

Siret's smile

Jean Guilaine*



Recent palaeogenomic data have expanded the debate concerning the direction of cultural transmission during the European Chalcolithic by suggesting the western movement of people from the Eurasian Steppe. Heyd (2017) considers a simultaneous spread of material culture as supportive of these model. The author addresses Heyd's suggestions in the light of new archaeological data from the southern Iberian Peninsula. These data strongly suggest both Eastern Mediterranean and endogenous influences and innovation in the spread of culture across Europe during the third millennium BC.

Keywords: Iberian Peninsula, Chalcolithic, Bell Beaker Culture, statue-menhirs

Introduction

In a recent *Antiquity* paper entitled 'Kossinna's Smile', Volker Heyd (2017) uses the results of genetic analyses of individuals from the Central European Corded Ware Culture to establish a direct link between the emergence of this group and the Yamnaya Culture of the Eurasian Steppe to the east. Such a connection also supports the classic hypothesis relating to the westward spread of Proto-Indo-European languages from the steppe during the Chalcolithic period (Gimbutas 1997; Mallory 1997; Lebedynsky 2014). Heyd posits that the Yamnaya impact on third-millennium BC Chalcolithic cultures is not only restricted to genetic transmission to the Central European Corded Ware, but is also seen in the spread of anthropomorphic stelae and statue-menhirs, cultural influences reaching as far as southern Iberia, and in a possible connection with the Bell Beaker phenomenon in Western Europe. Heyd therefore also proposes that the third millennium BC was a time of large-scale, long-distance cultural interactions. In the present paper, partly as a response to that published by Heyd, I wish to comment on three issues among the many raised therein: the anthropomorphic stelae, the Chalcolithic funerary rituals and grave goods of southern Iberia, and the origins of the 'Maritime' Bell Beaker tradition.

The issue of anthropomorphic stelae

The view that the concept of anthropomorphic stelae spread from east to west is not new, whether the origin is thought to be the Trojan area or the Pontic region (Childe 1925;

* Collège de France, 11, Place Marcelin-Berthelot, 75005 Paris, France (Email: jguilaine@wanadoo.fr)

Arnal 1976). The Pontic hypothesis is often associated with the dissemination of eastern-style objects as far west as the Italian Peninsula: the ‘battle axes’ of the Rinaldone Culture and the hammer-headed pins of both the Remedello Culture and the Gaudio group (Guilaine 1994). It cannot, however, be denied that the various western groups of anthropomorphic stelae (e.g. Trento-Adige, Lunigiana, Sion-Aosta, Sardinia, Languedoc, Rouergue and Iberia) vary considerably from one another in both typology and characteristics (Casini *et al.* 1995; Mezzena 1998; Rodriguez & Marchesi 2015) (Figure 1). There were obviously several contributing ‘groups of artists’ or ‘schools’ (Guilaine 2017), although their emergence is neither precisely dated, nor necessarily synchronous with the Yamnaya-Corded Ware-Bell Beaker horizon.

For example, the Rouergue group—one of the largest and the most innovative—should be assigned to the Late Neolithic of southern France (*c.* 3500–3000 BC). The ‘shafted axes’ depicted on male statues could represent maces or antler hammers known from the archaeological record (Jallot & Sénépart 2008). The ‘Y-shaped pendants’ of the female statues are reminiscent of ‘grooved pendants’ also made of antler and dated to the same period. Interpretation of the depictions of the so-called ‘object’ placed diagonally across the chest of male statues, however, is more difficult. It is often considered to be a dagger (Serres 1997; Maillé 2010; Maillé & Vaquer 2011), but it would be made of flint, as daggers with copper blades are rare before 3000 BC.

I agree with Heyd that the dagger is the most frequently depicted element on these stelae. Daggers with flint blades, however, appear in Western Europe during the mid fourth millennium BC (from the outset they may rival distinct copper blades of the Rinaldone Culture). By analogy with the archaeological record, the Remedello-style daggers depicted on the stelae (e.g. Trento-Adige, Sion-Aosta, Lunigiana) can be dated to between 2900 and 2500 BC (phase II of the Remedello Culture; De Marinis 1994, 2013); the ‘object’ depicted on the statue-menhirs in southern France, thought to represent a flint dagger, to a few centuries earlier. Thus, the hypothesis of an east to west spread of the ‘stelae phenomenon’ and a link with the Yamnaya Culture is invalidated.

A similar line of argument arises from the Armorican stelae (e.g. Trévoux-Laniscar, Le Catel Guernesey, Kermené-Guidel) with their necklace and breast ornamentation paralleled by carvings on distinct supporting pillars of megalithic gallery graves in Brittany (e.g. Prajou-Menhir, Mougau-Bihan, Tressé) and the Paris Basin (e.g. Bellée, Le Bois-Couturier, La Pierre Turquoise, Aveny). The latter can be dated to *c.* 3300 BC or even earlier (Kinnes 1995; Cottiaux & Salanova 2014).

