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El Peñón de la Zorra (Villena, Alicante, Spain): change and continuity in settlement pattern during Bell Beaker

Gabriel GARCÍA ATIÉNZAR
Universidad de Alicante, Ctra San Vicente del Raspeig, s/n, 03690 San Vicente del Raspeig, Alicante, Spain
g.garcia@ua.es

Abstract
In this paper we analyze some archaeological indicators that can be related to the emergence of Bell Beaker elites. We focus on the study of occupation patterns in the Upper Vinalopó valley (Alicante, Spain) where the appearance of the Beaker package precedes a series of changes in the location of settlements and in the habitat structures that can be related to a reorganization of production and the emergence of social elites.

Keywords: Bell Beaker, Settlement pattern, Social elites, Interchange nets

Résumé
Dans cet article, nous analysons certains indicateurs archéologiques qui peuvent être liés à l’émergence d’élites sociales lors le Campaniforme. Nous allons concentrer sur l’analyse des modèles d’occupation de la vallée de l’Alto Vinalopó (Alicante, Espagne), où l’émergence de le paquet campaniforme précède ou est associé à un certain nombre de changements dans l’emplacement des établissements et les structures habitat qui peut être liée à une réorganisation de la production et l’émergence de leaders sociaux.

Mot-clés: Campaniforme, modèle d’établissement, élites sociales, réseaux d’échange

1. Introduction

The Beaker ‘package’ –copper weapons, ivory adornments, Bell-Beaker pottery, etc.– implies the combination of various prestige goods shared by certain individuals and assumed as such by the community as a whole (Sherratt, 1987; Garrido, 1999, 2006). Traditionally the emergence of these social elites has been related with the monopoly of the production of certain products and the control of exchange routes (Kunst, 1998; Delibes & del Val, 2007-2008).

One of the main archaeological contexts associated with this new social development was the first individual inhumations, although some important individuals may have received special treatment in collective graves in natural or artificial caves and in megaliths (Rojo et al., 2005; Bueno et al., 2007-2008). The use of certain prestige goods made from exotic materials (gold, ivory, etc.) or new technologies (copper metallurgy, precious metal work, etc.) would reflect processes of incipient social inequalities in certain societies in the middle centuries of the third millennium cal BC. This picture can be seen in several of the Peninsula’s inland sites such as Camino de las Yeseras, Humanejos and La Magdalena (Blasco & Ríos, 2010; Liesau & Blasco, 2011-2012), and in parts of Portugal (Kunst, 1998). However, in the peninsular Levant it is more difficult to reach the same conclusion for a variety of reasons, not least because the multiple inhumation in caves characteristic of the late Neolithic/Chalcolithic continued to be practised (Soler, 2002). However, several individual burials have been found in settlement areas associated with Beaker grave goods (La Vital, Vila Filomena, Lloma de l’Atarcó, Arenal de la Costa) and even a little earlier (Tossal de les Basses, La Vital, Costamar, Cami de Missena) (Bernabeu, 2010; García Puchol et al., 2013).

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On the other hand, some of the assumptions that we have previously suggested were the bases that sustained the Beaker elites are not observed in the archaeological record of this region, since it lacks both seams of copper and other mineral resources, e.g. salt or cinnabar. However, in certain contexts—settlement and funerary—the so-called Beaker ‘package’ has in fact been found, and has traditionally been equated with the existence of these emerging elites. So it is worth asking ourselves, what were the bases that this emerging social class used to support its position in an area lacking certain raw materials? There are some indicators that it was the process of productive intensification, mainly in farming and husbandry, that would lead to the increasing complexity of late Neolithic/Chalcolithic communities (ca. 3500-2500 cal BC).

In this paper we aim to examine in depth the characterisation of these emerging elites by analysing a number of archaeological indicators, especially settlement patterns in a specific area—the Upper Vinalopó, Alicante, Spain—because we believe that the transformations observed in this area over the course of the second half of the third millennium cal BC could be associated with new forms of social organisation that resulted in inequality.

