wood, and metal being used. These, in turn, were filled with smelted, molten metals, namely the two main bronze alloys: tin-bronze and arsenic-bronze. Once cold, the axes would receive finishing treatments, being grinded, polished, and sharpened with stones, and finally attached to a wooden handle[268]. One practical use the functional double-axe might have served, that connects the spheres of everyday life with ritual, is the sacrifice of animals – mainly the bull – at least at some point of the ritual, as in later Greece.[269]

The second group is composed of the famous, non-functional, and strictly ceremonial[270] double-axes, an iconic image of Minoan Crete. Its frequent appearances in iconography in association with female figures[271] led scholars to assume it was related to a goddess,[272] a

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[265]For more on their typology see Evely 1993.
[266]Davaras 1974, 71-73.
[267]Lowe Fri 2007, 131-146.
[268]Lowe Fri 2007, 31-42
[269]Davaras 1974, 72, which can be contested by the conspicuous iconographical absence of double-axes being put to this specific use, daggers appear to be the choice for the killing of sacrificial animals. However, the beheading would likely require an axe, in which case the question of "why do we not find depictions of animal decapitation" emerges, opening a whole new discussion.
[270]In some instances so without a function other than votive the axe is simply made of a sheet of metal.
[271]Marinatos 1993, 5.
[272]Davaras 1974; Evans 1901, among others.

suggestion not without criticism.[273] It is in most cases made of thin sheets of metal (copper, bronze, tin, silver, or even gold), which renders the object utterly non-functional. As an object embedded with meaning and symbolism, double-axes appear as early as in the EM IIA as burial gifts in central and east Crete.[274] Their size ranges from a few centimeters, for example as pendants, to considerably large (e.g. 0.67m in length as some in Arkalochori). During the Protopalatial period, their use as meaningful objects, votives, is more stressedly marked at sites such as peak sanctuaries and caves – e.g. protopalatial Jouktas and the earliest from the Arkalochori cave dating to the early Neopalatial period, MM III.
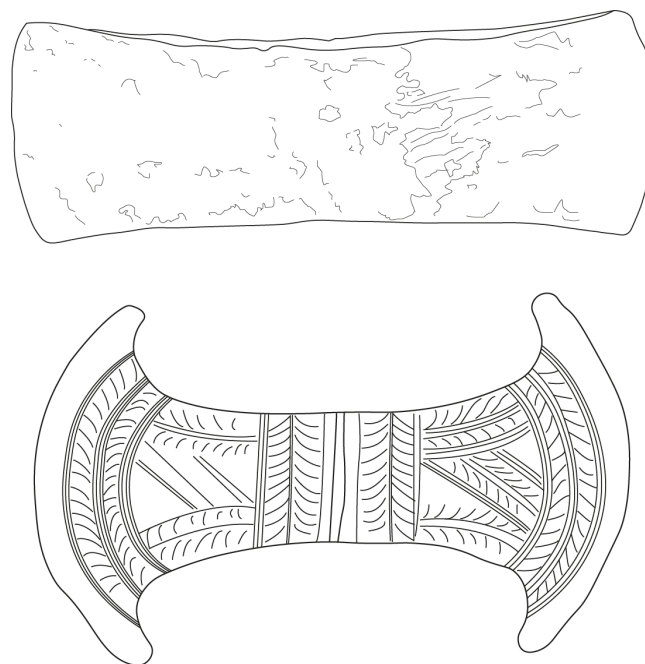

Fig 8. Double-axes. Above, double-axe as a tool, Late Minoan. After photography from the MetMuseum, Accession Number 24.150.11; Below, miniature gold votive double-axe from the Arkalochori Cave, representative of the standard ceremonial type. Drawing Author after Davaras 1974.

The role of the double-axe during the Neopalatial period, when it started appearing more frequently as a votive in caves and sanctuaries, is blurry. Traditionally, it has been interpreted as an object of sacred status since it appears so clearly in ritual contexts. Though its sacred dimension is not easy to dismiss, it can hardly be argued that it was its only one. Associations with war seem to have existed,[275]since a religious symbol can be employed in the

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[273]Nilsson (1927, 194) strongly disagreed, suggesting it was purely a symbol that became prominent for its importance in the ritual sacrifice of animals.
[274]Flouda 2015, 43.
[275]Haysom 2010, 48.

slaughtering of enemies just as well as in worship – as the Christian cross pointedly demonstrates, killing devices can easily operate as religious icons. Its use as a tool or the existence of a utilitarian and functional equivalent does not remove it from its sanctity either. Some Neopalatial assemblages present large double-axes that appear to have been destined to melting[276], but this is no basis for arguing that an inglorious end to some of these objects disproves their religious virtues, as statues of gods themselves were melted for the manufacture of weapons in times of need throughout Antiquity. Objects that meet banal ends and everyday objects that fulfill mundane roles can also be employed in ritual activity without any contradiction, as shown by Vergaki in the case of rhyta, traditionally interpreted as strictly ritual apparatus and now demonstrated to have been put to use in domestic contexts as well[277]. Another, familiar example are candles, both used to create a romantic atmosphere for couples, generate light when the power grid fails, and are lit in religious ceremonies, such as the Greek λαμπάδες during Easter. If anything, this somehow fluid symbolic nature of the double-axe during the Neopalatial does not say much beyond that it likely functioned as a multivalent symbol, still loosely defined, having its nature increasingly delimited overtime and eventually peaking in holiness in the later, following periods.

The reasons and meaning behind the offering of such objects are beyond us nor is one of this present study's goals, but several hypotheses have been sketched (not mutually exclusive), such as (1) Elite members depositing valuable metal objects as a way of displaying wealth; (2) Metalsmiths making offerings that consist of returning a portion of their craft's material back to Earth in order not to disturb natural cycles[278] and; (3) Simple, non-privileged individuals attempting to compensate with ostentatious objects their inability to consistently make extravagant offerings[279]. Evidently, albeit interesting, such possibilities are of difficult or impossible verification, rendering the question of "why such depositions?" one of secondary interest. Alternatively, a more pressing question is that once something, e.g.

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[276]Haysom 2010, 48-49.
[277]Vergaki 2021, 413-428.
[278]Flouda 2015, 53; This possibility is further emphasized by the curious fact that double-axes from the cave of Psychro became embedded in the cave's stalactites, thus, becoming one again with earth (Hogarth 1899–1900, 108–9 as cited by Haysom 2010, 42). Also potentially symbolizing the return of metal to the earth is the deposition at Jouktas, as well as the one at the Gournos Kroussonas open-air sanctuary on Mount Psiloritis, which appears to be foundational, with votive double-axes placed deep in crevices (Flouda 2015, 44).
[279]More on offering expenditure, see the case of funerary offerings in Pearson 1999, 29-32.

the double-axe, is given, how does it materially exist and interact? E.g. what does it allow, evoke, provoke, and so forth.

5.1 Affordances and Constraints

Double-axes present a series of affordances related to their material properties. Despite being made of metal, they are light, not posing much effort to be lifted. They do not stand on their own, so they need holding, be it a person or a base. In fact, as iconography shows (Figs 9-12), both seem to be the case. Even the largest specimens appear to have been carried in a specific manner. Apparently, a double-axe held by the handle could be manipulated in two ways: in banner fashion, ahead of the body and at eye level or above the head; or behind the body, resting on one shoulder, the end of the handle at chest height, held by both hands. The first mode is obviously related to a display intention, allowing maximum visualization of the object, while the second, is reminiscent of military formations, considering that many weapons are held in this way, and echoes a notion of march. At the same time, this second position is also similar to the gesture performed when using a real axe, held high to gather strength and momentum to chop wood or an animal.
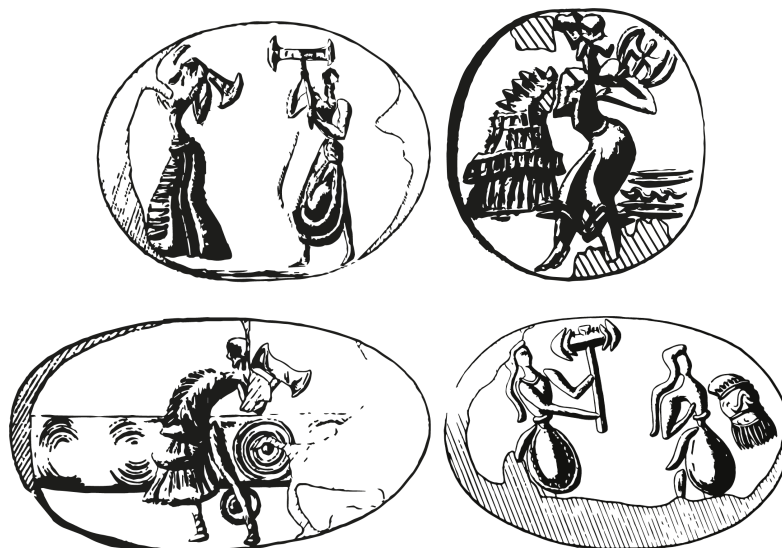

Fig 9-12. Seals depicting double-axe bearers: (Top left) Neopalatial seal from *Agia Triada*, CMS II.7 7. Crowley 2013, 75; (Top right) Neopalatial seal from *Knossos*, CMS II3 8. Crowley 2013, 295; (Bottom left) Neopalatial seal from *Thera*, V Sup 3 394. Crowley 2013, 295; (Bottom right) Neopalatial seal from *Zakros*, CMS II.6 10. Crowley 2013, 159.

The smaller specimens have totally different handling. Miniatures appear to have been deposited in a pile and their deposition may have been done one by one, or the complete pile at once, in which case the miniatures would have been collected and previously stacked. One possible way is to hold the axe by the ends of each flap, flat and horizontal, like a plate. Another is to tie it and use it as a pendant. An element that may have priority is the visual factor, strongly linked to the physical structure of the object itself. The axes with their shafts could, and were, inserted into holes and attached to bases, where they were visible and displayed[280].

Fig 13. (Left) Bull head with upside down double-axe in between horns (CMS XI 259) After Crowley 2013, 239; (Right) Bulls with double-axes in between horns. Linear B sign in the center of the image, identified as the syllabic sign "a", number 8 in Linear B notation. (CMS XII 250) After Crowley 2013, 296.

As metal objects, they are resistant and, when treated to that intent, can be sharp. This affords cutting usages, applicable to many different materials, e.g. flesh, wood, etc. One might imagine that the beheading of sacrificial animals could have been done with such a tool, as it was done later on in Classical Athens[281]. In fact, hints in the iconography seem to suggest this. Even though there are no clear depictions of the decapitation being done with double-axes, a seal impression shows bucrania in association with double-axes, hovering above their heads, as if hanging (Fig.13).[282] Another affordance is that of sound-making. Metals are also sonorous, producing all sorts of sounds. Notably, when fashioned into sheets,

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[280]Popham 1970. However, the horns of consecration found with a central socket with a hole for double-axe insertion are a later example from LM III Knossos.
[281]Davaras 1976, 72.
[282]Caution is advised, however, the seal is of much later date, counting even with an inscription in Linear B.

a trembling, thunder, and storm-like sound is produced. Their physical properties are the good conduction of heat, electricity and display high tensile strength[283]. This means that more than organic materials, metals can resist a much higher level of stress, being bent and deformed a lot before breaking. Bronze and gold, favorite materials for double-axes, vary in degree in some properties such as brittleness, level of reflectiveness, and melting point. For instance, bronze is a lot more brittle than gold, which in turn is more malleable. Finally, metal objects are lustrous, and when worked properly can be extremely smooth. In this visual quality, it affords reflection. It is no surprise, for example, that bronze was fashioned into mirrors during antiquity and even in the Bronze Age[284].

