Bronze Age Adyta: Exploring Lustral Basins as Representations of Natural Spaces and Places

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Abstract: The architectural feature known as a ‘lustral basin’ or ‘adyton’ is enigmatic and highly intriguing. This paper will explore the Aegean adyta and their associated archaeological artefacts and architectural features, including frescoes, pier-and-door partitions or polythyra, and moveable artefacts, and will then consider various interpretations of the evidence. Analysis and comparisons of adyta with other Bronze Age artefactual and architectural evidence will reach the conclusion of corresponding equivalence between adyta and underground natural spaces such as ‘peak sanctuaries’ and ‘sacred caves’. These observations of equivalence are evidenced by comparative analyses of architectural similarities as well as associated archaeological artefacts.

The distinctive deep-set architectural spaces, found throughout the Aegean Minoan civilisation, were first described as ‘lustral basins’ by Sir Arthur Evans, the nineteenth and twentieth century British antiquarian, archaeologist and main excavator of Knossos and of the Mycenaean and Minoan cultures: Evans named the ‘lustral basins’ for the oil or perfume jars he found in their vicinity at Knossos, interpreting these as evidence of anointing rituals already known from later eras. More recently

these ‘small, sunken rooms’ have been referred to as ‘adyta’ by Nanno Marinatos, and after Spyridon Marinatos, the great twentieth century Greek archaeologist and excavator of Akrotiri, who was also the first to describe these features as imitations of sacred caves built for chthonic purposes. The Greek word, ‘adyton’, literally means “untreadable”, a “place of separation”, or a “holy of holies”. The terminologies of both Marinatos and Evans infer and reference their underlying interpretive and religious analyses of the functions of these architectural spaces, drawn from classical and modern cultures, and are reflected in the language. Therefore, while tending to the terminology of ‘small sunken rooms’ for descriptive objectivity, this paper will preferably utilise the term ‘adyta’ after Marinatos, but will interchangeably use the terms ‘lustral basins’, ‘adyta’ and ‘small sunken rooms’ whilst investigating and drawing out the original propositions.

**Geographical Range and Overview**

We will begin by surveying these architectural features: these sunken chambers are found throughout the Minoan and Minoanised Cycladic civilisations, ranging geographically across Crete, and to Akrotiri on the island of Thera, modern-day Santorini. They have been excavated in buildings ranging from the ‘palaces’, also known as ‘cult centres’, through those buildings designated as less ‘palatial’ ‘villas’ and ‘houses’. The ‘Palace’ at Knossos contains three such unambiguous architectural spaces, one sited inside and opposite the main ‘Throne Room’, as well

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as the ‘North Adyton’ (also known as the ‘North-West Lustral Basin’ after Evans) and the ‘South-East Adyton’ (or, ‘South-East Lustral Basin’) respectively (a fourth originally described by Evans as the ‘Queen’s Bath’ does not have the sunken floor or stairs to confirm it as an adyton).\(^6\) Throughout Crete there are also two adyta found in the ‘Palace’ at Phaistos, in Rooms 63d and 81; two adyta, the ‘North Adyton’ and the ‘West Adyton’, in the ‘Palace’ at Zakros; and one in the ‘Palace’ at Mallia, in ‘Quartier III.4’.\(^7\) Another adyton in Mallia’s Quartier Mu, inside Building A, was described by Jean-Claude Poursat as the earliest-built example of a lustral basin yet discovered.\(^8\) As well, two more adyta were excavated in Mallia in the buildings designated Houses Delta Alpha and Zeta Alpha; two adyta at Tylissos in Houses A and C respectively; and one at Palaikastro in House B.\(^9\) There is also one exceptional adyton found outside of Crete, in Akrotiri’s Xeste 3 building on the Cycladic island of Thera.\(^10\)

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Adyta: Architectural Descriptions

Architecturally, adyta are without exception small rectangular spaces which are sunken below the adjoining rooms’ floor levels with stairs descending down into them.\textsuperscript{11} To describe a famous example, the Knossos Throne Room’s adyton includes the typical half-metre thick, stone balustrade running between the sunken floor of the ‘basin’ and the Throne Room proper.\textsuperscript{12} The ‘Throne Room’ is named for its carved gypsum ‘throne’, which sits on a raised platform and is flanked by frescoes of griffins, and notably with the throne’s back sculpted to symbolise and represent a mountainto\textsuperscript{13} The benches which encircle the perimeter of the Throne Room continue along the balustrade of the adyton; three columns are also set into the wide, stone balustrade which separates the room from the basin’s sunken floor, which is accessible from the Throne Room by an L-shaped series of stairs which descend down into the gypsum-lined basin.\textsuperscript{14} Some adyta, such as at Mallia, Phaistos, Zakros and Knossos, are formed either at the corner of, or on the edge of, a larger room with a balustrade surrounding the remaining sides of the adyton.\textsuperscript{15} These balustrades are usually

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\textsuperscript{14} Evans, The Palace of Minos. IV: 2, 901–922; Evans, The Palace of Minos. I, 4–5.

interpreted as having been designed to allow either participants or viewers to surround and witness the ritual being carried out inside the basin itself.

