

MONUMENTALITY, VISIBILITY AND ROUTES CONTROL IN SOUTHEASTERN IBERIAN MEGALITHIC SITES

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Abstract

Between the end of the V Millennium B.C. and the end of III Millennium B.C., megalithic tombs expand over the Southeastern Iberian Peninsula but their positions, distributions, associations, sizes, shapes and contents are very different according not only their chronology but mainly their ideological function. A new interpretation about the Tabernas Corridor (Almería) megalithic graves situation analysis is proposed here before discussing the differences among the Los Millares tombs (Santa Fe de Mondújar, Almería) in terms of their location and grave goods as known from the old excavations by L. Siret and A. Almagro-A. Arribas. Both subjects are included in a wider study of the Late Prehistoric funerary ritual phenomenology in the Southeastern Iberian Peninsula and its relation to the social organization through different methodological strategies.

Introduction

Although the first simple individual megalithic tombs in Southeastern Iberian Peninsula (fig. 1) are supposed to be dated to the end of the V Millennium B.C. (Guilaine 1996), graves reached their greatest architectonic development as true *tholoi*, or tombs covered by a false vault, and their widest territorial expansion between 3300 and 2000 B.C., during the local Chalcolithic period. At the end of the IV Millennium B.C. economic changes, that have begun in Late Neolithic (from 4000 B.C.), became consolidated. A temporary halt in the slow environmental changes towards a greater aridity (Carrión *et al.* 2003) was accompanied by a fully sedentary way of life, mixed farming (including cattle traction, emphasis on certain cereal species with a higher yield, use of damp places to cultivate pulses and the beginning of olive tree exploitation) and craft development (including metallurgical techniques and the use of metal tools in other productive activities as flint knapping and textile industries) (Molina and Cámara 2005).

A strong relationship between these changes and the beginning of social hierarchisation has been suggested. This increase in wealth differences can derive from unequal accumulation of livestock ownership and dependent labor force control (Afonso and Cámara 2006). Data suggesting differential goods consumption are available not only from settlements as Los Millares (meat and prestige goods consumption) (Molina and

Cámara 2005; Navas *et al.* 2008), but also from tombs where size and grave goods are not correlated to the number of burials (Chapman 1991; Aranda and Sánchez 2005; Molina and Cámara 2005, 2010; Afonso *et al.* in press). These arguments can be linked to the evidence for violence/defense (fortifications, arrowheads), to the definition of a capital status to a site (attending to public buildings such as storage or ritual areas, design and changes in residential units) (Molina and Cámara 2005; Esquivel and Navas 2005, 2007; Castro *et al.* 2010) and to interest in controlling the entire political territory in a ritual way (megaliths) or, at least from 2500 B.C. onwards, in a military way (hill forts) (Cámara 2001; Molina and Cámara 2010).

It is in this context that we shall study the use of tombs in terms of territorial control, definition of political centers and wealth exhibition and masking. The definition of routes and boundaries by megaliths will combine concentration (in the valleys and near major villages) and dispersal (towards the mountains), possible addition of new tombs and their interdependence, display and concealment. All the locations will be explored as to whether they express social competition and an unequal society in different ways. Control over territory and resources will be exerted only in an ideal way in favor of all the community because it will provide more benefits to a section of society, as could be also seen in differences in grave goods and graves.

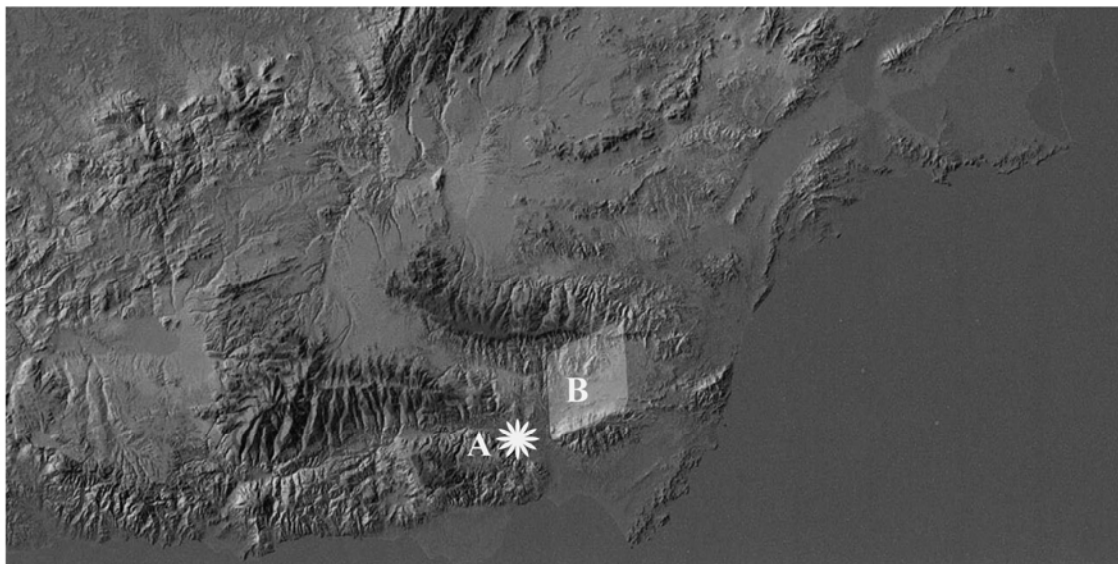


Fig. 1. Southeastern Iberian Peninsula - location of Los Millares (A) and Pasillo de Tabernas (B)

The ideological role of the graves as monuments

Among the many ways ideology is materialized (DeMarrais *et al.* 1996), monuments stand out for their permanence and their capacity to display power during ceremonies and beyond (Bard 1992:8; Naso 2007:145;

Smith 2007:165; Fahlander and Oestigaard 2008:9; Scarre 2008:15), although determining what a “monument” is, can sometimes be a problem. It has been pointed out, that monuments are public structures designed and constructed, in terms of scale and detail, to produce a strong impact on the environment (Moore

1996:92; Johansen 2004:319; Cunningham 2007:26; Driessen 2007:73; Scarre 2007:34; Thompson 2009), but sometimes this impact is not very well marked (Ambridge 2007). The main debate evidently concerns the definition of the public character (Hamilton and Spicer 2005; DeMarrais 2007) when it is assumed solely by ideological steering through emphasis on its commemorative aspects (Bloch 2000:50) because administrative uses are seldom mentioned (Khattri 2008:107; Daneels 2010:228; Peebles and Peterson 2010:242).