2. Intensification of production and the pattern of settlement

In the Levant of the Iberian Peninsula a pattern of settlement can be defined from the fourth to the early centuries of the third millennium that is characterised by intense occupation of valley bottoms and beside rivers and water courses. In most cases, excavation has revealed concentrations of negative structures—silos—used for storing or preserving food. These have been associated with the intensification of production (López Padilla, 2006; Jover et al., 2012) and even with the development of incipient local hierarchies (Bernabeu et al., 2006; Pérez Jordà et al., 2011). In addition, buildings for domestic use have also been detected, some of them that were in use for an extraordinary length of time, with which various types of activity have been linked. These settlements—villages—are always sited in the centre of endorheic areas or valley bottoms, close to better quality agricultural land and near lakes or watercourses where there would have been abundant natural resources (García Atiénzar, 2009). These factors, together with the fact that some of these sites were enclosed by ditches, are evidence that Neolithic communities were becoming established in a particular territory.

The development of this settlement pattern can be explained in terms of the progressive increase in population of Neolithic societies. But it can also be analysed in terms of the relations that they established with communities in the peninsular Southeast, in particular those to the south of the Segura river basin. In this territory, once the Neolithic communities had stabilised in demographic and territorial terms, production started to intensify in the first half of the fourth millennium cal BC thanks to the greater variety of lithological resources, the diversity in productive capacity of the soils and exclusive access to outcrops of metal-bearing ores. From then on, the emerging ruling groups intensified their acquisition, production and exchange of raw materials and products with neighbouring territories, and complementary activities and social dependency began to develop amongst groups.

Thus a political structure was constructed in the Southeast which in anthropological terms can be equated with tribal hierarchies (Sarmiento, 1992), recognised in the archaeological group of Los Millares. The expansion of this group would be based on the unequal distribution of technical knowledge and exploitation of resources, particularly metallurgical resources. In this social network, the redistribution of goods and control of the workforce would become evident in the creation of large villages such as Los Millares (Molina & Cámara, 2005) or that which lies beneath the town of Lorca (López Padilla, 2006).

On the other hand, the territories situated between the Segura and Júcar river basins are not areas with notable resources; instead the lithology is similar throughout the area and metal-bearing deposits are entirely absent. In these territories there might be considerable demographic growth when two
Informal conditions were present: large areas of good land that allowed sufficient food to be produced and key points along routes communicating basins or territories where raw materials and products from different sources could be controlled and redistributed (Jover et al., 2012). All the evidence seems to suggest that mechanisms of social control were not developed either between the different areas nor within each group, since the resources necessary for the reproduction and maintenance of each productive unit could easily be obtained in each basin independently.

However, as certain products –copper, ivory, particular siliceous and metamorphic rocks– became a more important part of social interaction and links with the territories further south were consolidated, the control mechanisms for distributing them became more clearly defined. In this way the association of certain territories with the communities that inhabited them emerged –reflected in collective funerary rituals– and the principles of reciprocity that had previously dominated Neolithic communities began to change towards a system of asymmetric redistribution in which the work of some lineages was appropriated by others. In this way, and although the resources that existed in each territory continued to be communal property, the resulting products no longer were, and control of the workforce became a key element in the development of inequality between lineages, since certain productive processes and the capacity for political decision-making remained in the hands of the kinship groups that controlled the largest workforce.

This increasing social complexity developed through the middle centuries of the third millennium cal BC. The extension and consolidation of these social networks would lead to the appearance of changes in social dynamics that can be inferred from the following indicators:

- Increased territorial control of places of transfer and exchange, the occupation of hilltop sites being a good indicator.
- The greater presence of metal objects, mainly used as grave goods.
- The presence of funerary remains associated with settlement areas, both in open-air settlements and in caves associated with the first hilltop settlements.