The early idea that these areas were literally used for bathing was invalidated by Evans himself, along with confirming his defining terminology of these areas as ‘lustral’, as none of these ‘lustral basins’ contain any forms of drainage or plumbing. This is surprising because rooms complete with sophisticated drainage systems, springs and wells, often built to run through indoor spaces, were commonplace in ancient societies. Interestingly, some adyta, such as at Xeste 3, are situated directly off spaces which include smaller rooms with drains and basins. Further, early debate also addressed the solubility of gypsum, with which these adyta are invariably lined. While these observations and analyses falsify the conjecture of any literal type of bathing inside adyta, this may also in fact support Evans’ original belief that symbolic religious ‘cleansing’ ceremonies were performed in the lustral basins, after participants may have first bathed or cleaned themselves with the water which flowed through these adjoining, drained rooms.

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Chronologies

Dates of these buildings’ features can be arrived at through analyses of the strata’s architectural features, and pottery styles and phases, in a dating method which was calculated, applied and recorded by Evans. Indeed the chronology of Minoan and also Mycenaean cultures, chronologies which still stand and which we continue to use today, were Evans’ inventions and creations, based on his archaeological analyses, as well as his comparisons with Egyptian chronologies of the same temporal period. As the excavator, Evans was the first to date the lustral basins at Knossos, based upon the pottery remains and potsherds which he unearthed above the floor levels, to before the period LM IA (Late Minoan 1A), following the Neopalatial MM IIIB (Middle Minoan) which is approximately 1700 to 1600 BCE.\(^{22}\)

The filling in of the adyta during later eras appears to have been intentional, and based on the strata, archaeological and artefactual evidence, some of the adyta were filled in before subsequent buildings of Minoan Halls were added directly above and over them.\(^{23}\)

Phourni, Archanes, Crete

Excavations at Phourni, Archanes, also in northern Crete, have provided further important and convincing links between the representations, symbolism and possible functions of adyta and chthonic ritual. Phourni is a large Minoan cemetery site, which includes the Tholos tombs, and an exceptional building has been designated


Building 21. In fact, Building 21 has been recorded and described by the excavators to be architecturally halfway between an adyton and a sacred cave. Unlike its surrounding structures, Building 21 has never revealed any remains, human nor non-human. Further, and saliently, Phourni’s Building 21 includes not only a deep-set, sunken floor, but also a descending staircase: these features and architectural structure of Building 21, and their strong similarities to traditional adyta, have been noted by the excavators. Building 21’s contents included pithoi, cooking pots, conical cups, jars, jugs and potsherds which all date to LM IIIB, the end of the Mycenaean period, that is, much later than the dates of the surrounding buildings and tombs.

Adyta with Associated Polythyra

Some of the adyta are associated with pier-and-door-type partitions, also known as polythyra. These architectural features are most impressive as well as physically closest to the adyton in Room 3 of Xeste 3 at Akrotiri on Thera: the polythyra or multiple doorway-partitions which surround the side of Xeste 3’s adyton could either be opened or closed, and the fact that the partitions were designed to be moveable indicates a multiple and culturally complex use of the space. The pier-and-door polythyron may have been alternately entirely opened, entirely closed, or part-opened and part-closed, so that people in the adjoining room could clearly or only

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25 Ibid., 85–6.
26 Ibid., 85.
27 Ibid., 85–6.
28 Ibid., 84–6.
29 Palyvou, ‘Circulatory Patterns in Minoan Architecture’, 198.
just glimpse what was occurring inside the adyton.\textsuperscript{31} The pier-and-door partitions in the vicinity of the Throne Room at Knossos could similarly be either part-opened or part-closed, and partially or fully, with many and varied results of light or dark and visibility or privacy or just a glimpse within the area which includes the Throne Room and its associated adyton.

Photographic records and experiments and resulting analyses of this architectural design at Knossos have been conducted by Lucy Goodison in order to observe their natural light and shadows at various times of the year.\textsuperscript{32} Goodison has demonstrated that the Knossos Throne Room’s adyton, despite being deeply recessed and situated to the inside of the Throne Room, is deeply illuminated during the sunrise of the midsummer solstice.\textsuperscript{33} She also demonstrated that the Knossos Throne itself is illuminated during the dawn of the midwinter solstice, in fact this dawn lights up whomever is sitting upon the stone seat.\textsuperscript{34} Goodison uses her own terminology and describes the Throne Room and its adyton at Knossos as a “light trap”.\textsuperscript{35} This extraordinary and cyclical deep-reaching of the sunlight into this adyton at Knossos is conclusive, whether the light is observed to have entered in through the pier-and-door partitions added at a later date, or in earlier time periods coinciding with the stratigraphy when the features were first built.\textsuperscript{36} Clearly, there may indeed have been varied types of activities within the adyta, during different time periods, and at their various geographies, and also within the one culture at different time intervals,

\textsuperscript{31} Hitchcock, \textit{Minoan Architecture}, 158–159; Marinatos and Hägg, ‘On the Ceremonial Function of the Minoan Polythyron’, 60; Palyvou, ‘Circulatory Patterns in Minoan Architecture’, 198–9.
\textsuperscript{33} Ibid., 85–6, 95.
\textsuperscript{34} Ibid., 82–3, 93–4.
\textsuperscript{35} Ibid., 81.
\textsuperscript{36} Ibid., 81, 85.
further indicated by the many multiple possible positions of the screens of polythyra.\textsuperscript{37} As is becoming evident, adyta and their uses are complex as well as intriguing.