Perhaps the best way to overcome these problems is to attend to the monumental character¹ of the elements rather than monuments as perfectly defined elements (Cámara *et al.* 2010a:135). What happens is, that an ideological message is anchored to a more or less permanent medium that serves as a framework within which, or from which, ritual activities are carried out (Grima 2007:35). These activities are present in the construction of an architectonic element, the erection of a sculpture, the manufacture of a tool or the inscription/writing of a more or less encoded message. From that point onwards, from the construction/erection/manufacture/inscription and after the accompanying consecration, successive ceremonies become integrated and different ways of materialization are articulated. In this respect, even within the so-called natural monuments (Driessen 2007:73, 92; Khattri 2008:105-106; Jerpåsen 2009:138), it is necessary to differentiate between those that configure an inner space, especially those that even form a three-dimensional space with volume, and those other ones that only offer an image, a sculptural dimension, although the outer part of the monument, its façade with its sculptural dimension, is very often one of the most important features, especially in relation to visibility. In any case, a specific ritual, or a part of it, can be performed outside the architectonic feature or far from the referred monument because ritual is mainly composed by “activities” (Insoll 2007:88).

Ideology uses the past in order to justify social order, but it also offers a future project (a perpetuation of the present or a return to the past), and of course, both of them (past and future) are defined from the present, establishing which is possible and which is good. For this reason certain monuments remain for a long time in their placement and are used by very different societies (Williams 1997; Mullin 2001; García 2005, 2011; Thäte 2007; Wickholm 2008; Bueno *et al.* 2010). These special features were used for the perpetuation of social order, by asserting social structural links to the remote past according to memory transmission (Bradley 2002; Joyce 2003; Holtorf and Williams 2006; Yoffee 2007; Harris 2009; Sayer 2010).

Thus, it is probably safe to say that monuments are defined by their public dimension, although access can be restricted and common people have been very often

implied only as a labour force in the building process. Actually, only a section of the group can get real benefits (and not ideal ones) from the management and use of this type of public features (especially buildings with an inner space). In this sense, other characteristics are secondary ones, because of their special character among the rest of the similar items (buildings, sculptures, books, etc.), their size or their situation. Their public dimension and the performance of specific ideological activities in or around them, including object deposition and people circulation, must be considered as the basic criterion.

The immovable architectonic elements, either built or dug-into, have two key characteristics. First, they can be containers/settings for all other types of ideological formalization (ceremonies, movable and written items). Second, their outer shape can have an important visual impact in terms of contrast with the surroundings/context, prominence, clarity of form and sufficient mass for emphasizing presence (Johansen 2004:319), depending on different variables: permanence (by material type, construction method and duration of use/maintenance), scale, centrality, ubiquity and visibility (exhibited or hidden as in the case of caves) (Johansen 2004:323-326; Cunningham, 2007:23; Driessen, 2007:74).

As authors refer to the permanence of certain features, they often forget that in past societies permanence is measured in relation to people’s lives. In this sense, raw material durability (stone in the first place) could have been a secondary trait, taking into account that wood can also survive for a long time. However, stone is considered especially suitable for symbolic communication because it lasts for a longer period and it is believed to modify environment on a larger scale (DeMarrais 2004; Scarre 2004, 2010b; Tilley 2004; Cooney 2007; Herrera 2007; Robb 2009). But when we analyse every case, it is evident that features which are interpreted as symbolism (provenance, shape, decoration, modification, etc.) are really related to production costs (Laffineur 2007:118, 120). In this sense it is possible that a better finished work carried a more understandable message, for example with “artistic” representations.

Taking into account these previous discussions, first we must remember the different functions that megaliths can carry as ritual monuments (Tilley 1993; Nocete *et al.* 1995; DeMarrais *et al.* 1996; García 2000; Cámara 2001; Mantha 2009): cohesion symbols (not only of the whole community but also of a section of it), property and boundary marks and inequality expressions (or ways of concealment). Secondly, among these three functions, the second one has mainly driven the research agenda for the study of Late Prehistory in the Iberian Peninsula and as a result economic territories, routes and sceneries have been defined. Here, we claim that the definition of inter-tombs differences in certain situations could help to identify social inequalities concealed by a collective burial. In order to do that, it will be necessary to study how every grave (or group of graves) has developed a monumental character by analysing the tomb’s inner (content, especially grave goods, built spatial features)

¹ We must thank our postgraduate students, and especially Abel Berdejo Arceiz, for their useful comments on this subject.

and outer space (outer shape according to mound, façade and outer features) and location (distribution, visibility, impact over surrounding areas).

and certain other characteristics (mainly shape and size) especially in Los Millares necropolis. Some features as decoration and remains of outer ceremonies will not be treated because of the few available data.

First we will studied location traits in the Tabernas and Los Millares cases. Secondly we will analysed contents