As for the constraints imposed by the materiality of double-axes, not much can be said in relation to the cultural restrictions established for the use of these objects. One can imagine that being votives, weapons, and tools, their constraints would likely be circumstantial instead of general and apply when framed within a context, as ritual. Evidently, paper-thin metal sheets deny practical uses such as chopping, rejecting any interpretation that these objects could have been used as tools. Their handling appears to have been done by both males and females, at least from what iconography shows. There is no clear indication that double-axe use was restricted to a specific social group. In fact, it appears to have navigated in a much more fluid manner between segments of society. Possibly, the bigger and more well-crafted specimens – sometimes with Linear A inscriptions[285] – would be more valuable, thus being commissioned to metalsmiths by members more well-positioned in society. But the use of the double-axe as miniature votives, cheaper to produce and therefore easier to access, could mean that all members of society could acquire such objects and dedicate them. As Haysom has demonstrated, in the Neopalatial period the object is yet to have its use limited, or centralized in the religious sphere.[286] Overall, the diversity of contexts in which double-axes are found seems to point way more to a lack of constraints than to their presence.

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[283]Paquin, 1994.

[284]An example being a bronze mirror with ivory handle from Final Palatial Knossos (circa 1400-1300 BCE), currently in the Archaeological Museum of Heraklion. The object can be seen in 2005 online publication from Latsis Foundation, "The Archaeological Museum of Heraklion", page 87.

[285]See above in chapter 4.2 for an alleged bronze Minoan double-axe inscribed with Linear A from Plagia that would have been brought to P. Faure.

[286]Haysom 2010, 49-50.

5.2 Iconicity

With regard to the corpus of resemblances that ceremonial double-axes possesses, a broad set of sensorial similarities to other objects – be it aural, tactile, or visual – presents itself. As Knappett defined it, the investigation of iconic relationships consists in answering the question of what other material culture categories an object resembles, keeping in mind that resemblance and similarity goes beyond pure visual likeness and it involves many other sensual qualities[287]. In this sense, they bear great similarities to their functional counterparts, but also stark distinctions. Metal is common to both types, but differences exist. Gold, being much less brittle than bronze, appears in objects that are not destined to be used as tools, being more related to display. In this, a process of curation is evident. Despite both objects being iconically very close, and both being made of metal – thus, sharing many physicochemical properties – the differences between the two (one alloy and one natural element) render each better suited for specific contexts. Yet, one more material category shares similarities with double-axes, and that is the remaining objects that make up the corpus of Minoan weapons alongside the axes themselves. In fact, as will be revised in the discussion of contiguity, weapons and double-axes possess a clear relation of proximity, being deposited next or together in many cases[288]. Another, more loosely defined connection is the visual link between double-axes, bird shapes, and butterfly shapes (Fig.14).

Fig 14. (Left) Typical silhouette of a Double-ax; (Center) Simplified bird from seal (CMS XIII 118) After Crowley 2013, 346; (Right) Silhouette of a pair of butterflies from Seal (CMS II.6 4) After Crowley 2013, 190;

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[287]Knappett 2005, 143.
[288]Infra 297, Haysom 2010, 48.

Although minor, it is still worth mentioning, as it reveals a peculiar coincidence, both shapes being associated with the so-called goddess or mistress of animals, a connection that, albeit controversial, was also made with the double-axe[289]. In regard to another physical quality of metal objects, the tactile one, few things can be said. The surface of polished metal is of unnatural smoothness, for this is a quality that rarely occurs spontaneously in nature. The natural world is one of twisted shapes and textured surfaces. In such wise, the touch of a double-axe must have felt uncanny, or minimally strange – in a society with little treatment of materials and no manufacture of highly synthetic materials as the ones known to us today. A similar sensation could have been felt while touching slip-covered ceramic objects, but the associations between the two are not straightforward. There is an exchange in overall shapes between metal and ceramic vessels, and skeuomorphism, the reproduction of shapes and appearances in one media typical of another media, is well-attested between ceramic and metal objects. However, double-axes represent a context too far removed from ceramic vessels to allow further discussion[290].

Fig 15. Pithos' fragments from the Psychro cave show a band of decoration under the rim. Top left and right, relief double-axes. Hogarth 1899, 104.

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[289]The butterflies or symmetrical pair of insects appear as a common motif, most notably in the necklace of the goddess from Xeste 3, Akrotiri. The bird has, since Evans, been considered a visual metaphor for the goddess, especially in seal depictions of epiphany scenes. Both silhouettes share visual similarities with double-axes, having an horizontal axle and presenting bilateral symmetry.
[290]It is worth mentioning, however, that relief double-axes under the rim of pithoi from Psychro Cave exist, and these were mould-made (Fig 15). Hogarth 1899, 104.

Many of the affordances provided by the physical properties of double-axes can foment the creation of iconic relationships between double-axes as a sign standing for a referent. For instance, the aforementioned affordance of sound and its sonorous resemblances to thunder and storm might have allowed for the establishment of an iconic relationship between the object and the sound it brings to mind. An object's iconicity, the resemblances it bears, differ for instance from factorality in the sense that an object might be similar to another without being a factor of it, or pertaining to it in a way. The resounding, thunder-like noise produced by metal sheets could allow their rendering as icons to the storm, or the thunder and lightning. Still and all, a metal sheet is not part of a meteorological electric discharge. Thus, this is nothing but a mere example of what could be, the investigation of such relationships being unattainable at the moment, coming only to demonstrate that multiple relationships operating at different semiotic levels are within the realm of possibility.

5.3 Indexicality

Between different semiotic categories, many possible relationships exist. These, however, are not mutually exclusive, as they stand for different ways through which a sign can refer to a referent [291]. Therefore, treating separately iconicity and indexicality – deeply interconnected relationships – separately would be incurring in a mistake[292]. In proceeding with the relationships within the indexicality of double-axes (contiguity, causality, and factorality) it is necessary to keep in mind that in many instances they behave as both Icon and Index.

Contiguity

Proximity can be observed both in the three-dimensional depositional context of archaeological finds and in the plain world of images. One very well-known contiguity, both in the imagery as in the material record, between double-axes and another type of object is that with horns of consecration (Figs 18-19). But to dwell in this well-known association would be to commit the mistake of ignoring that these come mostly from later periods.[293] The

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[291]See again chapter 3.3.
[292]Knappett 2005, 97.
[293]Morris and Peatfield (2020) have already warned about the mistake of piecing together elements that are clearly distinct in time and nature as much as possible, preventing the analysis from becoming

same applies to the remarkably strong iconographic association between double-axes and the so-called Minoan Goddess (Figs 16-17), seen all over the literature[294].

Fig 16. Gold signet ring from the Acropolis Treasure, Mycenae. (CMS I. 17).

Fig 17. Impression of LM II–III seal from Knossos depicting the Mistress of animals flanked by two griffins. (CMS II.3 63).

One last case in iconography is that of the sacred knot. Two seals, one from MM IIB and one from LH IIA (V SUP 1B 138B and CMS II.5 234) indicate a very long lifespan of the association between the double-axes and sacred knots. In LM IB Zakros, knots appear in contact with double-axes occurring solely where these occur, in the West Wing.[295]The knot has been recently regarded as a polysemic symbol, only understood in context with the other polysemic motifs. With this, Nicgorski proposed that they are too rich in possible meanings to be defined by one single attribute[296], much like what Haysom has proposed for double-axes.[297]The example of the knots further cements that the correct approach to iconic symbols of Minoan culture is a careful one, particularly fine-tuned to noticing the capacity of these symbols to bear multiple meanings.

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anachronistic, reminding that a civilization as the Minoan, with a two thousand years span, is very unlikely to remain within a single, monolithic set of ideas.

[294]This, as Haysom (2010) noted, is more typical of the first years of scholarly investigation, for instance in the work of Evans, who sometimes tried to associate the double-axe with a supreme female deity.

[295]Soulioti 2016, 159.

[296]Nicgorski 2022, 122.

[297]Haysom 2018.

Fig 18. Minoan larnax with painted decoration of plants, double-axes, and horns of consecration. Postpalatial period. Archaeological Museum Heraklion.

Fig 19. Horns of consecration from LM III Sanctuary, Knossos. In the center between the horns, a raised central socket with a hole is probably for the insertion of a double-axe. Modified after Popham 1970, 195.

With little doubt, one of the strongest contiguities of double-axes is with other instruments capable of slaughtering and of cutting, chopping, etc. This association is evidenced by several instances where double-axes and implements of war are found next or close to each other. Among double-axes themselves, not much difference in treatment of axes diverse in typology are observable and they seem to most commonly be deposited together according to their type – as in Jouktas, where all axes in the pile are votive. It is in the wider context of such depositions that clear relationships are revealed. It has been recently demonstrated that in Neopalatial Knossos, the scenario was quite different from the one traditionally depicted in the literature. Considerably influenced by Evans's assessments of the symbol,[298]a common view is that of the double-axe as a widespread symbol of Knossian authority, an emblem. In reality, the symbol/object is concentrated mainly in the areas of the Pillar Crypts, West Magazines, and in the East Wing Hall of the Double Axes and the Queen's Megaron. This shows a deliberate grouping of double-axes in all forms (stands, bronze specimens, frescoes, mason's marks), accentuating its symbolic value.[299]This specific employment of double-axes in secluded areas is in close similarity to the deposition from Jouktas, which seems to be foundational, with them removed from a broader context and inserted under the ash altar.

[298]Evans 1921, 423-447.
[299]Soulioti 2016, 37-8.

This also resonates with the setting of axes deep down Psychro cave – packed with weapons, some of which were also not fit for real use, being votive sheets of metal[300] – yet another instance of unfrequented space, removed from the public eye if not for the single moment of deposition.

Haysom notes how both in caves, where weapons have been deposited[301], and in urban settings, where tools are found[302], double-axes appear contiguous to these classes of objects in their respective contexts. If in Neopalatial assemblages, the double-axes can be found in contiguous relationships with both war implements and craftsmen tools in domestic contexts, the contiguities concerning peak sanctuary assemblages are not tracked so effortlessly. Factorally, one could say that double-axes are a factor or represent a portion of peak sanctuary assemblages. However, their appearance in other forms of sites and in only a number of peak sanctuaries forces us to reject this idea at least initially. They are, nonetheless, existent at peak sanctuaries. In this, their proximity to other items regarded as votives and ritual apparatuses demonstrates how – despite not being yet the religious symbol it became in Post-palatial times – the double-axe already occupied a position amongst sacred symbols during the early Neopalatial period, or even earlier. In this way, the contingencies observed between double-axes and a variety of placements inspire an appreciation of these objects as having a holistic function, intimately interconnected with a network of other items and contexts and perhaps only explicable by reference to each other.

