

Property Relations in the Bronze Age of South-western Europe: an Archaeological Analysis of Infant Burials from El Argar (Almeria, Spain)

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Political and economic organisation of Argaric society has been one of the most interesting research topics among Iberian Prehistory. Recent debate has focused upon how to define and assess the socio-economic differentiation which is characteristic of Argaric communities, as well as the suitability of the term 'State' when approaching those differences at the political level. Arguments for and against it have been mainly drawn from the Argaric funerary record (2250–1550 cal BC). This paper attempts to approach this issue through the analysis of grave-goods associated with infant tombs. Our main goal is to ascertain if Argaric society established rules concerning asymmetric consumption of goods through infant funerary rituals. If so, this will allow us to infer relevant differences affecting the property of various elements involved in social production.

INTRODUCTION: THE ARCHAEOLOGY OF THE ARGARIC BRONZE AGE FUNERARY RECORD

The exceptional work of the Belgian engineers Louis and Henry Siret during the last two decades of the 19th century made the so-called El Argar culture one of the most outstanding archaeological entities of later prehistoric Europe. The appearance of large settlements located on protected hill sites, a specific intramural funerary ritual, as well as distinctive metal and pottery production, soon attracted the attention of many scholars. The fact that this social and economic development occurred in the south-east of the Iberian Peninsula, known as one of the most arid regions of the Mediterranean, but also one with very rich metal ore deposits, offered a further challenge to the understanding of the emergence of El Argar in the context of the Early Bronze Age.

Since *Les Premiers Age du Métal dans le Sud-est de l'Espagne* was published in 1887 by the Sirets, the funerary record has formed the core of the empirical evidence available for El Argar, on which most of the archaeological models have relied. The vast material collection and archaeological information relating to the Argaric burials, discovered by the Sirets and spread over 12 museums in five countries, has recently been presented in a systematic way by Schubart and Ulreich (1991). New excavations carried out on a series of sites during the last three decades have discovered further examples of this funerary ritual but, in particular, they have improved our understanding of the settlement structure and economic organisation of the Argaric group. Thus, while it was mainly Louis Siret who discovered and recorded, in a rather systematic way for his time, around 1400 burials, nearly 1000 of which came from the site of El Argar itself, modern excavations have increased this number by nearly another 400 tombs (Fig. 1). This implies that any interpretation of early Bronze Age funerary practices in south-east Spain will have to rely to a great extent on the evidence obtained in the 19th century excavations of this site.

Argaric burials attract our attention, in the first place, because of the sharp break they manifest in relation to the Copper Age or Los Millares funerary

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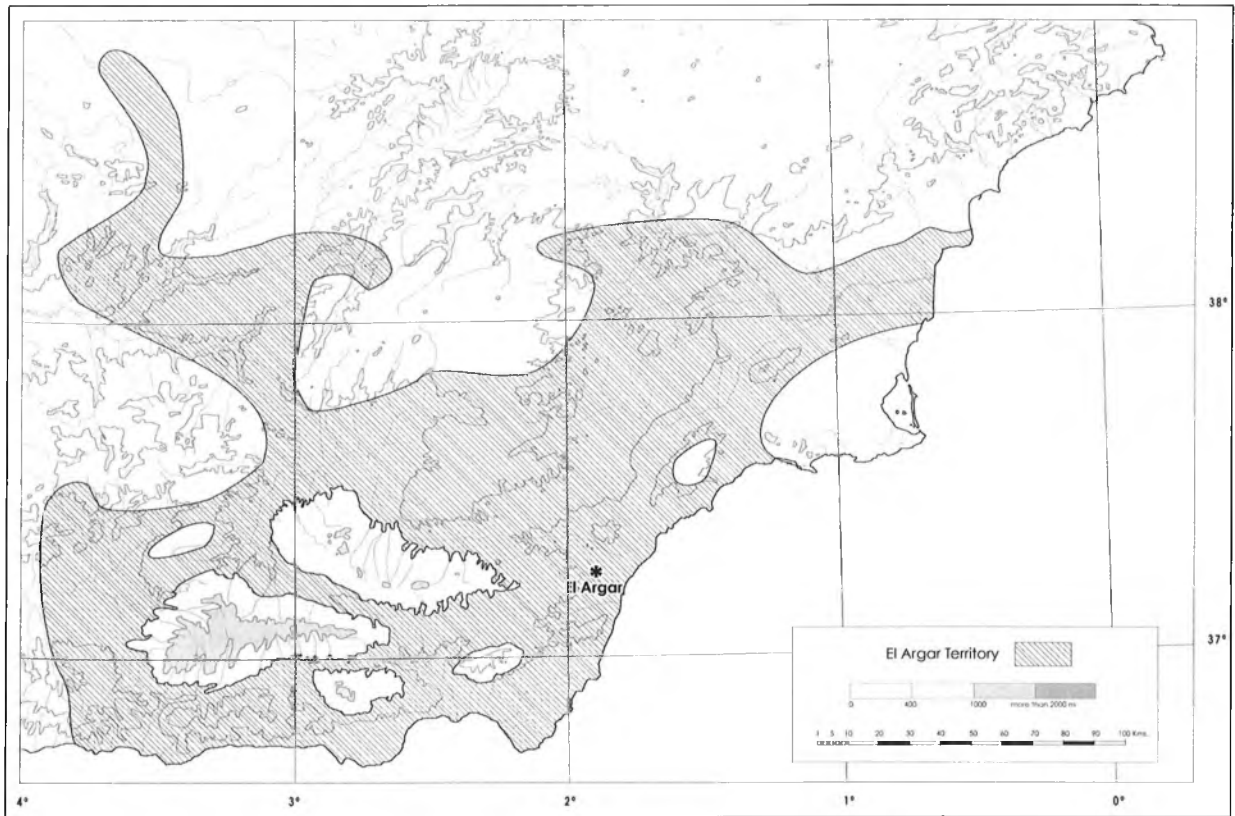


Fig. 1: Maximum expansion of the El Argar territory around 1750–1550 cal BC

tradition. While here we find a collective burial rite in characteristic *tholoi* constructions, located at some distance from the settlements and containing very diverse grave-goods (Chapman 1990; Micó 1993), after 2250 cal BC a highly standardised funerary ritual inside settlements is established (Lull 1983). The spatial overlap of the domestic and funerary domain has been considered as an eastern Mediterranean influence on El Argar (Schubart 1973), but it is also common in other archaeological groups of central or eastern Spain (eg, Las Motillas and Bronce Valenciano).

Characteristic of El Argar graves is the placement of one, sometimes two, and exceptionally three, individuals inside four types of funerary structures: cists, usually built with large stone slabs, pottery urns or *pithoi*, pits, and so called *covachas*, artificial caves cut into the bedrock. Stratigraphic observations and absolute dates indicate that some of these grave forms have a chronological pattern. While rock cut tombs were common between 2250 and 1700 cal BC, *pithoi*

appear as funerary containers during the second part of El Argar (1950–1550 cal BC). Cists and, possibly, pits are known throughout the Argaric temporality, which extends from c. 2250 to 1550 cal BC (Castro *et al.* 1993–4; 1998a; Castro *et al.* 1996).

A rather restricted range of materials and artefacts accompany the dead inside these funerary deposits. The Sirets distinguished eight main pottery types, which remain the basis of present day classification systems. Common pottery offerings are open or closed bowls (form 1 and 2), globular vases (form 3), carinated forms (form 5 and 6), cups with a foot (form 7), and small cylindrical cups (form 8). Characteristic of all these shapes is their well-burnished surface and, in marked contrast with the ‘Symbol’ and Bell Beaker pottery of the Copper Age, the avoidance of decorative motives. A certain number of graves contain metal ornaments, tools, or weapons. Most remarkable are the Argaric halberds, daggers, short and long swords, axes, knives, awls, diadems, bracelets, and pendants. While weapons and tools are

made out of arsenical and, towards the end of El Argar, 'true' bronze, some of the ornaments also use silver and, in rare cases, gold. Necklaces made out of copper, shell, bone, or stone beads or boar tusks are another common personal ornament. Less frequent is the presence of bone and stone tools, such as sharpening tools (erroneously called 'archers wristguards'), flint flakes, awls, etc. Use-wear traces observable on the vessels, metal artefacts and stone tools show that grave-goods were not specific funerary products, but rather a selection among a range of artefacts available and used in the Argaric settlements. Yet, despite some well known extraordinarily rich Argaric tombs, it must be underlined that a large proportion of the dead were interred with no grave-goods, or with just a ceramic pot and a small ornament, indicating that access to these tools, weapons, and ornaments was restricted to certain parts of the society.

It was again the Sirets who first noted that the association between these objects in the rich burials followed certain rules, which allowed them to distinguish male and female tombs. Yet, after the pioneering work of Beatrice Blance (1971), the first multivariate analyses of Argaric burials was presented by Vicente Lull and Jordi Estévez at the conference dedicated to Louis Siret, held in Cuevas del Almanzora in 1984 (Lull & Estévez 1986). The theoretical foundation of their analysis, developed through Historical Materialism, considered funerary contexts as ritual places of social consumption or amortisation. Always subject to the condition that a sufficiently representative archaeological record is available, it should be possible to distinguish groups of burials according to greater or smaller differences in the social value of the products used as grave-goods. If such asymmetric situations can be recognised in other spheres of social reproduction too, these differences in consumption correspond, consequently, to an unequal participation in social production by the groups in charge of funerary practices.

As can be seen, the key issue in this analysis was the identification of the social value of each of the objects forming part of the funerary deposit. While, on the one hand, marked differences exist in terms of labour and skill necessary for the production of the grave-goods, on the other, variables such as rareness, accessibility, or symbolic implications are relevant too. Moreover, social value always has to be

considered not as an absolute category, but as one that is relative to the (pre)historic moment we are studying. Lull and Estévez (1986) found a possible solution in a statistical analysis called the algorithm of the minimum-maximum distances of the inverse index of Q. The principle of this test is to search for combinations between rare items of the sample, which, at the same time, appear among rich and varied grave-goods. In this way, an indirect measure of the social value of the different funerary objects could be found: those infrequent objects found in significant association with the richest graves should be located at top of the value scale, and *vice versa*. The analysis of 396 individual graves, which were known at that moment, proved the existence of sets of items which were interpreted according to a decreasing scale of social value. At the same time, as this indicator of social value maintained a plausible correspondence with the quantity of labour crystallised in the objects (labour value), it was possible to translate these groupings into categories of grave-goods, which seemed representative of hierarchically ordered socio-economic classes. The first two categories would correspond to members of the dominant Argaric class, while persons holding full rights inside the community formed the third category. Finally, two more categories, showing a very low ritual consumption, could be defined and probably stand for servants, foreigners, or even slaves¹.