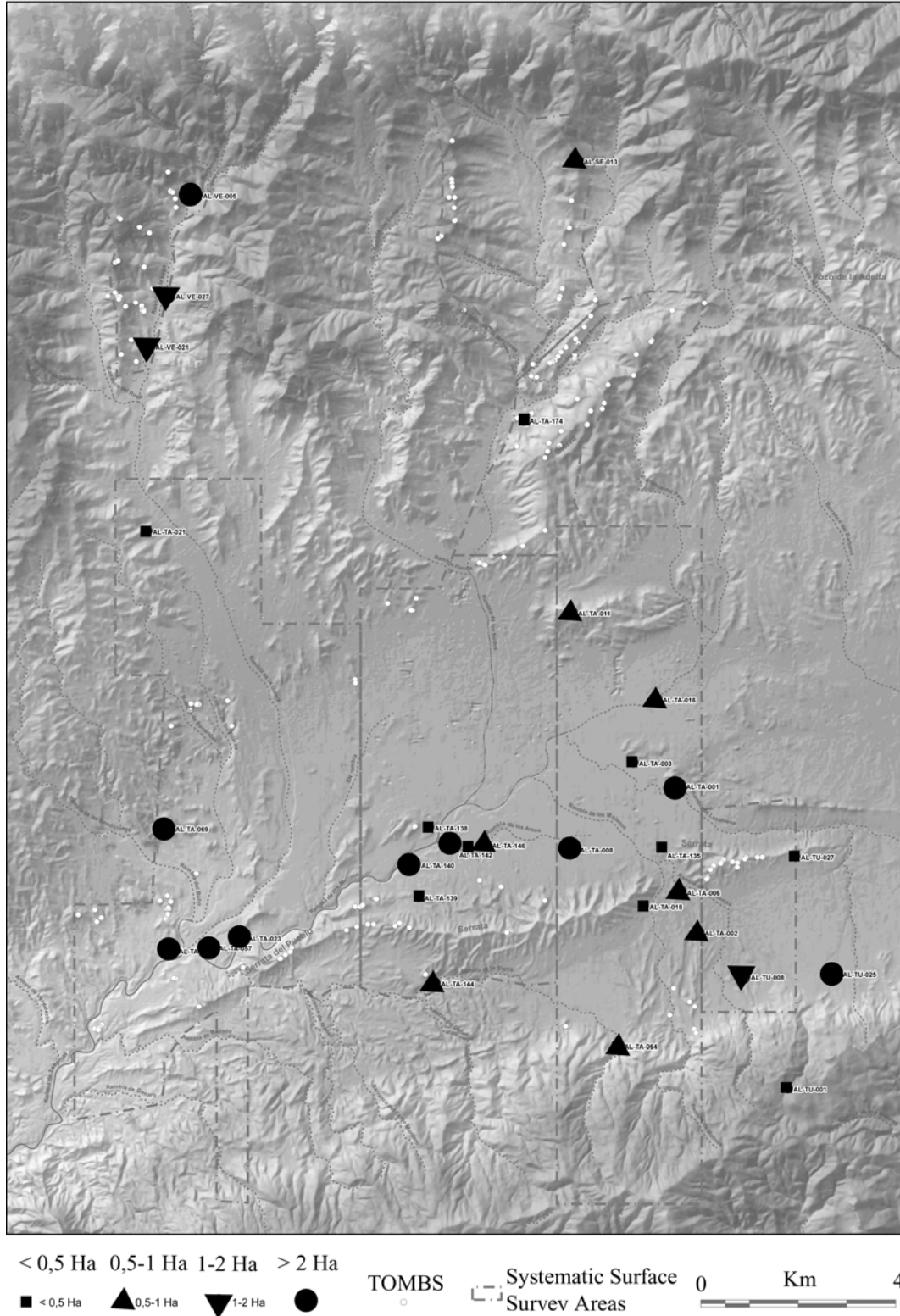


Fig. 2. Systematic surface survey transects in Pasillo de Tabernas area, including identified Neolithic and Chalcolithic settlements (polygonal symbols) and megaliths (white circles)

Methodology to analyse the Pasillo de Tabernas megalithic distribution

Introduction

Spatial distribution of megaliths has been considered in the analysis of ‘Megaliths in Iberian Southeast’ and was possible due to the good results of the systematic surface surveys, especially in Pasillo de Tabernas area (Maldonado *et al.* 1991-92; Alcaraz *et al.* 1994) (fig. 2). An important unresolved issue is the exact chronology of every tomb, since most of them were excavated or destroyed before our research, and none of the well preserved graves has been recently excavated. However, dates of burials and dates of construction can be different (Scarre 2010a; Schulz Paulsson 2010) and our main interest lies in studying the way in which all sets of graves were used to define territories throughout the IV and III Millennia cal B.C. by adding similar monuments continuously. Although that it is better to have enough data to relate burial episodes in order to make a social comparison, at present, this is almost an impossible task.

Our first analysis studied the differences between megalithic necropoleis and, it became clear that it is important to pay attention to the topographic characteristics of every tomb (Cámara 2001), since the limits of the necropoleis are very often difficult to define, as we can see in the tomb distribution of Rambla de Velefique-Rambla del Sevillano and Hoya de la Matanza-Sierra Bermeja-Rambla de Senés. This last approach has also been used in this paper, taking into account gradient and visibility values of each tomb.

Topographic Analysis Methodology and results

A longer discussion of the characteristics of topographic variables used in order to study site location can be found in different publications (Nocete, 1989, 1994; Spanedda, 2007). Based on previous results of tombs location in Pasillo de Tabernas, we have reduced the topographic analysis to the values that can offer some clues about territorial control depending on the relative height of tombs and gradient of the places where they are located.

Six variables have been selected to conduct this study (Spanedda *et al.*, this volume):

1) A set of indices referring to the organisation of the settlement within 1 km radius:

GROUP	YCAIP	YCAI1	YCAI2	YCAUP	YCAUI1	YCAUI2
A	0,065-0,282	0,691-0,931	1,054-1,221	0,077-0,370	0,844-1	1,010-1,165
B	0,065-0,312	0,740-1	1,123-1,426	0,202-0,478	0,905-1	1,050-1,214
C	0,117-0,292	0,698-0,953	1,099-1,330	0,306-0,612	0,885-1	1,046-1,178
D	0,340-0,376	0,714-0,788	1,079-1,116	0,222-0,352	0,906-0,945	1,005-1,075
E	0,088-0,429	0,874-1	1,299-1,544	0,282-0,583	0,925-1	1,051-1,378

Table 2. Values of groups according to Cluster Analysis

a) YCAIP (geomorphologic area gradient index). This is obtained by dividing the difference between the maximum and minimum height of the 1 km radius area around the site by the distance between the two.

b) YCAI1 (visual dominance index 1). This is obtained by dividing the height of the site by the maximum height of the 1 km area.

c) YCAI2 (visual dominance index 2). This is obtained by dividing the height of the site under study by the minimum height of the 1 km area.

2) A second set of indices refers to the relation of the site within 250 m in radius.

d) YCAUIP (250 m geomorphologic area gradient index). This is obtained by dividing the difference between the maximum and minimum heights of the 250 m radius area around the site by the distance between the two.

e) YCAUI1 (visual dominance index 1). This is obtained by dividing the height of the site by the maximum height of the 250 m area.

f) YCAUI2 (visual dominance index 2). This is obtained by dividing the height of the site by the minimum height of the 250 m radius km area.

The analysis is centered on Rambla de los Molinos and its tributary rivers (mainly Tabernas, Velefique and Senes municipalities), since in Gérgal municipality the surface surveys were very restricted.

Results of Cluster and Principal Components Analyses (figs. 3 and 4) have been combined in order to obtain a classification which will enable the identification of general patterns in tombs distribution. Taking into account that the accumulated variation in components 1 and 2 is 67,548%, table 1 synthesizes their values.

	Component	
	1	2
YCAIP	0,341	0,776
YCAI1	0,764	-0,349
YCAI2	0,888	0,064
YCAUP	0,641	0,548
YCAUI1	0,593	-0,551
YCAUI2	0,676	-0,119

Table 1. Values of each variable in each component according Principal Component Analysis

