



MEGALITHIC VERSUS STATUS: THE ARCHITECTURAL DESIGN AND MASONRY OF EXCEPTIONAL LATE BRONZE AGE I BUILDINGS IN EAST CRETE

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ABSTRACT

There is a series of edifices of special character in east Crete during LM I, featuring megalithic masonry. In several of these buildings, such as the guardhouses, this type of masonry is indicative of their function. However, in the case of the "villas", masonry along with architectural design seems to have played a different role. These features are assumed to be indicators of high status and authority. We will dwell upon this equation between megalithic masonry and status. Through the examination of case studies an attempt will be made to understand the relationship between the two aforementioned concepts. There is evidence to suggest that this equation is not linear at all. On the contrary, it involves a series of both technical and socio-economic parameters that underscore the complexity of the issue. We will mainly focus upon examples of LM I edifices, such as the "villas" at Achladia, Epano Zakros, Klimataria, Zou and Makrygialos. These examples, are part of our project on the role and character of the "villas" in east Crete, which is still in progress. Both the presence and absence of megalithic architecture may provide insights into the ways in which this type of masonry may be related to questions of status and authority.

KEYWORDS: Crete, villa, architecture, status

INTRODUCTION

This paper examines several examples of Bronze Age villas in east Crete that are supposed to be monumental, due to the megalithic construction of their walls. It particularly focuses on the social implications of megalithic masonry and attempts to understand whether such edifices may be linked to elite groups, or any notion of special social status. It should be noted that the terms "megalithic" and "monumental" have different meanings for different regions and chronological periods in Europe and Eastern Mediterranean. For this reason and before proceeding with data presentation and analysis, it is necessary to define the term "megalithic masonry" for Minoan Crete (fig. 1). It is a building practice that utilises very large boulders, i.e. roughly 1m x 0.80 m x 0.60 m or larger. The usual building material is limestone and sandstone of local provenance. These boulders are not necessarily well hewn, but roughly dressed on the outer surface. They are often riveted together with small stone plugs. With this technique the constructed walls measure 1m or even more in width¹. Megalithic construction is mostly encountered at the exterior walls of the buildings.

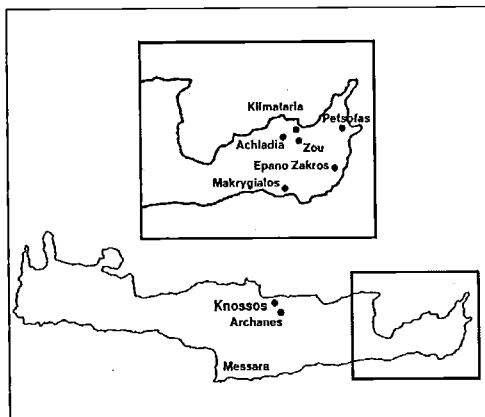
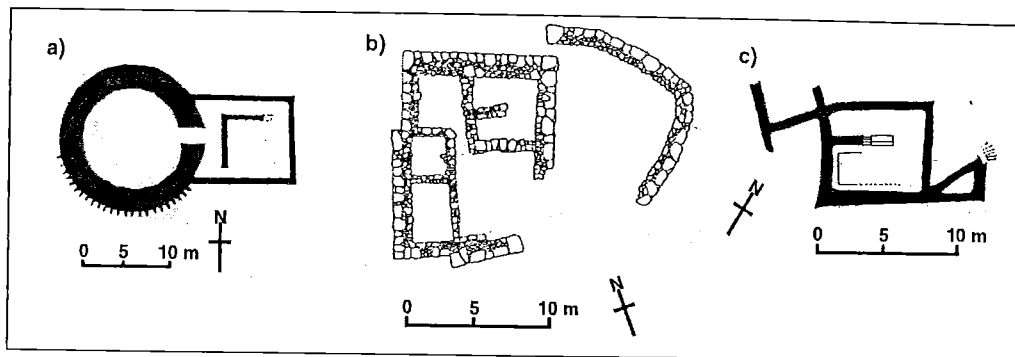


Fig. 1: Map of Crete, with main sites mentioned in the text.

This definition applies to a variety of building types, such as houses, tombs, palaces, villas, sanctuaries and guardhouses (fig. 2). These cover a wide chronological spectrum, namely from Middle Neolithic to the Neopalatial period or 4750-1425 BC. Indicatively, the following sites may be mentioned: The Great Middle Neolithic House at Knossos has exterior walls 1m wide (Zois 1973, 147, Fig. 18). The well-known Early and Middle Minoan (c. 3650-1900 BC) tholos tombs of Messara feature walls that range from 1.20 m to 2.55 m in width, with very few exceptions of only 0.80 m (Branigan 1970, 162, Appendix 1). The west wall of the Middle Minoan III sanctuary at Anemospilia, Archanes is about 2 m wide (Sakellarakis and Sakellarakis 1991: 138, Fig. 114). Petsobas has strong walls too. Their width reaches 2 m (Rutkowski 1991: 17). The Middle Minoan guardhouses of East Crete have exterior walls of hard grey limestone (sideropetra) blocks, ranging 1 m - 1.20 m in width (Chryssoulaki 1999). The Minoan villas, which are the fifth category of buildings with megalithic architecture, will be presented in detail below.