The Pontic stelae developed in two distinct stages. The early stage is characterised by stelae exhibiting a schematic protruding head or apical rostrum: these are rarely decorated—at most featuring a belt. The later stage is characterised by carved stelae with attributes (e.g. anatomical characteristics, weapons, ornaments) (Telegin & Mallory 1995). A similar, albeit three-staged, process occurred across Western Europe. During the fifth millennium BC, the emergence of stelae and standing stones exhibiting a schematic protruding head or apical rostrum are noted within various cultural contexts (e.g. Armorican passage graves, the stone alignment of Yverdon, Switzerland, and the anthropomorphic standing stones on Sardinia). During a second stage, groups of stelae that place particular emphasis on the face appear (e.g. the Maltese stela of Zebbug, and the Trets group of stelae from Provence, which dates to



Figure 1. Variability of statues-menhirs and anthropomorphic stelae of Western Europe: 1–2) Petit-Chasseur (Sion, Switzerland), early stage; 3) Petit-Chasseur (Sion, Switzerland), recent stage; 4) Monte Ferredu Barrili (Sardinia); 5) Pontevecchio (Lunigiana, Italy); 6) Moncigoli (Lunigiana, Italy); 7–8) Lagundo F and B (Upper Adige, Italy); 9) Castelluccio dei Sauri (Sterparo, Daunia, Italy); 10) La Jasse (Miolles, Tarn, France); 11) Frescaty (Lacaune, Tarn, France); 12) Catel (Guernsey, Channel Islands); 13) Catel (Guernsey, Channel Islands) (after Ambrosi 1972; Almagro Gorbea 1993; Gallay 1995; Kinnes 1995; Tunzi Sisto 1995; Atzeni 1998; Maillé 2010).

c. 3800 BC). A third stage is characterised by the ‘genuine’ statue-menhirs exhibiting ‘objects’ in the Rouergue and Languedoc regions, or a Remedello-type dagger in northern Italy. Various phases, however, existed within the third stage, including the monuments of southern France assigned to the Saint-Ponian and Ferrières horizons. These probably pre-date stelae of the Italian groups (Guilaine 2017).

The significance of this brief overview is ambiguous. On the one hand, it demonstrates common attributes, such as the belt or dagger, among several Southern European stelae groups. Yet the dates of these features are apparently inconsistent with the idea of a single East European origin, from which regional variants would have stemmed. The internal chronology of these various groups remains a topical issue.

The southern Iberian Chalcolithic funerary evidence

According to Heyd, another Western reflection of burial rites from the steppe can be identified in southern Iberia, in the form of distinct funerary practices. Examples include the ochre stains near the individual buried in chamber 10049 in the PP4-Montelirio sector (or the red pigments made from cinnabar sprayed over the individuals of the Montelirio tholos—a particular megalithic monument unique to the area), and the presence of sandals made of ivory, stone and even gold, from burials in this region (e.g. Los Millares, Almizaraque, Alapraia, Seville) (Heyd 2017). These two examples merit further discussion. The covering of deceased individuals with red mineral powder is an ancient ritual in Western Europe and was practised from at least the Upper Palaeolithic to the Neolithic (Duday 1975; Grifoni & Radmilli 2001). An autochthonous tradition, rather than an influence from the steppe, therefore, cannot be ruled out. At the same time, recent archaeological discoveries from the South-eastern Mediterranean (e.g. the southern Levant and Egypt) may suggest exogenous influences on southern Iberia from places other than the steppe. These can be summarised as follows:

- 1) The term ‘sandals’ describes sole-shaped ivory, stone or gold objects that have been discovered in several southern Iberian sites (e.g. Almizaraque, Los Millares, Alapraia). It is, however, uncertain whether these objects were actual sandal soles, particularly as one gold example from the Montelirio tholos depicts ‘solar eye’ patterns. These can be linked to Iberian figurines exhibiting a similar iconography (Murillo Barroso 2016a). Yet Heyd maintains the ‘sandal’ hypothesis, drawing comparisons with the sandal sole patterns depicted on Ukrainian stelae. These sandals could, however reflect Egyptian, rather than Ukrainian influences (Figure 2.6). In the Nile area, sandals were an important indicator of social status (Cherpion 1999) as early as the Neolithic and Predynastic periods. Grave U160 of the Hu cemetery at Diospolis Parva, for example, has yielded imitations of ivory sandals painted in red, while grave 24 at Adaïma contained sandals on a stucco base painted in red or white (Cherpion 1999, citing Petrie; Crubézy *et al.* 2002). Furthermore, the Narmer Palette, dated to c. 3000 BC, depicts the social role of the pharaoh’s ‘sandal-bearer’. Towards the end of the third millennium BC, Nubia provided Egyptian society with leather and skins for the manufacture of clothing and sandals (Moreno García 2018). In Egypt, the use of ivory testified to the wealth of the deceased (Cherpion 1999).