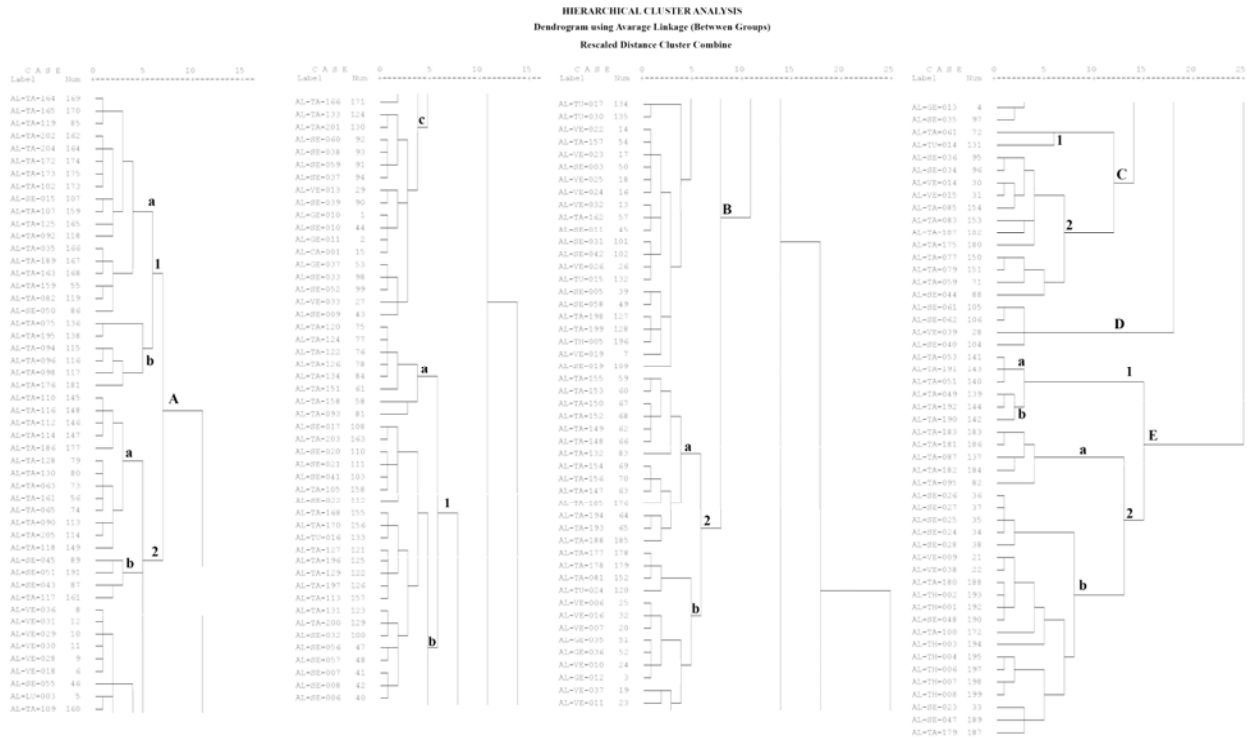


Fig. 3. Topographic analysis of Pasillo de Tabernas megalithic graves. Cluster Analysis. Dendrogram

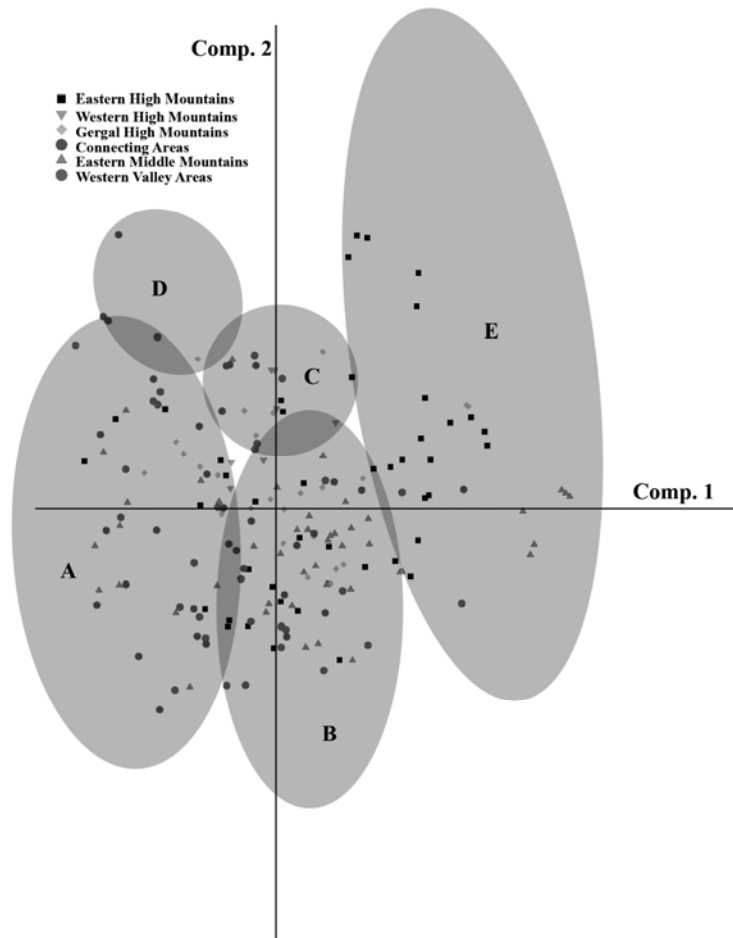


Fig. 4. Topographic analysis of Pasillo de Tabernas megalithic graves. Principal Components Analysis. 1st and 2nd Components Graphics

According to values of each group of tombs (table 2), strategic dominance is mainly exerted by tombs included in Groups B and E. It is very interesting that some of these graves are part of valley necropoleis (fig. 5), especially in Rambla del Búho and Rambla de los Pílares areas, both of them in the Western part of Pasillo de Tabernas. The differences between the Western and the Eastern areas of the studied portion of Pasillo de Tabernas have been pointed out by previous analyses regarding megalith visibility (Cámara 2001; Cámara and Molina 2004) and settlement patterns (Molina and Cámara 2005, 2010). Megaliths located in mountains to the South and to the North are the other tombs in groups B and E, although the Torrecilla tombs located to the East, and considered as linking necropolis (Cámara 2001; Cámara and Molina 2004), are also included in group B. The differences between groups B and E depend on the geomorphologic area gradient which is higher in E group. It is noteworthy that tombs of group E in the Western

area can be located in the Serrata del Pueblo and La Barquilla necropoleis near Rambla de los Molinos valley where the main settlements are situated, such as Terrera Ventura (Gusi and Olaria 1991) or El Búho. It seems that interest in control of the sacred boundaries by funerary monuments is the main factor in this Western area where the Late Neolithic and Chalcolithic population is concentrated in few villages. In the Eastern area, the changes in settlement patterns in these periods are characterized by an increasing emphasis on territorial control exerted from domestic sites and a population concentration between the Late Neolithic and Chalcolithic periods (Molina and Cámara 2005, 2010).

Some tombs located in the lowest areas with high gradient near river valleys are included in group D. They define the beginning of roads connecting valley bottoms with mountain summits.

SUBGROUP	YCAIP	YCAII	YCAI2	YCAUP	YCAUII	YCAUI2
A1	0,065-0,212	0,691-0,931	1,062-1,216	0,077-0,237	0,928-1	1,020-1,165
A2	0,090-0,282	0,723-0,897	1,054-1,221	0,181-0,370	0,844-0,986	1,010-1,148
B1	0,065-0,261	0,819-1	1,123-1,347	0,202-0,430	0,905-1	1,050-1,169
B2	0,087-0,312	0,740-0,904	1,201-1,426	0,300-0,478	0,913-1	1,060-1,214
C1	0,134-0,185	0,897-0,953	1,220-1,330	0,506-0,612	0,953-1	1,086-1,125
C2	0,117-0,292	0,698-0,838	1,099-1,242	0,323-0,590	0,885-1	1,046-1,178
E1	0,243-0,247	0,975-0,998	1,457-1,491	0,370-0,507	0,984-0,998	1,290-1,378
E2	0,088-0,429	0,874-1	1,299-1,544	0,282-0,583	0,925-1	1,051-1,202