Megalithic masonry is one of the three main types of wall construction in stone in Middle and Late Minoan periods (Shaw 1973, 82-106; Zielinski 1998). The other two are ordinary rubble and ashlar masonry. Edifices with ashlar masonry, among other features, are supposed to reflect a social group of high status. According to this concept, only an elite would afford to erect such elaborate architecture. Ashlar walls are mainly found in palaces (Graham 1972, 152, 155). Palace walls vary significantly but extreme examples are about 2.50 m wide, with blocks about 1m x 2m. On the other hand, wall construction with ordinary rubble does not require specialised skill or extra effort. Rubble is widely used. It is found in various types of buildings, particularly in common houses. It is not considered as a marker of special status.



Ground plans of a) a tholos tomb at Platanos (after Branigan 1970: Fig. 2), b) a guardhouse at Karoumes (after Chryssoulaki 1999: pl. VII) and c) the sanctuary at Petsotas (after Rutkowski 1991: Fig. 1).

Megalithic masonry is placed in between the two aforementioned categories, both in terms of knowledge and skill and, consequently, in status. It is found in a variety of buildings and it is viewed from different viewpoints. In several cases it is associated with function. For example, wall thickness of the tholoi is supposed to be dictated by the need to support the roof, while the guardhouses were defensive sites. Nonetheless, in the case of the villas, megalithic masonry is interpreted in a different manner. It is supposed to reflect, among other features, the special status of these buildings, because the villas are placed in between buildings with practical needs and centres of authority (Hägg 1997). This different interpretation confuses the relationship between megalithic masonry and social status and calls for a closer examination of the villas.

The villas may be divided into two types: The first type comprises the buildings in central Crete (fig. 3). These present frequently ashlar masonry, as well as other stone cut features (e.g. pillar and column bases, benches, platforms and doorjambs). These architectural components, among others, bring them closer to the palaces (Driessen 1989-1990). The second type comprises a series of buildings in East Crete. These edifices are not as

elaborate as the ones in central Crete. Instead of ashlar masonry they usually feature megalithic and rubble walls². Additionally, their design seems to have been based on an altogether different concept, as they frequently lack hall systems, lustral basins and other cult or official areas. Consequently, they are thought to be closer to farmsteads than the so-called "proper villas". Even so, megalithic

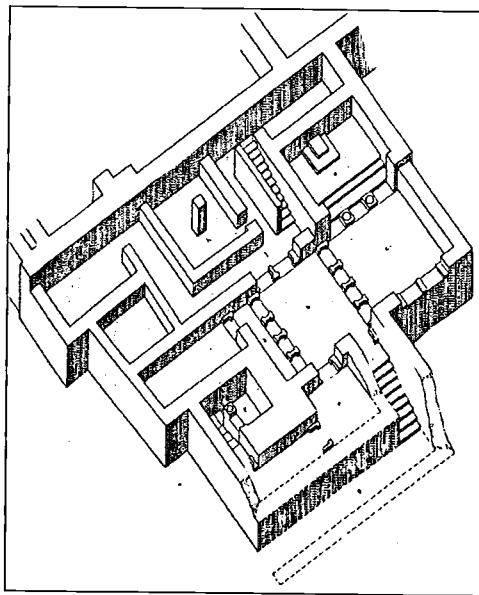


Fig. 3: Isometric plan of the House of the Chancel Screen at Knossos (after Preziosi 1983: Fig. II.4).

masonry is impressive within the context of east Cretan architecture. For this reason it is usually considered to betray social status higher than the average household, without nonetheless explaining why and how (Tsipopoulou and Papacostopoulou 1997, especially Tables 1 and 3).

This paper focuses on the villas in Eastern Crete. It aims to demonstrate that megalithic technique is not just inferior in quality than ashlar masonry and superior than ordinary rubble. It has to be interpreted according to context. Five case studies have been selected: Klimataria, Achladia, Epano Zakros, Zou and Makrygialos. They are all supposed to be villas, i.e. buildings of exceptional status and function. These buildings were excavated long ago by N. Platon³ and C. Davaras and have not been properly published yet. Their architecture was re-examined by the authors in summers 2003 and 2004⁴.