Siret's smile

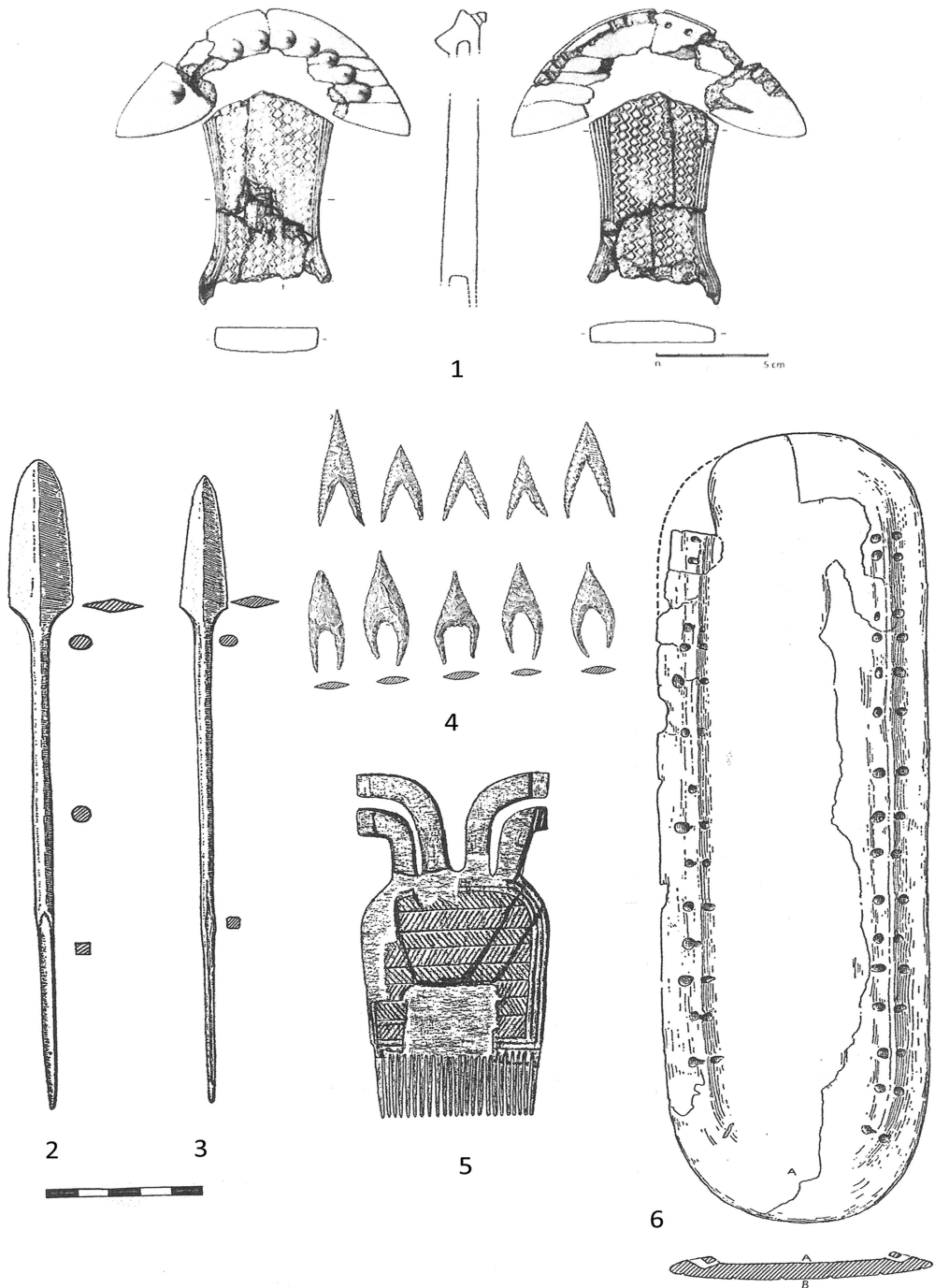


Figure 2. Markers of status of the Chalcolithic in the southern part of the Iberian Peninsula: 1) dagger hilt made of ivory (megalithic monument 10042-10049, PP4-Montelirio, Valencina de la Concepción, Sevilla, Spain); 2-3) copper javelin-heads (dolmen of la Pastora, Castilleja de Guzmán, Sevilla, Spain); 4) 'Alcalar' arrowheads (Alcalar tholos 1, Portugal); 5) ivory comb (grave 12 of Los Millares, Santa Fé de Mondújar, Almería, Spain); 6) ivory 'sandal' (grave 12 of Los Millares, Santa Fé de Mondújar, Almería, Spain) (after Leisner & Leisner 1943; Almagro Basch 1962; E. Conlin in Garcia Sanjuan et al. 2013a).

© Antiquity Publications Ltd, 2018

The 'sandals' discovered in southern Iberian tombs may therefore indicate the wide Mediterranean contacts of the regional elites. Although this argument would fail to convince on its own, it is supported by further evidence.

- 2) The 'horned' ivory comb of grave 12 from Los Millares (Leisner & Leisner 1943) and the combs with carved animal heads from the Montelirio tholos also have prototypes from Predynastic (and later) Egypt (Figure 2.5).
- 3) The ritual deposition of elephant or hippo tusks is observed from the Egyptian Naqadian period (c. 3200–3000 BC) onwards. These items are also found at the Andalusian elite tombs (e.g. the Montelirio tholos and the megalithic monument 10042-10049).
- 4) The impressive 'Alcalar' arrowheads, with their narrow and exaggerated tails are restricted in their distribution to tholoi in the very south of Iberia (Figure 2.4). The arrowheads of the dolmen of Ontiveros and those discovered in the Montelirio tholos, made of rock crystal or melonite, are the most remarkable (García Sanjuán *et al.* 2016). Prototypes for these arrowheads are attested in Egyptian Predynastic graves (Tristant 2004; Friedman 2008).
- 5) Stylistic parallels exist between the figurines from the Levantine Ghassulian, the Naqadian and a small assemblage of Iberian ivory or bone objects including a stiff posture with crossed arms. The possible Near Eastern prototypes, however, were modified and rendered in an Iberian style, particularly through the use of chevrons to depict long hair (El Malagon at Cullar-Baza, Marroquies Altos and Torre del Campo at Jaen, Cerro de la Cabeza at Seville; Arribas 1977).
- 6) The analyses of southern Iberian ivory artefacts suggest the use of Asian elephant ivory (Figure 2.1). A workshop for processing this material has been discovered at Valencina de la Concepción (García Sanjuán *et al.* 2013a; Nocete *et al.* 2013) (Figure 3). This elephant ivory could not have been transported via the large Mediterranean islands (e.g. Cyprus and Crete), as these have yielded only third- and second-millennium BC objects made from hippo ivory. A land or sea route from the Levant or the Nile Delta along the North African coast should therefore be considered.
- 7) The assemblage of javelin-heads from the Pastora dolmen clearly match Levantine prototypes, although the former were made from Iberian copper (Hunt Ortiz *et al.* 2012; Figure 2.2–3).