Based on this statistical and sociological analysis of the funerary customs, it was suggested that kinship relations were transformed into social classes in Argaric society and a new political system, which resembles a State formation as defined by Historical Materialism. This interpretation has recently found strong support in the archaeological evidence gained from modern excavations and surveys (Schubart & Arteaga 1986; Arteaga 1992; 2000; Risch & Ruiz 1994; Lull & Risch 1995; Cámara *et al.* 1996; Castro *et al.* 1998b; 1998c; 2001; Jover 1999; Chapman 2002; Risch 2002; etc). The key elements observed in this social and political organisation can be summarised as follows:

1. Centralisation and redistribution of the subsistence production in the larger settlements;
2. control over production, distribution and use of metal objects, significantly of means of coercion (weapons), means of production (tools), and means of ostentation (ornaments);
3. standardisation of pottery and metal production;

4. control over the inter-regional distribution of goods;
5. establishment of territorial limits equivalent to what we call a 'frontier'; and
6. functioning of mechanisms of psychological coercion at the level of symbolic expression².

Parallel to this investigation of the economic and political structure of El Argar, new results have also been achieved in relation to the funerary practices. The sociological analysis of Argaric burials proposed by Lull and Estévez in 1984 still lacked a chronological framework based on absolute dates. This situation is changing thanks to a large scale dating programme, furthered mainly by our excavations at the Copper and Bronze Age site of Gatas in Almería. At the moment, a series of 128 radiocarbon dates is available for the El Argar archaeological group, for which 55 dates correspond to funerary contexts where human bones have been sampled systematically in sites such as Gatas and Lorca (Castro *et al.* 1996; 1999). Although several chronological questions still remain to be resolved, especially regarding the beginning of El Argar or the dating of certain funerary objects, it is now possible to place the development of El Argar between *c.* 2250 and 1550 cal BC, corresponding rather precisely to other socio-economic developments in central and western Europe during the Early Bronze Age. Furthermore, a better understanding of the chronology and succession of certain burial rites, as well as of the main types of grave-goods, has been achieved (see Castro *et al.* 1993–4; 1998a; Lull 2000b).

An even more important handicap in the early 1980s, was the absence of almost any anthropological information regarding the age and sex of the individuals included in the statistical analysis. This changed when M. Kunter presented his anthropological analysis of the skeletal material collected during the excavations of the Sirets more than 100 years ago, parts of which are still kept in the Museums of Brussels and Madrid (Kunter 1990). This research has further been completed by J. Buikstra, L. Hoshower, and C. Rihuete (Buikstra & Hoshower 1994; Buikstra & Rihuete unpublished) and allows us today to consider the different burial practices in relation to age and sex differences. Moreover, Buikstra and Hoshower (1994), after observing a significantly higher variability among male than female crania, suggested that the regional mobility of the males must have been higher than that of the

females. The interesting point here is that a similar conclusion had been reached by R. Micó (1993). This was based not on anthropological variables but through the first statistical analysis of all the available archaeological information of the Siret collection, now made accessible thanks to Schubart's and Ulreich's systematic corpus of Argaric burials (1991). Apart from corroborating with only minor variations the class divisions proposed by Lull and Estévez, Micó pointed out that adult men of higher rank from settlements such as Gatas or Fuente Alamo seemed to be buried preferentially in the necropolis of El Argar, rather than in their usual place of residence. All this implies that kinship relations in Argaric society followed principles of matrilocality or avunculocality and, maybe, matrilineal descent rules in the context of extended families. Such a possibility contradicts the common view of the existence of nuclear families and monogamy, argued on the basis of the association of male and female skeletons inside double burials. Surprisingly, AMS dates of bone parts of both individuals sampled in a series of double burials, show that male and female were buried a mean of 100 years apart, and thus could never have formed a couple, nor represented a nuclear and monogamous family (Castro *et al.* 1993–4; 1998a). On the other hand, the temporal distance between both individuals would not contradict the existence of a matrilocal or avuncular system. It can be suggested that a relationship between certain women and some men, maybe representing the figure of the uncle, is being symbolised here at a ritual level (Lull 2000b).

Extensive excavations of sites such as Fuente Alamo (Almería) also allow us now to consider the spatial distribution of the tombs inside one of the main Argaric settlements (Schubart *et al.* 2001). In a detailed study of the economic organisation of this important centre and its territory, Risch (2002) could show that most of the metal artefacts found in funerary contexts correspond to a limited set of burials located in the eastern and upper part of this hill settlement. The grave-goods interred in this area correspond largely to the 1st, 2nd and 3rd categories proposed by Lull and Estévez, and signal the upper classes in the Argaric community. Outstanding architectural structures, such as square towers, a large cistern, large storage and industrial buildings, as well as possible grain deposits were built above these tombs. Not surprisingly, the means of production with the highest social value, such as tools relating to the

finishing and maintenance of metal products, were placed and used in this upper part of the settlement, forming a kind of 'acropolis' from where economic production and distribution was controlled³.

THE ARCHAEOLOGICAL RELEVANCE OF THE INFANT BURIALS

Out of the results and ideas developed during the last years new questions arise, which need to be investigated in the future through a whole set of archaeological and anthropological research lines. Undoubtedly, a central question remains that of the relationship between funerary contexts and social organisation. As mentioned, differences in the ritual consumption expressed in the Argaric burials have been considered as indicating an unequal participation of the members of society in social production and consumption or use of the obtained goods. In other words, it has been proposed that this society was divided into at least an *exploiting* and an *exploited* class. The first based its domination on the property of all or part of the factors implied in production (means of production, labour force, or finished products) which, in the Argaric case, were, in the beginning, metallurgy and later dry-farming crop production through a strict territorial control of the agricultural land. What we call 'property' is not more than, say, a juridical or formal expression of the extraction of surplus products and labour to the benefit of the dominant class, without an equivalent compensation for the exploited class. This surplus can be employed in different ways, one being its consumption through political-ideological practices, such as, for example, funerary rituals⁴.

In any case, it is important to point out that not all class societies will express inequality in the funerary domain, as has been discussed over the last 30 years in the field of the so called 'archaeology of death'. In many cases, when differences in the cemetery do not express the large distances that distinguish rulers from common population in the first oriental civilisations, the question arises as to whether the society that produced the funerary record has to be labelled as tribe or chiefdom, or as chiefdom or early class society. In order to solve such situations of explanatory uncertainty, arguments of very diverse order are called on. One of the most decisive pays attention to the funerary treatment of children. The

presence of infant burials with outstanding grave-goods in a necropolis is a persuasive reason to place the corresponding society on one of the highest steps of the current evolutionary typologies.

What is the reasoning behind this interpretation? If we follow the functional sociology adopted by processual archaeology, two types of status are to be distinguished: *acquired* and *attached* (Linton 1965: 123 ff.). The first is achieved by men or women thanks to personal abilities or efforts which are recognised in the social group. Yet, most status positions in a society are attached to the persons since their birth. Those assigned by reason of biological condition such as sex and age are practically universal, but only in hierarchical societies do we find individuals with attached status according to class or caste. Given that children hardly have the chance or ability to strive for recognition, it is easy to follow why the presence of a limited number of rich infant tombs is considered by processualism as a key indicator of hereditary or attached status in a society.

It is not always correct to apply this reasoning when outstanding infant burials are identified, as even some processual archaeologists have admitted (McHugh 1999, 19–21). From a Marxist perspective, as we understand it, notions such as 'prestige' or 'status' should be avoided, as they refer to a political and psychological subjectivity of dubious relevance in the organisation of past societies, and with an indeterminable archaeological expression (Lull & Picazo 1989). We consider it more reasonable to argue that the material differences eventually expressed in the funerary practices manifest differences in the consumption of products. Given that a dead body cannot supervise nor direct his or her own funeral, such differences refer to the consumptive capacity of those groups in charge of the accomplishment of the funerary practices. Only then can we accept that such uneven capacity in consumption has to be understood by virtue of a privileged position in production, previous to the placement of certain goods in the burial. Last but not least, only if the material inequalities observed in the funerary contexts follow a normalised pattern over several generations, can we infer that they express the functioning of stable mechanisms of hereditary transmission of property and, accordingly, that they suggest the existence of social classes (Lull 2000a).

The reason why we have decided to centre our analysis on the infant burials is that these structures

reveal better than any other age group the consumptive character of the funerary practices. The supposed subjects, especially children of young age, are in fact only objects involved in practices they could never choose nor decide about. If we speak about social development in abstract terms as a totality, there will be no doubt that children are important, even 'indispensable' for social reproduction ... if they reach adulthood. Instead, if we leave this abstraction aside and stick to reality (the only reality) of the death of specific girls and boys, we find that these practices were carried out by and for groups of adults, which is the only collective that reproduces itself and whose members organise social production. Moreover, these practices can give an image of what these men and women are capable of, or what was allowed to them. Therefore, beyond the debate about the archaeological identification of attached or acquired status, funerary contexts of infant individuals give, in theory, one of the best images of a society. The aim of the present paper is to confirm, or not, if these contexts express the economic and political asymmetry between the different groups that formed Argaric society⁵.

THE INFANT POPULATION OF EL ARGAR: EMPIRICAL DIMENSIONS AND METHODOLOGICAL CRITERIA

Although it is true that the age when productive capacities are fully assumed differs slightly among and between societies, in biological terms this does not happen at least until adolescence/puberty or the beginning of adult age. This coincides with the beginning of the full development of physical capacities, developed after a previous period of basic learning and practicing and, in relation to reproduction, with the beginning of sexual maturity. Under these circumstances we choose to relay on biological criteria when defining the limits of what we understand as 'infancy'. Such criteria offer two advantages: they allow comparison based on an objective frame of reference and, secondly, they can be inferred directly from the archaeological material we wish to analyse, ie, the human remains.

Different definitions of the growth and development stages exist in biology and clinical practice that are of interest for this study (see Scheuer & Black 2000). Generally, it is considered that *foetuses* are those human beings who still have not

been born; perinatal individuals are those that die during birth or shortly afterwards, and they are distinguished from the *newborn* because these survive until the first month. *Infancy* refers to the growth period between birth and 12 years. Finally, the term *youth* corresponds to a stage of development between 12 and 20 years, after which a person is considered to be adult or mature.