In such wise, the strongest contiguity observed seems to be, indeed, that of double-axes and war instruments. For an atmospheric setting to resonate with notions of warfare, it has to utilize the evoking of several mental images. A war implement carries with it endless associations, most of them relating to danger, death, but also power, strength, and so forth. One might be tempted to think if the double-axe and its offering to a deity are, in a way, staged violence or danger. A double-axe, with twice as many cutting edges as most weapons, has an unquestionably violent character. In exploring another indexical relation, factorality, the connection between these objects and a broader universe of violence and aggression, for instance, warfare, becomes even more clear. The contiguous occurrence of double-axes and

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[300]Haysom 2010, 48.

[301]For instance, the Psychro cave. Hogarth (1899, 91) noted how many of the weapon-simulacra and votive double-axes – which he calls toy double-axes – were found together in the Lower Grotto of the cave. He also carefully otes how the deposition seems to have been done in niches of objects.

[302]Double-axes found in houses at Malia and Gournia together with scrap metal. Haysom 2010, 49.

weapons might reveal the axe as a factor of war, standing for it without representing it as a whole.

Causality

A relationship of causal nature, the last of the indexical relationships, is sometimes established between a sign and referent. An object's cause (e.g. its manufacture and makers) is implicated and deeply intertwined with the perception of the object by social agents. The relationship of causality of double-axes to their craft of origin can only reinforce the aggressive, violent, and dangerous nature of these objects. That is simply due to the fact that the risks associated with the lifestyle of those involved with metallurgic production – hardly unknown to others in society – could have imprinted double-axes, as well as other metal objects, with a secondary and particularly threatening aura, since the associations with an object-making might be transferred into the final product[303].

Factorality

Because objects share spatiotemporal associations with other objects,[304] it is of great importance to think of them within this network of relations. The material assemblage of peak sanctuaries forms a community of objects that are inserted in the same ritual framework. Therefore, the associations between double-axes and a symbolic universe of aggression, violence, and competition can only be verified through examination of this broader framework in which they are inserted. Double-axes are contiguous to the objects found with them at peak sanctuaries, but also represent a factor or a part of the "whole" of peak sanctuary assemblages[305]. Thus, an examination of additional contiguous relationships in the material record and of more elements belonging to the "whole" double-axes originate from is required to verify their association with a violent universe.

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[303]Knappett 2005, 158-9.
[304]Knappett 2005, 58.
[305]Notably, as frequently seen in the literature, there exists such a thing, reasonably agreed upon, as "peak sanctuary assemblage", consisting fundamentally of votive figurines and ex-votos. See, for instance, Peatfield 1992; Rutkowski 1988. However, during the neopalatial period, more elements came to form the peak sanctuary "common" – to the few remaining sites – assemblage, sometimes defined as "luxury" items, such as double-axes, bronze figurines, stone vases, etc. See Peatfield 1987; Dietrich 1969.

The creation of an aggressive visual repertoire is a known way of managing violence within human communities through its evacuation, expressing it visually.[306]The forms of violence being dealt with by people could be exemplified in many ways, for instance, widespread social unrest, different clans, or factions in conflicts. Convenient for the present case is the fact that violence expressed ritualistically and released in cathartic fashion is not an unknown phenomenon. As a form of elaboration of pre-existing clashing contents, investigating this possibility for peak sanctuaries would certainly reveal more and deepen previously raised hypotheses for dynamic, ecstatic, and shamanic rituals[307]. Perhaps, such resolutions could also have assumed the shape of festivals and celebrations that include violent ritual performances. One example is the slaughtering of animals followed by the burning of remains and consumption of meat, practices well attested at peak sanctuaries.[308] As data reveals the most significant part of peak sanctuary assemblages remains the votive figurines and ex-votos[309]. This is so true that it has been utilized as one of the specific criteria for defining a site as a peak sanctuary by several authors. Being these objects so polyvalent, no possibility extracted from the materiality of one class of object can make sense if not under the light of the broader material corpus that makes up the assemblage. Once again, different semiotic relationships overlap. A turn to other objects sharing contiguous lines with double-axes, therefore, is necessary in order to visualize these as factors of a broader corpus within the peak sanctuary ritual.

On other contiguous factors

With regard to the anthropomorphic figurines, multiple interpretations have been offered, as they have been thought initially as statuettes of the gods themselves,[310] as well as possible simulacra, representing the adorants[311], and also as metaphors for the ecstatic ritual,[312] embodying the physical positions performed by participants. Their condition is so

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[306]Girard 1997, as cited in Hodder & Meskell, 2011.
[307]For instance, Peatfield & Morris 2012.
[308]That is, the slaughtering of animals and its ceremonial collective consumption. For more see Borgna 2004, 257-8.
[309]Briault 2007, 125
[310]A tendency especially at the beginning of the study, for instance, Myres 1903.
[311]Davaras, 1976, 245.
[312]Morris & Peatfield, 2012; 2021.

fragmentary that it has been suggested they were made to be broken.[313] This possibility would not be something new and, in fact, many examples are known from the Neolithic to the Iron Age.[314] That the figurines were made to be displayed for an unknown time duration is a certainty, evidenced by the presence of rectangular bases.[315] However, as objects have lives, they go through distinct moments as anything else that has a life, hence, their display is not in contradiction of an intentional breakage. Despite being well constructed – an effort on the maker's part that could be argued to show an intention of making figurines to last or pure display, and no intention of eventually breaking them – their state of fragmentation stands out in such a way that deliberate crashing seems a possibility difficult to eliminate. Furthermore, the grouping of figurine fragments (according to physical gesture) in the temenos area shows that human interference played a central role in the precarious conditions figurines are found.[316] Unfortunately, the hasty conduction of rescue excavations, poorly recorded and noted, prevent us from precious information on patterns in the spatial distribution of figurine fragments, from which valuable clues to their function would certainly come. Without access to much of their depositional context, one must go straight to their materiality itself and the extant figurines. The vivacity portrayed in the broad vocabulary of gestures[317] from the figurine assemblages imbues them with life-like qualities. If they were perceived as alive or a completely distinct ontological category is difficult to assess, but the endowment of these qualities raises the possibility. This, in turn, strengthens the idea that they had the potential for being representations of ritual participants,[318] but unlike Davaras' suggestion of perpetual adoration, mimicking trance-like postures[319].

This sense of movement must have certainly worked through illusion, fruit of the combination of elements such as the smell of burning flames and incense, flame-light, sounds

[313] Renfrew 1992, 81-82.

[314] For some examples, see: Intentional decapitation of anthropomorphic figurines at Neolithic Gobekli Tepe (Schmidt, 2006), Fragmentation on EM-MM Tholos tombs in Crete (Vavouranakis & Bourbou 2015), The special deposit on Keros (Renfrew 2015), Ritual Breaking of Objects in Greek Funerary Contexts (Fossey 1985). On peak sanctuaries: Atsipadhes Korakias constitutes one example (Peatfield, 1992). For more on deliberate fragmentation as a social practice in Bronze Age Aegean societies see Chapman 2015, 25-47.

[315] For instance, the famous neopalatial male figurine *MH 9831* from Piskokephalo, Rethemiotakis, 2002, 90.

[316] Peatfield & Morris 2012, 240.

[317] Figurine typology is a topic that appeared since the very first excavation of a peak sanctuary, with Sir John Myres at Petsophas (1903), revisited by Rutkowski in 1991.

[318] As suggested by Davaras, 1976, 245.

[319] Morris & Peatfield, 2021.

or music and spatial atmosphere, deepening to a great extent the impression that the figurines were animated, or endowed with some sort of spirit or agency. The unmistakable emphasis on body posture is further evidenced by the suspicious lack of attention and detail to their mouths, which can be seen as a form of denying agency.[320] Rendering figurines silent by diminishing their vocal apparatus and autonomy highlights their bodily attributes and movement. It could be the case that these agent-figurines, after completing their purpose during a phase of display[321], went on fulfilling a different role, morphing into something else,[322]through ritual breakage and laying of fragments in the areas we now see, for example at Atsipadhes during the Protopalatial period. The relevant point, however, is the cathartic effect breakage ritual action holds, opening the possibility for rituals that functioned as the purging of conflicting contents existing in the social landscape.

Another instance of competitive connotations is the case of votive limbs. Votives have been traditionally interpreted as ex-votos, petitions for cures[323]. While that indeed seems to be the most sound explanation for some objects[324], the structural integrity of this hypothesis was certainly compromised by Nilsson's point[325]. He argued that the differences in groups of body parts from sanctuary to sanctuary contradict the idea of them as necessarily healing votary requests, as people are unlikely to suffer all from the same health problems. Haysom has also drawn attention to the fact that votives can be celebratory, such as the remembrance of sports competitions, for example. A dispute-like repertoire can be found both in boxing gloved hands, as the votives from Atsipadhes (Protopalatial, however) and aggressive bull-leaping iconography[326], as well as in boxer figurines[327] (Fig.20).

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[320]There are instances where mouths are represented, but it is noticeable that this was far from the main concern on the part of the maker, with much more attention being directed at attire, hairstyles, anatomy and body gesture.

[321]Rethemiotakis (2014, 149) discusses how their size and manufacture shows signs that the figurines were intended to be displayed at least for a while.

[322]Vavouranakis & Bourbou 2015, 170-1.

[323]Davaras 1976, 247.

[324]Once more the example of the figurine of a woman with a swollen leg, maybe with elephantiasis (Peatfield & Morris, 2012).

[325]Supra 151.

[326]Haysom 2018, 23.

[327]The figurine is at the British Museum and, although provenance is unknown, the fabric appears to indicate that Kophinas peak sanctuary was its original location. Rethemiotakis 2014, 150.

Fig 20. Boxer from Kophinas. British Museum 1970, 11-7. Rethemiotakis, 2001.

The symbolic associations between the many components of peak sanctuary assemblage, figurines, ex-votos, and votive double-axes corroborate the idea elaborated by Haysom that peak sanctuaries functioned as arenas for social dispute, with conflictive and competing world-views and interests being presented and manifested materially and by ritual performance. This interpretation is reinforced by redundancy, the systematic repetition of phenomena across and inside sites, an inherent component of ritual[328]and as such, observable in peak sanctuaries[329]. Redundancy does not stand for a semiotic relationship but is defined as one of the formal characteristics of ritual[330]and it is, nonetheless, worth mentioning.

Redundancy

Since the religious nature of the double-axe is not clear nor straightforward in the Neopalatial period – its use in this sense being more well-attested and evident in later periods[331] – one must assume that for the double-axe to reach the later status as a strongly established religious symbol, a gradual and progressive conceptualization of it as such must have happened over time in between its appearance in the Protopalatial and the later stages of Late Minoan period. This intermediary temporal space would, of course, be the Neopalatial period. The number of instances where double-axes are offered as votives in ritual sites

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[328]Briault 2007, 295.
[329]Kyriakidis 2005, 32-3.
[330]Tambiah 1979, 119.
[331]Haysom 2010.

increases during the Neopalatial period, in loci such as caves and peak sanctuaries[332]. Additionally, the deposition of several such objects at once, as the Jouktas hoard of double-axes, takes place around this time, in a clear occurrence of redundancy. This phenomenon has been described as a way of systematizing and standardizing rituals[333]. Therefore, we might be witnessing at this time the *making of* a religious symbol in the redundancy we see operating in Neopalatial cult places.[334] Circumventing and accounting for errors in the transmission of meaning and ritual communication – ritual being a form of communication[335] – is the primary function of redundancy. Through repetition of symbols, the effectiveness of ritual is stressed, and the message is guaranteed to "get across".[336]

Such repetition, in turn, results in the conceptualization of a symbol as an icon, cementing its meaning the more it is repeated. This functions as well as an indication of a specific socio-political context,[337]in which there is a need for the establishment of solid, recognizable symbols. Furthermore, the repetition of a *theme* – aggressivity and competition – across different registers of the material culture – double axes, ex-votos, figurines – could indicate, indeed, an attempt to frame that context in order to ensure the correct transmission of content. The establishment of a well-defined context in which the actions and objects are inserted can guarantee that they are appropriately understood by participants.