An important corpus of archaeological data, therefore, seems to indicate that during the development of the southern Iberian Chalcolithic, foreign materials and prototypes were imported, including ivory from Asia and Africa, and probably amber from Sicily (Nocete *et al.* 2013; Lucíañez Triviño & García Sanjuán 2016; Murillo Barroso 2016b). These materials were processed locally by highly specialised craftspeople. The idea that some of these specialists may have been of Levantine, Egyptian or African origin cannot be discounted. Indeed, if the rulers of Near Eastern city-states called in the most renowned craft workers to process lapis lazuli, ivory, bronze and faïence, why should the situation have been different in southern Iberia? Recent research suggests the important role that craft specialisation may have played at sites such as Valencina de la Concepción (García Sanjuán *et al.* 2013b). The discoveries made in the tholos of Montelirio and in the megalithic monument 10042-10049 of the PP4-Montelirio sector have radically altered perception of the Chalcolithic of this region (Fernandez Flores *et al.* 2016). Most obviously, socially dominant individuals can be clearly identified through the quantity and the quality of the materials



Figure 3. Map of the Iberian Chalcolithic sites mentioned in the text (the mega-site of Valencina de la Concepción includes several monuments: Montelirio tholos, megalithic monument 10042-10049 (PP4-Montelirio sector), Cerro de la Cabeza, Pastora dolmen, Ontiveros dolmen) (map by I. Carrère).

and objects in their tombs: the Montelirio tholos included the largest quantities of ivory and amber of all Iberian sites. Was Valencina a ‘hub’ for receiving and processing Asian and African materials? While the idea of a movement from the Aegean-Anatolian region long prevailed (the ‘colonies’ of E. Sangmeister and B. Blance; Blance 1961, 1971; Sangmeister 1975), these concepts have been progressively challenged in favour of purely autochthonous developments (Renfrew 1967; Guilaine 1994). Without ignoring indigenous creativity, it is clear that Levantine and Egyptian impetus influenced the social development of southern Iberia, particularly in relation to the emergence of a hierarchy on the importation of exotic goods.

With regard to these observations it may be noted that, in the early twentieth century, the Belgian archaeologist Luis Siret (1913) compared several Iberian Chalcolithic cultural traits with those from Egypt—notably the ‘symbolic’ hoes (funerary adzes), figurines, ivory combs, ostrich eggs, alabaster vases and hippo ivory, as well as lithic artefacts (Siret 1913: fig. 6; Chapman 1990) (Figure 4). A century later, the archaeological record seems to confirm, at least partially, Siret’s intuition.






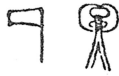





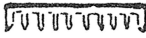
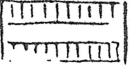





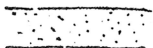


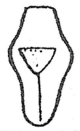













	Egypte	Ibérie	Bassin égéen
1 Tombes à coupole			
2 Herminettes funéraires			
3 Symbole de la hache			
4 Signe de l'eau			
5 Signe de la pluie ou des nuages			
6 Symbole du poulpe			
7 Signe de la terre			
8 Statuettes féminines			
9 Silex taillés			
10 Peignes en ivoire			
11 Ivoire d'hippopotame			
12 Oufs d'autruche			
13 Vases en albâtre			

Figure 4. Comparison of objects recorded at Chalcolithic sites in the southern part of the Iberian peninsula, and vestigial remains stemming from Egypt and the Aegean (after Siret 1913: fig. 6).

The emergence of the Maritime Bell Beaker tradition

Despite increased research, the long-standing debate around the emergence of the Maritime Bell Beaker tradition remains unresolved. Here, I propose a further hypothesis resulting from the evidence discussed above. The Bell Beaker phenomenon is generally considered to have originated in two main areas: Northern and Central Europe, and southern Iberia. Research in the former area has advanced a direct link between Corded Ware groups and the emergence of Bell Beakers. The model of continuous ceramic development (Protruding-Foot (PF)/All-Over-Ornamented (AOO)/Maritime/Veluwe beakers) proposed for the Netherlands (Lanting & van der Waals 1976; van der Waals 1984), for example, is not strictly confirmed by a recent re-examination of the radiocarbon data (Beckerman 2011–2012). More particularly, dating of the AOO beakers, considered a transitional form between the PF and Maritime beakers, was not ascertained by this study. Although there are temporal overlaps between the PF, AOO and Maritime beakers, the latter cannot date earlier than 2500 BC; they are rarely encountered and hardly support the identification of Northern Europe as an area of Corded Ware to Bell Beaker succession. A stronger argument in favour of such a succession comes from the similarities in the shapes of Corded Ware and Bell Beaker common wares (Besse 2003). Moreover, Central European models may have inspired the practice of individual burials beneath mounds and the strict gendered rules with regard to the orientation of the body (although differing between the cultures). This hypothesis therefore considers the Bell Beaker expansion as a progression from Northern and Central Europe towards the Atlantic coast and the Mediterranean, introducing Bell Beaker funerary practices into Western and Southern Europe hitherto characterised by collective burials.