Table 3. Values of subgroups according to Cluster Analysis

TYPE	YCAIP	YCAII	YCAI2	YCAUP	YCAUII	YCAUI2
A1a	0,065-0,174	0,781-0,931	1,062-1,168	0,096-0,237	0,928-1	1,020-1,118
A1b	0,125-0,212	0,691-0,774	1,091-1,216	0,077-0,171	0,936-0,998	1,022-1,165
A2a	0,120-0,188	0,723-0,781	1,117-1,201	0,181-0,297	0,844-0,941	1,046-1,148
A2b	0,225-0,251	0,758-0,848	1,054-1,123	0,239-0,351	0,912-0,931	1,010-1,046
A2c	0,090-0,282	0,772-0,897	1,101-1,221	0,195-0,370	0,903-0,986	1,036-1,124
B1a	0,091-0,136	0,819-0,877	1,220-1,347	0,202-0,326	0,905-1	1,089-1,159
B1b	0,065-0,261	0,853-1	1,123-1,298	0,205-0,430	0,936-1	1,050-1,169
B2a	0,087-0,191	0,824-0,904	1,318-1,426	0,300-0,478	0,940-1	1,117-1,210
B2b	0,193-0,312	0,740-0,881	1,201-1,336	0,311-0,452	0,913-1	1,060-1,214
C2a	0,183-0,292	0,698-0,837	1,099-1,194	0,323-0,435	0,885-1	1,058-1,178
C2b	0,117-0,193	0,761-0,838	1,107-1,242	0,491-0,590	0,931-0,950	1,046-1,137
E1a	0,243	0,982-0,986	1,468-1,474	0,507	0,984-0,988	1,352-1,357
E1b	0,243-0,247	0,975-0,998	1,457-1,491	0,370-0,435	0,984-0,998	1,290-1,378
E2a	0,088-0,222	0,941-0,984	1,428-1,523	0,282-0,380	0,976-1	1,088-1,202
E2b	0,222-0,429	0,874-1	1,299-1,544	0,292-0,583	0,925-1	1,051-1,165

Table 4. Values of types according to Cluster Analysis

Tombs in lowland areas are included in groups B and C, the latter including tombs located in high gradient places even in lowland areas. Differences between Western and Eastern areas can also be noted. Graves from group C in

the Western area are located in necropoleis situated in the main valley (El Chortal and Rambla del Búho), while in the Eastern area, this kind of tombs are located in the bottom of a special and closed zone called Hoya de la

Matanza suitable for grazing and having plenty of surface water. This region was considered as very important during the Bronze Age, too, as settlements and hill-forts

occupy all the surrounding summits in order to control the access to the area.

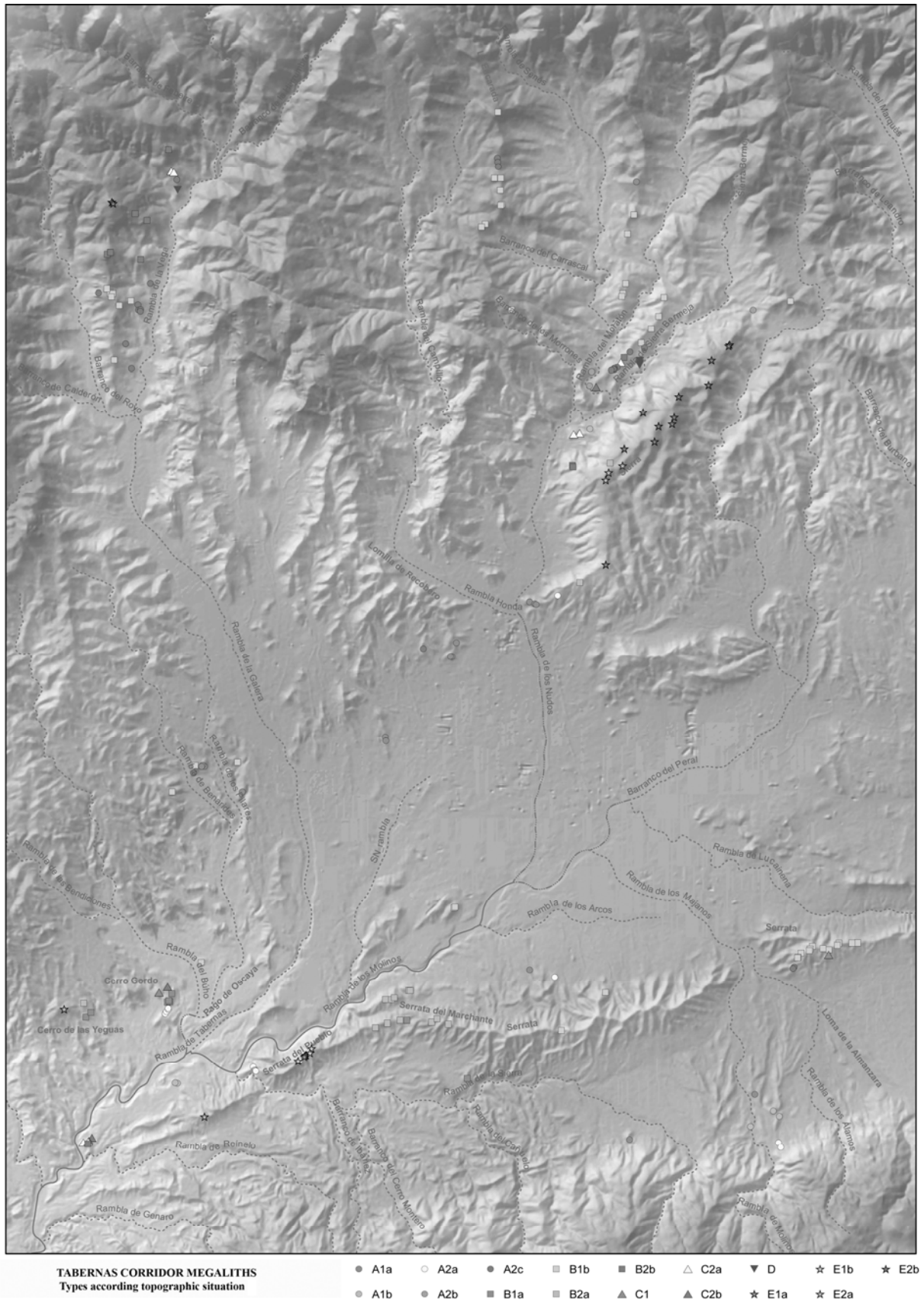


Fig. 5. Distribution of graves types in Pasillo de Tabernas according to the results of the topographic analysis

If we pay close attention to the subgroup classification (table 3) some other characteristics can be discussed. Graves from subgroup E1 can be only found in Serrata del Pueblo necropoleis. Tombs in this subgroup show a higher control over the neighboring areas. Tombs from subgroup C2 show a low territorial control even as all the C group tombs' high gradient places have been chosen to situate them. This result allows a better comprehension of the graves from group D as the first step on the path to disperse and mountain necropoleis, but El Chortal cases, however, cannot be related to a similar situation mainly because of Llanos de Rueda (Leisner and Leisner 1943) tombs destruction.

