Approaching Specialisation: Craft Production in Late Neolithic/ Copper Age Iberia

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While political models of craft specialisation are integral to archaeological frameworks describing social complexity, they do not adequately describe the emergence of nascent specialists in the absence of concomitant regional, political and economic organisation. This paper reviews several examples of craft production in the Late Neolithic/Copper Age of southern Iberia. In particular, it focuses on the production of engraved slate plaques as an example of how Late Neolithic/Copper Age prestige objects may comprise an intermediate step in this process, approaching traditional models of craft specialisation in some respects, but defying them in others. It suggests that social practices such as the systematic production and consumption of rarefied or prestigious objects have a recursive relationship with the emergence of social complexity, forming the underlying basis of more institutionalised forms of specialisation and social inequality.

Keywords
Complexity, craft specialisation, Neolithic Copper Age Iberia, plaques

Introduction

Evidence of craft specialisation has served as a barometer of social complexity in a wide range of archaeological contexts. Many contemporary ideas about early craft specialists in Neolithic Europe can be traced back to Childe, who saw a strong relationship in the archaeological record between how labour is organised and the development of class structures (1930, 1950, 1951, 1958). Although Childe's notion of the emergence of craft specialists in the form of an itinerant metallurgist roaming the prehistoric European landscape has been challenged on a variety of grounds (Chapman 1996; Gilman 1996; Sherratt 1989; Trigger 1980), his recognition that the emergence of specialisation often reflects a dramatic shift in underlying social and political structures remains particularly valuable for archaeologists.

Following Brumfiel and Earle's (1987: 5) suggestion that craft specialisation is not tied to a specific threshold of social complexity, but represents a continuum between *independent specialists* (who produce goods for a variety of consumers in a variety of contexts) and *attached specialists* (a class of worker who provides staple and finance goods to elites), more attention has recently been given to specialisation as a social practice with a complex set of rationales. Thusly, anthropologists increasingly see craftspeople as active participants in the negotiation of social hierarchies, rather than as epiphenomenal to them (Clark and Blake 2004; Flad and Hruby 2007; Helms 1993; Sennett 2008). In terms of nascent specialisation, it has been suggested that the routine production of ritual or prestige objects by skilled individuals may represent an initial step in the transition from part-time, independent craft production to more complex modes of production (Cross 1993; Lass 1998; Perlès and Vitelli 2000; Spielmann 1998).