Here the masonry of the aforementioned buildings will be contrasted to a series of characteristics that are responsible for the overall impression that the assumed "villas" create. Masonry will be analysed in terms of the size of stone blocks, type of building material, collection mechanisms and provenance of the material. These characteristics should demonstrate the amount of effort invested in the edifice against any practical requirements, such as the type of building ground. The first characteristic against which masonry will be contrasted is the design of each building, namely the occurrence of palatial style features, such as pillar and column bases, dados, paved areas, open air courts and hall systems. The second characteristic is the use of space, that will demonstrate the function and character of each edifice. This will be complemented by the examination of the place of each supposed "villa" in its natural and social landscape, which is the third and final characteristic to be presented here.

DATA PRESENTATION

Klimataria

Klimataria is located just south of the modern town of Siteia. It is a MM III – LM I building, situated on the slope of a hill and built on series of different terraces (fig. 4). Megalithic masonry is mainly but not exclusively employed in the external walls with the use of massive and heavy blocks (fig. 5). Indicative boulder sizes are: 1.40m x 1.85m x 0.70m maximum and 0.80m x 0.60m x 0.60m minimum. These walls seem to have primarily retained construction. The rest of the walls are made of rubble. It seems that ancient builders fully exploited the locally and readily available resources of building material, mainly marly limestone, thus saving time and energy. A limited amount of non-local sandstone suggests a small-scale transportation venture. The boulders are very little or not hewn at all, with the exception of the two external staircases and the vestibules (fig. 4).

The walls give an overall rustic impression, which is followed by the general lack of elaborate features. Only one column base and three doorjamb bases were located. Nonetheless, it should be noted that the design of Klimataria is highly original and sophisticated. Its proportions, i.e. about 100 x 70 Minoan feet⁵, seem to be well planned on a basic harmonic ratio of 10:7. The building has been laid out on four different terraces and the various areas are symmetrically arranged. This is particularly the case of the two external staircases and the two porter's lodges. These two features are also part of a complex circulation system, which served a twin purpose. On one hand, it controlled the traffic of outsiders coming in and out of the storerooms and other ground floor areas of secondary use through the wide external staircases. On the other hand, it allowed the top-down control of this traffic by the main residents of the upper floors, through narrow winding corridors.

Artefactual evidence, such as the signifi-

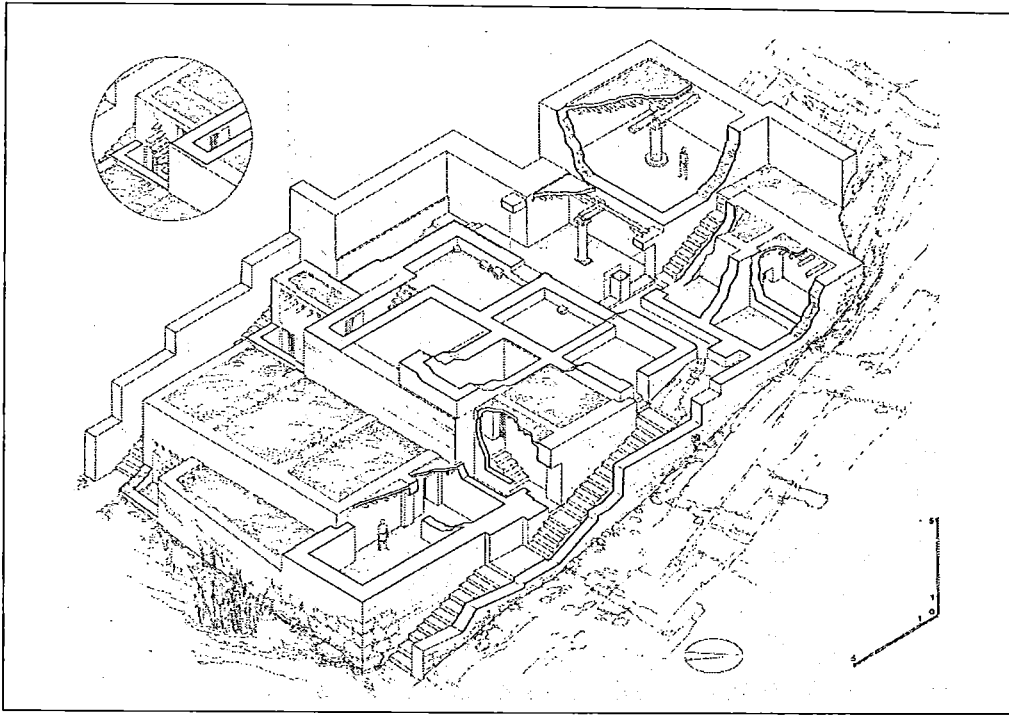


Fig. 4: Isometric plan of Klimataria (by Chr. Kanellopoulos).

cant amount of pithos fragments, points to the use of Klimataria as a local centre of agricultural activities and movement of products. It seems to be an isolated building in the countryside and not within the limits of a settlement. As a result, the importance of this building does not lie in its megalithic wall



Fig. 5: A wall at Klimataria. Megalithic masonry is visible to left and centre of the picture. Contrast with simple rubble to the right.

construction. Rather, it is connected to its exceptional design, which was probably based on the social dynamics of the organisation of agricultural production.