Only one comment will be made here in relation to the type characterization of subgroup E2 because of its heterogeneity. E2a type tombs (table 4) show lesser control over the neighbouring area in E group but they are sepulchres located in the flattest areas of the mountains.

Concluding Remarks about Pasillo de Tabernas megalithic distribution

This new approach has shown that graves can be distinguished by their location, especially within dispersed necropoleis but also in some important valley necropoleis as Rambla del Búho, where tombs of different formal types can be recognized.

According to previous data (Cámara and Molina 2004) we can see, that the graves located on the highest places seldom control graves located in lower areas, but in valley necropoleis the visual connection is emphasized and dominance over surrounding land is exerted by most of the tombs of Western necropoleis.

In that sense, we can say that in dispersed necropoleis the ideological control of people (dead people) as a justification of the control of the labour force is left apart from the territorial control. The first aim is attained by dominance over other tombs, while the second is achieved by total territorial dominance (Cámara and Molina 2004).

Otherwise visual links between tombs aimed to generate an ideological cohesion within a boundary, as can be appreciated by connections between necropoleis situated in the valley and dispersed necropoleis in the near mountains (especially in the Eastern area) (Cámara 2001).

Finally, in valley necropoleis, that are near the settlements, differences in grave location, correlated with tombs shapes suggest that in these areas the tombs were used to show social differences; especially in the Western area these differences include a different interest in territorial control as can be seen in Rambla del Búho necropolis.

Los Millares grave goods

Some information about the Los Millares necropolis can be found in the first publications of the site (Siret 1893) and in different catalogues and studies made during the last decades (Leisner and Leisner 1943; Almagro and Arribas 1963; Chapman 1991; Aranda and Sánchez 2005; Cámara and Molina 2005; Cámara *et al.* 2010b). Most of the graves are *tholoi* (sepulchres with a round chamber made in masonry, covered by a false vault and with a long corridor) but some tombs are true orthostatic dolmens.

A strong differentiation in grave goods among Los Millares graves was noted by R.W. Chapman (1991), taking into account prestige items such as metal weapons, ivory objects, ostrich eggs, flint daggers, Beaker pottery and other decorated pottery. Discussing correlations between presently visible tombs and the ones excavated by Siret, according M. Almagro and A. Arribas (1963), R.W. Chapman differentiated a group of tombs that is richer in graves goods than the other tombs, thus suggesting lineage differences. Even authors who doubt the social hierarchy at Los Millares have talked about funerary ritual as an "arena" for lineage competition (Díaz del Río 2011:50-51). However, doubts about this classification have been presented by other researchers (Micó 1993), based mainly on certain problems as plundering before L. Siret's and P. Flores's excavations and the limitations of this ancient research (Siret 1893). These problems demanded that our criteria ought to be more qualitative than quantitative in order to classify the tombs according to their grave goods.

Taking into account the associations of these items, we have considered four wealth levels and a set of graves without data (Molina and Cámara 2005). Results have shown that the richest tombs (type A) are located closer to the village or to the road which leads to the settlement (fig. 6). Only in the area near the village gate, the main grave (7-VII) is located in the centre of its group and it is the only one in the area near the village gate. The main tombs usually contain metal weapons, flint daggers, many flint arrowheads, decorated pottery (Symbolic, Beaker and Painted), stone vessels, ivory items and a great amount of idols made in different raw materials, and present closed ceremonial areas with *baetyls*. It is noteworthy that B. Blance (1971) considers most graves of types A and B as not being covered by a false vault due to the chamber size in relation to the mound. Exotic raw materials (Subbetic flint, Huelva volcanic stones and siliceous materials from the North-Western Mediterranean shore) used in the knapping of lithic tools are only found in these graves, where tools made by specific techniques (daggers and large blades made by pressure flaking) are deposited (Afonso *et al.*, 2011).

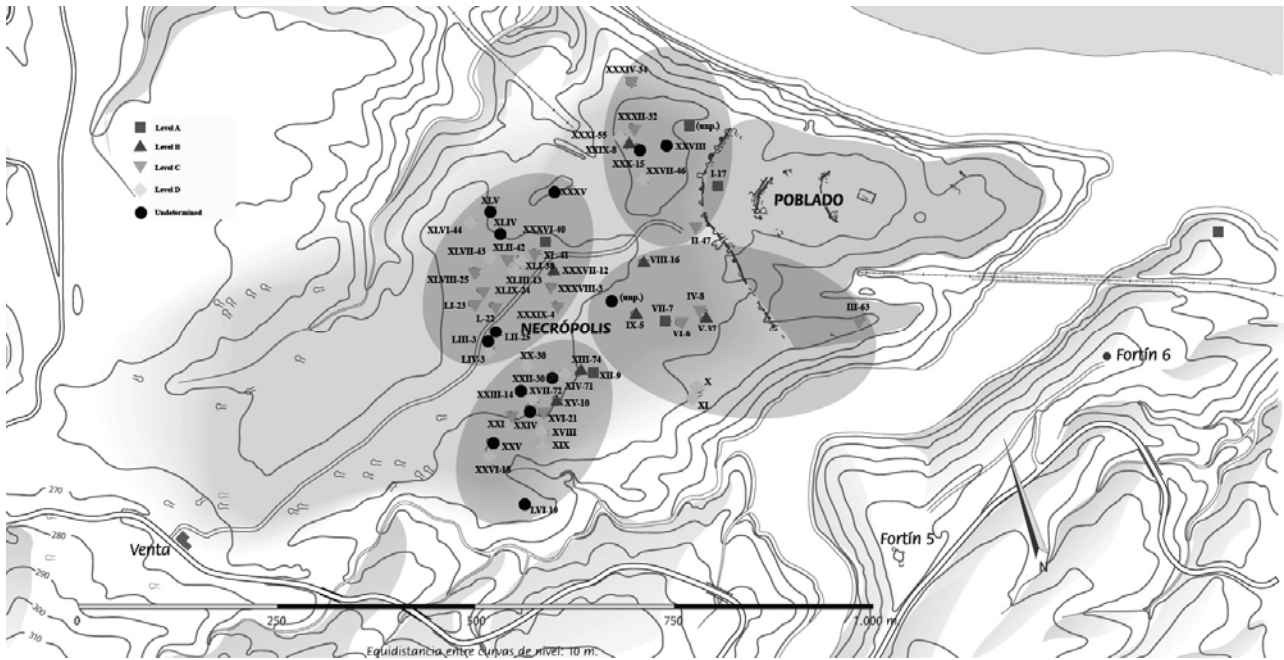


Fig. 6. Differences in grave goods deposition in the Los Millares megalithic necropolis. Graves numbers follow Almagro & Arribas 1963 (Roman numbers) and Leisner & Leisner 1943 (Arabic numbers)

Graves situation analysis on Los Millares necropolis

In order to relate the grave goods with location of the graves, we have used similar variables (see above) regarding gradient and relative height but measured in 25 and 50 m radius, since we were interested in differentiation within the same necropolis and because of the little difference in height in the Los Millares plateau. This approach which pays special attention to small differences in location has been possible because 1:2000 maps are available. Visual dominance 2 indexes have not been used because of the distortion in the differentiation provoked by ravines (Cámara *et al.*, 2010b). In this sense four indexes have been considered in this analysis:

- a) YCAIP50 (50 m geomorphologic unit gradient index). This is obtained by dividing the difference between the maximum and minimum heights of the 50 m radius area around the site by the distance between the two.
- b) YCAI150 (visual dominance index 1). This is obtained by dividing the height of the site by the maximum height of the 50 m area.
- c) YCAIP25 (50 m geomorphologic unit gradient index). This is obtained by dividing the difference between the maximum and minimum heights of the 25 m radius area around the site by the distance between the two.
- d) YCAI125 (visual dominance index 1). This is obtained by dividing the height of the site by the maximum height of the 25 m area.