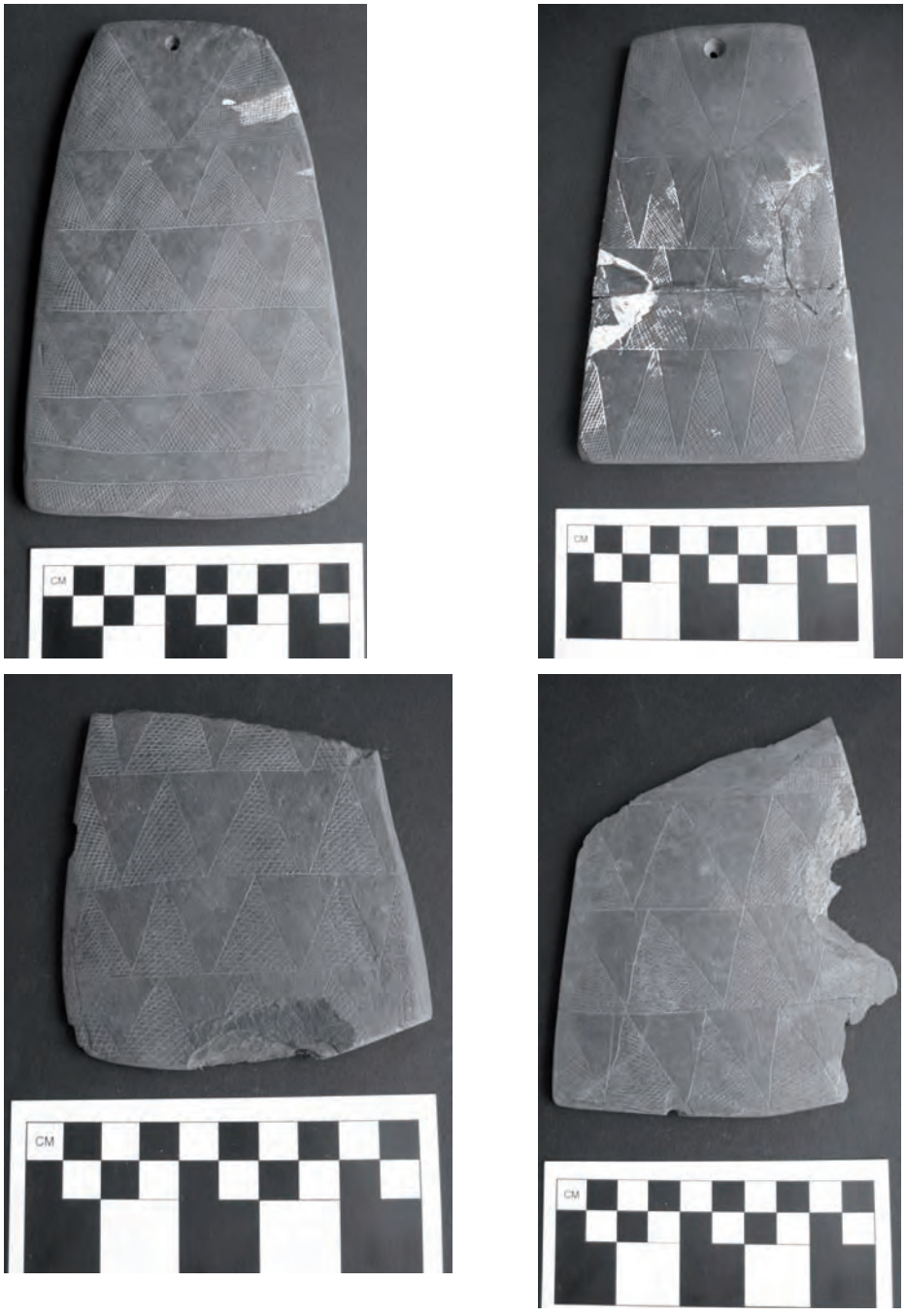
In the southern Iberian Late Neolithic/Copper Age (3500-2000 BC), however, there are still gaps in our knowledge of the production and consumption of material culture at different sites – gaps that cloud our understanding of the nature of specialisation at this time. Not unlike ongoing debates about the level of social complexity during the Late Neolithic/Copper Age, ideas about specialisation vary according to site, medium, and for historical reasons (Chapman 2003: 174). Our understanding of the organisation of craft specialists at this time is directly linked to other evidence of complexity: intersettlement and interregional relationships, settlement hierarchisation, the presence of 'workshops' (concentrated production above the level of domestic consumption), and the presence of individuals buried with prestige goods. It is clear that, before the Late Neolithic/Copper Age, some small-scale craft production existed in southern Iberia. For example, evidence exists that textile weaving and basketry were practised during the Early Neolithic (Fernández *et al*. 1996). Early Neolithic mines, such as Casa Montero (c.5400-5000 BC), attest to long-term procurement of lithic raw materials for flint knapping (Díaz-del-Río *et al*. 2006), and changes in ceramic technology indicate that pottery became more specialised throughout the Early and Middle Neolithic (McClure *et al*. 2006). However, evidence of full time specialisation during the Late Neolithic/Copper Age – or the agricultural surpluses required to support it – is ambiguous (Díaz-del-Río 2006). Most lithics, ceramics, and metals were produced domestically and in small numbers during this period. Occupational or attached specialisation only appears in southern Iberia after the Late Neolithic/Copper Age, when Bronze Age burials containing personal wealth (weapons and jewellery of copper, bronze and silver, and special ceramics) and workshops are more prevalent (Chapman 1996; Gilman 1995, 1996). This shift has tended to underscore the idea that extra-domestic or elite-financed metallurgy is the clear line of demarcation for 'serious' specialisation. In comparison, the manner in which nascent specialists emerged in the Late Neolithic/Copper Age before the appearance of clearly defined social hierarchies has received slightly less attention.

Chapman (1996: 74) has noted that the predominance of models of highly organised, attached (elite sponsored), or occupational specialisation in Iberia has led to a focus on the elite control of production systems without a corresponding explanation of how elites and specialisation emerged in the absence of concomitant supra-local political and economic organisation in the first place. How did part-time, small-scale craft production (independent or 'casual' specialisation) among different Late Neolithic and Copper Age groups evolve into more complex specialisation practices?

Among North American archaeologists, this transition has been addressed by investigating the presence and organisation of craft specialists in non-stratified societies and middle-range societies which are stratified but not state-level (Arnold and Munns 1994; Bayman 1999; Bayman and Nakamura 2001; Clark 1995; Clark and Blake 2004; Clark and Parry 1990; Cobb 1993; Cross 1993; Earle 1997; Hayden 1995; Lass 1998; Mills and Crown 1995; Sassaman 1998; Schortman and Urban 2004; Spielmann 1998; Trubitt 2000). European inquiries into 'Neolithic specialisation' outside of Iberia have also challenged earlier assumptions about the degree of social complexity required for craft specialisation (Perlès 1992; Perlès and Vitelli 2000; Souvatzi 2008).