Achladia

Further south from Klimataria lies the LM I "House A" of Achladia. It is also situated on a hill slope, albeit not as steep as Klimataria (fig. 6). Building blocks come from local outcrops of light coloured limestone and marls, while the use of non-local sandstone was limited. Most external walls are, again, megalithic and give a cyclopean impression. Their boulders are roughly hewn, albeit only on their outer face (fig. 7). Their size ranges from 0.48 m to 0.80 m in width and from 1 m to 1.40 m in length. Megalithic features in this building may have served different purposes. For example, in the case of Room M, the pur-

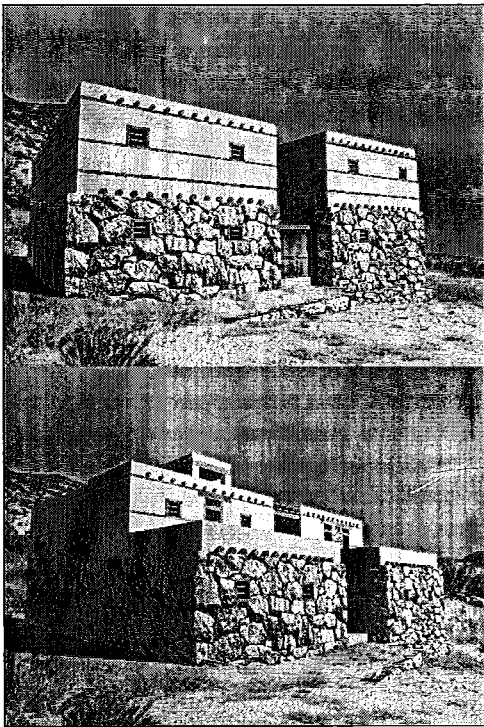


Fig. 8: Two photorealistic reconstructions of Achladia House A (by Chr. Kanellopoulos).

would look like a tower and thus it would be highly impressive (fig. 8). All the above characteristics bring Achladia closer to the typical villa of central Crete, although materials and techniques of construction betray inferior quality. During the second, LM IB, phase, changes occurred in the architecture. The polythyra were partly blocked and an internal staircase was erected (fig. 6). Similar changes are observed in the use of space. The reception rooms B and M were transformed into store-rooms and cooking areas, as suggested by the LM IB pottery.

The location of Achladia provides a good visual command and control over a large region. In addition, the building was situated within a settlement. The changes in the architecture and function, mentioned above, may be related to the particular role that House A played each time within the social dynamics

of the settlement. Thus, the status of the residents of House A impinges upon the design, function and overall architectural and social context of the site. Once more, it seems that megalithic construction does not reflect status by itself.

Epano Zakros

The LM IA edifice at Epano Zakros is situated on the slope of a hill overlooking the local fertile valley. It has been partly excavated and there is still much to be uncovered (fig. 9). It is laid out on a series of terraces and only the ground floor has survived today. Nonetheless, the presence of staircases and the great amount of fallen ashlar blocks, boulders and mudbrick suggest a substantial upper floor, which is missing today. Megalithic masonry characterises the surviving external walls. These are particularly strong and give a cyclopean impression (fig. 10).

The blocks are mainly hard grey limestone and conglomerate, although red limestone was also employed to a lesser extent. All types of stone were quarried locally but not from the location of the building itself. They probably come from the surrounding hills. There are many visible limestone outcrops and the boulders may have easily been the products of surface detachment, rather than proper deep quarrying. The purpose of the megalithic masonry was twofold. On one hand the walls retained the terraces. On the other hand, they supported an upper floor built with heavy yellow limestone (poros) and gypsum ashlar blocks, judging by the findings in the excavation fill.

Both the megalithic features of the ground floor and the ashlar blocks of the upper floor betray special care and investment of labour, particularly when compared with the other two aforementioned buildings. The internal fresco decoration added to the overall monumental impression of Epano Zakros. Unfortunately no stone cut features, such as column bases, polythyra, paved areas etc, are known,