5.4 Conclusions

When double-axes have been investigated, often discussed are the properties of their physical bodies, taking into account their cutting capabilities or other more evident physical qualities. Its reflective property, however, has not been explored. Evidently, affordances concern what is physically made possible by an object's set of physical characteristics, e.g. its shape, size, weight, and material. Nonetheless, the ways in which an object is employed, or the decisions people make on what to do with an object are crossed by a multitude of ideas

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[332]The majority of the double-axes known in the sites discussed in the present work come from the Neoapalatial period. For more, see chapter 4.
[333]Briault 2007, 293-4.
[334]Further evidence for the intensification of redundancy is the architectural elaboration and specification of the ritual space that happens in the Neopalatial period (Briault 2007, 294).
[335]Kyriakidis 2005, 29.
[336]Briault 2007, 293.
[337]Possibility raised and briefly explored by Cherry (1974).

and perceptions humans have[338]. The affordances of an object might inspire social agents to relate to it in certain ways or to instrumentalize such an object as a symbol. One affordance mentioned earlier is that of reflectiveness, a product of the shiny and smooth metal surface of votive and ceremonial double-axes. Reflective surfaces, such as metal double-axes, have a long tradition of being thought of as devices that somehow interact with one's spirit or the extra-natural world.[339] It is reasonable to expect that these phenomena are most certainly related to structural neurological ways in which the human brain processes visual data in interactions with reflective surfaces, sparkling psychological responses, cognition, and self-awareness[340]. This is a possible explanation as to why there are so many different attitudes toward reflecting surfaces across a great number of human societies, both western and non-western, distant temporally and geographically. Examples such as the Shinto Shintai mirrors[341] demonstrate how the reflective surfaces of objects (lakes, water-filled bowls or mirrors, etc) provide a myriad of possible interactions with an object, such as bowing, inspired by its physical reflexive capabilities. While it is difficult to assess what belief Minoans held about reflective surfaces, if any, it is conceivable that the shiny aspect of double-axes – and the mirror-like appearance of the more smooth specimens – would not go unnoticed by them. For this reason, the discipline can only benefit from further studies on the reflectiveness of such objects.

Double-axes, as figurines and ex-votos, reveal in their materiality that the rituals taking place in peak sanctuaries during the Neopalatial period were performances framed by a conflicting, competitive social landscape. If the elite responded to the organization and popular manifestations of "the rest of the people" – as has been argued before in the case of

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[338]For instance, horseshoes have several uses, from its obvious one in protecting hooves from wearing out, to decoration of western-themed restaurants. Still, layers of superstition, belief and symbolic perception that see the object as capable of – affording – the warding off of evil and bad luck has rendered principal its apotropaic use, second only to its originally intended function.

[339]Examples are many: Initiates in the Mbiri-Bwiti religious movement claim to see their ancestors in mirrors during rituals after the consumption of psychotropic eboga, *Tabernenthe eboga* (Fernandez 1980, 28-29); Many believers of kardecist spiritism, a 19th-century religious french movement tremendously popular in Latin-America, employ mirrors or bowls with water in regression rituals to visualize one's own past-lives in the mirror; Once more in Africa, there is a general belief that the dead dwell behind or beneath reflective surfaces, as lakes, streams, and pools (Fernandez 1980, 30); Practitioners of Japanese Shinto believe mirrors to be *shintai*, the material place Amaterasu – curiously enough the Sun Goddess – resides in. This, in turn, causes them to bow before the mirror in ritual manner (Dumpert 1998, 27-37).

[340]For more see Fernandez 1980, 35-39; Butler et al, 2012; Altschuler & Ramachandran, 2007.

[341]Dumpert 1998, 27-37.

the palatial institutions as a response to the emergence of the multitude[342] – it is likely that at the dawn of the Neopalatial period, the elite reacted against the reconfiguration of MM society. This response seems evident in peak sanctuaries by the adoption of an elite material language (e.g. the high-quality votives, architectural elaboration reminiscent of elite buildings, objects inscribed with Linear A, and so on). This adoption could have occurred spontaneously by the remaining social segments – a perspective that entails more agency on the people's side – or was imposed by the elites via more forceful methods. Both processes could have taken place concurrently as well with varied intensity from place to place and time to time. The taking on of an elite material repertoire and vocabulary for the mediation of competitive and social discourse occurring at peak sanctuaries is particularly clear in stone vessels. In a broader sense, stone vases are a medium known to be used for the reproduction of elite discourse during the Neopalatial period [343], hence, requiring further investigation.

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[342]Vavouranakis 2018.
[343]On the Role of Stone Vessels in Neopalatial Elite Propaganda see Logue 2004.

Chapter 6. Minoan stone vases

The ability to carve stone blocks into almost any shape has resulted in an astonishing variety of objects made from it. Comprehensive studies of stone-carved vessels and other stone objects exist, and we draw information regarding typology from these, such as Warren's and Bevan's.[344] Stone has been used as a material for object manufacture since the Stone Age. But the establishment of the craft as such, resulting in a material culture that is understood as Minoan, occurs only around 2600 BCE, in the EM II period.[345] Stone vase production is seen throughout the Bronze Age, and an observable burst in production takes place in the Protopalatial period, with the chisel being the favored instrument for working soft stones and drilling the main technology. Furthermore, in the Protopalatial period, uniformization beings to appear, expressed in a predominance of serpentine stone use[346], and in the Neopalatial – with the reaffirmation of a palatial way of life and recovery from setbacks at the end of the Protopalatial[347] – the craft hits its zenith. In this period, stoneworking is attested in many places, but most notably in palatial contexts, such as Mallia, Knossos, and Zakros[348].

Considering the myriad of objects made of stone that possess an overall block shape, a choice has been made to restrict the scope of the artifacts concerned in the present work, further narrowing the broad category of block vases. The selected types are refined, and sometimes boasting inscriptions, (1) the **offering/libation tables**, (2) **the game board type**, blocky, flat objects with a number of small surface concavities, and (3) **kernoi**, block vases that possess some considerable "holding/containing" capacity, being similar to a grouping of cups or recipients(Fig 21).

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[344]Respectively, 1969 and 2007.
[345]Warren 1969, 1.
[346]Bevan 2007, 57-9.
[347]Evely 1993, 181.
[348]Evely 1993, 182.

Fig. 21 (Left) Libation tables. (Center) Kernoi of different types. (Right) Game board type. Modified after Warren 1969 (left and center); Karetsou 2012 (right).

the broad group of kernoi range from flat stones with holes – similar to what is here called the game board type – to more elaborate types, such variety often resulting in a terminological "overlap" and many rudimentary blocks with holes being classified as libation tables type or kernoi[349]. While kernoi originated as a type around EM II/III[350], libation tables appeared, if not around the same time, somewhat later, in MM I[351]. All the aforementioned types are reported during the Neopalatial period in settlements[352], but also in cult places, such as peak sanctuaries, where many have been found, and caves[353].

Fig 22. Libation table IO Za 2 from Jouktas with Libation formula. After Karetsou,Godart & Olivier 1985.

The presence of inscriptions (Fig. 22) in many alongside the use of serpentine stone make it safe to attribute a Neopalatial date since its when this stone peaks in popularity, as mentioned above. This does not imply that the deposition of stone block vases at peak sanctuaries only

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[349]Karetsou 2012, 81-2.
[350]Warren 1969, 12. Different types appear at different times. Infra Warren 1969, 11; 62.
[351]Warren 1969, 11; 62.
[352]Such as Knossos and Zakros.
[353]Adams 2017, 66.

started in the Neopalatial period[354], and it seems to have begun already in the Protopalatial period. As in this study, due to the immense variation between block vases, they have been interpreted in several different ways. As a trend during the first decades of scholarly investigation, their attributed role was grafted from posterior periods. Xanthoudides understood that it is in the Minoan kernoi that the origins of later Greek practices are found. A possible use for such vases could have been, then, the dedication of first-fruits[355], which has survived in the literature as the most preferred possibility[356]. However, as a wide category of objects, some with numerous cupules on their surface are thought to be related to games of some sort, thus what here is labeled game board type.[357]Others, more reluctant to draw parallels between Bronze Age and later Antiquity have proposed alternative uses, such as calendrical systems[358]. In this way, the separation between types within the category of block vases is a response to these observable contrasts, such as blatant differences in shape, number of holes, energy dedicated to working the stone, and so forth. So much variation is a clear indication that, although all "blocky" in shape and all appear at ritual places, we are looking at objects with different functions.

6.1 Affordances and Constraints

Logically, objects of **kernos-type** could hold within their holes many different substances in small portions. This is in accordance with the interpretation that they were meant to receive offerings in portions, be it liquid or grains. The multiplicity of concavities suggests that a variety of offerings was intended since for one substance, one hole would be enough[359]. This is its basic affordance, drawn from its simple features. Its material, however, provides and prevents some interactions with this object. Stone, being heavy, makes displacement difficult, but that is circumvented by the usual and relatively small size of such objects, enough that they could be moved around. That, however, is challenged by the underside of some

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[354]Adams (2017, 66) states that these vases do not appear at peak sanctuaries prior to the Neopalatial period. In reality, the Ash altar at Jouktas and its protopalatial strata yielded libation tables, kernoi, alongside foundational double-axes. See Karetsou 1981, 2012.
[355]Xanthoudides 1906, 20.
[356]Warren 1969, 11.
[357]Karetsou & Evely 2012, 83; Evans 1930, 390; Hillbom 2005, 82-3.
[358]Herberger 1983; Hillbom 2005, 82; Ridderstad 2009; Whittaker 2002.
[359]Xanthoudides 1906, 15.

kernoi[360]. The rough bottom surface of some kernoi is indicative that this side was not meant to be seen. The harsh texture renders this side unpleasant to the touch, perhaps a subtle inhibition to movement. On the other hand, the fact that many count with curvilinear patterns and circular inlays as decoration[361] is indicative that if not for full-on display, they were meant to be seen. That is even more true for **libation tables**, masterfully carved, and many times boasting inlaid and carved decoration identical to the *kernos* block-vases, further strengthening their link.

During the Neopalatial period, specimens increased in size, and are more markedly decorated with such motifs, besides Linear A inscriptions[362]. One evident affordance is their capacity to hold substances, be it liquids or portions of grains, foods, etc. It is the presence of concavities and holes in these vases that allows for their interpretation as recipients of offerings. More on this affordance of block vases will be discussed in the investigation of their iconic relationship of similarity. Concurrently, although an affordance of containment is evident, their ample distribution across many sites is challenging to the investigation of their constraints, and one must assume that, since their appearance is more common at sanctuary sites (caves, peak sanctuaries, and domestic shrines), as for most of the ritual apparatus, cultural constraints and use-taboos were applicable for these specific contexts. Nevertheless, the fact that both types often appear at the same sites is, however, telling that their distinctions extended beyond the number of holes and surface treatment. Some possess a large number of minuscule concavities, in fact so small that their holding capacity is clearly insignificant unless someone wishes to offer incipient amounts of hundreds of different substances. The objects in question are the **game board type**. Such small concavities offer a clear restriction to the action of offering or deposition of significant amounts of liquid or food. On the other hand, such mini-holes could afford to be bases for placing pieces of a game[363]. This provides some evidence of constraints that might have been in place. Their purpose, in this way, was entirely distinct, the types being completely different objects. Still and all, even if all types were used for libations and offerings, their decisions can only signify that some constraints to their use were in place, such as who was allowed to handle and utilize such vessels, by means of imposed social conventions.