**Adyta with Associated Frescoes: Xeste 3 at Akrotiri**

The adyton situated in Room 3 of Xeste 3 at Akrotiri, on modern-day Santorini or Thera, is extraordinary for a further important reason: this adyton is surrounded by elaborate frescoes. The magnificent imagery includes abundant scenes of women: on the ground level directly surrounding the adyton, a pre-pubescent girl (so defined because of her shaved hairstyle which was only worn by children in Bronze Age Aegean and Egyptian cultures) appears to be turning away or averting her eyes from the rest of the scene; a young woman sits stooping with her hand to her head and what appears to be a bleeding foot, or with blood running down her foot; a mature woman, so interpreted for her heavier breasts and red blood-vesselled eyes, holds a necklace and approaches the seated woman; to the right of the scene, Minoan ‘sacred horns’, seemingly an altar, is depicted with dark liquid, possibly a representation of blood, or alternately of dye, crocus or plant oil, running down it.\textsuperscript{38}

To the left, naked boys, holding containers, walk toward the women; directly above the still woman in the ground-level scene, parallel to the second level of the building, another female figure sits, with her back straight and her head high, between a blue


monkey and a griffin; she is further surrounded by girls picking crocus (so interpreted as pre-pubescent girls again because of their shaved children’s hairstyles and relatively undeveloped bodies), also significant because crocus are used as a painkiller for menstrual cramps, as well as to make yellow dye which appears to have been exclusively worn by women throughout the Minoan culture.\(^{39}\)

Nanno Marinatos makes the important observation that these frescoes include representations of symbolism connected to the season of springtime.\(^{40}\) The adyton scene in its entirety is most commonly interpreted as depicting a female-specific ritual: possibly a celebration of sexual maturity, or an initiation of young women into adulthood, as evidenced by the seated figure’s bleeding foot as an image of menstruation, an interpretation also originally made by Nanno Marinatos. Further alternative interpretations have suggested some type of more general fertility ritual related to female sexual development.\(^{41}\) These have become the dominant and popular interpretations of Xeste 3’s magnificent frescoes, however the details of the ritual use or uses of the adyton nevertheless remain obscure.

**Adyta: Associated Archaeological Artefacts**

We now turn to the directly associated archaeological evidence: various moveable artefacts were found inside some of the adyta when they were first excavated. As well as the frescoes directly surrounding the adyton in Xeste 3 on Thera where, as we saw, women of varying ages are portrayed conducting particular activities,

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\(^{40}\) Marinatos, *Art and Religion in Thera*, 74.
alongside an image of a shrine in the shape of horns of consecration depicted dripping with dark liquid, additionally, artefacts from inside Xeste 3’s Room 3 included ‘strainers’, rhyta in the shapes of beehives and other artefacts described as ritual objects and treasuries.\textsuperscript{42} There has been one other adyton excavated, while conducting work on a travel agency’s building in the Papadopoulos plot of the Splatzia quarter of the city of Chania, that includes a fresco, extending from floor-level, and reportedly in marble or gypsum veneer, the details of which are not yet available to date.\textsuperscript{43}

Further associated archaeological artefacts, rhyta, double axes, horns of consecration and bowls were found inside the adyton at Phaistos.\textsuperscript{44} Sealings with impressions interpreted as religious iconographies were also recorded inside the adyton of Knossos’ ‘Little Palace’, as well as inside the North Adyton at Zakros.\textsuperscript{45}

Thus associated objects can also include artefacts found very nearby. Arguably, some of the basins themselves were mostly empty when unearthed – that is, the objects are not necessarily found on the floor level of the basins – objects found within these spaces are sometimes considered to have been used to fill in the basins at later dates.\textsuperscript{46} On the other hand, for example, when the West Adyton at Zakros was excavated, the strata immediately above the basin contained a highly decorative amphora made from polychrome veined marble, with a skilled and carefully crafted spherical body, double rim and coiled marble handles. The excavator, Nicholas

\begin{footnotes}
\footnote{Marinatos, \textit{Minoan Religion}, 203–9; Marinatos, \textit{Art and Religion in Thera}, 78–84; Niemeier, “Iconography and Context”, 98; Preziosi and Hitchcock, \textit{Aegean Art and Architecture}, 125, 128; Shaw, “The Aegean Garden”, 675.}
\footnote{Marinatos, \textit{Art and Religion in Thera}, 74–75; Marinatos and Hägg, “On the Ceremonial Function of the Minoan Polythyron”, 73.}
\footnote{Marinatos and Hägg, ‘On the Ceremonial Function of the Minoan Polythyron’, 61–2, 73; Pernier, \textit{Il Palazzo Minoico di Festos II}, 163–191.}
\footnote{Marinatos and Hägg, ‘On the Ceremonial Function of the Minoan Polythyron’, 73.}
\end{footnotes}
Platon, states that even if this unique artefact came to be inside the basin only through its location in the room’s vicinity, this intricate piece is nevertheless relevant to the adyton and, indeed, confirms the reality of probable purification rituals being carried out within the adyton.\(^{47}\)