Several types of Late Neolithic/Copper Age ritual or prestige goods that are found in southern Iberia are suggestive of 'transitional' or nascent specialisation. For example, although extra-domestic metallurgy — generally accepted as unmistakable evidence of full time specialisation because of its industrial nature — does not appear to be a widespread practice during the Late Neolithic/Copper Age, smelting and metal working at large sites such as Valencina de la Concepción (Nocete *et al*. 2008) and Zambujal (Müller *et al*. 2007) become more commonplace during this period. During this period ceramicists produced thousands of standardised, high-fired ceramic loom weights (or possibly ornaments) such as those found at Vila Nova de São Pedro and Perdigões (see Fig. 1a). Several other types of artefacts which have been characterised as prestige objects have been found throughout southern Iberia: silicified oolitic limestone blades (Nocete *et al*. 2005); bifacial flint tools (Forenbaher 1999); amphibolite axes, adzes, chisels, and hammers (Lillios 1997); ostrich eggshells and ivory (Harrison and Gilman 1977); Pamela-style arrow points; worked metal objects (Müller *et al*. 2007; Nocete *et al*. 2008); bell beaker ceramics; decorated funerary objects ('idols') made from limestone or bone; and the engraved slate plaques (Lillios 2004b) discussed in more detail below (see Figs. 1b-1e). Although the evidence for craft production, specialisation, and social complexity varies greatly between separate sites and separate regions in southwestern and southeastern Iberia, some trends can be pointed out. This paper examines how the production of many Late Neolithic/Copper Age craft objects appear to border on specialisation, and how these objects contribute to our understanding of the development of social complexity.

Figure 1a. Three examples from the thousands of high-fired, relatively standardised (possibly mold-cast) loom weights/ornaments found at the Late Neolithic/Copper Age settlement of Perdigões (courtesy of Herdade do Esporão, photo by author).



Figures 1b-e. Examples of similar engraved slate plaques and plaque fragments from the Late Neolithic site of Pedra Branca in southwestern Portugal (courtesy of Museu Geológico de Lisboa, photos by author).

Social Complexity in Late Neolithic/Copper Age Iberia

Conceptions of social complexity between the Late Neolithic/Copper Age and Bronze Age of southern Iberia continue to evolve, and range from characterisations of groups as roughly egalitarian to those forming tributary states (see Díaz-del-Río 2006; Molina and Cámara 2005; Molina *et al*. 2004). Because of a lack of fine-grained resolution at sites, there has been a wariness among many Iberian archaeologists concerning "complexity inflation" (Gilman 2006:14). In addition to this, the concept of 'social complexity' itself is problematic, as different archaeologists often mean different things when they use the term (Chapman 2003). For the purposes of this paper, the development of social complexity is defined as increasing inequality in interpersonal relationships and in the organised relationships within and between communities.

It is generally agreed that during the Late Neolithic/Copper Age, funerary evidence attests to some social differentiation between individuals. However, there are few archaeological indications of a permanent and pervasive class structure (see Díaz-del-Río 2006). The period is broadly defined by a new emphasis on sedentary agricultural subsistence (Gonçalves 1999b), the construction of elaborate and labour-intensive monumental collective tombs, and a proliferation of symbolic objects and a symbolic division of the landscape (Bradley 1997). Settlement patterns indicate a cycle of social integration and fission among factions associated with the construction of large, fortified settlements across southern Iberia (Díaz-del-Río 2004) such as Vila Nova de São Pedro, Perdigões, Leceia, Zambujal, and Los Millares. Although incipient elites may be developing in southern Iberia during the Late Neolithic/Copper Age, the evidence of institutionalised class division, differential access to productive resources, political centralisation, or rigid hierarchical systems is scarce during this time (Chapman 1996). While large sites such as Zambujal in the southwest appear to be contemporary with and roughly equivalent to (in terms of social complexity) the Los Millares culture in the southeast, it must be reiterated that evidence of craft production in southern Iberia during this period is highly variable both from site to site and over time.