A detailed analysis of this phenomenon allows us to see that this process presents a marked chronological gradient (López Padilla, 2006; Jover et al., 2012; García Atiénzar et al., i.p.). Thus in the case of the lands close to the Segura and Mundo river basins this evidence appears in the course of the first half of the third millennium cal BC, while the lands associated with the basins of the Vinalopó, Serpis and Albaída become more clearly defined in the second half, often coinciding with the appearance of Beaker pottery (López Padilla, 2006). This gradient allows us to defend the thesis that this transformation expanded from south to north, although we should not forget that the process of expansion also took place in other directions, if the early appearance of some of these features at the mouth of the river Serpis is taken into consideration (Bernabeu & Molina, 2011: 277) (Fig. 1).

3. The Villena basin: the Beaker phenomenon

The human occupation of the Villena basin goes back to the Middle Palaeolithic. From the beginning of the Holocene, a defining feature of this territory is the existence of large, brackish lagoons that became an ecological reserve which attracted human populations. In fact, the area around the Villena Lagoon was occupied almost without interruption from the Epipalaeolithic onwards (Soler García, 1976). Several sites have been documented towards the end of the Neolithic that, although they have not been extensively excavated and the number of finds are limited, could be interpreted as settlements of the village type.

Several sites can be recognised in the Villena basin that reveal the process of economic intensification (Casa de Lara, La Macolla, etc.) and changes in the pattern of settlement that allow us to infer that social asymmetries were developing or, at the very least, the forms of social organisation were changing.
Prominent amongst the sites that were occupied before the Beaker culture appeared is Casa de Lara. It is a large settlement situated on the perimeter of an ancient brackish lagoon which was first occupied in the Epipalaeolithic (Fernández, 1999). When we look at its occupation by the Beaker culture, we find a tanged dagger with rhomboid blade as well as other metal objects and several fragments of pottery with incised Beaker decoration. However, the absence of a stratigraphic context means we are unable to evaluate these finds correctly, and cannot rule out the possibility that some of the metal items may predate the Beaker settlement. This settlement was inhabited continuously from the late Neolithic to the Beaker period, a characteristic that is also observed in other sites in neighbouring basins: El Prado de Jumilla (Jover et al., 2012), Quintaret in Montesa (García Puchol et al., 2014), Molí Roig in Banyeres (Pascual & Ribera, 2004), Ereta del Pedregal in Navarrés (Juan-Cabanilles, 1994) and La Vital in Gandía (Pérez et al., 2011).

The appearance of the first hilltop settlements is also associated with Beaker materials. Puntal de los Carniceros (Soler García, 1981; Jover & de Miguel, 2002) is situated on a plateau some 60 m above the surrounding plain. This site affords excellent visual control of the Almansa corridor, a valley that connects the Mediterranean coast with the Meseta through the Vinalopó Valley, and the Beneixama Valley, a corridor that gives Villena access to the coast through the Serpis valley. The site is characterised by the masonry walls that mark its limits on three sides—North, East and South—and a steep escarpment on the West, defining a rectangular enclosure of some 3,500 m². The notable investment of time and effort in building it is particularly evident in the north wall, which is more than 3 m thick in some places, has five courses of medium-sized stone blocks arranged in parallel and extends for more than 90 metres. The stratigraphic information is limited to a sondage carried out in the 1960s in which no structures were documented, although various fragments of incised Beaker pottery were recorded (Fig. 2).

The site which offers most information is that of Peñón de la Zorra (Soler García, 1981; Jover & de Miguel, 2002; García Atiénzar, 2014). It is a settlement located on a rocky, triangular-shaped spur, the Beaker remains being concentrated at the highest point, situated 100 m above the valley floor. Four lines of walls of between 1 and 1.5 m wide parallel to the contour lines, defining an area of some 5,500 m², can be observed on the surface. They are separated from each other by a distance of between 50 m for the first two lines and 20 m for the two higher ones. These walls extend in parallel with the
escarpments, and they could be interpreted as a system of circulation along a passage between the constructed spaces and the escarpments (Fig. 3). As in the case of Puntal de los Carniceros, the effort expended in the construction of these enclosures was considerable.