The biological development of a human being implies a series of changes in the morphology of the skeleton and dentition that start at embryonic age and continue in a more or less predictable way during the different growth phases. Although it is true that the age when these changes take place can vary according to sex, population (biological inheritance), and living conditions (illness, nutrition, labour), their identification allows us to classify human remains according to different intervals or categories of biological age and, thus, provides an estimation of the 'calendar' age of an individual at death (Buikstra & Ubelaker 1994; Hillson 1996; Scheuer & Black 2000).

The age categories we use follow the standard conventions, based on criteria of osteological maturity, and the age identifications carried out by Kunter (1990) on all the available skeletal material remaining from Siret's excavations, and by Buikstra and Rihuete (unpublished) on a smaller number of cases. Given that the poor preservation of the sample does not allow us to distinguish clearly between foetus, perinatal, and newborn, we have included all their remains in the same category, which would extend until the first month of extrauterine life. Following osteological criteria, the remaining part of the infant age can be subdivided into four intervals of three years each (Steele & Bramblett 1988; Safont 2003). The vertebral arches, for example, remain separated until the third year of age, the breaking through of the permanent dentition starts with the first molar at 6 years and the fusion of the epiphyses starts around 12 years and finishes at the beginning of the adult age.

Once the anthropological criteria of the analysis have been established, any study of the social structure based on the funerary record has to specify if the available sample is representative of the mentioned society. Here the difficulty is to make sure that all age, sex, and, eventually, class groups are included in the anthropological and archaeological sample. Funerary rituals, such as burying or not the newborn, settlement patterns characterised by high

mobility, or different post-depositional factors and inappropriate recording systems can bias the funerary sample. Several studies have shown, for example, the differences existing between the mortality profiles reconstructed from skeletal material, and those derived from demographic analysis. Guy *et al.* (1997) underline that archaeological analysis can rarely identify more than 5–6% of the children less than one year old among the human remains of a necropolis, while according to demographic data this rate is not lower than 25% of the born population previous to the introduction of vaccines. In such societies about half of the children die before reaching adulthood. Surprisingly this is not the case in the Argaric burials, where conservation of infant burials is certainly exceptional in comparison to what is usually the case in the archaeological record of prehistoric Europe. Not only modern excavations, such as those carried out at Gatas, Fuente Alamo, Peñalosa, or Castellón Alto, but also what remains from Sirets' collections includes a high proportion of infant tombs. Kunter identified 217 individuals less than 6 years old for the site of El Argar and a sample of 563 skeletons (38.5%), and 71 in El Oficio with a collection of 182 individuals (35%). Based on this data we may conclude that preservation of the Argaric skeletons is good, and that an eventual under-representation of infant burials must have been caused by social decisions or insufficient sample size.

The two palaeo-demographic analyses carried out so far allow the testing of such possible anomalies (Botella *et al.* 1986; Kunter 1990). In the case of the cemetery of Cuesta del Negro (Granada) it is evident that infant burials are under-represented, while in El Oficio (Almeria) an unusually low proportion of women have been identified. In both cases sample size is the most probable cause of the biases. Consequently, it seems more convenient to base our sociological study on the only reliable collection, which comes from the site of El Argar itself. As mentioned earlier, this is by far the largest known cemetery and it offers sufficiently detailed archaeological and biological information about containers and contents of the individual graves in order for it to be possible to carry out a solid statistical analysis. Moreover, the mortality indices according to sex and age can be considered 'normal' in this case, especially in relation to children.

A final aspect that should be evaluated is the chronological distribution of child burials. It cannot

be simply assumed that infant mortality was treated in the same way throughout the 700 years of El Argar society (2250–1550 cal BC), and this is one of the reasons why radiocarbon dating of skeletal remains from funerary contexts is of prime importance. The above mentioned dating programme, carried out during the last few years in collaboration with the *Institut Royal du Patrimoine Artistique* in Brussels, the *Leibniz Labor für Alterbestimmung und Isotopenforschung* of the Christian-Albrechts-Universität in Kiel and the *Laboratory for Archaeology and History of Art* of the University of Oxford, has allowed us to date by AMS a considerable number of Argaric tombs⁶. From the available 55 dates, 52 fulfil all the necessary chemical conditions to be considered as valid results (see van Strydonck *et al.* in press). They date tombs in 13 different settlements, although nearly half of them correspond to the cemetery of Gatas (Almeria), which at the present stage of research will have a significant weight in any chronological proposal.

As should be expected on stratigraphic and typological grounds, the series of absolute dates confirms that Argaric funerary structures were contemporaneous with the settlements where they were found. Put in a different way, it can be stated that Argaric society buried its dead during seven centuries inside their settlements (Castro *et al.* 1993–4). Yet, if we evaluate the dates according to age groups, it appears that individuals between 0 and 18 years did not merit the same funerary rite during the first 250/200 years (Appendix 4). This view is supported by archaeological observations, as hardly any infant skeletons are found in association with characteristic early Argaric grave-goods or funerary structures, such as halberds, large carinated vessels of form 6, or rock cut tombs, nor in lower stratigraphic contexts at multiperiod sites, such as Gatas or Fuente Alamo. Apparently, the younger population of El Argar gained access to the archaeologically known funerary ritual during the 20th century cal BC. What the treatment of these corpses was in earlier times, and why it was decided to include them in the intramural ritual at a certain moment, are questions that still need to be clarified. The fact is that, once children were included in the collective rights, these were maintained until the disappearance of the whole socio-economic system. It should be mentioned that this generalised burial right coincides with the full development of the El Argar state organisation.

Before presenting the statistical analysis of the infant burials of the cemetery of El Argar, some comments on the sample selection are necessary. In the first place, we have not included any partially destroyed or incomplete tombs. Double burials (eg, children associated with adult men or women) were not considered either, as it is usually not possible to assign the various grave-goods to each individual. State of preservation and the number of skeletons were recorded in a surprisingly systematic and rigorous way by Pedro Flores, Siret's foreman who described each tomb through text and schematic drawings according to a standardised procedure. These field diaries, kept in the archive of the Museo Arqueológico Nacional⁷, as well as the *corpus* of the Siret brothers and the systematic review of all available information, presented by Schubart and Ulreich (1991), represent the basic source for any analysis of El Argar or other Argaric sites excavated by the Sirets.

As argued before, the aim of our analysis is to understand the social structure responsible for the material differences existing among child burials. Given that age differences are a crucial aspect, only infant tombs with osteological information about the age at death were considered. This means we have to rely on the anthropological studies of Kunter (1990) and of Buikstra and Rihuete (unpublished). It is possible to identify many more child burials, thanks to the measurements of the funerary structures recorded by Pedro Flores and his comments on the small size of the bones, but in these cases the precise age of the individual remains unknown, and have therefore not been considered.

Taking into account these archaeological and anthropological factors, the total sample consists of 227 children, who died between 0 and 12 years of age and were buried in individual tombs in the settlement of El Argar c. 1900–1550 cal BC (Appendix 1).

FUNERARY STRUCTURES OF ARGARIC CHILD BURIALS

Out of the existing four Argaric funerary structures described above, children were primarily buried in urns. Nine out of ten infant deaths were placed in urns. It has been suggested, that the use of ceramic vessels might have been a consequence of the decision to incorporate children into the intramural funerary practice (Ulreich 1991, 386, Castro *et al.* 1993–4, 85). In any case, according to the available absolute dates,

urns seem to have been used for adults already in the 20th century BC. From a typological point of view it can be observed that most infant urns correspond to vessels of form 4, a large oval container, which was the most common funerary urn of El Argar and other sites. Nearly as frequent is form 2, a much smaller urn of hemispherical shape and a slightly entering rim. Carinated vessels of form 5, spherical shapes of form 3, and open bowls of form 1 and its variants were only occasionally used.

When these urn types are arranged according to the chronological ranges into which infancy has been divided (Fig. 3), it appears that vessels of form 2 mainly contained very young children, especially newborns or babies, who died before reaching the age of 3. On the other extreme we find *pithoi* of form 4, which are unknown among the newborn, come into use from the age range of 0.1–3 onwards, and remain the exclusive urn used after 6 years of age. The changes in urn types seem to respond to the need for larger containers suitable for more voluminous bodies. If the *t* test is applied in order to evaluate the differences in capacity between urns of form 2 and 4 used for the age range between 0.1–3 years, it becomes clear that the later replaces the first one, as well as all other minor shapes, when the corpses surpass a certain size⁸. Nevertheless, the dominant use of form 4 for taller/older individuals cannot be interpreted strictly in functional terms, as the carinated form 5, an equivalent large storage vessel common in the settlements, is practically never chosen for the burial treatment of older children or adults. The normalisation of the burial ritual is further suggested by the dominant use of form 2, especially in its variant 2B3y, for the youngest children. Other shapes, such as forms 1, 3, or small variants of form 5, would have been equally suitable for burying newborns and babies. The high frequency of urns 2B3y, characteristic of the final phase of El Argar, might reflect a higher infant mortality at the peak of the development of El Argar society, as is also indicated by stratigraphic and anthropological observations (Buikstra *et al.* 1995).