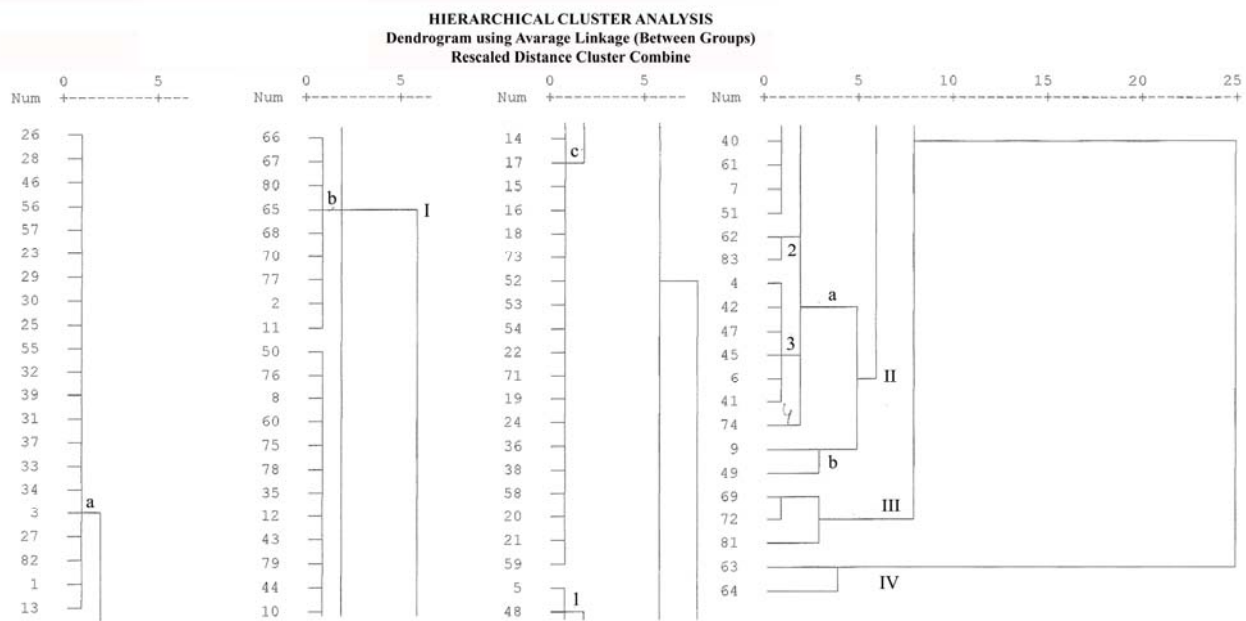


Fig. 7. Topographic analysis of Los Millares megalithic graves. Cluster Analysis. Dendrogram

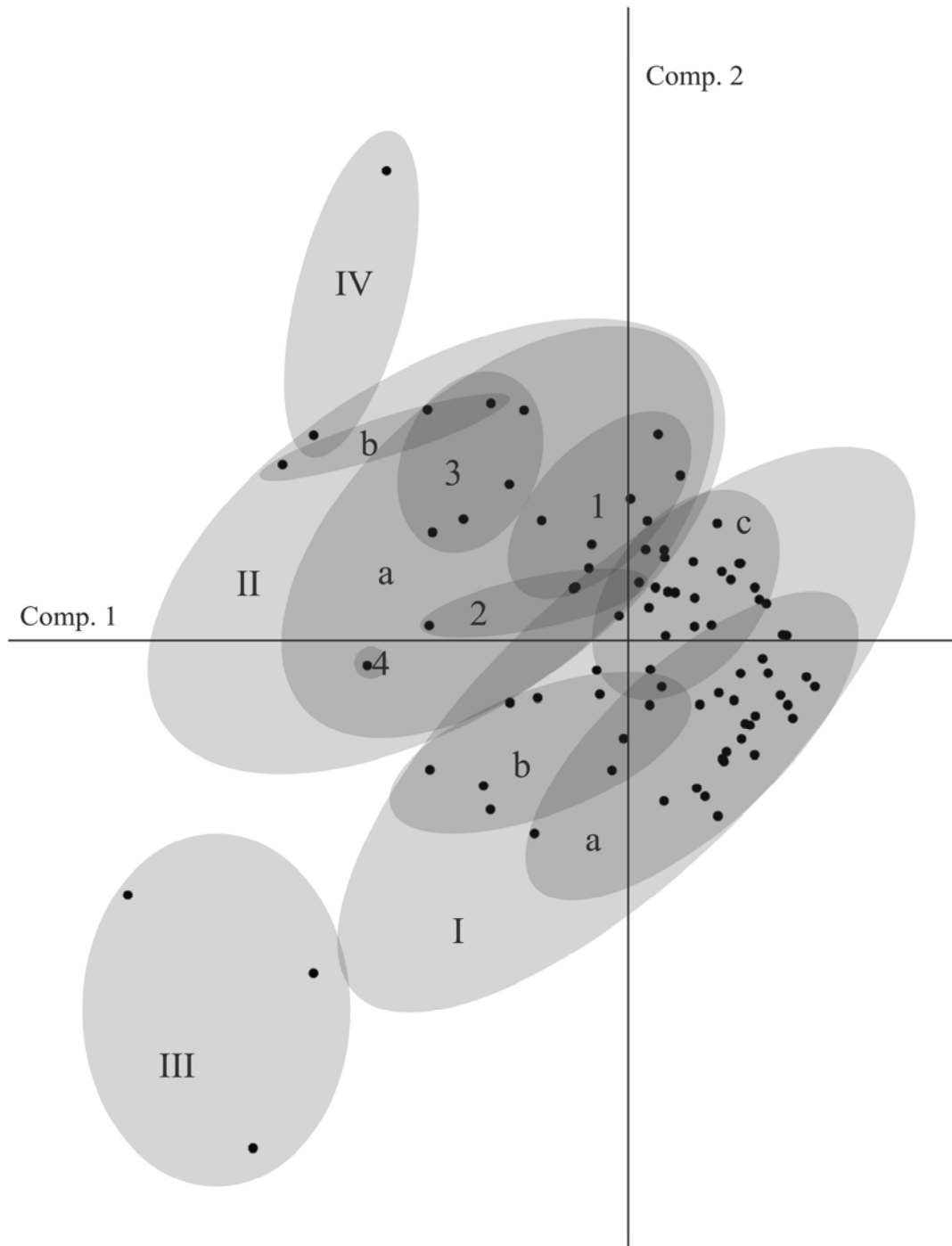


Fig. 8. Topographic analysis of Los Millares megalithic graves. Principal Components Analysis. 1st and 2nd Components Graphics

These indexes have been again treated with multivariate statistical techniques: Cluster and Principal Components Analysis. The former was used to define groups (fig. 7) and the results have been modified according to Principal Components Analysis data (fig. 8). Taking into account that accumulated variation in components 1 and 2 is 96,862%, table 5 synthesizes the results.