Lithics and Late Neolithic/Copper Age Craft Production

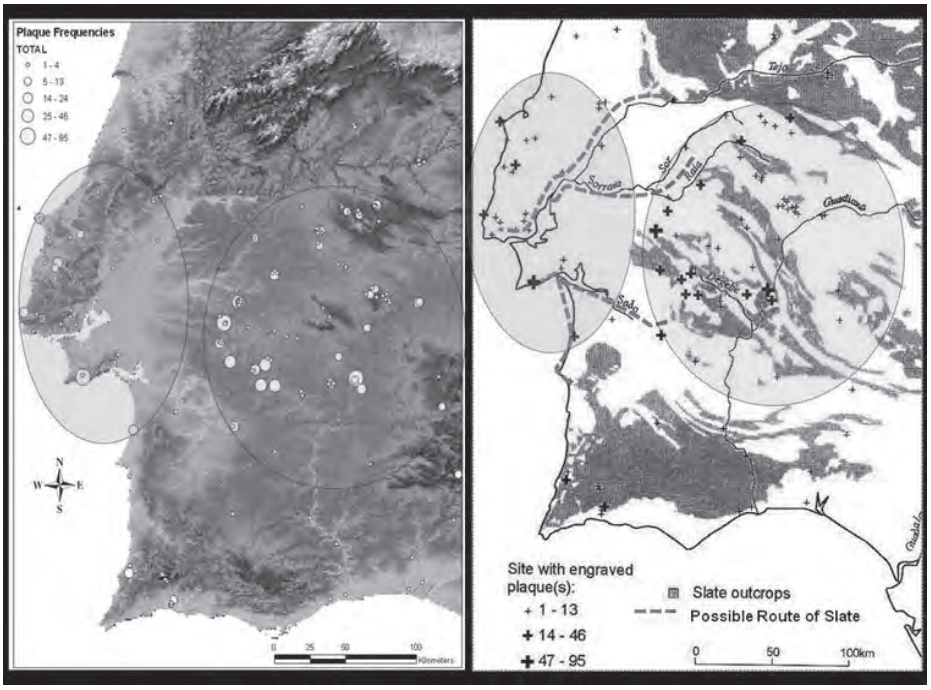
During the Late Neolithic/Copper Age, craft objects made in several media (stone, bone, ceramic, and metal) circulated in small quantities in parts of southern Iberia. Decorated ceramics, loom weights, textiles, basketry and other materials produced by craftspeople were increasingly present at this time (Fernández *et al*. 1996; Lillios 1997; McClure *et al*. 2006; Quesada *et al*. 1996). Smelting and metallurgy become both more systematic and extra-domestic in nature (Müller *et al*. 2007; Nocete *et al*. 2008; Oliveira and Matos 2002), and ore for the production of special metal objects found at fortified settlements such as Zambujal was sometimes obtained from distances of over 100 km (Müller *et al*. 2007). It has also been suggested that the symbolic language exhibited in Iberian rock may constitute a type of specialisation (Bradley 2002; Cruz and Vincent 2007; Fairén-Jiménez, forthcoming; see Gell 1998). Following this argument, designs related to this rock art that are often found on Late Neolithic/Copper Age ceramics, slate plaques, and other idols may have also required a specialised type of knowledge.

The organisation of lithic technology in particular is perhaps the most apt example of Late Neolithic/Copper Age craft production bordering on specialisation (Chapman 2003: 174; Forenbaher 1999; Molina *et al*. 1986; Ramos Millán 1998). By the Late Neolithic/Copper Age, large quantities of sought after raw materials such as flints, amphibolites, slates and other stones were being transported hundreds of kilometres across the landscape (Forenbaher 1999; Lillios 1997). While most flint knapping in southern Iberia during this period appears to have occurred in domestic contexts, the production of flint bifaces is often recognised as an organised practice that reflects a type of specialisation; in some cases, standardised bifaces were produced by skilled experts, available in a variety of predetermined forms, and found in quantities or caches indicating exchange (Fohrenbaher 1999: 108). In southern and central Portugal, amphibolite axes and other groundstone tools appear to be a similarly specialised product (Lillios 1997). In addition to evidence of increasingly organised metal production in the Guadalquivir Valley between 3000 to 2500 BC (Nocete *et al*. 2008), there is also evidence of a silicified oolitic limestone lithic industry centred in this area and stretching towards the southwest (Nocete *et al*. 2005). Although less industrial in nature than the production of metal objects, the production of functional and symbolic stone objects during this time (1) is persistent and geographically widespread, (2) demonstrates a preference for difficult to obtain and highly sought after raw materials, and (3) occasionally displays site-level or regional standardisation. While there is no indication that lithic manufacturers were removed from food production or worked in 'workshops' (as a specialist would be in the type of specialisation envisioned by Childe, for instance), the quality, transport, and standardisation of lithics at this time is well beyond what could be termed casual. Many of these objects are clearly being produced for consumers outside of the domestic context in which they were produced.

In particular, the repetitive form, raw material and visual imagery of the Late Neolithic/Copper Age Iberian slate plaques provides one possible example of the production of a prestige object bordering on nascent specialisation. Over 2,000 slate plaques have been found in hundreds of Late Neolithic/Copper Age burials throughout southwestern Iberia (see Fig. 2). An updated catalogue of the images and proveniences of 1322 plaques from 238 sites can be viewed online at ESPRIT, the Engraved Stone Plaque Registry and Inquiry Tool (Lillos 2004a). These flat, hand-sized slate objects are generally trapezoidal and perforated at the top, ostensibly for cordage. When associated with articulated skeletons, plaques are typically found adjacent to or on the chest of the body (Gonçalves 1999a: 87). Plaques are found in burials over 99% of the time, and usewear experiments on the perforations in replica plaques demonstrate that archaeological plaques do not show the signs of daily wear. This suggests that slate plaques were produced primarily for internment with the dead (Woods and Lillios 2006).