The other theory refers to a Mediterranean—and predominantly a southern Iberian—origin, encompassing Andalusia and the Lisbon bay area (Schmidt 1913; Bosch Gimpera 1926; Del Castillo Yurrita 1928; Sangmeister 1963). This hypothesis states that distinct elements (e.g. copper tongue daggers, turtle-shaped buttons, Palmela arrowheads) of the Bell Beaker ‘package’, which accompanies the diffusion of the bell-shaped beakers, have a near-certain Iberian origin, given that copper metallurgy was notably developed in Iberia during the late fourth millennium BC. A potential origin of the Maritime beaker from the ‘*copos*’ (beakers) of the Portuguese horizon Vila Nova de São Pedro I is also taken into account on the basis of technical similarities in decoration (Harrison 1977), despite remaining differences. In addition, radiocarbon dates potentially further support an Iberian origin, although some of the early dates (from the twenty-seventh century BC onwards) await confirmation (Cardoso 2014).

Nonetheless, the origin of Maritime beakers still requires explanation. In my opinion, this form represents the earliest manifestation of the Beaker phenomenon. It also constitutes the broadest geographic expansion across the continent and serves as a diagnostic for the Bell Beaker community or *koine*. As early as the fourth millennium BC, many European cultures were innovative in producing beakers and jugs following regionally specific forms (Guilaine 2009). In contrast, the obliquely impressed patterns characteristic of the Maritime beaker are not associated with any clearly identified European tradition. The only other regions in which comb impressions, arranged in horizontal bands with the oblique lines, attested prior to the Bell Beaker ware are Tiout in Algeria and El Kiffen in Morocco (Bailloud & Mieg de Boofzheim 1964; Camps-Fabrer 1966). Given the geographic proximity between North

Africa and Iberia, processes of technological transfer between these two spheres cannot be excluded, especially as materials reached Southern Europe from more distant parts of Africa.

This, however, does not explain the reasons for the ‘emergence’ of beakers with zoned decoration as a marker of social status. This also explains why I do not exclude Maritime beakers—through analogy with the various regional Chalcolithic examples of ‘noble’ exotic materials (e.g. the ivory and amber items from the Montelirio tholos and the megalithic monument 10042-10049)—which were perceived as status symbols among the elites due to their innovative aesthetics. Regardless of the function of the Maritime beaker, a suitable social context favouring its emergence and adoption was required in order to distinguish such a marker. In the whole of third-millennium BC Western Europe, only one region benefited from such a social environment: southern Iberia, with its unusually large sites and burials probably restricted to high-ranking leaders. A possible hypothesis could be that these elites may have called in potters (perhaps from Africa) to produce such an original beaker type, which may also have been the expression of a particular social group. This situation would then explain the strong and expanding presence of this marker within the existing material cultural tradition (from Almeria to Lisbon Bay), which would become completely different from that of the Iberian interior. The end of the regional Chalcolithic—marked by the progressive abandonment of its most characteristic sites—was not due to any external intrusion. Rather, the internal evolution of this society, driven by specific Bell Beaker development, finally led to its deconstruction.

The points presented above can therefore be summarised as follows:

- 1) Stelae iconography mirrors an ideology (i.e. armed males) that characterised various European cultures as early as the fourth millennium BC, at a time when daggers with flint or copper blades became common in Western Europe (Guilaine & Zammit 2005).
- 2) The latest research on southern Iberia allows for the description of a specific, regional cultural setting, in which the elite had access to exotic materials and to cultural influences originating in the Eastern Mediterranean. The influence of the steppes is therefore, in my opinion, not key to the debate.
- 3) The hypothesis proposing the emergence of Maritime beakers in southern Iberia is not a new one. It may, however, be reinvigorated through consideration of the evidence of the unique early third-millennium BC social context of the region within Europe at this time, in terms both of the power of its connections and of its actors.

Acknowledgements

Karoline Mazurié de Keroualin translated this manuscript from French.

References

- ALMAGRO BASCH, M. 1962. *El ajuar del ‘dolmen de la Pastora’ de Valencina de Alcar (Sevilla). Sus paralelos y cronología*. Madrid: Trabajos de Prehistoria.
- ALMAGRO GORBEA, M. 1993. Les stèles anthropomorphes de la péninsule Ibérique, in A. Duval & J. Briard (ed.) *Les représentations humaines du Néolithique à l’âge du Fer* (Actes du 11^e Congrès des Sociétés Savantes, Avignon, 1990): 123–39. Paris: CTHS.
- AMBROSI, A.C. 1972. *Corpus delle statue stele lunigianesi*. Bordighera: Istituto Internazionale di Studi Liguri.
- ARNAL, J. 1976. *Les statues-menhirs: hommes et dieux*. Toulouse: Les Hespérides.