Recent excavations (Garcia Atiénzar, 2014) have allowed several masonry constructions to be identified that can be defined as units of habitation, and also a solid structure of large blocks of stone built on a triple platform constructed using the same technique. Its morphology, its position as an axis that articulates the other buildings, the amount of rubble documented around it and its elevated
position suggest that it was a lookout tower from which the occupants could keep watch over the surrounding area, principally the Beneixama valley, the main natural corridor connecting this region and the Meseta with the coast along the Serpis valley (Fig. 4).

To date, five units of habitation have been documented, although with stratigraphic relationships that suggest that they represent different phases of occupation. The first is defined by a space (House 5) with a trapezoidal plan and an area of approximately 25 m² and is built against the elevated structure, which would date both buildings to the earliest period of the settlement. Under the rubble from the walls of this unit a single level of abandonment is documented; this contained an assemblage of archaeological materials including 12 pottery vessels with Beaker decoration, mainly of the incised style, sometime combined with the impression of points or pseudo-excised (Fig. 5). The vessels included the three typical forms of Beaker pottery: the bell-beaker, the pot and the bowl. Together with them other small and medium vessels without decoration were recovered. The rest of the material assemblage consisted of a bone spatula, a perforated *Cerastoderma* shell, some flakes of flint and several hammer stones and grindstones. This phase was dated from a grain of wheat to c. 2480-2280 cal BC (Beta-332584: 3900±40 BP).

In addition to this building, others have been defined that, because of the different stratigraphic relationships observed and the dates obtained, are later chronologically and date to the Early Bronze Age.
4. The emergence of Beaker social elites in the Alto Vinalopó

Traditionally, the Beaker finds in Villena were interpreted as the paradigm for the emergence of social elites (Soler García, 1981; Bernabeu, 1984). This inference was made fundamentally on the basis of the funerary evidence from the Peñón de la Zorra, particularly the Eastern and Western Cave. These two caves, excavated by J. Mª Soler in 1964, were published as evidence of individual burials associated with Beaker culture metal grave goods: the tanged dagger and two Palmela spearheads discovered in the Eastern Cave (Soler García, 1981). The subsequent review of the anthropological remains (Jover & de Miguel, 2002) allowed it to be determined that a greater number of dead were buried there: six in the Eastern Cave and two in the Western Cave.
Thus what had initially been interpreted as an example of individual Beaker burials became collective burials that, to some extent, maintained the funerary traditions typical of the late Neolithic. However, certain characteristics suggest a departure from previous funeral practices because burials linked with settlements on hilltop sites are documented for the first time, and this association has also been established for Beaker settlements on the plain (Pérez Jordá et al., 2011; Soler Díaz, 2013). Moreover, the number of those buried is quite low when compared with multiple burials in the caves. Finally, metal weapons were included in the grave goods, although there is also some evidence of metal grave goods in the immediately preceding period (Pérez Jordá et al., 2011). In this respect, mention should also be made of the find of silver rings, an element that had been interpreted by some authors as a sign of modernity (Bernabeu, 1984; Simón, 1998) (Fig. 7). The new radiocarbon evidence demonstrates that at least one of the individuals must have been buried in the Eastern Cave at the same time as the final occupation of the settlement during the Bronze Age (MAMS-19108 3357±22 BP: 1736-1611 cal BC 2σ). Therefore, and given the long period of time during which these caves were used for funerary purposes, we think that this evidence is not the best suited for trying to explain the process by which social elites emerged.