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[360]For instance, both kernoi from Jouktas published by Karetsou, 1981.
[361]Warren 1969, 12.
[362]Warren 1969, 61.
[363]Whittaker 2002, 75.

6.2 Iconicity

Being both block-shaped vessels, **libation tables** and **kernoi** share the most visual similarities with each other. Their closest iconical association with an object of another kind is with their ceramic counterparts (Fig. 23). Their long lifespan from the Early Bronze age to Late Antiquity and Roman times and frequent appearance at ritual sites is the source of their assignment as ritual vessels, meant to receive first-fruits. Ceramic Kernoi, indeed, appear to very clearly have possessed this function, as the many smaller "factor-vases" that make up the whole object are often rendered as miniature cups, amphorae, and receptacles[364]. The accurate rendering of these miniature components that collectively form kernos demonstrates a clear intention of echoing the function or role of their life-size counterparts. Few other reasons can be given as to why produce a miniature amphora that holds some liquid content if not to echo the real amphora's storing and holding capabilities.
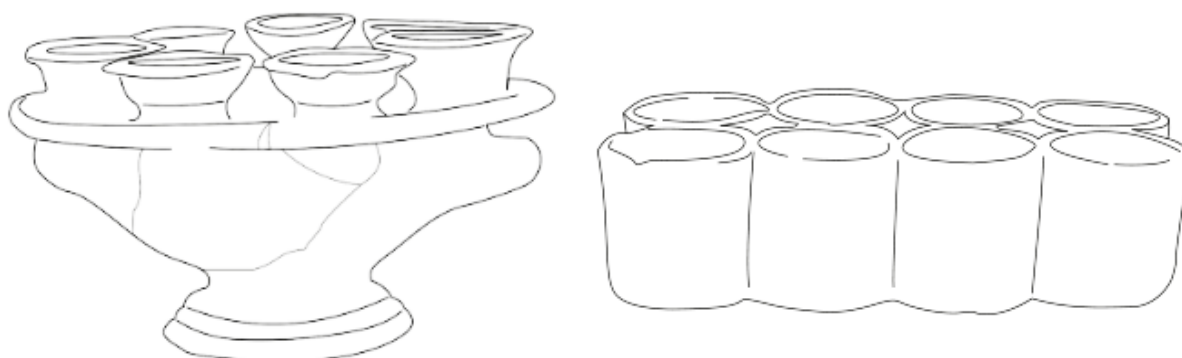

Fig 23. (Left) Ceramic Kernos from Hagios Nikolaos. (Right) LMI Stone Kernos from Palaikastro. Author after Xanthoudides 1906; Warren, 1969.

The capacity of **kernoi** and **libation tables** to hold materials is rendered possible because, in many ways, block vases are negative consumption vessels. Here the territory between physical affordances and physical characteristics overlap and once more there appears a reminder of the multiplicity of semiotic relationships taking place in different registers at once. While many have a conical negative interior space similar to a cup, others, shallower, such as libation tables, correspond to the impression of a bowl. A three-dimensional consumption vessel delimits a portion of the space, making it possible to

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[364]Xanthoudides 1906, 16.

store liquids or food in a manipulable way – since the walls of these objects "cut" the space and circumscribe a content. These vases share the same "storage" capacity, but, being blocks, do not promote consumption or mobility of the content that occupies the cavity. Kernoi and libation tables are, in a way, the impressions that would be left by a consumption vessel, their negative, similarly to modern (and ancient) gesso/plaster moulds utilized in the confection of ceramic vessels (Fig.24).

Fig 24. Plaster mould of a clay bowl and the bowl made of clay-slip it produces. Photography from Etsy shop Etisanat, number EK076[365].

In sharing an iconic relationship of similarity with consumption vessels such as cups and bowls, block vases reveal themselves as potential candidates for fulfilling a role very likely related to a contextual frame of consumption. The comparison to plaster moulds helps visualize the stability of the shape of block vessels, solid and robust. In these qualities, the immobility of a heavy block inscribed with a negative shape consists of an obstacle to the manipulation of the vessel, but not the consumption of what might be placed inside it. In resembling a matrix, from which a consumption vessel can be drawn and created, block vases with negative spaces such as concave cavities, evoke an image of consumption and at the same time, deny the collective in taking part in such consumption, for the vase cannot be

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[365]Access: https://www.etsy.com/fi-en/listing/1043022534/plaster-mold-for-large-bowl-21x8cm-ek076

shared and passed around, but is to be left stable, dedicated for a special individual (likely, a divine being). The notion reinforced here is that of a delimitation of the offering area to a stable, fixed object, such as the libation table. This finds parallels in many religions, where food and ingredients are left as depositions, and moving or interfering with them is frowned upon[366]. In such wise, the shape promotes a constraint and reinforces social attitudes towards the object and offerings deposited in it. While consumption vessels, with many iconic relations to block vases of kernos and libation table types, are movable, the stone vases can, with their materiality, emphasize a delimitation of a special area for offerings and discourage the handling of the object. The demarking of a special area is a characteristic of dedicatory offerings, as it reinforces social taboos and conventions[367] (Fig.25).

Fig 25. Exemplar case of demarcation of offering space. Umbanda offering of food and feathers in a clay bowl, cigarettes and alcoholic beverages on top of a red cloth deposited in a spatially demarcated space, traditionally at crossroads. Photo: Antonio L. Teixeiras, Olhares.com

[366]These ritual offerings are a routine procedure in many religious practices. Such offerings are required by divinities, to assist in spiritual and material matters (Hubert 2011, 96-9). They can also be given as retribution and return for what has been bestowed by the deity, as a prosperous harvest. In this sense, the placement of an offering embodies the relationship of exchange between divinity and humans, a pact of "I give you so you may give" (Nagy 2016). Moreover, they may be only a small part of a broad, more complex ritual, such as initiation rites. See Myscofski 1988 for the case of food preparation and offering in female initiation rites in Afro-Brazilian religions.
[367]The marking of space and delimiting of an offering area is a well-known reminder to not interfere with the objects. Social conventions might be in place and reinforce this constraint, such as stories about curses and tragedies that might fall upon meddlers (Rocha 2022; Dorneles & Dos Anjos, 2021).

This iconic relationship to consumption vessels strongly suggests that social agents would have perceived these objects in a broadly similar fashion. But the differences between them, namely the fact that they constitute in a way the reverse of each other – and the delimitation of space and challenge to move suggested by their materiality – mean that social agents must have been faced with cultural constraints as which individuals were allowed the use of receptacles for the consumption by a deity (**libation tables** and **kernoi**) and consumption vessels utilized by the community (cups, chalices, and bowls). These may include the prohibition of whom may interact or manipulate such vessels and allowance only to a certain group.
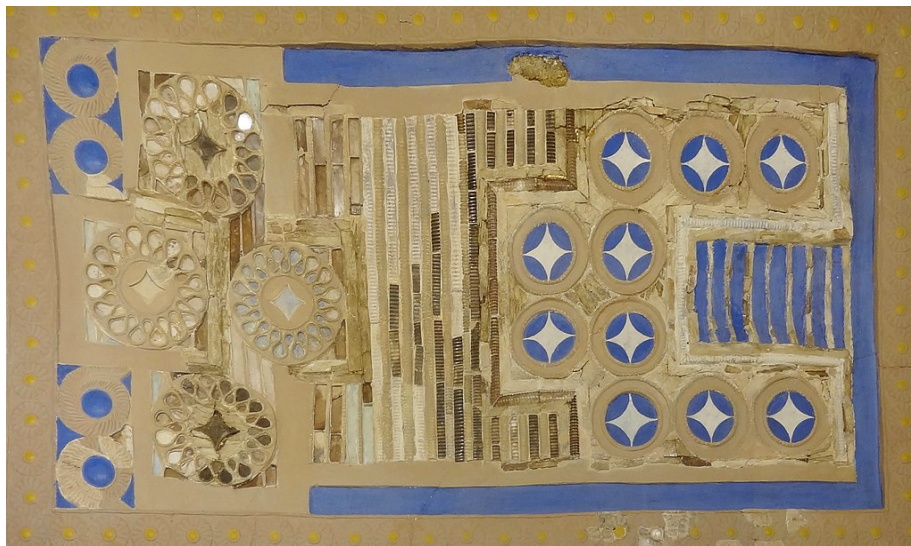

Fig 26. The Knossos board game. Public Domain.

At the same time, variation still exists. As stated before, the looser rendering of receptacles in many Minoan stone kernoi allows for other alternative and more flexible interpretations that might shed light on their active role in ritual and social interactions at peak sanctuaries. The other type of kernos, here previously referred to as **game board**, could have supported only minuscule portions of liquids and grains. Another and more likely use would be the support of other vessels, such as lamps, or as mentioned above, movable pieces. The resemblance of its surface with their multiple holes is to the overall distribution of houses on a board game (fig.26). Another iconic association of these flat stones with multiple concavities is to celestial cycles and, albeit anachronically, even to modern diagrams representing planetary or lunar phases (fig.27). In fact, Minoan stone kernoi have been

suggested to be **calendars**[368]. These iconic relationships of resemblance and visual – but also tactile and related to other senses – are to be further explored, reappearing in the discussion of other semiotic relations these objects share among themselves and to other categories of objects.
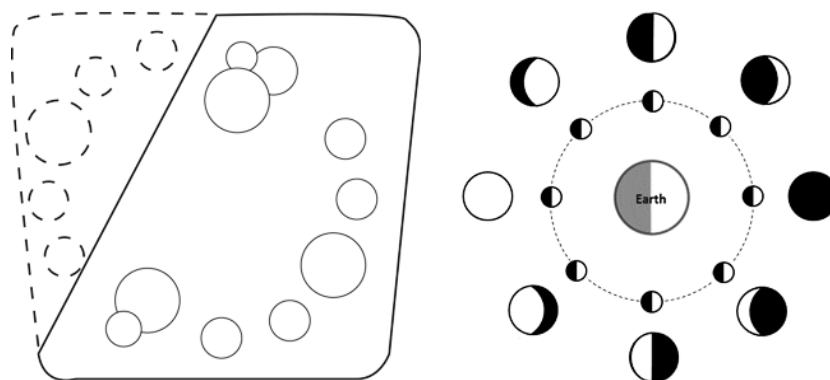

Fig 27. Left: Kernos found by Evans (1930), after Pliakos 2021. Right: Modern diagram of Lunar phases, public domain.

6.3 Indexicality

Proceeding now to the indexical relationships of block vases, namely physical, spatial or temporal relations it is important to remember that, coming from the same context, many of these are shared with double-axes, thus having been previously examined. Thus, this allows for a more summed-up analysis of indexical relationships. Some instances of overlap between indexical qualities of stone haves and double-axes are, for example, the case in which the broad material assemblage of peak sanctuaries – figurines and ex-votos – was examined.