In addition to this amphora, the West Adyton at Zakros also contained a hammer, an anvil and a saw which were found directly on the basin’s stairs, and which Platon concluded had fallen into the basin’s vicinity from the above floor. He also recorded scores of clay vessels and small white stone bowls found in the basin’s nearby corridor which he surmised had also fallen from the floor above.\(^{48}\) Again, it is noted that artefacts described inside the adyton can include objects found within the filling of the basin and of a later date than the floor levels.\(^{49}\) Nevertheless, such moveable objects suggest that some significant rituals were performed inside the adyta, as we shall also see presently in similar comparative archaeological analyses from ‘peak sanctuaries’ and ‘sacred caves’.\(^{50}\) However, such interpretation still allows us only a tantalising glimpse into imagined possible uses of adyta, and toward the end of their time periods of uses before abandonment or destruction. These artefacts also do not provide us conclusive evidence into earlier temporal and cultural functions of these sunken areas.\(^{51}\)

\(^{46}\) Driessen, “The Dismantling of a Minoan Hall at Palaikastro”, 230; Driessen, “To be in Vogue in LM IA”, 32, 39, 43, 63.
\(^{47}\) Platon, Zakros, 127–129.
\(^{48}\) Ibid., 129.
\(^{49}\) Driessen, “The Dismantling of a Minoan Hall at Palaikastro”, 230; Driessen, “To be in Vogue in LM IA”, 32, 39, 43.
Chthonic Similarities

Adyta are extraordinarily small and enclosed which is notable considering that they are a central feature to many buildings. As we have seen through analysis of the architecture, these sunken spaces are deep-set, often partially surrounded by balustrades and enclosed by the surrounding walls against which they are built. Some adyta can be almost completely closed off by varied and purposefully designed openings and closings of associated polythyra, such as the adyton in Xeste 3 on Thera, and sometimes along with corresponding rooms, as in the adyton of the Throne Room at Knossos. This makes them also somewhat inaccessible, particularly considering that they may conceivably have been either semi-public or ritual spaces. The enclosed nature and design of adyta, along with archaeological records of possible rituals, immediately suggests similarities between adyta and the depths of sacred caves.

We thus turn to wider-ranging and more holistic cultural and architectural evidence to enlighten us further on possible uses of these spaces. As early as 1941, during analysis of site excavations of buildings and associated adyta, Spyridon Marinatos wrote of his perception of the similarities between these sunken architectural features and the Minoan culture’s sacred caves. As he writes, “it may be that the Minoans found in deep and dark caves the most suitable places of worship for their great chthonic Goddess, who dwelt in the innermost parts of the earth, whence she could send fertility and prosperity, as well as sterility and terrible earthquakes.”

Then in explicitly comparing the caves with the adyta, Marinatos further writes, “It is

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extremely probable that the curious subterranean constructions in Cretan palaces, of which the so-called north lustral basin and the basin of the Room of the Throne at Knossos are the best examples, were simply elaborate imitations of the caves. The steps lead down to Mother Earth, where prayers could be better addressed to the great chthonic Goddess.\textsuperscript{55} These small, sunken rooms are certainly reminiscent of an equivalent “descent into the earth”.\textsuperscript{56} In fact, when such architectural features are analysed in the light of a culture which created ‘sacred caves’, in addition to ‘peak sanctuaries’ situated at the tops of their mountain ranges, consideration of adyta as exactly this – a symbolic descending into the earth – becomes a rational and informative interpretation.

To further support similarities between adyta and sacred caves, the interplay of darkness and light available inside adyta is reminiscent of the interplay of darkness and light inside sacred caves, for example, the Kamares Cave into which daylight reportedly reaches its deepest recesses. As discussed earlier, Lucy Goodison has conducted photographic analyses and has evidence of the complexities of such regular illuminations of light reaching periodically deeply inside adyta. These structures might well have been designed and used for exactly this type of play between light and darkness.\textsuperscript{57}