We think that the patterns of settlement and some of the architectonic features described above are better indicators for analysing this process. However, any analysis of the territory’s pattern of settlement should start from two fundamental questions: Are the settlements with Beaker pottery – on the plain and hilltop settlements – contemporaneous? Or, on the other hand, did the abandonment of the first imply the founding of those sited on hilltops? There are various regions around Villena where sites on the plain associated with Beaker materials ceased to be occupied when others appeared on hilltops, some of which would survive into the second millennium cal BC. We can highlight the cases...
of the Jumilla basin, where Beaker materials (pottery and metal) have been observed in the settlement on the plain of El Prado (Jover et al., 2012), and metal objects of Beaker typology in Herrada del Tollo (Simón et al., 1999), in the Middle Vinalopó, where Beaker pottery was documented in the settlements on the plain at Terrazas del Pantano and also in the hilltop site of El Monastil (Segura & Jover, 1997), or that of Banyeres de Mariola, where Beaker pottery has been documented both in the settlement on the plain of Moli Roig and in the hilltop site of La Serrella (Pascual & Ribera, 2004; Pascual, 2007).

Unfortunately, few sites have been excavated to date, although the datings available point to the presence of Beaker materials in sites on valley floors from 2500 cal BC onwards. This evidence is always associated with sites that had been occupied from the first half of the third millennium cal BC onwards. The first hilltop sites occupied (Peñón de la Zorra and Mola d’Agres) are later, dating to around c. 2400-2300 cal BC. Although the chronological evidence is still limited (see Fig. 8), it can be proposed that the sites on the plain were progressively abandoned –although some, such as Arenal de la Costa, may have survived until the final centuries of the third millennium cal BC– and the population became progressively concentrated in settlements sited at a higher altitude. Thus for some centuries a model of complementary settlement can be documented, with villages on the plain devoted to farming and husbandry and walled hilltop settlements that offered excellent visual control over the lands worked and communication routes. The date that probably marked the end of this dichotomy in the pattern of settlement would be around 2200 cal BC, a period that saw major changes in the settlement pattern in the Upper Vinalopó –and also in neighbouring basins– that implied a new internal structure of the settlements, giving rise to what we know as the Bronze Age (Jover et al., 2014: 61).

If this progressive transition can be shown to have occurred, it not only provides evidence of a new form of settlement but of a radically different model of the way societies were organised. In these hilltop settlements the population was concentrated into a much smaller space in units of habitation with a rectangular plan. This model is very different from that observed in the late Neolithic –even in the early phases of the Beaker culture– when we see hamlets consisting of a few dwellings scattered over the best agricultural land or near areas with water.

2 For more details, check Pérez Jordà et al., 2011 and Jover Maestre et al., 2014.
The concentration of the population in one place would have culminated in an increase in productive capacity. At this time no improvements are observed either in the means of production –with the exception of the appearance of denticulated sickle blades– or agricultural techniques, so the only way to increase the productive capacity necessary for obtaining certain products with a high social value would be to reorganise production. This greater level of social integration is also seen in communal work unrelated with the subsistence economy, such as the defensive walls of the hilltop settlements or the elevated structure on the Peñón de la Zorra. Furthermore, the documentation of an extensive of Beakers in the same place (House 5 of the Peñón de la Zorra) is evidence of the concentration of symbols of power in one place and in the hands of a small sector of the population. In any case, what these indicators show is the success of the tribal domestic unit as the basic form of social organisation, characterised by reciprocal solidarity amongst its members, and the appearance of broader and more complex organisational units that could be defined as hierarchized tribal societies in which a series of ruling elites appropriated part of the production in exchange for undertaking the group’s ‘intellectual’ or ‘maintenance’ work (Bate, 1998). These elites, whose principal role would be the management of agricultural production and the organisation of other, non-productive, tasks would be distinguished by the ostentation and use of metal products, especially in the form of weapons, and Beaker pottery. In addition, they would emphasise their pre-eminence over the rest of the community by associating their graves with domestic spaces, either in former silos or in small fissures in the hills on which the settlements were sited, establishing a funerary tradition that would expand considerably in the course of the Bronze Age, both in the Southeast and in the peninsular Levant.

References


Analysis of the economic foundations supporting the social supremacy of the Beaker groups