Contiguity, causality, and factorality

A first indexical relation is that of contiguity. As said before, these vases occur in ritual contexts, such as caves, domestic shrines, and peak sanctuaries[369]. But also in other contexts and many have been found on streets or thresholds and entrances of buildings, many of these

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[368]Ridderstad 2009; Pliakos 2021.
[369]Adams 2017, 66.

being of the kernos type addressed in this study as **game boards**[370]. At Jouktas, stone kernoi of this very type appear at the foundational layer of the protopalatial ash altar, associated with clay bucrania, double-axes[371], clay bird figurines, handleless cups, animal bones, pottery fragments (approximately 60% corresponding to libation vessels) and a thick layer of ash and pebbles[372]. Evidently, a context heavily symbolically charged. Moreover, as noted by the excavator, the two stone-kernoi are not alone in representing the category in this context, as more than 500 fragmentary stone offerings are present, many of which correspond to libation tables of various sizes. While the typology of the Protopalatial kernoi found at Jouktas is challenging, categorized by Karetsou as **libation-type**, but fitting more in the description of **calendrical devices/game boards**, at Neopalatial Petsophas, stone tables certainly for **offerings** are frequent[373]. Given that in other instances block vases such as kernoi and libation tables are found at palatial sites – such as the Malia table – or ritual sites, it is evident that they played a role as cult equipment. The nature of such participation in ritual performance, however, is less straightforward, with multiple hypotheses existing – e.g. as seen above, gaming board, offering table, and calendar.

The causal relationship, a second indexical relation, of block vases is less clear, once in the dynamics of sign/referent we do not know precisely what the vases stood for, as much as we have possibilities for uses and functions. Nevertheless, the causal relationship between the vases and their craft seems to reinforce an increasingly more intense relationship between the elite and such objects. Since stoneworking was a craft particularly associated with palaces, it is safe to assume that many of the objects found at peak sanctuaries during the Neopalatial period were offerings sent by the palaces or individuals of the elite. The peak in the number of types and use of exotic stones concentrated in workshops at Malia, Knossos, and Zakros explicitly demonstrates that the elites were particularly interested in expressing their ideology through this media[374]. The further association between the craft, product, and elite is revealed in the fact that many of the types utilized in the Neopalatial period are argued to be destined for ceremonial use[375]. In fact, the blossoming of new types is indicative of complexification

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[370]For the placement of such types see Hillbom 2005, 65. The main locations are stairs, courts, streets (outdoor areas), and shrines or sanctuaries).
[371]See previous chapter (5).
[372]Karetsou 2010, 89-90.
[373]Supra 242. Driessen 1994 and Davaras 1972.
[374]Logue 2004.
[375]Evely 1993, 181-6.

of ritual practices[376], as new ritual actions might require new and specific devices. Other stone-carved vases, such as Rhyta with reliefs establish a dialogue between ritual action at peak sanctuaries and stone media, in which stone vases appear to put forward a series of performative actions – ritual and martial – and the media being a favorite for such depictions[377].

While **offering tables**, masterfully carved, are very likely to come from specialized workshops, thus, being linked to the elite in a clear manner, the other objects discussed, **calendars/ or game boards** have a less straightforward association with the Elite. This connection is, however, traceable. The existence of ivory gaming figures/pieces suggests that games indeed exist and were likely prestige items[378]. Board games are, among other things, competitive leisure activities. Usually, these take the shape of disputes, conquest, or races on the board, between players. Another way of understanding games is within the broader family of sports activities, arguably the most clearly competitive form of performance. The contextual study conducted by Whittaker – in which block stones with depressions from a variety of sites were analyzed – concluded possible that during the Neopalatial period standardization of ritual and centralization of religious activity led these objects, which she interpreted as game boards, to be utilized in the affirmation of elite power across many Neopalatial settings – funerary, public, administrative and cultic[379]. Moreover, games being a time-consuming, non-productive activity, they can be perceived as representative symbols of the elite that spends time occupied with such leisure activities. In this sense, game boards might be symbolically bonded to the elite[380]. Still and all, the context discussed and in which they very often appear, ritual spaces – peak sanctuaries – places these objects as likely having at least some religious/ritual dimension. At the same time, albeit potentially elite-related objects, they are still found in other contexts, such as courtyards and on streets, which attest to a popular dimension. Further analysis might explain their appearance at these and at sacred spaces and how these objects played into ritual.

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[376]Bevan 2007, 133.
[377]For Stone carved vases and Neopalatial propaganda see Logue 2004; For the relation between stone vase iconography and peak sanctuaries see Haysom 2021.
[378]Whittaker 2002, 83.
[379]Whittaker 2002.
[380]Whittaker 2002, 83.

Fig 28. The Queen plays Senet. New Kingdom Painting in the tomb of Egyptian Queen Nefertari (QV 66) ca. 1279-1213 B.C. Public Domain.

Examples of instrumentalization of games and the relationship between leisure, game activities, and the elite are plenty, such as medieval chess. The game itself is centered around an elite thematic universe with pieces being the King, Queen, and so forth. But perhaps the best suited to illustrate the case is the Egyptian Senet, which demonstrates how games might operate as reflections of both the social realm as to divine conceptions. Extensive research and availability of sources reveal that the game possessed a profoundly sacred dimension, mirroring the journey of the soul into the afterlife[381]. Appearing as a popular pastime, the trajectory of Senet is very clear, migrating towards a strong religious connotation and becoming increasingly mystical and elite-marked, frequently figuring in royal iconography (Fig.28). As game boards have been found as tomb offerings in Egypt, their amuletic significance is further highlighted[382]. Moreover, that they were used as game boards does not exclude ritual use in places devoted to ritual activity. As in Egypt, Minoan game boards could have been dedicated *as* offerings, presented as prestige items given their sacred dimension and elite connotation. Another way through which the elite could have instrumentalized objects such as kernoi of this type is discussed in a study that binds two existing hypotheses,

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[381]Piccione 1980, 56.
[382]Piccione 1980, 58.

the game board interpretation, and the calendrical device. After all, as seen in subchapter 6.2, the similarities and iconic relationships of such objects afford their use as both. The **game board** and the **calendrical device** interpretations can coexist, and in fact, models have been developed in which these stone blocks are both. Games can be based on observations of nature and the celestial cycles, which in turn frequently influence perceptions of the spiritual, supernatural world[383]. This means that a game that illustrates magical dimensions, for example, the afterlife, is intrinsically calendrical since notions of the supernatural world can be commonly drawn from astronomical knowledge[384].

It is very possible that the palace and elite likely controlled the calendar of festivities[385], as it is suggested by the increasing uniformization of religion during the Neopalatial period. To regulate the calendar and determine when ceremonies are to happen, astronomical observation is required, and it has been shown that peak sanctuaries might have been some places for the conduction of these observations[386]. As a consequence, the interpretation of some objects as game boards based on calendrical systems only strengthens the idea that these objects possessed heavy palatial connotation and reveals yet another manifestation of palatial-elite involvement with peak sanctuaries. This leads to the possibility that these objects were a part of a larger set of ritual activities[387]. If not as mere offerings, the possibility of utilization of such gameboards *in situ* cannot be completely excluded, with games being played at peak sanctuaries, especially when taking into account that other competitive activities might have been practiced there, such as boxing (see the previous chapter). This set of multiple different ritual activities could be a way through which the elite legitimized their authority as mediators – through the organization of ceremonies – and replicators – through offerings and goods – of the cosmic order[388]. Further strengthening this hypothesis is the possibility that kernoi, cupboards, or stone gameboards were, indeed, utilized in ritualized gaming practices is the possibility that they could have been used as ceremonial, offering

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[383]For instance, see Whitley (1989) for an example of how astronomical knowledge can reflect on the shape of ritual and on religious beliefs.

[384]As an example, see Martínez (2014) for the case of the influence of astronomy on Egyptian board games.

[385]Ridderstad 2009.

[386]See chapter 4 for the case of astronomical observations at Pyrgos, Traostalos, and Petsophas. Blomberg, & Henriksson 2003, 133-34.

[387]For examples of games employed in ritual practice see Stern (2019). The author mentions the game boards from the Hill of Agios Georgios in Nicosia, the Royal Game of Ur, and the already mentioned case of Senet and its funerary associations.

[388]Ridderstad 2018.

tables by officials. Offerings, in this sense, could have been done in game fashion, with libations and first fruits being deposited in similar ways to how the then ritualized game used to be played. Concurrently, in everyday life the game kept being played by people on streets and courtyards as a leisure activity, explaining their appearance in non-ritual contexts[389].

Another way through which indexical qualities of stone vases present themselves is through a third relation, that of factorality, that is, being a factor of a larger whole. As already stated, the stone block vases in question belong to the large collective of items identified as "peak sanctuary assemblage". In this sense, the examination previously conducted on those items applies when discussing the whole to which stone vases belong to. This said, factorial relationships can also manifest a relationship to an activity[390]. In this way, block vases could have been imprinted and perceived as a factor in wider contexts. For the **game board** type, associations to the thematic universe of such a game, and to the social context in which this game was played might have been in place. As for **libation tables** and **kernoi**, they might take on the significance of the physical offering and of the gesture and act of offering themselves.

6.4 Conclusions

While some stone vases such as offering tables and kernoi appear to have an evident function as such, the variety of types demanded further investigation. As a result, the interpretation of vases referred to as **kernoi** that are considerably reminiscent of consumption vessels in shape, and **libation/offering** tables has been reinforced. The analysis of semiotic relationships has demonstrated that, in sharing visual, spatial, and sensorial similarities to cups, bowls, and other recipients, these stone vessels were likely utilized as recipients of offerings. Other stone objects, **kernoi** here referred to as **game boards** have been understood as such due to their strong iconic association with other game boards, for their affordances as boards capable of supporting gaming pieces, among other factors. It was evidenced that these boards may have been used in games that reflect or mirror notions and ideas about the supernatural world or the Minoan cosmology. This, in turn, is likely to be at some level based on astronomical knowledge and natural cycles. With these conclusions it is clear that the

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[389]Hillbom 2005, 85.
[390]Knappett 2005, 155.

interpretation of these as calendars and the hypothesis of board games do not contradict each other and, in fact, they are complementary, explaining the similarity of the distribution of holes on the surface of these kernoi with both celestial diagrams and the surface of boards.

The use of some of these objects as game boards does not deny, however, their role as receptacles for offerings and libations. The ample typology observed is sufficient to conclude that what is conveniently grouped as block vases in fact represents an ample spectrum of block-shaped objects with different functions. One has to be in touch with the reality of the rather extreme diversity inside this group of vessels, likely a result of several different, non-exclusive, applications. One way in which these objects would be both boards and vessels for offerings appears in the possibility that boards from a game of sacred and cosmic status may have been gradually incorporated into ritual procedures, becoming part of ceremonies such as libations. Moreover, if they were not used in such a way, they could have been played. Playing a sacred game still allows for an understanding of them as ritualistic important, but also positions them in accordance with broader, general themes observed at peak sanctuaries, such as competition. Both an elite aspect and a competitive nature of games seem to fit particularly well the Neopalatial scenario at peak sanctuaries, as it would allow for yet another media for dispute and competition between social agents. At the same time, there is no direct evidence of boxing practice taking place at peak sanctuaries. The possibility, however, has been suggested in an implicit way[391]. Evidence for an association between peak sanctuaries and boxing, nevertheless, exists. Votives of arms with boxing gloves have been identified and the stage in which boxing appears in stone-vase reliefs has a strong resonance with the "peak sanctuary setting" in iconography.