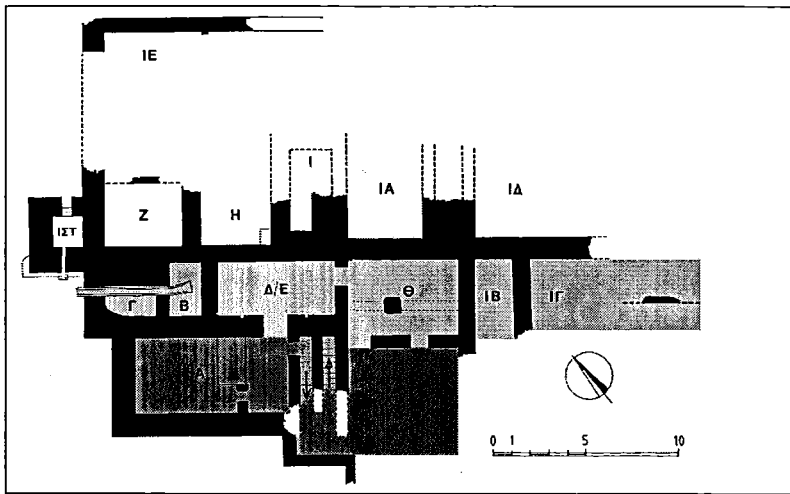


Fig. 9: Ground plan of Epáno Zakros (after Platon 1965: Fig. 1; redrawn by Chr. Kanellopoulos).

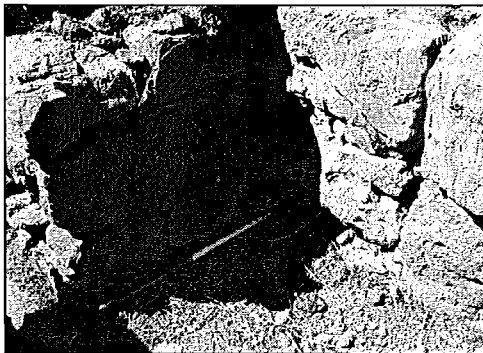


Fig. 10: Megalithic masonry in Room Gamma at Epáno Zakros.

since we are missing the upper floors, that were supposedly more elaborate than the ground areas of secondary use. The incomplete ground plan does not allow any further comments on the design and proportions of the building (figs 11 and 12).

It is certain that the ground floor levels were devoted to the production and storage of wine, judging by two wine press installations and a number of store rooms (Kopaka and Platon 1993). The fresco remains in the debris imply reception and living quarters situated

on the upper floor. It may be plausibly suggested that the residents of the Epáno Zakros edifice controlled at least part of the agricultural produce in the area and were thus able to afford lavishly decorated quarters. This hypothesis is also corroborated by the commanding location of the building, the fact that it stood alone and was slightly earlier in date than the palace at Kato Zakros (Platon 2002). Once more, megalithic masonry, wherever employed in this case, does not reflect high status by itself. It has to be combined with the architectural design as a whole, the internal decoration and the use of space.

Zou

The MM III – LM I building of Zou lies in between the modern villages of Piskokephalo and Zou, on a steep slope (fig. 13). It is surrounded by hills, which restrict the visual command over the region. A ravine to the east of the site is the only way out of the hills. The ravine was probably a source of water for the area too. Most of the walls are of megalithic construction⁷, with the exception of a few internal ones that are made of smaller sized blocks. Large boulders measure on average

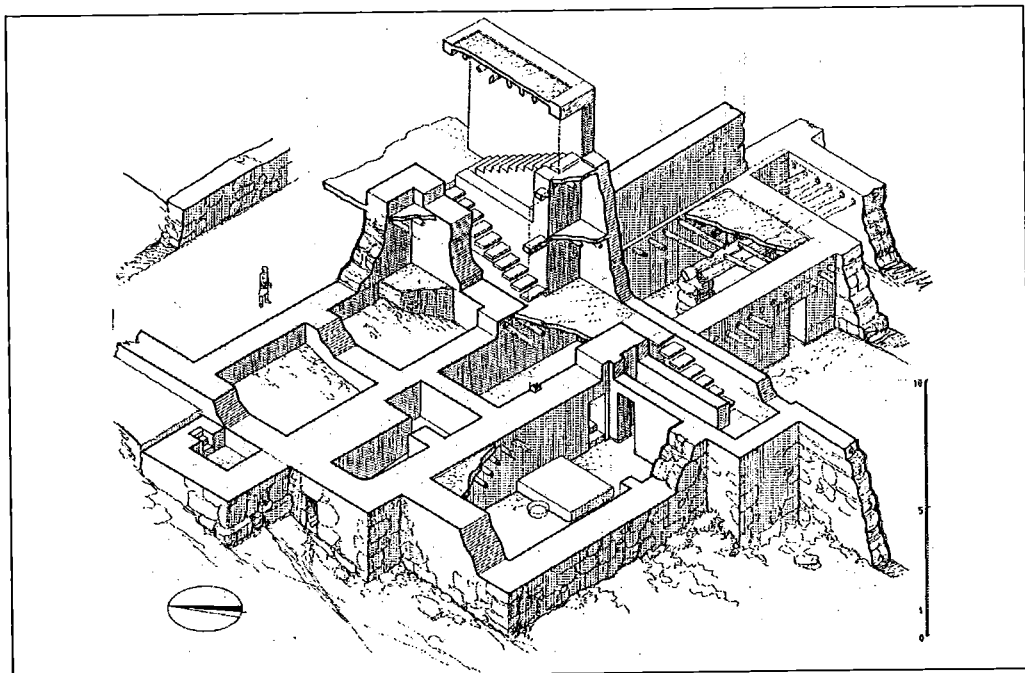


Fig. 11: Isometric plan of Epano Zakros, with the first reconstruction of the staircases (by Chr. Kanellopoulos).