In addition to the observable similar ritual nature of activities apparent in all these locations, as based on analyses of the moveable archaeological evidence found at the sites, architectural analysis also reveals that some caves and peak sanctuaries 

\begin{footnotes}
\item[54] Marinatos, “The Cult of the Cretan Caves”, 130.
\item[55] Ibid.
\item[56] Hitchcock, “Naturalizing the Cultural”, 94; Preziosi and Hitchcock, \textit{Aegean Art and Architecture}, 147–148.
\item[57] Goodison, “From Tholos Tomb to Throne Room”, 81–6; E. Loeta Tyree, “Diachronic Changes in Minoan Cave Cult” in Robert Laffineur and Wolf-Dietrich Niemeier (eds), \textit{POTNIA, Deities and Religion in the Aegean Bronze Age, Proceedings of the 8th International Aegean Conference},
had artificial spaces. These may have been walls built in front of or inside them, either originally or during subsequent Bronze Age eras. Most notable of these is the site at Mount Juktas, where the entire sanctuary is ringed by walls whose bases were some three metres wide. These walls were perhaps for protection of peoples, for definition or separation of a holy place, or to make them even more ‘cave-like’ and enclosed, again reminiscent of the architecture of an adyton.58

**Peak Sanctuaries: Mount Juktas**

Peak sanctuaries and sacred caves range geographically across Crete, and their temporal range begins and extends through the Minoan civilization, as well as temporally beyond and into the Iron Age, as is evidenced by the stratigraphic contexts and associated artefact analyses.59 Of some 2,000 caves and grottoes across Crete, only 36 such rock caverns retain and show evidence of religious, cult or ritual uses; and to date, there are at least 25 confirmed peak sanctuaries throughout Crete, established by comparisons of artefact assemblages found therein, as well as by their locations at the topographical ‘peaks’ of mountaintops, as well as the ‘visibility’ both from and of the site.60

There are further sites which included the appropriate artefacts, or alternately demonstrate the correct topography or environmental data, but are excluded from

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recognition as ‘peak sanctuaries’ because they do not conform to all of these criteria. Of the 25 recognised peak sanctuaries, there are seven which are especially considered to serve as representative examples, because their associated artefacts as well as their locations conform to the category of ‘peak sanctuary.’ They are currently the most thoroughly published and best excavated sites. These are Mount Juktas in northern-central Crete, Kophinas in southern-central Crete, Vrysinas, and Atsipadhes, both toward the west of the island, and Petsophas, Traostalos, and Mount Plagia, situated closer to the eastern point of Crete.

Mount Juktas, in central-northern Crete, is considered the most superbly representative example of a peak sanctuary, including its chasm and fissures, first excavated by Evans in 1909. Its surrounds were excavated by Spyridon Marinatos in the mid-twentieth century, and more recently by Sakellarakis, including the mountainside as well as close to its nearby village of Archanes. Abundant excavated finds from the peak sanctuary at Juktas included stone altars and offering tables, animal figurines in stone and clay, human figurines in terracotta, bronze and lead, rhyta, pottery types encompassing bowls, jars, cups, goblets, pithoi, vases in fine ware and coarse ware, animal bones, horns of consecration, and numerous double axes, daggers and tools, both real and votive, and in clay and bronze, and pottery engraved with the recognisable but as yet untranslated Minoan Linear A

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62 Briault, “Making Mountains out of Molehills in the Bronze Age Aegean,” 125–7; Peatfield, “The Atsipadhes Korakias Peak Sanctuary Project”.
63 Sakellarakis and Sapouna-Sakellarakis, Archanaes, Crete; Briault, “Making Mountains out of Molehills in the Bronze Age Aegean,” 127, 136; Alexandra Karetsou, “The Peak Sanctuary of Mt. Juktas,” in Robin Hägg and Nanno Marinatos (eds), Sanctuaries and Cults in the Aegean Bronze Age (Stockholm: Svenska Institutet i Athen, 1981), 137–8, 151.
script. Notably, these artefacts are very similar to some of those found within and in the vicinity of adyta.

**Sacred Caves: Psychro Cave**

The Psychro Cave, named after the nearby village of Psychro as well as its natural spring, is also known as the Dikteon Cave for its location on the northern side of the Mount Dikte mountain ranges which are situated in the east of the island of Crete. Psychro is one of the most well excavated sites, beginning in the late nineteenth century, by the Italian Federico Halbherr and Joseph Hazzidakis from 1886, as well as by Evans in 1896, and then by Demargne and Hogarth from 1897: we possess their continuing records of pottery fragments, conical cups, ashes and animal bones, and bronze objects including small double axes, daggers, knives and spearheads found between the stalactites, as well as seal stones, bronze pins, knives, rings and figurines discovered beneath the waters of the permanent lake inside the cave, as well as terracotta animals and male and female human figurines. In 1996, the complete catalogue by L. Vance Watrous, of all the clay artefacts from Psychro, was published, which he had been working on since 1975. This included scholarly interpretations, analyses and comparisons with the other sites. Psychro is a deep

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‘double cave’, and includes two caverns known as the ‘lower’ and ‘upper’ chambers or grottoes.\textsuperscript{68} The Psychro Cave is thus, in addition to being one of the best excavated, also a good example of a deep, enclosed cave, suggesting that, when choosing ‘sacred caves’, those that went naturally deeper into the earth were chosen over those that were less enclosed.\textsuperscript{69}