	Component	
	1	2
YCAI150	0,860	0,443
YCAI250	-0,530	0,743
YCAI125	0,821	0,513
YCAI225	-0,596	0,686

Table 5. Values of each variable in each component according Principal Component Analysis

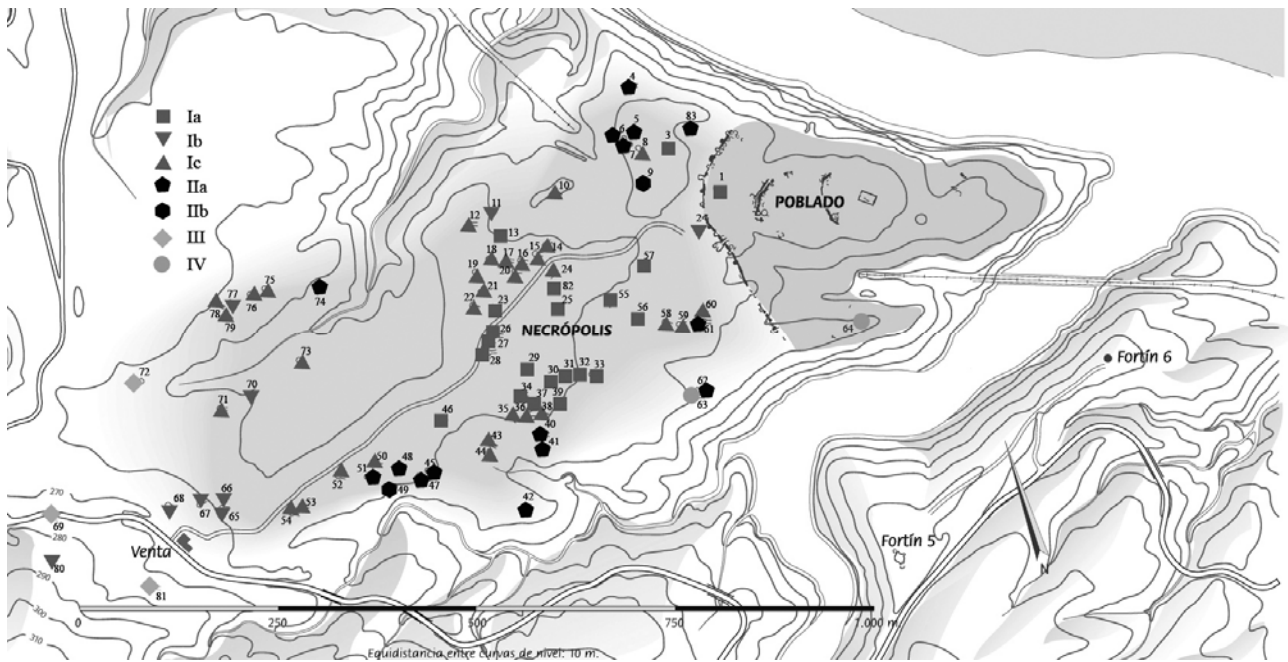


Fig. 9. Distribution of tombs types in Los Millares necropolis according to the topographic analysis. Graves numbers follow Cámara *et al.*, 2010b

Graves in the highest areas and far from ravines are included in type I, tombs in lowland areas are included in type II, while tombs located in low areas near ravines can be found in type III and tombs in high positions near ravines constitute type IV (fig. 9).

Graves with rich grave goods are concentrated in certain subtypes, but they are not located in the highest positions, as it has been suggested for the South-Western megaliths (Morán and Parreira 2004; Nocete and Peramo 2010). In Los Millares, the main interest is to situate tombs in the areas near the village or along the route which leads to the settlement, in flat areas which are easy to modify and allow the construction of a great monument. These tombs with rich grave goods are located far from ravines and bottom areas, where in some cases graves may have been built at a later stage, although no comparison between dates is possible. If we only pay attention to the tombs in these flat areas, we can suggest that graves with the richest grave goods are located in the highest positions (subtypes Ia and Ic) within these plain areas, although visual dominance is poor, especially over the lowest areas. The surrounding tombs are in pursuit of similar positions, especially in the central area of the necropolis. However, no rich tomb is known near ravines. In this sense, monumentality (and impact over environment and audience) is not attained by visibility from the grave but by the perception of each tomb in its immediate environment, that is achieved not by topographic setting but by grave size and proximity to the village and roads that lead to the settlement, as we have previously proposed (Molina and Cámara 2005).

Conclusions

In relation to the main aim of this paper, we have been able to say that the greatest differences between the Los Millares and Pasillo de Tabernas necropoleis can be

found between Los Millares and Tabernas mountain dispersed necropoleis where is obtained the greatest dominance between some tombs and surrounding areas. However, we can also find differences in the position of tombs in the valley necropoleis. The largest tombs are situated in the flattest and the most central places in Los Millares necropolis, creating monumentality through shape, contents, size and proximity to the village and routes which lead to the settlement, while territorial control is emphasized by certain tombs (especially *tholoi*) in other necropoleis of Pasillo de Tabernas, for example, Rambla del Búho.

We argue that a distinction can be made between necropoleis where inequality is exhibited (the valley cemeteries where tombs are distinguished by contents, shape and size and highlands cemeteries whose graves are differentiated by shape and their dominance over other tombs), necropoleis where cohesion is the main aim (there is a visual connection in the middle areas) and necropoleis aimed at territorial control (routes demarcation by dispersion and environmental control by strategic situation of tombs located on hilltops).

In summary and taking into account the discussion about the role of the collective burial in masking of class differences (Chambon 2000:273; García 2000:174; Cámara 2001:236; Nocete 2001:97), we can find no differences in the emphasis which elites have developed to mark their land rights in intensive farming areas on one hand, and extensive economic use on the other hand. However, there are differences in the way and degree in which elites exhibit their position since differences in grave goods look greater in the first area where almost all the tombs seem monumental in terms of shape and size, while in the second area, the graves are mainly used to emphasize territorial control.

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