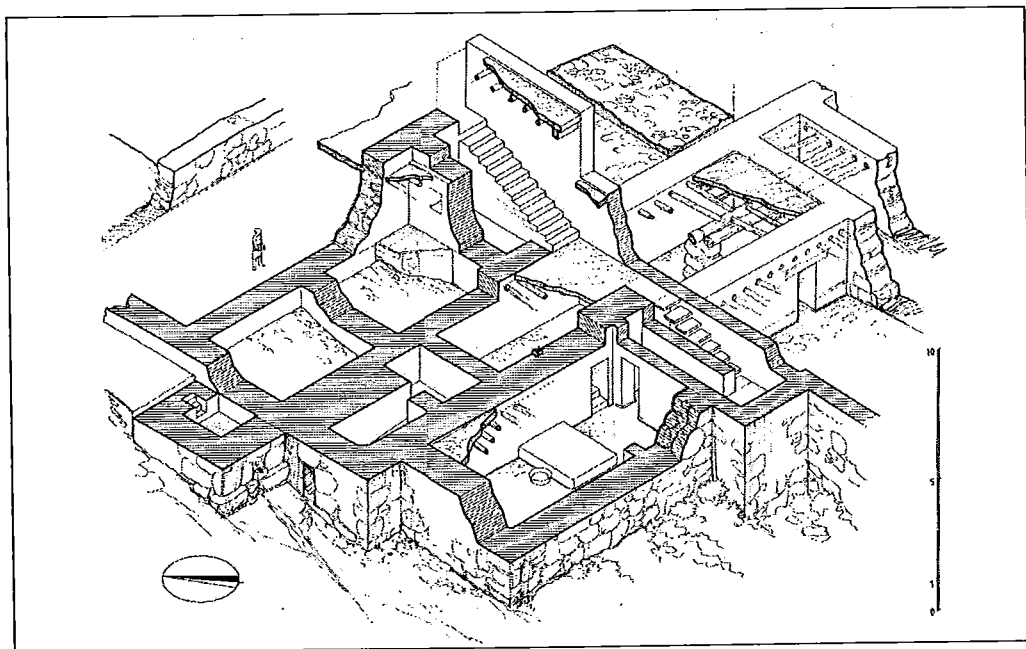


Fig. 12: Isometric plan of Epano Zakros, with the second reconstruction of the staircases (by Chr. Kanellopoulos).

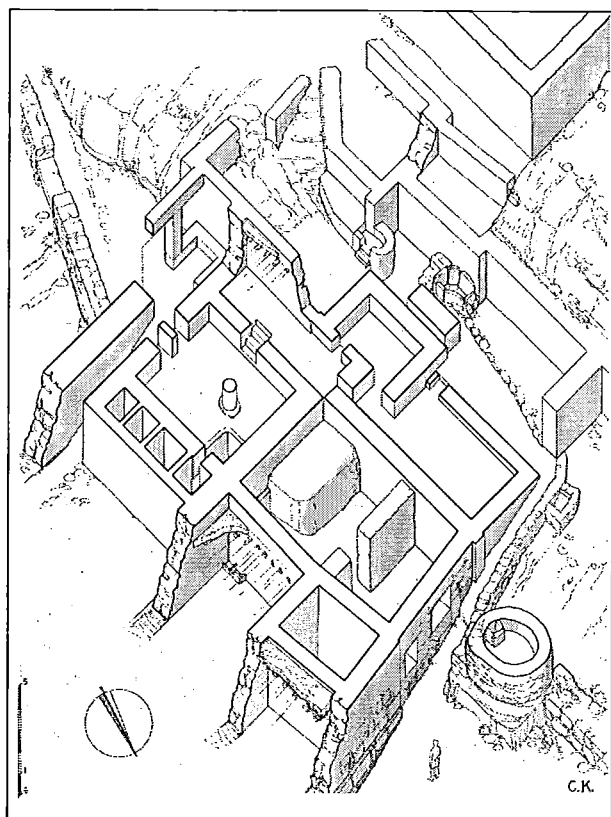


Fig. 13: Isometric plan of Zou (by Chr. Kanellopoulos).

0.80 m – 1.50 m x 0.25 m – 0.40 m x 0.30 m – 0.60 m and are slightly hewn, usually on the outer face (figs 14 and 15).