In 1900, Hogarth wrote of the excavation of an “altar in the middle of the grotto, surrounded by strata of ashes, pottery, and other refuse, among which many votive objects in bronze, terracotta, iron and bone were found, together with fragments of some thirty libation tables in stone, and an immense number of earthenware cups used for depositing offerings.”\textsuperscript{70} He explained how “[m]uch earth had been thrown down by the diggers of the Upper Grotto, and this was found full of small bronze objects. But chance revealed a more fruitful field, namely, the vertical chinks in the lowest stalactite pillars, a great many of which were found still to contain toy double axes, knife-blades, needles, and other objects in bronze, placed there by dedicators, as in niches. The mud also at the edge of the subterranean pool was rich in similar things, and in statuettes of two types, male and female, and engraved gems.”\textsuperscript{71}

**Sacred Caves and Peak Sanctuaries: Comparing Associated Archaeological Artefacts**

Comparative analyses of archaeological artefacts from all of these sites are recently moving forward with a focus upon differences instead of upon similarities.\textsuperscript{72} An emphasis on commonalities between the sites may allow us to glean generalised

\textsuperscript{70} Hogarth, “The Cave of Psychro in Crete,” 90.
\textsuperscript{71} Ibid., 91.
\textsuperscript{72} Jones, *Peak Sanctuaries and Sacred Caves in Minoan Crete*, 2–4.
insights into Minoan ritual and culture.\textsuperscript{73} It is important to note, however, the variations between sites and assemblages, rather than look for superficially unifying similarities in what are clearly different sites.

For example, when we look at closely detailed comparisons of the artefacts, we may well note the contrasts instead of the similarities: clay human figurines are recorded from all of the peak sanctuaries, but were only found in two of all the sacred caves, Psychro and Ida.\textsuperscript{74} Concerning interpretations, human figurines from Juktas have been considered to be representations of worshippers.\textsuperscript{75} Clay representations of votive body parts are also common from peak sanctuaries (though not found in all the sanctuaries), however, such body parts have not been found in any sacred caves except for the sculpted bronze (again not clay) leg recorded from the Psychro Cave by Hogarth.\textsuperscript{76} These ‘votive limbs’ have been interpreted as dedications concerning human health.\textsuperscript{77} In addendum, terracotta ‘limbs’ from Atsipadhes have been alternately interpreted to be votive limbs, phalli, and arms broken from whole figurines.\textsuperscript{78} Bronze human figurines have been found in all the caves except for Mameloukou.\textsuperscript{79}

Zoomorphic bronze figurines, as well as bronze jewellery, were only found at Psychro.\textsuperscript{80} Zoomorphic figurines of clay animals have been found in vast numbers from peak sanctuaries, and only in smaller numbers and in some of the caves: the species of animals also varies, with bovines being the most common; as well as

\textsuperscript{73} Ibid., 2–5, 28–31.
\textsuperscript{74} Ibid., 5–6.
\textsuperscript{76} Hogarth, “The Cave of Psychro in Crete,” 90–1; Jones, Peak Sanctuaries and Sacred Caves in Minoan Crete, 5–6.
\textsuperscript{77} Jones, Peak Sanctuaries and Sacred Caves in Minoan Crete, 33.
\textsuperscript{78} Briault, “Making Mountains out of Molehills in the Bronze Age Aegean,” 125; Peatfield, “The Atsipadhes Korakias Peak Sanctuary Project.”
\textsuperscript{79} Jones, Peak Sanctuaries and Sacred Caves in Minoan Crete, 7.
bovines, the peak sanctuary at Petsofas includes clay figurines of sheep, goats, agrimi, dogs, birds, weasels, tortoises, and beetles. Juktas includes bovines, pigs, birds, dogs, snakes, and beetles. No other sites encompass such a range of species as Petsofas and Juktas: only sheep, beetles and fish at Traostalos; lambs, birds and snakes at Plagia; pigs, dogs and birds at Thylakas; and birds, dogs, and unidentified animals at Atsipades.

Stone altars are found in some of the peak sanctuaries, and some of the sacred caves, but not all of either. Pottery and sherds have been found across sites – indeed, the polychrome style of decorative pottery now known as Kamares ware is named for its first discoveries inside the Kamares Cave – and again with great variations between all types and geographies. Ash deposits were recorded in more peak sanctuaries and in only a few caves, yet animal bones were excavated in more caves than peak sanctuaries. Artefacts inscribed with the as yet untranslated Linear A script have been found at Psychro Cave, and at the peak sanctuaries at Juktas, Petsofas, Ida, Vrysinas, Kophinas, Traostalos and Plagia.