GRAVE-GOODS PLACED IN ARGARIC CHILD BURIALS

The first observation regarding the grave-goods of infant burials is that only half of the considered cases contain some kind of object⁹. In order to grasp the

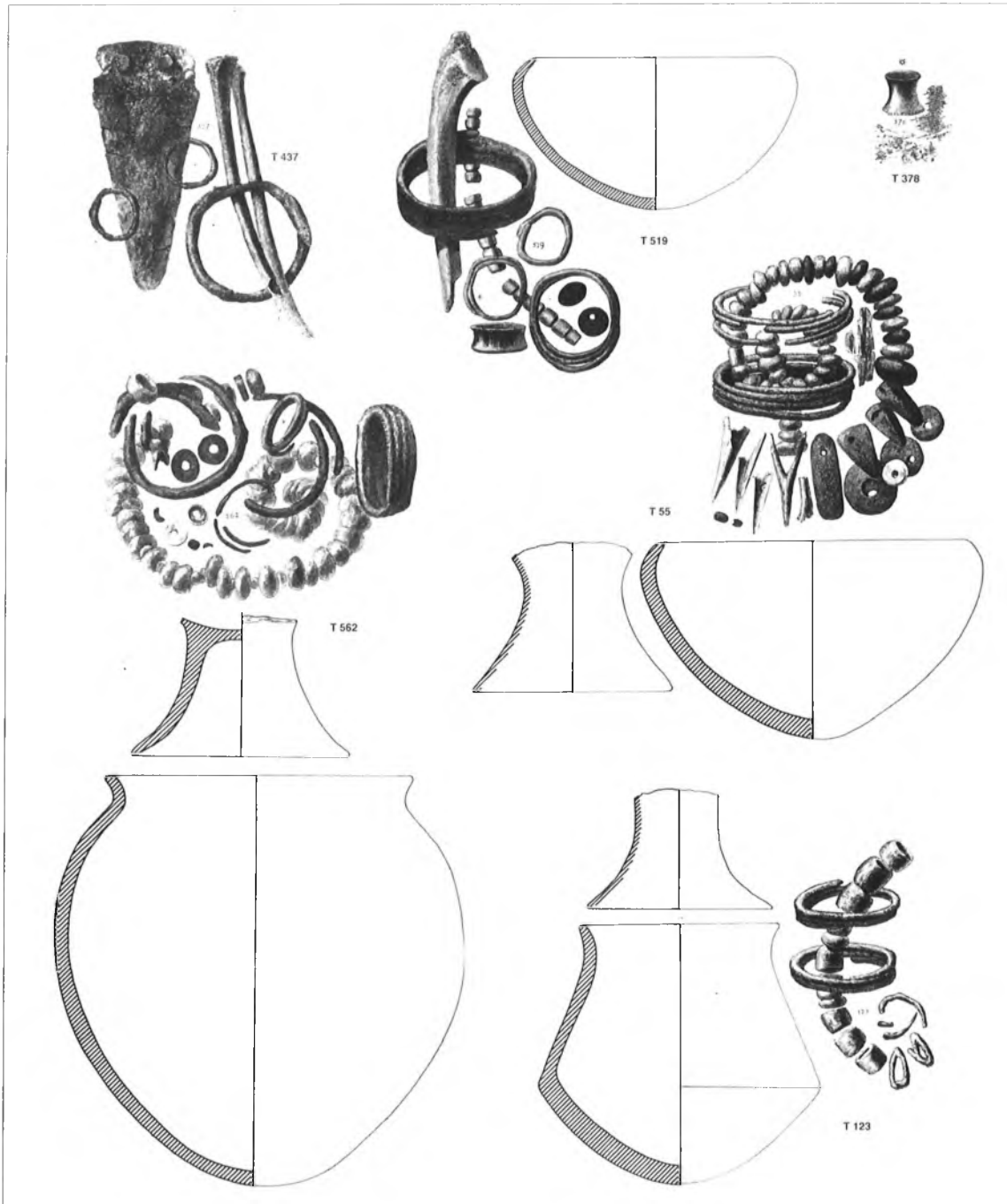


Fig. 2: Grave goods of Argaric child burials: tombs 55, 123, 437, 378, 519, 562 (ornaments and tools according to Siret and Siret (1887), scale 1:2; pottery according to Schubart and Ulreich (1991), scale 1:3. Open stars indicate golden objects; simple stars indicate silver objects).

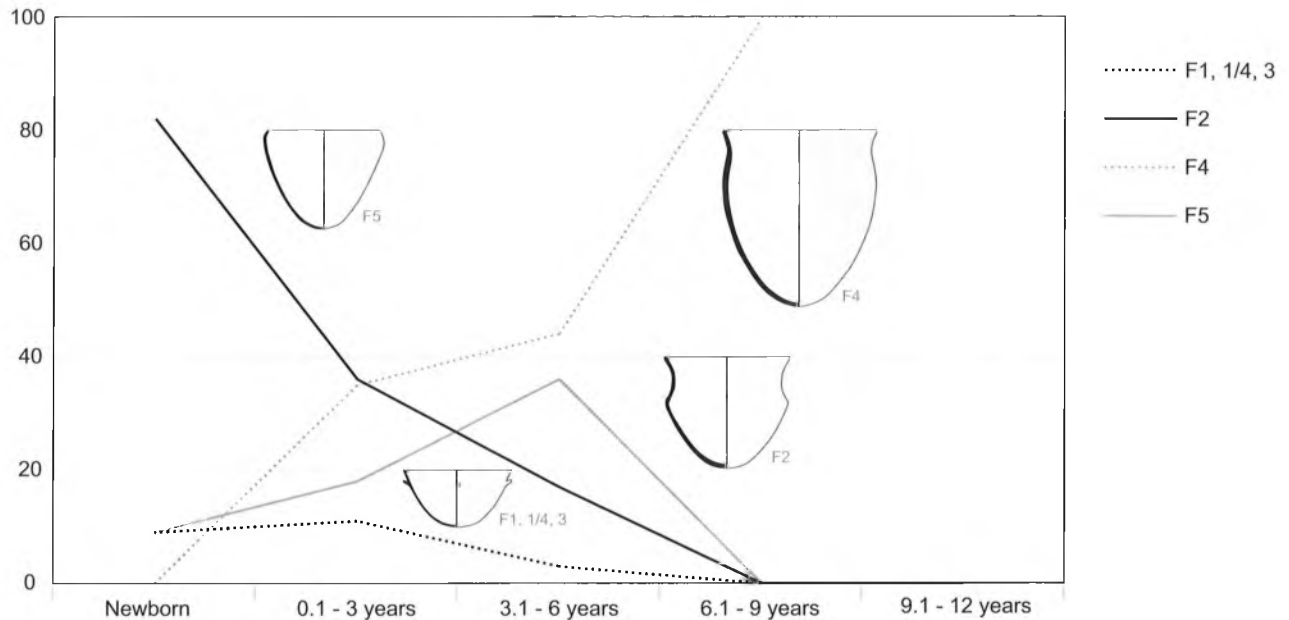


Fig. 3. El Argar. Frequency of urn types according to age.

pattern that lies behind this aspect of the Argaric funerary ritual, a so-called 'index of representativity' was calculated, which informs us about the recurrence of a given item in the sampled tombs. While 'popular' objects will have values close to 1, meaning that they are common in most of the burials with grave-goods, rare elements will tend towards 0.

Pottery is one of the most common funerary objects in El Argar. Generally child tombs contain one vessel (68.1% of the tombs with grave-goods), sometimes two (21.7%), but rarely more. Burial nr 882 is the only one that combines up to five pots. It should be noted that rich sets include most of the cups with a foot (form 7), a special and very elaborate pottery type which, in settlements such as Fuente Alamo, has been found mainly in the higher area or 'acropolis' (Schuhmacher & Schubart 2003).

The 'popularity' of each pottery form is variable and can depend on the age of the individual it belonged to (Fig. 4). The most common ceramic grave-goods at all ages are the carinated bowls of form 5. In some age ranges they were included in up to half of the child burials containing any object. Next in importance come forms 2, 1, 7, and, finally, form 8. Forms 4 and, especially, 3 were only exceptionally placed in a child burial, underlining again that the selection of objects in the funerary ritual followed

very precise rules. This normalisation probably did not concern the pottery types, but rather their contents or common use in the settlements, an aspect which still remains to be analysed more closely.

Metal artefacts, especially those used for personal ornamentation, are another common object found in Argaric child burials (Fig. 5). Earrings and other types of rings are by far the most frequent funerary items. Except among the newborn, they appear in more than half of the tombs with grave-goods and seem to have been very popular in 6–9 years old individuals. Generally they appear isolated or in pairs, although higher numbers are not infrequent. Tomb nr 826 is exceptional in this sense and contained up to eight such rings.

Different types of necklaces, with a variable number of beads and pendants made out of a range of raw materials, were also a usual adornment of Argaric children, appearing in at least one-third of the cases of all age groups. Next in importance are metal bracelets, which appear in approximately a quarter of the tombs with grave-goods belonging to children older than 3 years (Fig. 5).

Although most of these ornaments were made out of copper or bronze, 29% of the tombs with grave-goods contain one or more objects made out of silver. Gold, which, according to Lull and Estévez (1986) is

a characteristic trait of the highest category, is only found in two burials: a ring in tomb nr 89 associated to a 4–5 year old child and a bead in tomb nr 378 with a 7–8 year old boy or girl.

Metal tools were not regularly placed in infant burials. Some children, normally older than 2, bear a knife/dagger¹⁰ or an awl, sometimes both. Given that the awl, generally in combination with a knife, is the most common grave-good of adult middle and higher class women, its presence in child burials probably identifies young girls. The axe, in this case a typical middle class male grave-good, has hardly ever been recorded next to individuals younger than 12 years. The only exception is tomb nr 810, in which a 12–18 month old child was found.

One of the most remarkable aspects of children's grave-goods is the absence of a series of objects otherwise considered emblematic of Argaric tombs, such as halberds, swords, diadems, and large carinated vessels of form 6. According to the statistical analysis carried out by Lull and Estévez (1986), these objects form, together with golden items, a significant combination of grave-goods (1st

category), which would represent the highest class of Argaric society. According to the available anthropological information these artefacts seem to have been buried exclusively with individuals older than 20 years¹¹. We will come back to this point, when the sociological implications of the funerary ritual are analysed.