Returning to the offering tables, objects with more clear participation in rituals such as the pouring of libations and dedication of first fruits, their centrality to ritual is expressed in their materiality, as determined by the examination of iconic and indexical semiotic relationships, as well as by their evident affordances and constraints. In previous chapters, it has been mentioned that Colin Renfrew determined the liminal zone as a fundamental trait of ritual sites[392]. Libation tables express liminality via a set of unique physical attributes: they create a fixed zone in which they are placed; they delimitate space three-dimensionally with intentional clear lines, a result of intense work of the material, and they count with

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[391]Haysom (2018)
[392]See chapter 3.

inscriptions, a case that will be developed soon, but that for now suffice saying adds to them a symbolic charge powerful enough to create a threshold between the mundane and the sacred. What is being argued here as a result of the investigation is that beyond being simple offerings or recipients for offerings, libation and offering tables constitute a ritual space or landscape on their own, not unlike their Egyptian counterparts[393]. Understanding that these stone vases constituted a "materialization of the immaterial", renders it easy to appreciate how impactful these items could have been in the disputes between social agents taking place at peak sanctuaries.

6.7 One last case: Inscriptions

Having examined most of the semiotic relations that cross artifacts such as double-axes and stone block vases, one last remaining artifactual category requires attention, both for its value for the appreciation of the objects contiguous to it, as to what it allows for the understanding of Minoan ritual and society. The Minoan language remains undeciphered, many have dedicated attention and work to understanding the meaning of inscriptions, mainly the ones in Linear A, one among other Minoan writing systems, but no conclusive results appear to have been achieved, the same applies to attempts at translating or interpreting the libation formulae found on stone block vases[394]. Due to the limitations imposed by the fact that we do not know what the inscriptions say, one must turn to the inscriptions seeking to appreciate them for the artifact they represent in themselves. Inscriptions, of course, can be many things. When placed on votive offerings, possibilities include magical formulae, dedications, signatures, and so forth. Without dwelling on these virtually infinite possibilities and how they unravel, a turn to the materiality of inscriptions might prove useful. Both block vases, mainly of the libation table type (See cover figure for PK Za 11 inscribed libation table from Petsophas), and double-axes often appear inscribed with Linear A[395](Fig.29). The first have already been examined in depth in a study by Davis (2014), in which inscribed stone vessels from different contexts, but mainly peak sanctuaries, are inspected.

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[393]A study on how Egyptian offering tables can be understood as sacred landscapes by Esmeralda Lundius (2020).

[394]An attempt at interpreting some signs from the Libation formulae (octopus and double-axe) is Grumach's 1968 "The Minoan libation formula – again".
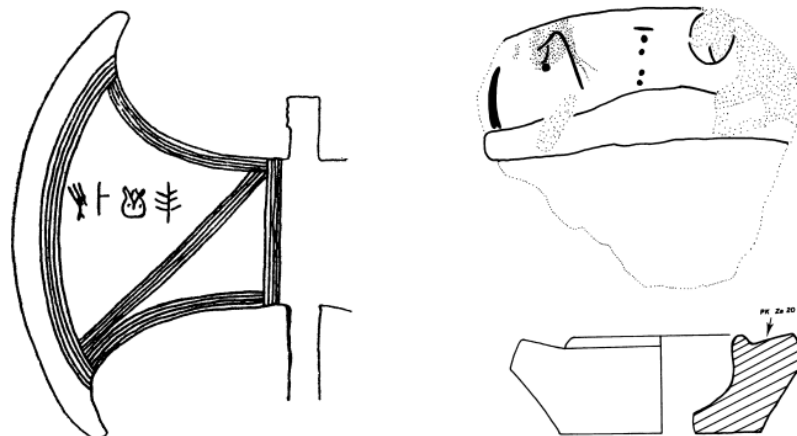
[395]Whittaker 2005, 30.

Fig 29. Left - Double-axe with Linear A inscription after Pope 1956; Right - Fragment of libation table with Linear A inscription from Petsophas, after Driessen 1994.

In the approach proposed here, these constitute artifacts within artifacts, thus, all three objects share contiguous, iconic, and other semiotic relationships with each other. The double-axe is itself an ideogram in the Minoan script and often appears in inscriptions on the surface of offering tables. Circularly, inscriptions appear too in double-axes. As seen, both types not uncommonly had inscriptions, and in libation/offering tables they are so common in the Neopalatial period that these inscriptions are often called Libation formulae[396]. Although literacy is frequently discussed from a point of view that emphasizes its close relation to the elite and how it must have played a role in their legitimization[397] – due to the high concentration of instances where writing appears within a palatial or elite setting– another aspect of literacy is of relevance, their sacred dimension. Their frequent appearance at peak sanctuaries, such as Petsophas[398], and association with cult paraphernalia attests to a religious dimension to them. A link with administrative centers does not mean that the writing system was only employed in administrative functions. In fact, its appearance across many ritual sites only strengthens the idea that writing was deeply intertwined with the sacred[399]. In the ritual arena, offerings with inscriptions are known to be used as a means of highlighting the

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[396]Sir Arthur Evans (1935, 656) called these inscriptions "dedicatory formulae", a more prudent designation as it avoids restricting their meaning to one form of dedication, such as libation.
[397]Adams 2017, 162.
[398]For example, two fragments described by Davaras, 1972; one fragmentary inscription from a Libation table described by Driessen, 1994, which he vaguely dates to MM IIIB - LM IA.
[399]Karetsou et Al. 1985, 144.

status of dedicants[400]. Knappett has elaborated already on how the aesthetic dimension of these objects that we today appreciate is likely indicative of their value in Minoan times. In fact, the value and artistry these objects are embedded with are powerful enough to take them to the realm of magical objects[401]. Moreover, the power of such inscriptions is demonstrated by a possibility that has been raised by Whittaker (2005), that of pseudo-writing. A bronze double-axe from the Arkalochori cave seems to refer to actual writing systems, Linear A and Cretan Hieroglyphic but amounts to no apparently meaningful sentence[402]. Instances of imitation of writing merely to the end of increasing the perceived value of an object are widely known[403]. However, inscriptions on stone vessels appear so far to be meaningful, containing names[404] and ideograms for offerings such as oil[405], and the case of pseudo-writing, if applicable, can only be proven and further discussed through a reassessment of the inscriptions and determining if any constitute the case of false writing. The possibility of nonsense inscriptions serves to highlight that the meaning of an inscription might have not been *as* important as the inscription itself. In fact, inscriptions appear to have been so powerful in reconfiguring the nature of an object, that some have referred to purposefully broken offering tables as having been killed[406], a suggestion that they, in fact, were magical to a point of belonging to a whole different ontological category.

If capable of rendering an object a living thing or not, one capacity inscriptions are sure to have possessed is of evoking and calling in for participation in rituals that likely required engagement and performance. As one of his contributions to the discipline, Warren helped define Minoan religion and ritual by their most active and dynamic qualities. In his work, he framed ritual actual as a proactive reaction towards the natural world, with all emphasis on the engaged, participatory and performative aspect of such reaction. If what is said about continuity between the Middle and Late Bronze Age, and the later Greek periods, can be applied to attitudes towards inscriptions, then the ones found all over cult paraphernalia from

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[400]Schoep 1994, 20.

[401]Knappett 2005, 164.

[402]Whittaker 2005, 32.

[403]Examples range from nonsense later greek inscriptions on vases to Minoan copies of Egyptian scarabs with gibberish hieroglyphs. See Panagiotopoulos 2013; Whittaker 2005.

[404]For instance, the inscribed neopalatial offering table **SY Za 2** (Davis 2014, 367) from the Kato Syme rural sanctuary has in its long inscription an *hapax*, tentatively reconstructed by Davis as the name *Sumatu*.

[405]Davis 2014, 105.

[406]Davaras (1972, 3) is convinced they were deliberately broken while Schoep (1994, 19) is not so sure, but says if that is the case, it could be because of the inscriptions, a case of "killing" the object.

peak sanctuaries indicate direct ways of interaction between social agents and material culture. As prayers or magical formulae[407] they might have evoked the literate members of the audience to engage with them, as was the case for later inscriptions on Archaic and Classical Greek dedicatory objects. This represents further possibilities for ritual performance at peak sanctuaries. If the inscriptions acted as markers or signatures of donors, they might have represented an early form of agency. In this sense, the dedicant person or group fragments itself and leaves a part imprinted in an object that will participate in a public ritual. The dedicant of such an inscribed object, a fragmented, partitive entity[408], is " remotely present", both spatially and even temporally. While an offering might be commemorative, consist of a request, or even express gratitude for something granted, it also stands as a remembrance, memory and the votive is, in this sense, a means of self-glorification[409].

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[407]The standard interpretation of the inscriptions. For more see: Grumach, 1968.

[408]Fowler (2004, 5) discusses the property of partibility of a personhood, that is, the ways in which an "dividual being" passes through reconfiguration and can be extracted and given.

[409]Mauss 1902.

Chapter 7. Conclusion

" There is no purely actual object. Every actuality surrounds itself with a
fog of virtual images." — Deleuze, *The Actual and the Virtual*, 19.6

Gilles Deleuze elaborated on the concepts of real, actual, and possible. When tackling the Minoan material culture in this study, these notions have implicitly informed the discussion. Real, being what exists, encompasses the actual. Double-axes, offering tables, and kernoi are *actual* objects because they exist. Deleuze postulates that the *actual,* belonging to the real, has nothing to do with possible or impossible, its opposite being the *virtual*. According to the French philosopher, every *actuality* is involved by a cloud of *virtualities* or *virtual images*[410]. These are not only plausible but real, they exist, as do actual objects. Consequently, as some of these virtual images have been laid out and explored in this work, it can be said that if not existing actually, they exist virtually. In such a sense, this study wishes to step into this realm of virtualities. The objects discussed possess no intrinsic meaning, thus examining their capabilities, affordances, and constraints in a contextual manner represents a small movement toward understanding plausible, virtual roles they played in what Knappett defined as a human-nonhuman network in which they are entangled[411].

As a starting point, comes the insight that ritual activity as performance entails, above everything, action, and participation. These go beyond the mere engagement of participants and involve acknowledging that ritual performance is a net between ideas, beliefs, and agents, both human and inanimate. Ritual devices are not merely instruments manipulated in ritual events, instead, they consist of agents themselves, capable of engendering specific interactions both between objects and with people involved. This demonstrated the centrality of material culture for comprehending the social world, one made of people and things. These are connected through practice[412], that is action or performance. With the employment of Carl Knappett's methodology of a semiotics of Minoan material culture, some of the affordances of certain objects were investigated. The selection consisted of artifact types found at peak sanctuaries because these sites, in their social dimension and particularities, allow for a

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[410]Deleuze, 2007.
[411]Knappett 2005, 166.
[412]Haysom 2021, 24.

unique understanding of Minoan society and material culture in the Neopalatial period. The social structure of this period is yet subject to debate and many hypotheses have been offered.