As Donald Jones concludes, “[w]hile there are some differences between the types of artifacts at peak sanctuaries and those in sacred caves, the differences between the offerings at those two types of site do not seem greater than those among peak

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80 Ibid., 7.
81 Ibid., 5–7.
83 Jones, Peak Sanctuaries and Sacred Caves in Minoan Crete, 7, 77–9.
86 Jones, Peak Sanctuaries and Sacred Caves in Minoan Crete, 12.
sanctuaries alone.”\textsuperscript{88} Citing the quote by Watrous that, “[d]espite substantial variations in the offerings at the different peak sanctuaries, the impression gained is that a similar cult was practiced at all of these shrines,” Jones then goes on to ask, “can one reject the conjecture that the same cult was practiced in sacred caves also?”\textsuperscript{89} Noting the similarities of artefacts found in Mallia’s Building B, Jones then asks “[h]ow widely must the conjectures about cults at peak sanctuaries be extended to other locations?”\textsuperscript{90}

In fact, as Watrous writes, “[c]aves and peak sanctuaries are linked by their rites and paraphernalia, including alters, animal sacrifice and cult meals, offering tables, lamps, kernoi and horns of consecration. At both types of shrines offerings are deliberately placed into the earth – into chasms, into rock clefts or in between stalagmites. The same types of votives are left at caves and peak sanctuaries.”\textsuperscript{91} Nevertheless, Watrous states, we “must also be careful not to treat cult as if it were monolithic”,\textsuperscript{92} and concludes that we can summarise “Cretan extra-urban shrines were the meeting paces for mankind and the gods. Thus they were located near the gods, on high places, and also in or next to a natural feature, such as a cavern, spring, chasm, or rock cleft, which offered passage into the earth.”\textsuperscript{93}

**Sacred Caves / Peak Sanctuaries / Functions / Rituals**

Indeed, it is important (as with the adyta) that we not presume to infer identical functions nor uses to various ‘peak sanctuaries’ nor ‘sacred caves’, across or even

\textsuperscript{88} Jones, *Peak Sanctuaries and Sacred Caves in Minoan Crete*, 39.
\textsuperscript{90} Jones, *Peak Sanctuaries and Sacred Caves in Minoan Crete*, 40.
\textsuperscript{91} Watrous, *The Cave Sanctuary of Zeus at Psychro*, 93.
\textsuperscript{92} Ibid., 92.
\textsuperscript{93} Ibid., 96.
within societies, geographies or temporalities.\textsuperscript{94} We do possess material evidence from sacred caves and peak sanctuaries, which allow us to draw inferences that rituals were performed, and we can attempt to reconstruct some of the details of these rituals through the artefacts, although our knowledge of such does remain tentative and drawn from interpretations of the archaeological artefacts which have been found inside these sites.\textsuperscript{95} We can certainly infer, based upon the remaining objects and our interpretations of their functions, some of the behavioural and ritually repeated activities conducted in the peak sanctuaries and caves: despite all the variations between geographies and types of vessels, the wealth of pottery evidences consumption of foods and drink, as well as pouring rituals.\textsuperscript{96} Animal remains and ash found at the sites is also consistent with food consumption. Also intriguing are the symbolic statuary, such as figurines and miniature horns-of-consecration which, without specific clear secular functional uses, suggest interpretations with religious or sacred or cultic connotations.\textsuperscript{97}

Although we do not presently have absolute knowledge of these cultures' religious and related belief systems, there have been various conjectures proposed. Interpretive analyses have included agrarian rituals; human fertility rituals, sometimes with the purpose of controlling human fertility; plus either female-specific


\textsuperscript{95} Kyriakidis, \textit{Ritual in the Bronze Age Aegean}, 28–29, 52–53; Watrous, \textit{The Cave Sanctuary of Zeus at Psychro}, 81–90.


or male-specific rituals or celebrations of sexual maturity or development.\footnote{Jones, \textit{Peak Sanctuaries and Sacred Caves in Minoan Crete}, 33; Marinatos, \textit{Minoan Religion}, 203–13; Marinatos, \textit{Art and Religion in Thera}, 73–84; Watrous, \textit{The Cave Sanctuary of Zeus at Psychro}, 79–91.} Further interpretations include wider-ranging female- or male-specific rituals or celebrations of cultural or social initiation.\footnote{Hogarth, “The Cave of Psychro in Crete,” 90–1; Jones, \textit{Peak Sanctuaries and Sacred Caves in Minoan Crete}, 33–4; Watrous, \textit{The Cave Sanctuary of Zeus at Psychro}, 89–91.} Other possible interpretations include rituals hoping or asking for human health.\footnote{Hogarth, “The Cave of Psychro in Crete,” 90–1; Kyriakidis, \textit{Ritual in the Bronze Age Aegean}, 18; Marinatos, \textit{“The Cult of the Cretan Caves”}, 129–136.} Other interpretations have suggested a connection with ancestor worship.\footnote{Callimachus, \textit{Hymn to Zeus}, in G. R. McLennan (ed.), (Roma: Edizioni dell'Ateneo and Bizzarri, 1977); A. B. Cook, \textit{Zeus: A Study in Ancient Religion}, (Cambridge: Cambridge University Press, 1914), 157; Evans, \textit{The Palace of Minos}. I, 159; Hitchcock, \textit{Minoan Architecture}, 67, 93; Karetou, “The Peak Sanctuary of Mt. Juktas,” 151–3; Nilsson, \textit{The Minoan-Mycenaean Religion and its Survival in Greek Religion}, 534; Rehak, “Imag(in)ing a Women's World in Bronze Age Greece,” 40; Rutkowski, \textit{The Cult Places of the Aegean}, 1–5, 17, 48–50; Watrous, \textit{The Cave Sanctuary of Zeus at Psychro}, 18–19, 23–25.} Furthermore, the mountains of Crete have been linked to the Greek deity, Zeus. Hesiod’s seventh-century BCE \textit{Theogony} describes the birth of Zeus in a Dikteon Cave; Homer locates Hera and Zeus at Mount Ida in \textit{Iliad} Book 14; Ida is the birthplace of Zeus in Callimachus’ third-century BCE \textit{Hymn to Zeus}; his burial place is identified as Mount Juktas in Arthur Bernard Cook’s twentieth-century \textit{Zeus}; and is discussed by Evans, and Nilsson, who link this mythology of Zeus in Crete with chthonic worship of a Mother Goddess of the mountains.\footnote{B. C. Dietrich, “Minoan Religion in the Context of the Aegean,” in O. Krzyszowska and L. Nixon (eds), \textit{Minoan Society: Proceedings of the Cambridge Colloquium 1981} (Bristol: Bristol Classical} The Classical mythology is less relevant to the Bronze Age millennia earlier, despite the idea that this myth may have originated from the Minoan civilisation. Furthermore, as we have seen, interpretations and comparisons with chthonic earth religions are based upon direct observational and artefactual evidence.\footnote{B. C. Dietrich, “Minoan Religion in the Context of the Aegean,” in O. Krzyszowska and L. Nixon (eds), \textit{Minoan Society: Proceedings of the Cambridge Colloquium 1981} (Bristol: Bristol Classical}
Discussion