Several of the largest Late Neolithic/Copper Age tombs contain hundreds of these slate plaques and are suggestive of some type of specialisation: 167 were found at Escoural (Santos and Ferreira 1969), 134 at Olival da Pega (Leisner and Leisner 1951: 240), and over 100 at Ante Grande do Zambujeiro. However, in some areas plaque consumption and production was small-scale, irregular, and probably played a very minor role in the overall sphere of daily activity. Thus, it is unlikely that there was a single modality

for plaque making across southern Iberia. Like many other Late Neolithic/Copper Age burial goods, however, there appears to be a limited number of acceptable forms for these objects, indicating expertise of some type (below economic specialisation, but beyond irregular craft production) was involved in their production.



Figures 2a-2b. Figure 2a (left) shows the geographic distribution and frequency of Late Neolithic/Copper Age engraved slate plaques in southwestern Iberia. The highlighted oval on the left represents the coastal Estremadura region where fewer plaques are found, while highlighted circle on the right represents the center of the plaque making phenomenon in the interior Alentejo region. Figure 2b (right) overlays the areas where plaques are found onto the geological availability of slate in southwestern Iberia. Note that slate outcrops are not present along the coast. Possible water routes for the westward movement of slate are indicated (modified from maps by Jerry Mount, Angela Collins and Katina Lillios).

The engravings on the Late Neolithic/Copper Age slate plaques are comprised of a small repertoire of motifs, and the vast majority of plaques across southern Iberia adhere tightly to this visual 'grammar'. Plaques are typically decorated with zigzags, triangles, checks, chevrons, hatched bands and, less commonly, anthropomorphic/biomorphic designs (Lillios 2004a), not unlike the designs found on contemporary rock art and ceramics (Bradley 1997, 2002), and later on bell beakers. Several different meanings have been proposed for the plaques: they have been interpreted as depictions of the European Mother Goddess (Almagro Gorbea 1973; Gimbutas 1991; Gonçalves

1992, 1999a; Rodrigues 1986a, 1986b), early heraldry (Schuster and Carpenter 1996; Schuster *et al*. 1986), ethnic identifiers (Bueno Ramírez 1992), and as heirlooms or genealogical mnemonics (Lillios 2004b). The form and visual imagery of the plaques is reminiscent of other Late Neolithic/Copper Age material culture, such as stone axes, dolmen orthostats, ceramics, basketry, and textiles (Lillios and Thomas, forthcoming).

Experiments in replicating the plaques have shown that it takes several hours to grind and polish the edges and surface of a blank plaque (Thomas *et al*. 2009; Woods and Lillios 2006) and roughly the same amount of time to engrave it. Larger, more heavily polished or finely engraved plaques were presumably more labour-intensive to create. Replication experiments also cannot account for the performative or ritual aspects of plaque making, nor for the time and effort involved in quarrying, reducing, transporting, and procuring raw materials. The slate used to make plaques is not ubiquitous throughout southern Iberia, and large numbers of plaques are often found in tombs located over 150 km from the nearest slate source (Lillios 2004b). These observations do not present us with a simple scenario for plaque making as a type of craft production. Plaque makers are clearly not Childean occupational specialists, but neither are they independent specialists producing a utilitarian object. Plaque makers produced a very specific type of prestige good which likely served to distinguish important individuals, perhaps as a marker of social differentiation or ranking in terms of burial finery. Plaque makers were at some level 'connected', sharing an in-depth understanding of a very coherent body of visual imagery and materiality that spanned hundreds of kilometers and perhaps hundreds of years. The consistency in terms of form, medium, and decoration suggests that plaque makers possessed a shared body of 'plaque knowledge'.

This still leaves us with several questions. Were plaques produced as 'one-offs' (produced one at a time, perhaps by a relative at the time of death), in batches by experts, or in some other manner? Were plaques produced more systematically at large sites than at peripheral ones? Approximately how many people were involved in making plaques at a given site? Answers to our questions about the plaque *chaîne opératoire* can potentially shed light on the presence of skilled craftspeople, and the link between social identity and the organised production of burial goods among groups of emerging social complexity in Late Neolithic/Copper Age Iberia.