RELATING OBJECTS: UNDERSTANDING THE SOCIAL RELATIONS BEHIND FUNERARY PRACTICES

Once the material elements participating in the funerary treatment of children have been described, it is necessary to ask how these variables are related to each other in the individual associations of grave-goods. One possible method of synthesising the variability of the sample is to carry out a principal component analysis with nine variables: number of ceramic vessels¹², awls, knives/daggers, axes, bracelets, earrings/rings, collars, and, finally, the number of metal objects made out of silver or gold¹³. The total variability of the sample is expressed by four factors,

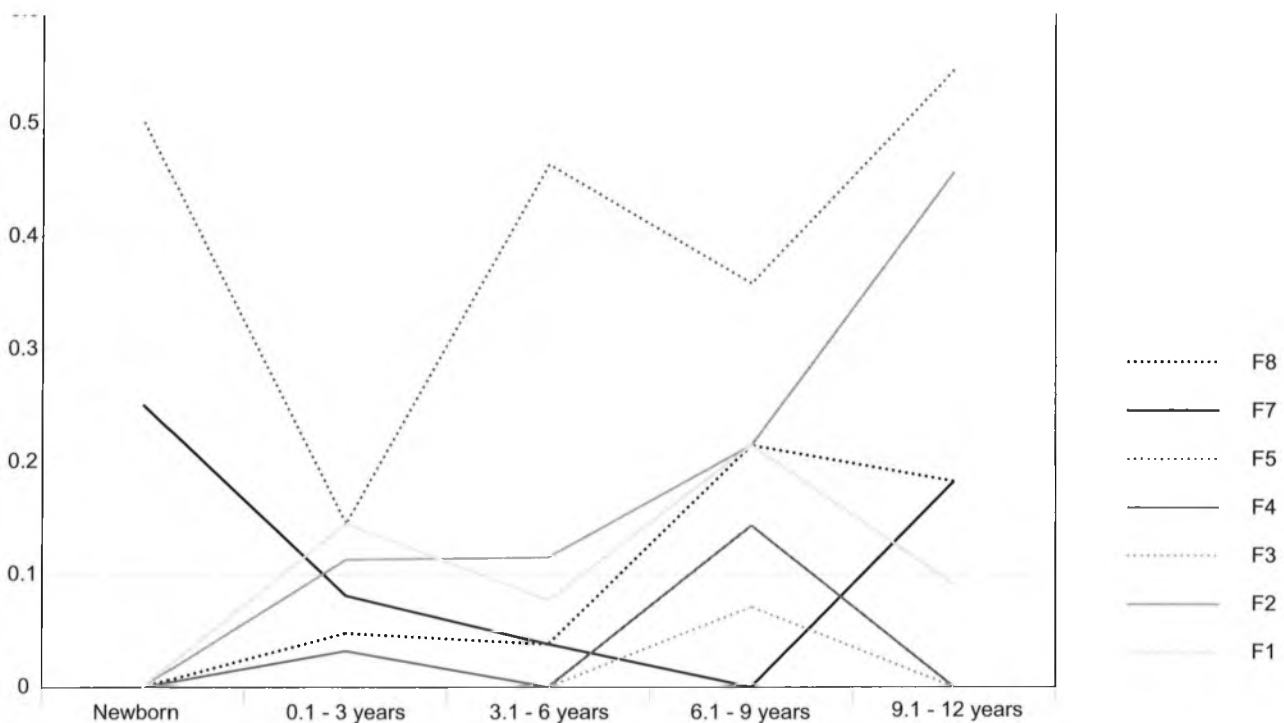


Fig. 4. Index of representativity of the pottery forms in the child burials of El Argar.

TABLE 1. EIGENVALUES AND PROPORTION OF ORIGINAL VARIANCE IN THE PRINCIPAL COMPONENTS.

Component	Magnitude	Variance proportion
1	2.659	.295
2	1.538	.171
3	1.075	.119
4	1.005	.112

TABLE 2. FACTOR SCORES OF EACH OF THE CONSIDERED VARIABLES

Variables	PC1	PC2	PC3	PC4
Pottery.626	.264	-.143	.090	
Awl	.450	.616	-.280	.255
Knife/dagger	.349	.799	.083	-.001
Axe	.167	.296	.805	-.388
Bracelet	.650	-.354	-.147	-.029
Ring/earring	.860	-.326	.002	-.021
Collar	.500	-.324	.365	.093
Silver	.709	-.142	-.026	-.107
Gold	-.045	-.077	.408	.872

the first two of which account for nearly 50% of the variance of the sample (Tables 1 & 2).

The weight of the different variables in each component, but especially in the first two of them, already informs us about a series of interesting

aspects. The first component (PC1) arranges eight of the nine variables in the same direction, as is indicated by their positive factor scores. Most relevant are the number of rings or earrings, silver objects, bracelets, and pottery vessels, closely followed by the remaining element of personal ornament, the necklace. Only the presence of gold does not seem to have a great weight, as the score of this value lies close to 0. Consequently, component 1 sorts out all tombs according to the frequency of copper or silver ornaments and to the variety of different grave-goods. In other words, it shows that burials with the highest number of metal ornaments also contain the largest number of objects and, moreover, the greatest variety of them. Thus, the factor that best explains the variability of the infant grave-goods represents a clear indicator of the differential wealth deposited in the tombs.

On the other hand, component 2 opposes tools (means of production), especially those made out of metal (knife/dagger, awl and axe), but also pottery, against all personal ornaments and the presence of silver or gold, used in the production of some of these. The correlation of the factor scores assigned by the first two components to each burial allows us to visualise an interesting arrangement of the infant tombs (Fig. 6). A large part of the sample concentrates

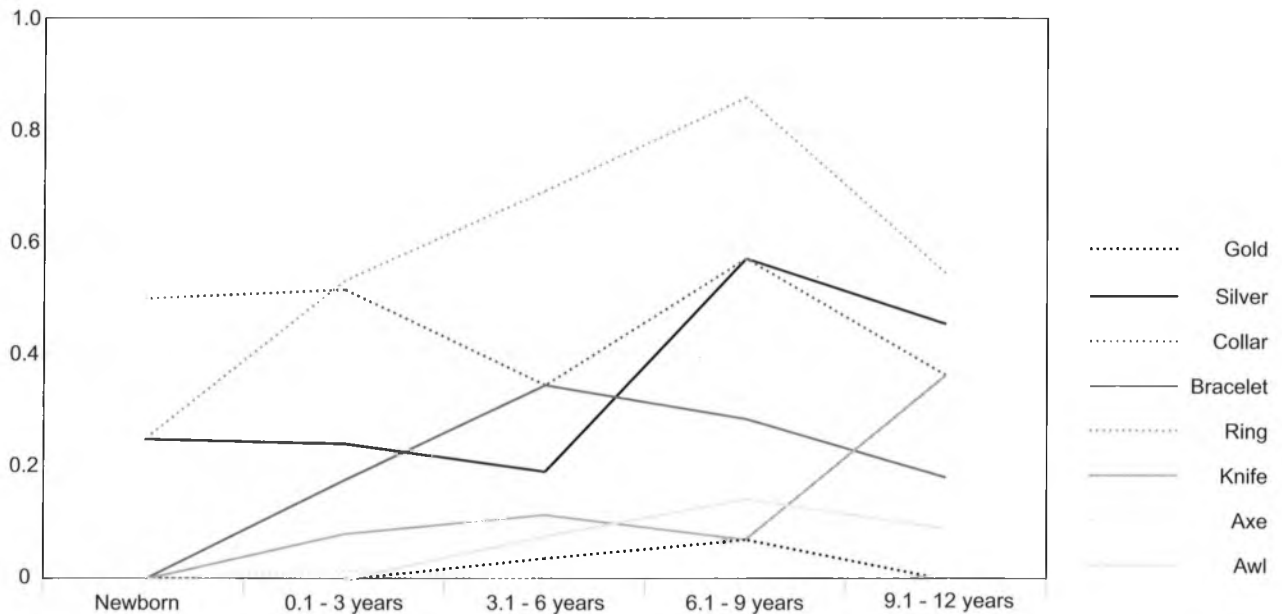


Fig. 5. Index of representativity of metal objects and necklaces in the child burials of El Argar.

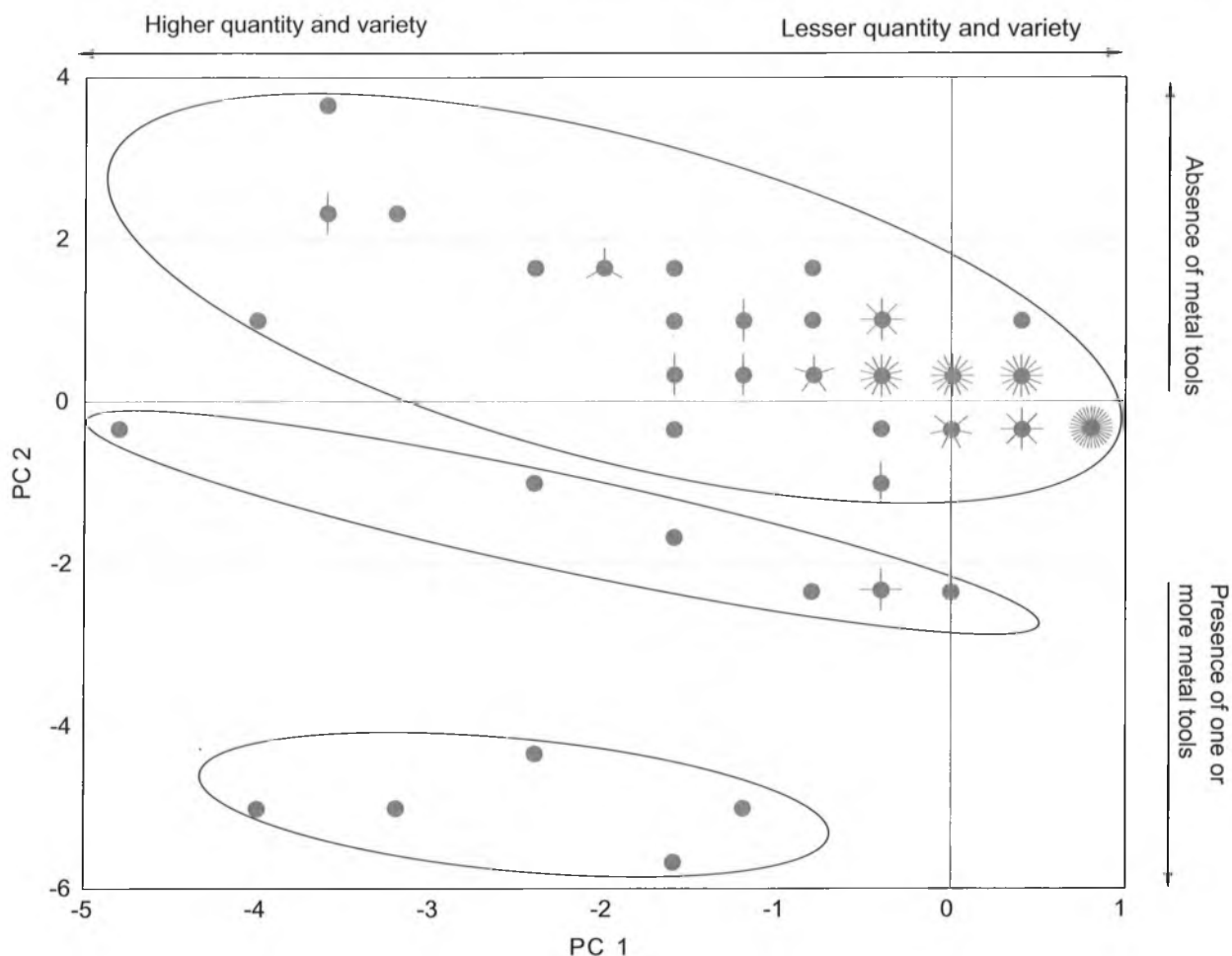


Fig. 6. Correlation between the factor scores of principal component 1 and 2 calculated for each infant tomb.

in the upper half of the scattergram. This cluster of scores does not include any tomb with metal tools, and, moving from the right to the left side of the figure, we first find contexts with no grave-goods at all ($n = 110$), next those with only ceramics or a necklace, and then tombs with increasing wealth in terms of the number and variety of metal ornaments. These can be accompanied or not by pottery. A second line of points can be seen parallel to this main cluster. It includes tombs with one metal tool, which can appear either alone, or, scoring again towards the left side of the scattergram, combined with more numerous or varied items¹⁴. Finally, a third horizontal alignment appears at the bottom of the diagram. It is characterised by burials with two tools (knife/dagger and awl or knife/dagger and axe) combined either

with pottery alone, or with pottery and a variable number of personal ornaments.