- ARRIBAS, A. 1977. El idolo de 'El Malagón' (Cullar-Baza, Granada). *Cuadernos de Prehistoria de la Universidad de Granada* 2: 63–86.
- ATZENI, E. 1998. Le statue-menhir di Piscina e Sali (Laconi, Sardegna), in G. Rodriguez (ed.) *Actes du IIe colloque international sur la statuaire mégalithique*: 61–72. Saint-Pons: Fédération Archéologique de l'Hérault.
- BAILLOUD, G. & P. MIEG DE BOOFZHEIM. 1964. La nécropole néolithique d'El-Kiffen aux Tamaris (province de Casablanca, Maroc). *Lybica* 12: 95–171.
- BECKERMAN, S.M. 2011–2012. Dutch Beaker chronology re-examined. *Palaeohistoria* 53–54: 25–64.
- BESSE, M. 2003. *L'Europe du 3e millénaire avant notre ère: les céramiques communes du Campaniforme* (Cahiers d'Archéologie Romande 94). Lausanne: Cahiers d'Archéologie Romande.
- BLANCE, B. 1961. Early Bronze Age colonists in Iberia. *Antiquity* 35: 192–202. <https://doi.org/10.1017/S0003598X00036188>
- 1971. *Die Anfänge der Metallurgie auf der Iberischen Halbinsel* (Studien zu den Anfängen der Metallurgie 4). Berlin: Mann.
- BOSCH GIMPERA, P. 1926. Glockenbecherkultur, in M. Ebert (ed.) *Reallexikon der Vorgeschichte*: 345–62. Berlin: Walter de Gruyter.
- CAMPS-FABRER, H. 1966. *Matière et art mobilier dans la Préhistoire nord-africaine et saharienne*. Paris: Arts et Métiers Graphiques.
- CARDOSO, J. 2014. Absolute chronology of the Beaker Phenomenon north of the Tagus estuary: demographic and social implications. *Trabajos de Prehistoria* 71: 56–75. <https://doi.org/10.3989/tp.2014.12124>
- CASINI, S., R.C. DE MARINIS & A. PEDROTTI. 1995. *Statue-stele e massi incisi nell'Europa dell' Età del Rame* (Notizie Archeologiche Bergomensi 3). Bergamo: Civico Museo Archeologico.
- CHAPMAN, R. 1990. *Emerging complexity. The later prehistory of south-east Spain, Iberia and the West Mediterranean*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511735486>
- CHEPION, N. 1999. Sandales et porte-sandales à l'Ancien Empire, in C. Ziegler & N. Palayret (ed.) *L'art de l'ancien empire égyptien*: 227–80. Paris: Musée du Louvre.
- CHILDE, V.G. 1925. *The dawn of European civilisation*. London: Routledge & Kegan Paul.
- COTTIAUX, R. & L. SALANOVA. 2014. *La fin du IVe millénaire dans le Bassin parisien. Le Néolithique récent entre Seine, Oise et Marne (3500–2900 avant notre ère)* (Revue Archéologique de l'Est, 34^e supplément/Revue Archéologique d'Ile-de-France, 1^{er} supplément). Dijon: S.A.E.
- CRUBÉZY, E., T. JANIN & B. MIDANT-REYNES. 2002. *Adaïma 2. La nécropole prédynastique*. Cairo: Institut Français d'Archéologie Orientale.
- DEL CASTILLO YURRITA, A. 1928. *La Cultura del vaso campaniforme (su origen y extensión in Europa)*. Barcelona: Universidad de Barcelona.
- DE MARINIS, R.C. 1994. La datazione dello stile IIIA, in R.C. De Marinis (ed.) *Le Pietre degli dei. Menhir e stele dell' Età del Rame in Valcamonica e Valtelina*: 69–87. Bergamo: Centro Culturale Nicolò Rezzara.
- 2013. La necropoli di Remedello Soto e l'Età del Rame nella pianura padana a nord del Po, in R.C. De Marinis (ed.) *L'Età del Rame. La pianura padana e le Alpi al Tempo di Ötzi*: 301–52. Roccafranca: Compagnia della Stampa.
- DUDAY, H. 1975. *Le squelette du sujet féminin de la sépulture pré-néolithique de Bonifacio (Corse)* (Cahiers d'Anthropologie 24). Paris: Laboratoire d'anatomie des Saints Pères.
- FERNANDEZ FLORES, A., L. GARCÍA SANJUÁN & M. DÍAZ-ZORITA BONILLA. 2016. *Montelirio. Un gran monumento megalítico de la Edad del Cobre*. Seville: Junta de Andalucía.
- FRIEDMAN, R. 2008. Excavating Egypt's early kings. Recent discoveries in the elite cemetery at Hierakonpolis, in B. Midant-Reynes & Y. Tristant (ed.) *Egypt at its origins 2* (Orientalia Lovaniensia Analecta 152): 1157–94. Leuven: Peeters.
- GALLAY, A. 1995. Les stèles anthropomorphes du site mégalithique du Petit-Chasseur à Sion (Valais, Suisse), in S. Casini, R.C. De Marinis & A. Pedrotti (ed.) *Statue-stele e massi incise nell' Europa dell' Età del Rame* (Notizie Archeologiche Bergomensi, 3): 167–94. Bergamo: Civico Museo Archeologico.
- GARCÍA SANJUÁN, L., M. LUCIAÑEZ TRIVIÑO, T.X. SCHUHMACHER, D. WHEATLEY & A. BANERJEE. 2013a. Ivory craftsmanship, trade and social significance in the southern Iberian Copper Age: the evidence from PP4-Montelirio Sector of Valencina de la Concepción (Seville, Spain). *European Journal of Archaeology* 16: 610–35. <https://doi.org/10.1179/1461957113Y.0000000037>