The social changes experienced in the turn of the Neopalatial period, the reorganization of institutions and reconstruction of the palaces, followed by a series of natural events, indicate that this period, albeit the heyday of Minoan civilization, was also a time of rearrangement, and of new, emerging forms of social interaction. Lately, a heterarchical model of social organization has appeared alongside other models that describe in what ways Minoan society was organized at the time, and it depicts a structure in which social groups are ranked *relative* to others and can be ranked in a series of different ways[413]. The value of such a model lies in its appreciation for the heterogeneity in many instances observed in the palatial periods. While an explanation for the reasonable uniformity observed particularly during the Neopalatial period is that a certain degree of dominance and influence existed, probably from Knossos, there is at the same time some level of regional variation and heterogeneity. Heterogeneity is commonly associated with a degree of social tension, once social entities are constantly repositioned in relation to each other, and disputes for dominance and power may emerge quite often. In the Neopalatial period, such tension could be argued to be expressed as the renegotiation of these social identities, and with the appearance of claims to power and social relevance. In iconography, this is particularly true and expressed by a large number of representations of performance and themes of competition and display to audiences[414]. What is true to iconography has been demonstrated to be equally true to the artifact assemblage of peak sanctuaries, where this dynamic is evident[415].

While such tensions and disputes have been acknowledged in the literature, the overall impression given by scholars is that the elites took control of peak sanctuaries and they became institutionalized in the transition between the two palace periods[416]. The explanation through which ways such phenomena took place has not included an analysis of items typically present at peak sanctuaries in order to determine how active they were in this process. More recently, models were proposed, in which the elite – whose presence at peak sanctuaries in the period appears to be undeniable – is not alone on mountaintops, but

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[413]See Day & Relaki 2002.
[414]Soar 2014, 233.
[415]Adams, 2004.
[416]Peatfield 1987, 93.

symbolically disputes the ritual arena with other social groups[417]. The evidence in its nuanced qualities seems to demonstrate a more complex and less self-evident process, one that highlights the active role of those deemed the rest of the people. Evidence that the peak sanctuary ritual could have included the management and working through of underlying social conflicting contents is found in the clear instances where themes are repeated over and over[418], and items are collectively and systematically broken. Inscribed libation tables that were brought intact to peak sanctuaries appear to have been, at some point, deliberately broken[419]. As seen in chapter 5.3, this is also true for many of the anthropomorphic clay figurines. Such ritualized destructive behavior can provide an almost palpable instance of working-through social tensions in a cathartic fashion. At the same time, the physical destruction of offerings echoes a broader sense of vigorous action and allows for an association with an atmosphere symbolically charged with competitiveness, force, and violence. Ritual space became uniform across peak sanctuaries from MM III onwards as a result of the formalization of ritual practices and this included the types of material paraphernalia examined in this study. This shift was related to the symbolic renegotiation of issues of wider social interest, such as competition, aggressiveness, and conflict. These had developed outside the context of peak sanctuaries but were introduced to the cult ritual that took place there.

It has been shown that **double-axes** afforded for rituals and performances of offerings that involve display and visibility, actions made possible and suggested by physical qualities of these objects, such as shininess and reflectiveness, but also their lightweight that allows for handling and exhibition. At the same time that these items, being impractical for use due to the fragility of metal sheets, are *iconically* linked to their "utilitarian" counterparts, in which a clear association with weapons is evidenced. Weapons, in turn, carry a violent and powerful connotation, that echoes as well aggressivity. The similarities of double-axes to their real and deadly counterparts are strong enough to assume that such connotation could be transferred to the symbol of the double-axe and to its ceremonial version. Moreover, hostility is expressed in other objects that share *contiguous* relations with double-axes. This relationship of

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[417]Haysom, 2018.

[418]Here not only in the sense of redundancy, which has been explored in this study, but also closely reminiscent of the Freudian idea of recollection and repetition as means for the elaboration of subjective contents, from his 1924 work "Further Recommendations in the Technique of Psycho-Analysis: Recollection, Repetition, and Working-Through".

[419]Rehak 1994, 3.

factorality is exemplified with ex-votos and figurines, all-important parts of peak sanctuary material assemblages. Evidence that rituals of deliberate breakage indicate that tension and conflict were being worked through at peak sanctuaries, and further emphasizes an atmosphere of cathartic violence and tension. Furthermore, the sheer numbers in which items are dedicated, many times forming a conglomerate of broken figurines or piled-up double-axes attests to more than the number of visitors and signals the operation of *redundancy*, that is, systematical repetition of reoccurrence of symbols, formalizing ritual performance and framing ritual context.

Unlike double-axes, stone vases of the types **kernos** and **offering tables** somewhat reject being moved around, and were, with great probability, placed stable in order to receive offerings such as first fruits or the pouring of liquids. In this, they also reveal an element of display, as items made to stand are to be seen[420]. These vessels afford "containing and holding" but present obstacles to their manipulation, emphasizing a static character. Not only do they resemble consumption vessels in their physical affordances, but an iconic relationship is established in an observed phenomenon. *Iconically*, they present some form of negative resemblance, in which they are connected to consumption vessels by being their opposite in terms of affordances for manipulation, handling, and use. In this, although they share a capacity for holding liquids and offerings, it is clear that the ritual procedure must have been different, as it is imposed by the materiality of these objects. For example, if light, ceramic bowls, and cups inspire consumption and movement – cups may be shared or passed, thrown, and moved around – stone **kernoi** and **offering tables** demand that users and agents behave differently, approaching them in a different fashion and thus, use them differently.

Other stone block vases, different kernoi, appear to have been used in some form of gaming practice. The hypothesis of game playing or **game boards** being utilized in ceremonies once the game had acquired religious significance has proved possible by means of comparisons to the Egyptian board game Senet and by an analysis that concluded gaming to be one physical affordance of such block stone vases. Since the connection between gaming and religious practices (divination, fortune-telling, sacred storytelling, and so forth) is not only not unheard of, but well attested elsewhere, it appears realistic to imagine that such phenomena could emerge in Crete. While many have traditionally interpreted stone block

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[420]For the way libation and offering tables could have been placed stably on pedestals or columns see Davis 2014.

vases with multiple concavities as having the same function as the later kernos, this is entirely dependent on their identification as such and can be argued to be a biased theory, since scholarship at the beginning of the 20th century was particularly concerned with identifying later Greek practices in Aegean Bronze Age[421]. Their use as offering tables was not entirely rejected in this study and is, in fact, likely to be the case when these objects are discussed in a more nuanced examination that explores alternative uses based on realistic parallels, on the observation of physical affordances, and in a contextual manner.

Moreover, practices such as gaming or dedication of prestige items, boxing, or celebratory votives related to sportive contests are all in line with the idea that peak sanctuaries operated as places for the reworking and reaffirmation of social identities, as places where negotiation and resolution of conflicts happened through ritual[422]. The idea of peak sanctuaries as spaces where combat and dispute are enacted through ritual performance may encounter resistance given a long tradition of perceiving Minoans as peacekeepers and as a nature-loving society. Despite not conforming with current understandings and the archaeological evidence, this picture, first presented to the world by Sir Arthur Evans with the introduction of Minoan civilization itself[423], has become crystallized and finds survivals in the literature to this day. Further cementing what is being proposed is the presence of written texts, inscribed in many of the objects, traditionally thought to be unmistakable examples of elite dedications. The study has shown that such a straightforward categorization of social rank according to the offering objects as we see them does not stand, once examples of simple and modestly crafted vessels also carry inscriptions[424]. This signals that an attempt at increasing the offering's value could have been made by someone of lower rank by inscribing the object[425]. **Inscriptions** further highlight the performative aspect of ritual, in the sense that they evoke participation, be it reciting or reading out loud. Concomitantly, the possibility, however remote, of false writing shows that there was space for alternative, "unorthodox" ways of dedicating valuable items and making claims to prestige. Individuals with access to literacy or with ties to a literate caste of society would unlikely forge inscriptions, and the practice, if possible to attest, would have been an attempt of those with not so much social primacy at

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[421]Hillbom 2005, 121-124.
[422]Soar 2014, 234.
[423]Bourke 2014, 10.
[424]To illustrate, the inscribed offering table **PK Za 11** from Petsophas can be an example.
[425]Davis, 2014, 109.

achieving prestige through ritual dedication. Hence, such examples come to show that objects usually classified as clear indicators of elite presence should not be so quickly assigned as originating from the palace or the wealthy in society. Another conclusion derived from the examination of the materiality of studied objects is that they clearly afford a ritual of ostentatious nature, and are likely to have been used during visible acts of offering and not in secluded, discrete dedications. However, there are challenges as to assigning who would have been the dedicants of such offerings or who would be allowed manipulation and handling of these objects. If initially they have been thought too precious to be anything other than elite dedications, a closer examination has cast doubts on this presupposition. The examination disclosed that these are offerings within the capabilities of poorer members of society. Nothing stands against non-elite individuals affording, if not big ceremonial axes, the small bronze double-axe votives found in the assemblages. This does not represent an effort to disbelieve elite presence, but to unravel how more convoluted their influence on sites such as peak sanctuaries seems to have been. A more subtle, and arguably more effective, means of control is not enforcing their presence with physical dominion, but co-opting the material language of that space and driving others to subscribe to it. The effort of "the rest of the people" in making their offerings seen and their attempt at claiming their space in these sites is evidence of such a process. It seems to be the case that once the people had incorporated the visual language of the elite, different social orders were placed in close contact, allowing for the emergence of new and intense interactions and exchanges, peak sanctuaries being the stage for some of these.

In this sense, the severe reduction in the number of peak sanctuaries during the Neopalatial period is telling. In the protopalatial, peak sanctuaries were frequented by various groups and populations from villages[426] and showed significant regional variation, besides a degree of "spontaneity" in the confection of offerings[427]. The abandonment of sanctuaries across the island and the concentration of them around palaces and bigger settlements meant a collapse of the space between the most powerful groups in society and the "rest of the people". Besides this collapse – a somewhat forced approximation of groups that likely led to some form of social tension and friction – a more subtle phenomenon is implicit. The material has shown that not only people were frequenting the same few sanctuaries, but in the Neopalatial

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[426]Rutkowski 1968, 157.
[427]Peatfield 1992.

period, all segments took on elite material language as the idiom for articulating their worldview, beliefs, and place in society. The emphasis on competition and negotiation shown by the assemblage, its semiotic qualities, and their role in peak sanctuary ritual performance indicates that the objects and the performances in which they were utilized acted as vehicles for displays of power and wealth, also symbolized by physical aptitude or prowess and excellence through celebrations of sports such as boxing and games. This means that the Minoan elite was successful in establishing its values on others. Such a statement does not imply that simple, common Minoans in the Protopalatial period lived in a non-ideological world, but that an ideology common to Minoan elites of the 17th century BCE thrived in the moments that followed the reconstruction of the palaces and that these elites succeeded in affirming a system in which reality is framed, and ideas and beliefs are informed by a set of determined values, their ideology. A contribution of this approach, then, is the idea that exquisite votives such as double-axes or stone offering vessels could have been dedicated by non-elite individuals. This reveals an active, engaged role of other social agents, otherwise seen as passive and submitted to dominance. The disclosure of these nuances shows that people were proactive in taking over the ritual and visual language of the so-called elites – and even written and spoken language in the case of inscriptions and the hypothetical scenario of false writing – of the more powerful groups in society, contesting the status and attempting the dispute for significance and power.

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