The following results can be gained from the principal component analysis in relation to the socio-economic organisation of El Argar:

- a. Significant qualitative and quantitative differences can be observed in the arrangement of the grave-goods. While on one extreme we find a large group of tombs with no funerary items at all (48.5% of the sample), a limited number of graves included metal tools, ceramic vessels, and rich metal ornaments.
- b. The asymmetries in ritual consumption are mainly expressed in a qualitatively and quantitatively differentiated deposition of metal ornaments (pendants, rings, and bracelets), which frequently

'drag' with them other objects, such as one or two vessels or a necklace. Moreover the chance to have a silver ornament increases proportionally to the quantity and variety of entered grave-goods. Out of the 20 funerary deposits with extreme scores in PC1, 19 have one or more silver objects, and they alone concentrate two-thirds of all the silver of the sampled tombs.

- c. This main structuring axis, determined by the variable number of ornaments, can be divided according to the presence of one or two metal tools. Yet, the presence of a tool does not automatically imply 'richness', as they may appear alone, combined with pottery and a few metal ornaments, or even in the most distinguished tombs. If the placing of a metal tool in a child burial symbolises the capacity to possess or to bequeath means of production, it should be suggested that this capacity alone did not guarantee the access to the richest and most diverse grave-goods.

This analysis informs us about the tendencies prevailing at a sociological level, but it does not clarify the main question we are trying to answer, that is, if stable mechanisms of hereditary transmission of wealth existed or not in El Argar. Although the inequalities in ritual consumption seem unquestionable if we refer to the group of children as a whole, we still do not know if these inequalities signify class relations or, rather, correspond to a situation in which dying at older ages gave the right to deserve progressively better furnished funerary rituals. In order to answer this question, it is necessary to examine the sample with greater chronological detail and, moreover, to find a way to translate the variability of the grave-goods into categories with a sociological meaning.

This latter requirement can be accomplished by classifying the 227 cases according to the five funerary categories established in Lull and Estévez's study described above. The absence of most of the characteristic items of the first category (halberd, sword, diadem, pottery form 6) in child burials implies that the identification of a golden object is the only empirical indicator used to assign some of the grave-goods to the first category. The second category includes combinations of earrings/rings, bracelets, pottery and at least one silver object. Eventually, they can also have a metal item. In the third category appear tombs furnished with metal tools, associated with copper or silver ornaments and/or pottery, but

never with the characteristic range of items of the second category.

The particularity of the infant burials requires introducing a subtle distinction in the fourth category, which was established by Lull and Estévez (1986) not on statistical grounds but as a hypothesis for the tombs containing very few items. The definition of category 4b respects the original definition as tombs with only pottery or one metal ornament. Instead, the new category 4a distinguishes combinations formed exclusively by several metal adornments, or by pottery and a metal ornament, but which in no case fulfil the requirements necessary for an attribution to category 2. Finally, the fifth category corresponds, as in the original proposal, to burials with no grave-goods or containing just one item not considered by the other categories, such as a necklace or a bone awl.

The next step was to calculate the varying proportion of the social categories in each of the proposed age ranges. The graphic representation of these values (Fig. 7) provides an overview of the socio-economic structure behind the funerary ritual given to Argaric children.

1. The joint proportion of tombs without grave-goods (category 5) and those with hardly any objects (category 4b) decreases as the age of death progresses.

This trend can be followed among the deceased at birth, until those dying before the age of 6, when the percentage of poor graves stabilises and forms about 40% of the children. Obviously, parallel to this decrease goes a proportional increase of those categories defined according to the association of different items. Categories 1 and 2, which correspond to individuals belonging or related to the dominant class, form a rather stable pattern and usually do not represent more than 10% in each age group, except in the period between 6 and 9 years. Mainly, it is categories 3 and 4a which show a steady increase until 6 years, after which, taken together, they reach around 40–50%. The differences between the age group of 0.1–3 years, when social recognition starts, and children of 6.1–12 years, where the proportion of the lower categories stabilises, prove to be statistically significant for each category where sample size is large enough.

2. In each of the age groups there existed marked differences in terms of the grave-good assemblages. The classification of grave assemblages of children

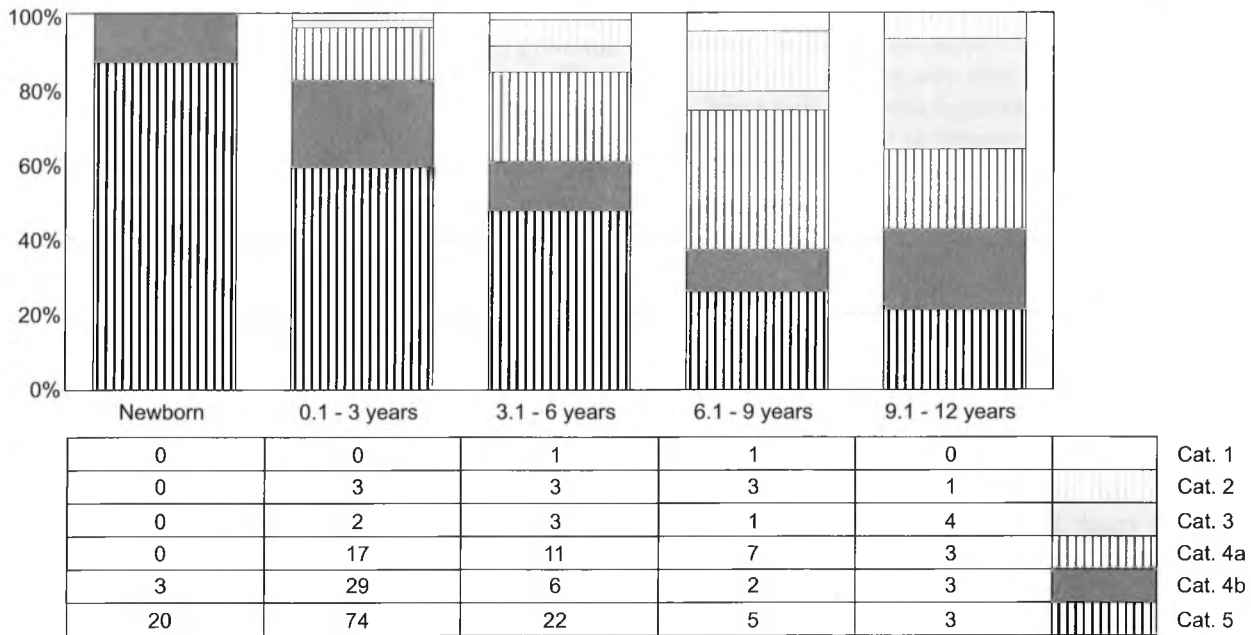


Fig. 7. Distribution of the funerary assemblages along infant age (0–12 years) according to social categories.

dying at all ages into the five social categories proposed by Lull and Estévez, confirms that social differences were continuously manifested. The only exception is premature or newborn children, the most homogeneous group where ritual consumption hardly went beyond the right to be buried¹⁵. Once individuals survived the first month, access to grave-goods was markedly unequal. Thus, around 20% of the deceased between 0.1 and 3 years deserved several metal ornaments (in some cases made out of silver), combined with pottery and even a metal tool, such as a knife/dagger or the only axe found so far in a child burial (categories 2, 3, and 4a).

3. *The normalised associations of metal tools with a clear sexual meaning are introduced in different ways in child burials.* Here we are referring to combinations of grave-goods that previous studies proved to have a clear sexual ascription: knife/dagger and awl to women, axe and knife/dagger to males. The male association only appears on one occasion and, as we pointed out previously, must be considered an exceptional case. Yet, the female association shows a much more persistent pattern. It appears in tombs nr 504, 796 (girls between 6 and 9 years), 798 (6–9 years), 856 (9–12 years), and probably nr 780, where only the awl was recorded. Frequently this tool set

forms part of grave furnishings together with metal ornaments, some of which are made out of silver, and two ceramic vessels (nr 780, 798, 856). This makes clear that the upper classes of Argaric society acknowledged the full status of a social person at a very young age. This ritual recognition expresses two highly relevant social dimensions. The first is related to the sexual identification, as, presumably, some girls deserved the same items that appear much more frequently in tombs belonging to adult and old women. The second dimension is related to property and to the practice of symbolising hereditary transmission. This is underlined by the fact that the listed tombs testify a much higher capacity of ritual consumption than the rest of the infantile burials.

This double and full acknowledgement happens at an earlier age among women than among male of the higher classes of El Argar. These have to wait until adulthood (probably from 12–15 years onwards, and definitely after 15 years) in order to obtain a ritual recognition equivalent to women. If, as anthropological analysis suggest, Argaric society was bound to principles of matrilineality and matrilocality (Buikstra & Hoshower 1994; Lull 1997/98; Castro *et al.* 2001), it should be expected that men buried with an axe and a dagger did not deserve these distinguished items of the ‘members of full right’ until

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they were integrated in the community of the wife, or before they reached the avuncular position (brother of the wife's mother) in their own community. Only then did they gain the mentioned status of 'full right' and, consequently, found themselves in a position in which it was possible to deserve the corresponding funerary ritual. On the other hand, the fact that some girls had access to grave-goods characteristic of 'rich' adult women, brings up a problem that has been raised repeatedly since the first studies of the 'archaeology of death': do the 'rich' female burials imply that at least part of the women had the capacity to transmit or bequeath property? or, rather, were they just used as a passive vehicle by means of which their male relatives, be it fathers, brothers, sons, or husbands, exhibited their own wealth? To answer this question surely requires a much broader and solid approach than is feasible with our present knowledge. In the first place, it would be necessary to confirm the sexual identification of the infant burials by means of DNA (Stone *et al.* 1996; Izaguirre *et al.* 2001). Secondly, our hypothesis that Argaric kinship was organised according to rules of matrilocality/avunculocality needs further support. Finally, it would be useful to undertake an in-depth analysis of the funerary associations of all age groups. All these research lines

are in progress, and we hope to obtain the desired answers soon.