The building material consists of local hard limestone, which was probably quarried from the vicinity. The excavator has located at least one such spot, to the north of a preserved pottery kiln, belonging to the Zou complex. The techniques employed to gather the building material comprise a combination of surface detachment for the smaller blocks and deeper and proper quarrying for the larger and massive ones. These works were probably part of the terracing that was necessary in order to construct on the

slope. Terracing marks are evident all around the site.

Megalithic walls fulfilled a practical purpose. On one hand they retained construction against the steep slope. On the other hand, they probably supported at least one storey, the presence of which is suggested by the stratigraphic sequence of the excavation fill. Beyond these practical requirements, the massive boulders, in combination with large windows and several monolithic features, would inevitably create an impression (fig. 16). Actually, when compared with the so far examined buildings, Zou seems to be the clearest and most notable example of megalithic masonry in East Crete.

Preliminary reports, combined with the architectural study of Zou, provide evidence, which supports the view that this is mainly a craft working installation. The presence of at least one pottery kiln is complemented with areas and features (stone basins and pipes) for clay processing, pottery making and the storing of finished products. The excavation of other areas of the building has



Fig. 14: Megalithic masonry in Room Heta at Zou.

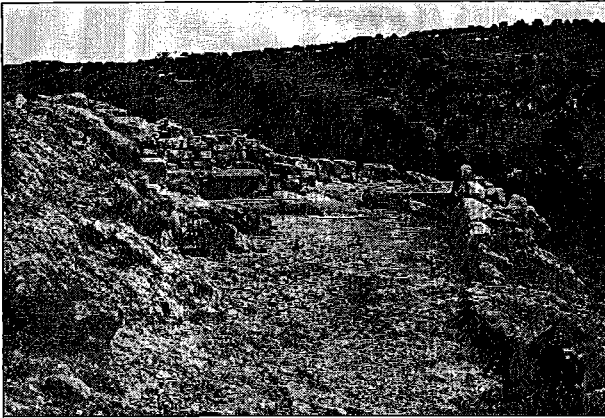


Fig. 15: Megalithic masonry at the south entrance of Zou.



Fig. 16: View of Rooms Delta and Epsilon showing two large windows at Zou.

yielded querns, rubbers, stone basins and a system of large built depositional pits, which may be taken as indications of industrial activities too. The industrial use of space does not support the characterization of Zou as a villa. This is further corroborated by the lack of visual command that would be expected for an elite building. In this case, it seems that sturdy, imposing megalithic masonry is blended with the crude craft working function of the edifice.

DISCUSSION AND CONCLUSIONS

The examination of the buildings at Klimataria, Achladia and Epáno Zakros demonstrated a partial use of megalithic masonry, while at Zou this was at a far wider extent. The size and type of boulders, the extraction operation techniques and the provenance of the material are almost common to all four cases. Furthermore, this type of masonry served mainly to retain the slope. Secondly, in the case of Achladia and Epáno Zakros, it also added to the monumentality of the structures. The hypothesis that Kli-

	Boulder size	Boulder type	Extraction operation	Boulder provenance	Building ground	Extent of application	Function
Klimataria	Very large	Hewn	Quarried	Local, on the spot	Slope	Partial	Retaining terrace
Achladia	Very large	Boulder	Detachable surface material	Local, on the spot	Slope	Partial	Retaining terrace, monumentality
Epáno Zakros	Large, very large, medium	Boulder, Hewn	Detached, quarried	Surrounding fields, valleys	Slope	Extensive	Retaining terrace, monumentality
Zou	Very large	Boulder, Hewn	Detached, quarried	Local, on the spot	Slope	Extensive	Retaining terrace
Makrygialos	Very small - mudbrick	Field Surface material. clay	Surface collection	Surrounding fields, valleys	Flat field	None	-

mataria, Achladia and Epáno Zakros reflected higher status is based upon a number of reasons: the use of space, their topographical location, as well as the partial use of megalithic features. On the contrary, Zou, the *par excellence* megalithic construction seems to have been an industrial installation, with no clear evidence for exceptional status (see summary of features in table 1). In other words, massive

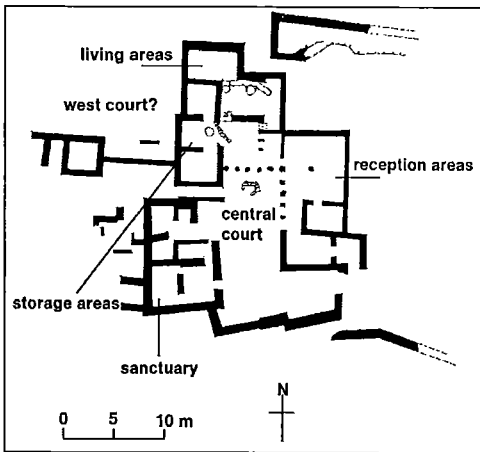


Fig. 17: Ground plan of Makrygialos (after Davaras 1997: Plan 1).

blocks and prestige do not demonstrate an explicit and direct relationship. On the contrary, there seems to be a contrast between the two.