Although they are clearly part of a coherent phenomenon, no one has attempted to attribute groups of plaques to 'plaque experts' or specialists, largely because of contextual problems associated with collective burials. The nature of collective tombs has made it difficult to establish a tight chronological sequence for plaques. In terms of sites which are suggestive of a systematic mode of plaque production, to date only one plaque quarry/workshop has been found (see Fig. 3), at the settlement site of Águas Frias. Here slate fragments, rough plaque 'blanks', finished but unengraved plaques, and fully engraved plaques were found adjacent to a slate outcrop (Calado 2004).

Figure 3. Slate outcrop and reduction area at the Neolithic settlement of Águas Frias, Portugal, where the majority of the plaque *chaîne opératoire* is evident (photo by Rafael Henriques).

Experiments examining variation in a group of replica plaques demonstrate that modern-day plaque makers have a distinct 'signature' or style directly related to their fine-motor skills, and that more skilled engravers have more pronounced and predictable styles (Thomas *et al*. 2009). This suggests that patterned variation of Late Neolithic/Copper Age plaque makers might be discernable in the archaeological record. Based upon past efforts to distinguish individuals in the archaeological record via fine motor-skill variation (see Hill and Gunn 1977; Whittaker 1987), experiments in distinguishing plaque engravers on the basis of repetitive idiosyncrasies in their engraving styles suggest that variation between different plaque makers is significantly greater than variation within the work of a single plaque maker (Thomas *et al*. 2009). In a set of twenty experimentally produced plaques, modern-day plaque makers were both statistically and visually distinguishable on the basis of individual idiosyncratic styles. Contemporary plaque makers tended to engrave unconsciously the same angles of incidence, hatching density per square centimetre, element size and proportion, shape and orientation of triangles and quadrilaterals, line parallelism, and regularity.

These criteria were then applied to assemblages of archaeological plaques in order to roughly estimate the number of plaques makers at four contemporaneous Late Neolithic/Copper Age sites. Drawing from the catalogue of plaques in ESPRIT (see Lillos 2004a), assemblages of archaeological plaques recovered from contemporary stratigraphic levels at medium-sized Late Neolithic/Copper Age burials (Praia das Maçãs,

Pedra Branca, Granja de Céspedes, and Casa da Moura) were tested. High-resolution scans of the archaeological plaques were made using morphometric software, which allows for measurements of angles and lengths between digitally assigned landmarks to be made directly on images of the plaques. As with the experimentally produced plaques, archaeological plaque features were divided into separate zones (see Fig. 4) for the morphometric measurements (measurements of angles and lengths taken from assigned landmarks). Fragmentary plaques and plaques coming from separate stratigraphic levels were excluded from the analysis. A hierarchical cluster analysis of this data was then performed using a statistical software package.

The results from the largest two sites, Pedra Branca and Granja de Céspedes, suggest that a relatively small number of individuals were responsible for producing plaques found at each site (Thomas *et al*. 2009). Twenty five plaques (out of 43 total plaques) from Pedra Branca were complete enough to be included in the hierarchical cluster analysis. The analysis showed between three and six distinct groups of plaques, with the largest group containing seven plaques that are clearly related to each other. Nineteen plaques (out of 22 total plaques) from Granja de Céspedes were complete enough to include in the same analysis. At Granja de Céspedes there were also three to six distinct plaque clusters, the smallest of which contained only two plaques, and the largest of which contained seven. Thus, according to the variables defined in the experimental analysis, roughly 36% of the plaques at Pedra Branca may have been created by one individual, while roughly 27% of the plaques at Granja de Céspedes can be attributed to one individual.