The main conclusion at this stage is that the distribution of values seen in Figure 7, confirms the existence of marked differences in ritual consumption. This gives important support to the hypotheses that Argaric society was organised according to socio-economic classes and sustained by its political correlate, the State. Yet, this distribution also informs us, that, *for some parts of society*, the age at death had an influence in an accumulative sense on the composition of the offerings. This trend, well defined for individuals up to 6 years, is not to be explained in terms of a hypothetical 'status acquisition' thanks to one's own achievements. It must be remembered that the sample analysed only includes individuals who did not reach their full productive and reproductive capacity in their lifetimes. Consequently, the social category expressed by their grave-goods could hardly originate out of their economic contribution to the community. Until the age of 6, the proportional increase of tombs with some type of grave-good must be considered as part of a norm of hereditary rights, which could only be exerted by those social groups who could allow themselves a certain level of ritual amortisation. For example, a person, who died at the

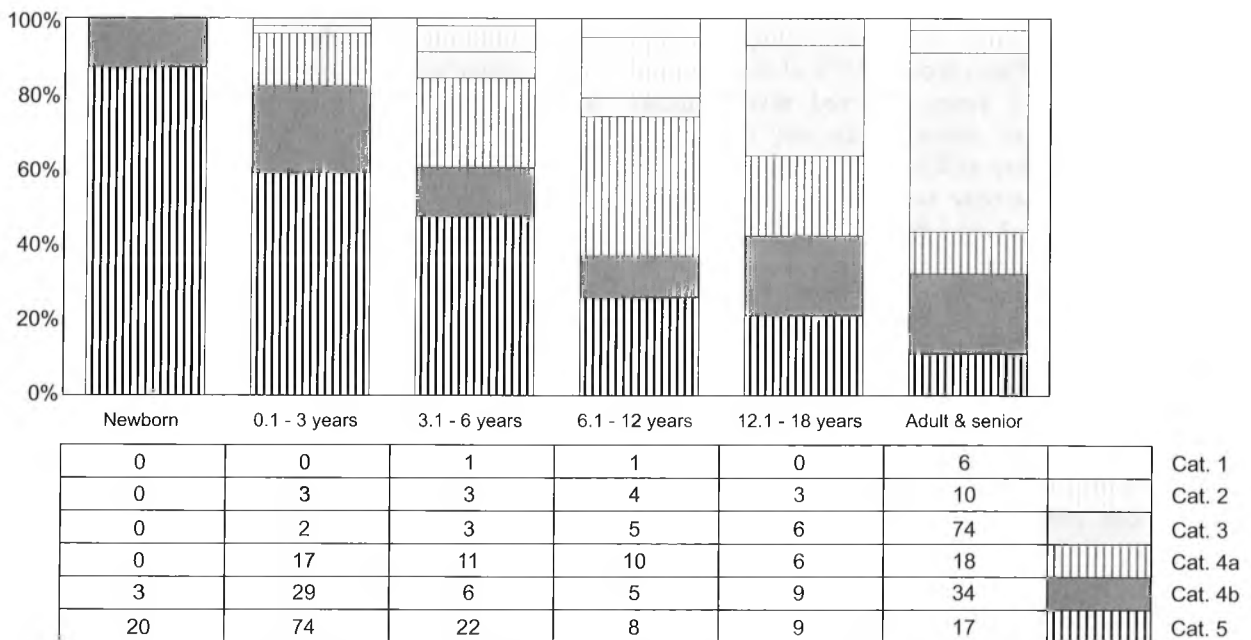


Fig. 8. Distribution of the funerary assemblages of all age groups according to social categories.

age of 8 years and received a category 4b assemblage, probably would have deserved items of category 4a or no grave-goods at all if he or she had died at the age of two. Therefore, the recognised consumption differences call upon an asymmetric access to social materiality between parts of the same society and, it follows, upon an unequal organisation of the relations of production (property).

INFANT BURIALS AS PART OF THE FUNERARY PRACTICES OF EL ARGAR

Is it possible to apply the social organisation inferred from the child burials to the Argaric society as a whole? Do the proportions remain the same if we include individuals who died at an older age? Although this paper focuses on child burials, we would like to conclude with a first tentative approach to these questions. For this reason, the sample has been extended to the remaining tombs of El Argar with age ascription, considering two age groups: juvenile individuals who died between 12 and 18 years ($n = 33$, see Appendix 2), and adult and old individuals above 18 years ($n = 159$, see Appendix 3). Again, the grave assemblages were classified into the same categories as the infant burials, and their percentage calculated for each of the age ranges (Fig. 8).

The inclusion of the juvenile population confirms, in the first place, that the distribution of wealth among the tombs stabilises from 6 years onwards. One can even appreciate a slight increase of the categories with no or hardly any grave-goods (5 and 4b), at the expense of category 4a. Therefore, we consider that there are enough elements to argue that a change in the social recognition of part of the individuals took place around 6 years. This change might be understood in terms of what is described in anthropology as 'passage rites'. It should also be pointed out that the normalised and characteristic male grave combination, including an axe and a dagger, becomes common for the first time among those who died at a juvenile age (tombs nr 35, 307, 434, 768, 849). What is still not present at this age are the main items of the first category, such as diadem, halberd, sword, or the carinated form 6.

The comparison with the wide range of adult and old individuals highlights certain differences in the pattern described so far. The first is that the proportion of tombs with no or hardly any grave-

goods decreases again. These lower categories represent now around one-third of the sample. This change has effects on the frequencies of categories 4a and 3. While the first decreases too, category 3 suddenly becomes dominant. Should we interpret this distribution as a proof of a social structure based on the status acquisition rather than ascription? Is it a more 'egalitarian' and 'open' society, which ritually acknowledges the individual 'merits' achieved during the whole life? We think not, although some considerations with regard to certain parts of the Argaric society should be made.

The main argument in favour of a negative answer is the fact that an important part of the adult and old population, roughly one-third, still continued without any significant funerary consumption (categories 4b and 5). Moreover, there are reasons to believe that this proportion could be much higher than shown in Figure 8. According to the absolute dating of Argaric burials, an uncertain number of these 159 adult and old burials belong to the first two or three centuries of the Argaric development. As we pointed out earlier, during that period intramural interment seems to have been reserved for grown ups, most of whom were buried with grave-goods classifiable into categories 1 and 3 (daggers/knives, halberds, form 6, early examples of the combination knife and awl, etc.; Micó 1993, 606–8; Risch 2002, 275). Taking into account this over-representation of adult tombs with grave-goods, it would not be unfeasible that the representation of categories 5 and 4b during the last four centuries of the Argaric period lay around 40%, the same as seen in the age groups between 6 and 18 years.

Nevertheless, inside this general pattern of inequality, certain groups were able to increase their funerary offerings as age advanced. One of the clearest pieces of evidence has to do with the proportional increase of grave-goods belonging to the third category. If we only consider the objects that combine with the characteristic metal tools of this category in adult and old burials, it can be shown that on their own, most of them would be classified as belonging to categories 4a and 4b. This seems to imply that a person who died at older age and deserved a funerary set of category 3 would have been interred with 4a or 4b grave-goods had he or she died before 18 years. Even so, it must be underlined that only 25–30% of the buried population could have cherished this hope to be 'promoted'. This percentage corresponds to the increase of funerary assemblages belonging to the

third category between children older than 6/juveniles and adults/seniles. Consequently, the detailed analysis of the funerary contexts makes clear that the differences in ritual consumption cannot be reduced to a mere question of presence or absence of metal objects in the tombs, as Kunter (1990, 118–19) has claimed in order to defend the idea that only age is responsible for the differences in wealth.

Another feature that expresses 'ritual benefits' as age progresses is the appearance of the distinctive items of the dominant class. Halberd, sword, diadem, or vessel form 6 only appear in adult and old burials¹⁶. In the case of women, the diadem is associated with rich and varied combinations of grave-goods, which on their own would obtain very high scores in the principal component analysis described earlier. The situation in the male tombs is more heterogeneous, as the halberd and the sword can appear combined with a variable number of pottery forms and ornaments, or, in some cases, without them. At the present stage of our knowledge, chronological and depositional factors make it difficult to propose a correct interpretation of the male association of the first category (many halberds can date from the early stages of El Argar, and many of them, the same as swords, turn up in double burials, making it hardly impossible to assign the grave-goods to either individual).

CONCLUSIONS

The study of the child burials of El Argar has allowed us to improve our knowledge of different aspects of the socio-economic and ritual organisation of Argaric society. The dominant class was buried with grave-goods belonging to categories 1 and 2. This represented about 10–15% of the society in all age ranges, except in the group of the newborn. The members of this class could afford to place considerable quantities of metal and other objects even in the funerary structure of individuals who died just a few months after birth. Nevertheless, they kept certain objects, such as halberds, swords, diadems, and the large carinated vessels of form 6 exclusively for members buried at adult or old age.

Below we find a second class, representing just over half of the population that died at adult or old age. Their members distinguish themselves through grave-goods belonging to category 3, and can be considered as 'members of full right' in the community (Lull &

Estévez 1986, 451). Their capacity to participate in ritual consumption was significantly lower than that of the dominant class and, moreover, they tended to accumulate richness in their tombs at an older age. Individuals dying between birth and 3 years did not deserve any funerary objects or only those classifiable into category 4b. Only after age 6 could their dead receive grave-goods belonging to categories 3 and 4a, and it was not before adult age that the possibility of ritual acknowledgement through the interment with one or two metal tools was extended to all members of this class.

At the bottom of the social pyramid we find the exploited class, which represented at least one-third of the population who died at adult or old age. When they died, no matter at what age, this part of society did not deserve any significant grave-goods (categories 5 and 4b). The belonging of an individual to this class was established ritually and socially at least from 6 years onwards, what gives us an idea of the rigidity of the social structure of El Argar.