Architectural and archaeological evidence supports the idea that adyta may in fact have been designed to consciously symbolise natural features such as those seen in caves and peak sanctuaries, and may be a representation of natural spaces which descend down into the earth.\(^{104}\) These comparative analyses, between adyta and sacred caves and peak sanctuaries, are important for our understanding of these Bronze Age Aegean architectural spaces as well as of the cultures which created and utilised them. Opponents to these interpretations may counter that, since adyta are always located inside buildings, they must not represent natural spaces, otherwise they would surely be situated outdoors even if attached to buildings. This claim, however, ignores the very definitions of representation and symbolism.\(^{105}\) The human imagination is capable of designing indoor spaces, such as the adyta, as symbolic representations of natural, outdoor spaces. Indeed, the modern dualist division between the ‘natural’ and the ‘human/artificial/unnatural’ is cultural-centric and arbitrary, and not relevant to Bronze Age cultures.\(^{106}\) Perhaps the people of these cultures would not even have understood our dualist natural/artificial segregations and definitions, which after all may well be described as merely our own cultural-centric way of seeing our world.\(^{107}\) There is certainly a difference between creating an outdoor space inside a building, and creating a representative space as is hypothesised by this comparison of the observed connections between adyta and sacred caves and peak sanctuaries.


Conclusion

Accordingly, if we accept the apparent connections and symbolic representation of adyta with sacred caves and peak sanctuaries, we might also use this observation to better understand Minoan culture. Any society which expressly recreates natural spaces inside such formalised and official spaces as the Minoan ‘palaces’ and halls, must place a particular value upon nature, naturalism, or naturalistic rituals. Such a focus upon nature may have been based in recognition of the dependence of an agrarian society upon natural forces. This does not necessarily indicate, however, an idealised culture in ‘harmony’ with nature or between human members. By contrast, it may in fact indicate an official or authoritarian effort to institutionalise the natural landscape and the natural world, in an attempt to control either the natural forces or dependent human beings.\(^{108}\)

To conclude, although the interpretation that adyta may be symbolic reflections of the natural world was proposed as early as 1941, this hypothesis has not yet been thoroughly integrated into our overall knowledge, and is a valid and fascinating idea. As has been demonstrated, there is much evidence to support this chthonic theory, including architectural analyses, interpretation of the frescoes surrounding the adyton of Xeste 3, as well as the similarities between moveable archaeological artefacts from inside sacred caves and those found inside and in the vicinities of adyta. Adyta are mysterious architectural features, and the more one learns of them, of details such as their significant placement in many buildings, their enclosed designs, including polythyra suggesting interplays of semi-covered views or of light and darkness, the more one is intrigued by their possible functions, which remain

\(^{107}\) Bradley, An Archaeology of Natural Spaces, p 103–4; Hitchcock, Minoan Architecture, 81.
open to investigation. Comparisons of adyta with the natural landscape, and resulting conjecture on their uses, may not have been sufficiently explored to-date because of a modern concern to avoid depicting Bronze Age cultures as ‘nature-focused’ and over-idealised. As we have seen, however, recognition of such architectural reflection of the natural landscape does not necessarily lead to such modern cultural-centric conclusions. In fact, further analyses of adyta as symbolic representations of the natural world can allow us deeper insight and recognition of their possible purposes and functions, and analogously allow us greater knowledge of the Bronze Age cultures which created and used such enigmatic and unique architectural features.

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