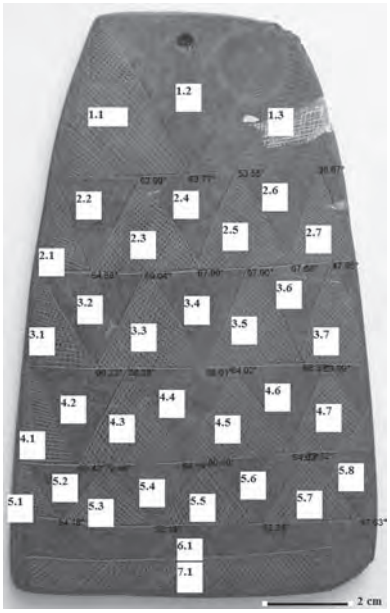
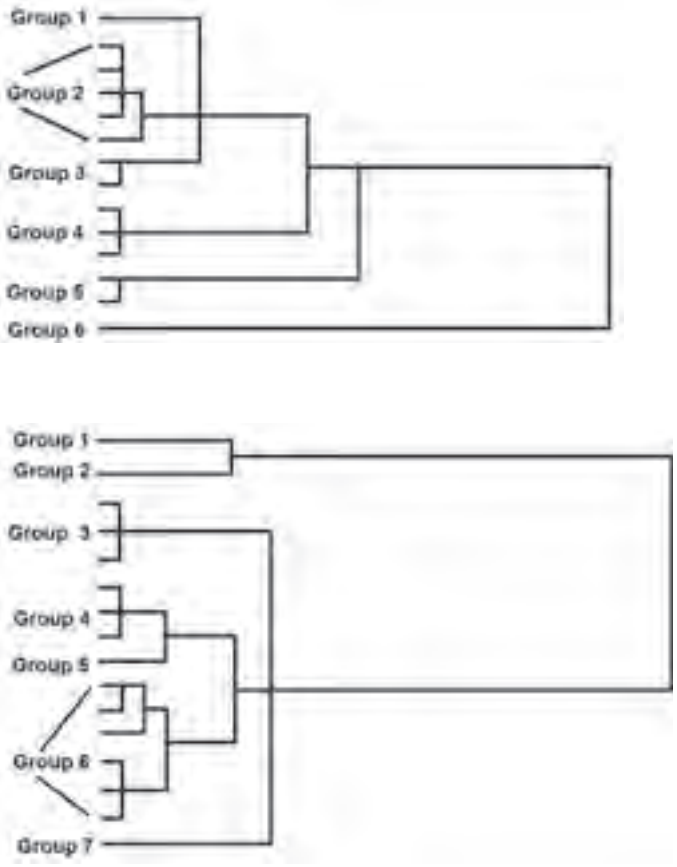


Figure 4. Morphometric measurements on an engraved slate plaque template.

In a second experiment, the results of which are presented below, I analysed the morphometric data from the plaques at Praia das Maçãs and Casa da Moura (see Fig. 4). Fourteen plaques (out of 20 total plaques) from Casa da Moura and 16 plaques (out of 23 plaques) at Praia das Maçãs were complete enough to be included in the hierarchical cluster analysis. In this case, the analysis showed that there were up to six distinct groups of plaques at Casa da Moura and seven distinct plaque groups at Praia das Maçãs that could have resulted from individual plaque makers. At Casa da Moura, the smallest clusters contained up to three plaques, with the largest group containing five plaques potentially from the same source. At Praia das Maçãs, two clusters each contained three plaques, while the largest cluster contained six clearly related plaques. Thus, roughly one-third of the plaques at each of these sites may have been created by a single individual.



Figures 5a-5b. Figure 5a (top) shows a hierarchical cluster analysis of Casa da Moura plaques; note Group 2 contains five plaques possibly by a single plaque maker. Figure 5b (bottom) shows a hierarchical cluster analysis of Praia das Maçãs plaques; note Group 6 contains six plaques possibly by a single plaque maker.

It should be reiterated that these results only serve as a general approximation of (1) the number of plaque makers at each site, and (2) groups of plaques that have statistical similarities according to the morphometric measurements identified in the initial replication experiment. Clearly, this analysis deals only with one type of artefact from four sites, and therefore it should be emphasised that it is not representative of all types of craft production during the Late Neolithic/Copper Age. However, it does illustrate that it is possible to investigate the organisation of craft production via variation: the cluster analyses appear to indicate that plaques at Casa da Moura, Praia das Maçãs, Pedra Branca, and Granja de Céspedes were not one-offs, but that large groups of them were produced by single individuals. Although plaque makers at these sites are clearly not producing a surplus of plaques in a manner that indicates occupational or economic specialisation, Late Neolithic/Copper Age plaque makers do appear to share some attributes with ritual or prestige good specialists in other small-scale complex societies (Spielmann 1998). This research has potential for examining the possibility that a more intense plaque industry developed in some areas than others, and more specifically for investigating the hundreds of plaques found at large Late Neolithic/Copper Age collective tombs such as Escoural, Ante Grande do Zambujeiro, and Olival da Pega. It also suggests that prestige goods may comprise a sort of intermediate step between very low-level, domestic craft production and more highly organised types of specialisation such as metallurgy.

Discussion

For several reasons, plaque makers and other prestige good producers are not easily integrated into archaeological models of domestic craft producers ('casual' specialists) or higher-level specialists ('serious' specialists). Although they are independently producing relatively small numbers of plaques on a part-time basis, plaque makers also seem to share a tightly defined body of knowledge related to a particularly coherent and widespread type of material culture.

Traditional models of specialisation placed its emergence in the context of agricultural surpluses controlled by a centralised elite (Childe 1950: 6-8; 1951:115). Craft specialists were initially considered a fully employed class of worker, withdrawn from food production. In this view, specialisation appears in conjunction with a very specific type of economy, and involves remuneration that replaces direct participation in subsistence agriculture. The idea that specialists are only truly specialists if craft production is their 'full-time job' has remained a persistent criterion of specialisation for many archaeologists.