In conclusion, the Argaric society can be characterised as follows:

1. A marked economic and political division was expressed through differential patterns of ritual consumption that cannot be explained in a satisfactory way in terms of age or sex of the diseased individuals. The fact that these differences were established already during childhood, and especially from more or less 6 years onwards, reveals the functioning of the mechanism of hereditary and unequal transmission of property.
2. Among those social classes, which were able to display property, ritual furnishing increased with age. This suggests a certain cumulative and acquisitive capacity with two possible thresholds: a first one at the age of 6, and a second one on the beginning of adulthood and maturity. This progressive enrichment produced a tendency towards a greater investment in ritual consumption in tombs of older persons. In any case, this increase never managed to cancel the marked economic inequalities present in this early Bronze Age society.

Endnotes

¹ This structuring of the El Argar society into five social categories based on the funerary record has sometimes been incorrectly referred to in the English archaeological literature (eg, Parker Pearson 1999, 78).

² The definition of El Argar as a State society has been questioned by some authors (eg, Gilman 1999; Carrilero &

Suarez 1997), who consider that none of the European Bronze Age societies, apart from Minoans and Mycenaean, 'deserve' to be labelled as States, because they do not present a bureaucratic, monumental, and ostentatious system as defined by V.G. Childe on the basis of the archaeological record of the Near Eastern civilisations. From a Marxist perspective, the essential question in the emergence of a State is the existence or not of institutionalised social exploitation and surplus production, understood not simply as an increase in production but primarily as an unequal distribution of material and energetic costs and benefits in society. Archaeologically, a State can not be reduced to a fixed set of empirical traits (temples, writing systems, etc), but rather has to be identified through the relation between social production and individual consumption, or, put in different way, the organisation of the forces of production and the circulation of the obtained products within a society (Lull & Risch 1995).

³ A similar organisation of the graves according to 'richness' has been suggested recently for other settlements, such as Castellón Alto in Granada (Molina *et al.* 2003).

⁴ The importance of the concept of property has also been stressed recently by other authors (see Gilman 1997).

⁵ In this sense we do not intend to get involved in the recently increasing claim of 'infancy' as a object of research in its own right (Scott 1999).

⁶ We also wish to acknowledge the collaboration offered and interest shown by Andrés Martínez Rodríguez and Juana Ponce García, from the archaeological museum of Lorca, and by Hermanfrid Schubart, director of the excavations of Fuente Álamo, in the dating of the Argaric funerary context found during their excavations. Thanks to Anne Cahen-Delhay, from the *Musées Royaux d'Art et d'Histoire* (Brussels), Carmen Cacho from the *Museo Arqueológico Nacional* (Madrid) and Pedro Duran Farell y Montserrat Vall-Llosera (private collection of El Picacho) for the ability to take samples from older collections. Jane Buikstra and Cristina Rihuete undertook the anthropological identification of the human remains of all the sampled tombs.

⁷ Pilar Martín Nieto, director of the archive of the Museo Arqueológico Nacional (Madrid), facilitated the access to these documents and has supported at all moments our 'struggle' with the Sirets' legacy.

⁸ $DF=77$; $t=-11,399$; $p<0,0001$.

⁹ 51.5% of the 227 tombs that form the sample.

¹⁰ Although the knife and the dagger are considered to be respectively a distinctive female or male item, these artefacts are indistinguishable on typological grounds (Lull 1983, 155ff.).

¹¹ The only exceptions would be tomb nr 52 of El Oficio and nr 101 of Fuente Álamo. The first contained a 6–7 year old child (Kunter 1990). According to the diaries of Pedro Flores (Schubart & Ulreich 1991, 218) the grave-goods included a sword. However, this does not appear on the sketch of the burial drawn by Flores himself, nor was it mentioned or published by the Sirets, which makes this seem an unreliable observation. On the other hand, tomb 101 belonged to a 9–10 year old girl with an unusually rich association of grave-goods. Remains of a copper hoop,

probably a diadem, were found in the area of the skull (Schubart *et al.* 1993, 7).

¹² Previous multivariate analysis have shown that none of the specific pottery forms has any relevant association with the other funerary elements (Lull & Estévez 1986; Micó 1993).

¹³ This multivariate analysis was carried out with the statistic program Statview 5. The unrotated solution of the principal component analysis was requested.

¹⁴ Closest to the left margin lies tomb nr 780 which included one awl, five copper and one silver ring, two copper bracelets, a beaker of form 4, a cup of form 8, and a collar.

¹⁵ Nevertheless, it should not be overlooked that the baby found in tomb 133 was furnished with a funerary assemblage formed by several vessels and a necklace of 138 beads.

¹⁶ The only exceptions seem to be tomb nr 52 of El Oficio, and nr 101 of Fuente Álamo, as mentioned above (see note 11).

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APPENDIX 1. INFANT BURIALS (INDIVIDUALS YOUNGER THAN 12 YEARS) FROM THE SITE OF EL ARGAR INCLUDED IN THE ANALYSIS

8, 13, 27, 32, 33, 36, 55, 63, 75, 78, 79, 80, 82, 86, 89, 91, 95, 97, 100, 108, 114, 115, 118, 119, 122, 123, 124, 126,

128, 132, 133, 137, 142, 143, 144, 147, 149, 150, 153, 162, 163, 164, 167, 168, 173, 176, 179, 181, 183, 184, 190, 201, 203, 206, 211, 219, 286, 287, 288, 290, 312, 316, 324, 336, 339, 341, 349, 354, 361, 377, 378, 383, 386, 388, 389, 391, 396, 404, 420, 425, 426, 428, 431, 437, 438, 440, 442, 443, 444, 446, 448, 451, 455, 457, 458, 464, 466, 469, 473, 475, 480, 481, 488, 496, 500, 503, 504, 512, 514, 517, 519, 525, 546, 548, 549, 552, 558, 561, 562, 563, 564, 566, 574, 576, 577, 586, 592, 596, 600, 601, 604, 611, 615, 624, 637, 651, 653, 661, 664, 668, 670, 675, 682, 683, 684, 704, 708, 723, 734, 737, 744, 747, 749, 756, 761, 770, 772, 773, 778, 780, 782, 783, 788, 791, 796, 798, 809, 810, 815, 820, 826, 830, 831, 833, 835, 836, 841, 842, 847, 850, 851, 853, 856, 858, 860, 861, 864, 866, 870, 871, 872, 874, 875, 876, 877, 878, 882, 887, 889, 890, 892, 894, 895, 897, 900, 901, 908, 911, 914, 915, 919, 920, 923, 926, 932, 934, 937, 939, 950, 953, 956, 960, 961, 964, 966, 969, 1026.

APPENDIX 2. JUVENILE BURIALS (12–18 YEARS) FROM THE SITE OF EL ARGAR INCLUDED IN THE ANALYSIS.

9, 34, 35, 138, 158, 160, 170, 174, 307, 350, 402, 416, 434, 456, 459, 463, 524, 595, 610, 646, 710, 765, 768, 781, 785, 807, 849, 857, 883, 886, 918, 938, 995

APPENDIX 3. ADULT AND OLD BURIALS (OLDER THAN 18 YEARS) FROM THE SITE OF EL ARGAR INCLUDED IN THE ANALYSIS.

5, 15, 20, 22, 24, 37, 42, 46, 51, 57, 65, 68, 69, 96, 102, 103, 104, 116, 129, 131, 136, 154, 157, 172, 175, 177, 178, 210, 212, 214, 218, 275, 281, 282, 285, 289, 323, 327, 331, 333, 345, 346, 360, 365, 366, 379, 380, 381, 382, 384, 385, 400, 405, 407, 409, 418, 419, 422, 432, 453, 461, 467, 471, 472, 476, 479, 486, 489, 491, 509, 513, 529, 530, 531, 533, 535, 543, 545, 554, 555, 572, 573, 575, 578, 580, 582, 584, 588, 594, 605, 608, 620, 626, 633, 639, 640, 642, 648, 652, 654, 658, 679, 691, 693, 696, 702, 703, 705, 706, 709, 716, 725, 736, 746, 750, 763, 769, 775, 784, 786, 787, 801, 802, 816, 823, 837, 839, 846, 862, 863, 865, 881, 884, 885, 893, 903, 913, 917, 921, 924, 925, 936, 941, 952, 954, 959, 962, 972, 973, 981, 983, 986, 989, 1009, 1013, 1014, 1016, 1017, 1034.

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APPENDIX 4. RADIOCARBON DATES FROM ARGARIC INFANT AND JUVENILE BURIALS (INDIVIDUALS YOUNGER THAN 19 YEARS)

<i>Site and tomb</i>	<i>Structure</i>	<i>Age</i>	<i>Lab. ref.</i>	<i>Determination BP</i>	<i>Date cal. BC2σ</i>
AR-T89	Pit	4-5 y.	OxA4965	3655 \pm 65	2200-1860
AR-T768	Urn	14-21 y.	OxA-4967	3375 \pm 60	1730-1520
CI-T7	Urn	9-16 m.	KIK-1475/ KIA-11226	3530 \pm 30	1940-1750
CN-T1	Pit	Subadult	GrN-7286	3620 \pm 35	2060-1890
GA-T8	Urn	1 y.	KIA-22255	3360 \pm 25	1730-1540
GA-T19	Urn	4-7 y.	OxA-3961	3355 \pm 60	1780-1490
GA-T20	Urn	Newborn	OxA-3962	3260 \pm 60	1890-1400
GA-T21	Urn	12-16 m.	OxA-3963	3310 \pm 60	1730-1450
GA-T23B	Urn	13-15 y.	OxA-3964	3285 \pm 60	1710-1420
GA-T24	Urn	3-6 m.	OxA-4476	3520 \pm 120	2180-1550
GA-T28	Urn	6-9 m.	OxA-4475	3570 \pm 65	2090-1720
GA-T29	Urn	10-12 y.	OxA-3966	3300 \pm 60	1720-1440
GA-T31	Urn	6-11 m.	OxA-3967	3380 \pm 60	1830-1520
GA-T32	Urn	14-18 m.	OxA-3968	3490 \pm 60	1960-1660
GA-T36	Urn	12-18 m.	OxA-4474	3460 \pm 110	2050-1510
GA-T39	Cist	14-16 y.	OxA-7764 OxA-10993	3520 \pm 35 3571 \pm 35	1940-1730 2010-1780
PI-T3	Urn	2.5-3.25 y.	OxA-5051	3475 \pm 65	1950-1630

All dates are calibrated using Calib 4.3 and are rounded out to the nearest 10 years in accordance with the recommendations of Mook (1986).

AR: El Argar, CI: Los Cipreses, CN: Cuesta del Negro, GA: Gatas, PI: El Picacho (y.: years, m.: months)