- GARCÍA SANJUÁN, L., J. VARGAS JIMENEZ, V. HURTADO PEREZ, M.T. RUIZ MORENO & R. CRUZ-AUÑÓN BRIONES. 2013b. *El asentamiento prehistórico de Valencina de la Concepción. investigación y tutela en el 150 aniversario del descubrimiento de la Pastora*. Sevilla: Universidad de Sevilla.
- GARCÍA SANJUÁN, L., J.A. LOZANO RODRIGUEZ, O. SANCHEZ LIRANZO, J. GIBAJA BAO & V. ARANDA SÁNCHEZ. 2016. La industria lítica del tholos de Montelirio, in A. Fernandez Flores, L. García Sanjuán & M. Díaz-Zorita Bonilla (ed.) *Montelirio. Un gran monumento megalítico de la Edad del Cobre*: 203–44. Sevilla: Junta de Andalucía.
- GIMBUTAS, M. 1997. *The Kurgan Culture and the Indo-Europeanization of Europe: selected articles from 1952 to 1993 (Journal of Indo-European Studies, Monograph Series 18)*. Washington, D. C.: Institute for the Study of Man.
- GRIFONI CREMONESI, R. & A.M. RADMILLI. 2001. La grotto Patrizi al Sasso di Furbara (Cerveteri, Roma). *Bullettino di Paleontologia Italiana* 91–92: 63–120.
- GUILAINE, J. 1994. *La mer partagée. La Méditerranée avant l'écriture*. Paris: Hachette.
- 2009. La Sicile et l'Europe campaniforme, in J. Guilaine, S. Tusa & P. Veneroso (ed.) *La Sicile et l'Europe campaniforme: la collection Veneroso à Sciacca*: 135–95. Toulouse: Archives d'Écologie Préhistorique.
- 2017. L'être humain et son double: l'anthropomorphisme des statues-menhirs, in J. Guilaine (ed.) *Les chemins de la protohistoire: quand l'Occident s'éveillait (7000–2000 avant notre ère)*: 101–39. Paris: Odile Jacob.
- GUILAINE, J. & J. ZAMMIT. 2005. *The origins of war in prehistory*. Oxford: Blackwell.
<https://doi.org/10.1002/9780470773819>
- HARRISON, R.J. 1977. *The Bell Beaker cultures of Spain and Portugal*. Cambridge (MA): Peabody Museum, Harvard University.
- HEYD, V. 2017. Kossinna's smile. *Antiquity* 91: 348–59.
<https://doi.org/10.15184/aqy.2017.21>
- HUNT ORTIZ, M.A., M.I. MARTINEZ NAVARRETE, V. HURTADO PEREZ & I. MONTERO RUIZ. 2012. Procedencia de las puntas de jabalinas del 'dolmen de la Pastora' (Valencina de la Concepción, Sevilla). *Trabajos de Prehistoria* 69: 357–74.
<https://doi.org/10.3989/tp.2012.12097>
- JALLOT, L. & I. SÉNÉPART. 2008. Haches-marteau et statues-menhirs dans le Sud de la France: de l'objet à sa représentation, in J.E. Brochier, A. Guilcher & M. Pagni (ed.) *Archéologies de Provence et d'ailleurs: mélanges offerts à Gaëtan Congès et Gérard Sauzade* (Bulletin Archéologique de Provence, Supplément 5): 215–55. Aix-en Provence: APA.
- KINNES, I. 1995. Statues-menhirs and allied representations in northern France and the Channel Islands, in S. Casini, R.C. De Marinis & A. Pedrotti (ed.) *Statue-stele e massi incisi nell'Europa dell'Età del Rame* (Notizie Archeologiche Bergomensi 3): 131–41. Bergamo: Civico Museo Archeologico.
- LANTING, J.N. & J.D. VAN DER WAALS. 1976. Beaker culture relations in the Lower Rhine Basin, in J.N. Lanting & J.D. van der Waals (ed.) *Glockenbecher Symposium Oberried, 1974*: 2–80. Haarlem: Fibula Van Dishoeck.
- LEBEDYNSKY, I. 2014. *Les Indo-Européens. Faits, débats, solutions*. Paris: Errance.
- LEISNER, G. & V. LEISNER. 1943. *Die Megalithgräber der Iberischen Halbinsel I. Der Süden* (Römisch-Germanische Forschungen, 17). Berlin: De Gruyter.
- LUCIAÑEZ TRIVIÑO, M. & L. GARCÍA SANJUÁN. 2016. Los marfiles del tholos de Montelirio, in A. Fernandez Flores & M. Díaz-Zorita Bonilla (ed.) *Montelirio. Un gran monumento megalítico de la Edad del Cobre*: 245–71. Sevilla: Junta de Andalucía.
- MAILLÉ, M. 2010. *Hommes et femmes de pierre. Statues-menhirs du Rouergue et du Haut-Languedoc*. Toulouse: Archives d'Écologie Préhistorique.
- MAILLÉ, M. & J. VAQUER. 2011. Images de guerriers du Néolithique final-Chalcolithique dans le Midi de la France. Les poignards: figurations sur les statues-menhirs rouergates et objets réels, in L. Baray, M. Dias-Meirinho & M. Honegger (ed.) *L'armement et l'image du guerrier dans les sociétés anciennes, de l'objet à la tombe*: 103–19. Dijon: Éditions Universitaires de Dijon.
- MALLORY, J.-P. 1997. *A la recherche des Indo-Européens*. Paris: Le Seuil.
- MEZZENA, F. 1998. Les stèles anthropomorphes en Europe, in F. Ambrosi (ed.) *Dei di Pietra: La grande statuaria antropomorfa nell'Europa del III millennio a.C./Dieux de pierre: la grande statuaire*