To emphasize this view, we would like to make a brief reference to the well-known building at Makrygialos. This LM I complex was built on the plateau of a low hill overlooking the Libyan Sea to the south. Its layout follows palatial standards (fig. 17). It features a central court with an altar, and a possible west court. The various quarters are arranged around the four sides of the central court. They are dedicated to different functions. Storerooms are to the west, residential areas are to the north, reception halls with colonnades to the east and a possible sanctuary to the southwest.

These features create the impression of a miniature palace and not simply of a villa. Nevertheless, the quality of construction is extremely poor. The building materials consist of small sized rubble, easily collected from the surrounding fields, and mudbrick (fig. 18). Walls have an average width of 0.30 m – 0.60 m and as a result it would be impossible to support an upper storey, unless this was very lightly constructed. Floors are made of beaten earth, while the bedrock has been

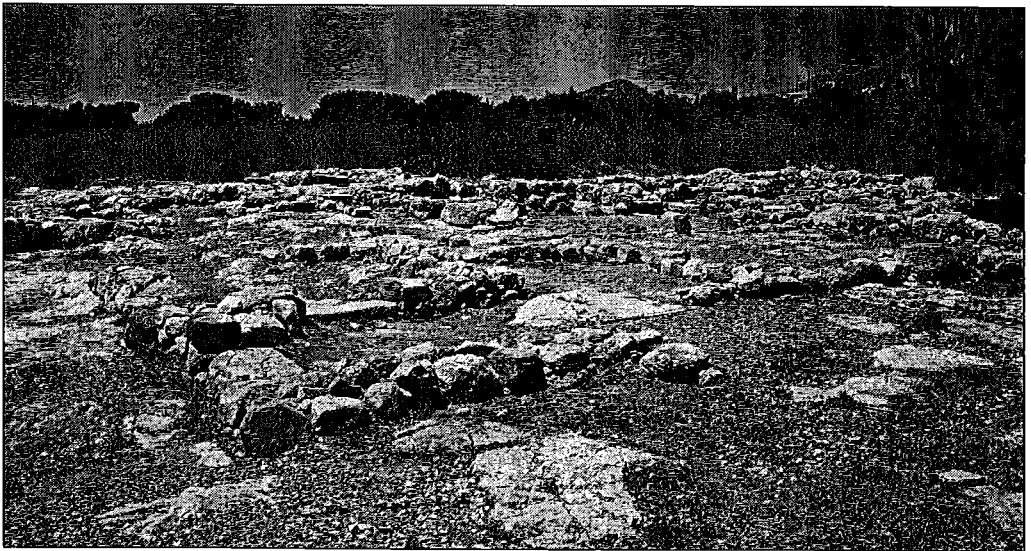


Fig. 18: View of walls at Makrygialos.

left exposed in various spots in the courts. Despite the important role that this building played in the area, its poor materials and shoddy construction are in direct opposition to its palatial design.

In conclusion, each of the examined buildings betrays an individual character. The pres-

ence or absence of megalithic masonry was part of this individuality, being combined with other architectural aspects. As a result, the equation between megalithic masonry and status is not linear at all. It has to be understood each time according to the particular context, both archaeological and social.

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ENDNOTES

- 1 In contrast, a simple house exhibits wall thickness of 0.80 m for the exterior walls and 0.50-0.55m for the interior walls (Preziosi 1983: 12).
- 2 See Korres (1988) for a detailed review on the geological factor in ancient Greek architecture, particularly the technical aspects of stone quarrying and detachment.
- 3 For Klimataria see Platon 1952a; 1952b; 1953a; 1953b; 1954a; 1954b; for Achladia see Platon 1959; for Epáno Zakros see Platon 1964; 1965; for Zou, see Platon 1955; 1956; for Makrygialos see Davaras 1997.
- 4 New data have been collected during the two fieldwork seasons. For the first three sites of the above, these data are presented in two papers, "(Mantzourani et al. 2005, Mantzourani and Vavouranakis in press)".
- 5 Cf. Bianco 2003, Graham 1972, 222-229 and Preziosi 1983, 11-15. Bianco has argued that the Minoan foot was a unit based on two hands with outstretched thumbs placed by side by side, which explains any minor differences in calculating the minoan foot, such as those observed between Graham (0.3036 m) and Preziosi (0.275 m).
- 6 For example, Malia and Rousses Chondrou at Viannos (Preziosi 1983, 22-23) and Gournia houses Ah and Ck (Fotou 1993, 59, 66, plan B).
- 7 No coursed ashlar masonry was observed during our study of the site, contrary to what Tsipopoulou and Papacostopoulou mention in their article (1997, Tables 1 and 3)