- anthropomorphe en Europe au IIIe millénaire avant J.-C.*: 15–89. Geneva: Skira.
- MORENO GARCÍA, J.C. 2018. Leather processing, castor oil and desert Nubian trade at the turn of the 3rd/2nd millennium BC: some speculative thoughts on Egyptian craftsmanship, in G. Miniaci, J.C. Moreno García, S. Quirke & A. Stauder (ed.) *The arts of making in ancient Egypt: voices, images, objects of material producers 2000–1550 BC*: 159–73. Leiden: Sidestone.
- MURILLO BARROSO, M. 2016a. El oro del tholos de Montelirio en el context de la tecnología aurea de Valencina, in A. Fernandez Flores, L. García Sanjuán & M. Díaz-Zorita Bonilla (ed.) *Montelirio. Un gran monumento megalítico de la Edad del Cobre*: 285–309. Sevilla: Junta de Andalucía.
- 2016b. El ambar del tholos de Montelirio, in A. Fernandez Flores, L. García Sanjuán & M. Díaz-Zorita Bonilla (ed.) *Montelirio. Un gran monumento megalítico de la Edad del Cobre*: 311–44. Sevilla: Junta de Andalucía.
- NOCETE, F., J.M. VARGAS, T.X. SCHUHMACHER, A. BANERJEE & W. DINDORF. 2013. The ivory workshop of Valencina de la Concepción (Seville, Spain) and the identification of ivory from Asian elephant on the Iberian peninsula in the first half of the 3rd millennium BC. *Journal of Archaeological Science* 40: 1579–92. <https://doi.org/10.1016/j.jas.2012.10.028>
- RENFREW, C. 1967. Colonialism and Megalithismus. *Antiquity* 41: 276–88. <https://doi.org/10.1017/S0003598X00033512>
- RODRIGUEZ, G. & H. MARCHESI. 2015. *Statues-menhirs et pierres levées du Néolithique à aujourd'hui*. Saint-Pons: Direction régionale des Affaires Culturelles Languedoc-Roussillon, Groupe Archéologique Saint-Ponais.
- SANGMEISTER, E. 1963. Exposé sur la civilisation du vase campaniforme, in P.-R. Giot (ed.) *Les civilisations atlantiques du Néolithique à l'âge du fer, actes du premier colloque Atlantique (Brest, 1961)*: 25–56. Rennes: Laboratoire d'anthropologie préhistorique.
- 1975. Die Anfänge der Metallurgie in Europa, in *Ausgrabungen in Deutschland, gefördert von der Deutschen Forschungsgemeinschaft 1950–1975, Teil 1 Vorgeschichte, Römerzeit* (Monografien des Römisch-Germanischen Zentralmuseums, 1,1): 297–99. Mainz: Römisch-Germanisches Zentralmuseum.
- SCHMIDT, H. 1913. Zur Vorgeschichte Spaniens. *Zeitschrift für Ethnologie* 45: 238–53.
- SERRES, J.-P. 1997. *Les statues-menhirs du groupe rouergat* (Guide d'Archéologie 4). Montrozier: Musée Archéologique de Montrozier.
- SIRET, L. 1913. *Questions de chronologie et d'ethnographie ibériques, I*. Paris: Geuthner.
- TELEGIN, D. & J.P. MALLORY. 1995. Statues-menhirs of the North Pontic region, in S. Casini, R.C. De Marinis & A. Pedrotti (ed.) *Statue-stele e massi incise nell' Europa dell' Età del Rame* (Notizie Archeologiche Bergomensi 3): 319–32. Bergamo: Civico Museo Archeologico.
- TRISTANT, Y. 2004. *L'habitat prédynastique de la vallée du Nil* (British Archaeological Reports International series 1287). Oxford: Archaeopress.
- TUNZI SISTO, A.-M. 1995. Megalithismo e statue stele nella Puglia settentrionale, in S. Casini, R.C. De Marinis & A. Pedrotti (ed.) *Statue-stele e massi incise nell' Europa dell' Età del Rame* (Notizie Archeologiche Bergomensi 3): 281–94. Bergamo: Civico Museo Archeologico.
- VAN DER WAALS, J.D. 1984. Bell Beakers in continental Northwestern Europe, in J. Guilaine (ed.) *L'âge du cuivre européen: civilisations à vases campaniformes*: 3–35. Paris: Éditions du CNRS.

Received: 12 August 2017; Revised: 18 December 2017; Accepted: 4 January 2018