Following Brumfiel and Earle's (1987) model of specialisation, attached specialisation specifically became linked to rareified objects which serve as material symbols of authority and which are crucial to negotiating leadership, social hierarchies, and the political-economic development of chiefdom-level societies. If plaques are indeed buried with individuals of significance, used to distinguish important family members or lineages, or served as markers of social identity (Lillios 2008), then this description in some ways seems to describe plaque makers.

Recently, archaeologists have explored models of specialisation developed specifically for small-scale contexts (Arnold and Munns 1994; Clark 1995; Clark and Parry 1990; Cross 1993; Sassaman 1998, 2000; Spielmann 1998). Many of these studies have shown that specialisation in relatively egalitarian or ranked contexts cannot be completely understood in terms of the direct presence or absence of strict specialisation 'traits' (Dobres and Hoffman 1994). Sassaman (1998: 93) has suggested that the bias towards models of specialisation predicated on consolidation of political power within political economies is so strong that egalitarian and ranked societies are precluded from even the most preliminary steps towards developing specialised production roles. Others have argued that specialisation does always not correlate isometrically with social complexity (Bayman and Nakamura 2001: 249; Perlès and Vitelli 2000), that specialisation should be explicitly redefined for low-level production in non-stratified societies (Cross 1993), and that too much emphasis has been placed on tying specialisation to the economy in societies which are only newly sedentary and agricultural like those of Late Neolithic/Copper Age Iberia (Shortman and Urban 2004).

Key to these observations is the acknowledgement that the work of nascent specialists may not be accompanied by direct, substantive compensation (Clark 1995: 278; Costin 2001: 276). Given that plaques are found only in burial contexts, plaque makers may have produced plaques for prestigious or ritual purposes rather than remunerative ones. Blurring the lines of traditional definitions of specialists, ritual specialists have been described as being 'attached' to an institutionalised role but not necessarily to an elite (Ames 1995; Spielmann 1998: 153). Lass has noted how ritual or religious roles in some ways defy political models of specialisation: "They possessed skills, experience, and most importantly, knowledge that others did not ... to a significant extent, then, one's role as a craft specialist was ascribed by lineage and religion" (1998: 19). Some have argued that ritual performance – certainly a possibility for plaque making – is a skilled activity that by definition "needs to be done well" (Sennett 2008: 12) and is thus itself a type of craft. Ethnographic examples suggest craft specialists' technical skill and ability to deliver a specific product to the consumer are often secondary to roles defined by their knowledge of the religious and social dimensions of their craft (Fenton 1987).

Another sea change in terms of archaeological ideas about specialisation emphasises a concern for specialists as active negotiators of social hierarchies via crafting as a social practice (Dobres and Hoffman 1994; Flad and Hruby 2007). From this perspective, some specialists have reasons for producing and distributing goods in a manner that defies market-oriented models. Low-level but skilled production of rarified objects may have conferred status and encouraged specialised roles (Flad and Hruby 2007). Decoupling specialisation from an economic role or direct remuneration provides a parsimonious view of how production may have been organised among small-scale groups without sharp class distinctions (Clark and Blake 2004). Specialisation (attached, independent, part-time, occupational, or anywhere in between) is thus viewed as a materially grounded but intrinsically social phenomenon (Dobres and Hoffman 1994: 247; Flad and Hruby 2007).

Characterisations of ritual specialists as possessing restricted knowledge rather than institutionalised economic roles (Helms 1993; Lass 1998; Sennett 2008) also consider specialists to be active rather than epiphenomenal parts of the emergence of social inequality. This may well be the case for Late Neolithic/Copper Age prestige good producers. Although plaques are not produced in ways which suggest full time or economic specialisation, they are found in contexts that clearly indicate that they were highly significant objects.

Conclusion

During the Late Neolithic/Copper Age of southern Iberia there was a gradual but definite movement towards the standardised production of some forms of prestigious types of material culture: silicified oolitic limestone blades (Nocete *et al*. 2005), bifacially flaked flint tools (Forenbaher 1999), amphibolite axes, adzes, chisels, and hammers (Lillios 1997), gold, copper, and other metal objects (Müller *et al*. 2007; Nocete *et al*. 2008), ceramics, decorated funerary objects ('idols') made from limestone or bone, ceramic loom weights/ornaments, and engraved slate plaques. Although none of these objects were produced in a manner suggestive of occupational specialisation, the movements of these materials across the landscape and the contexts in which they are found emphasise their importance not only in local political economies, but across large parts of southern Iberia. Despite the small scale of their production, great effort went into acquiring the raw materials for such objects; crafting them required skill and restricted knowledge that may have emphasised the social role of not just the consumers, but also of the producers. In this way, such craft objects are 'approaching' specialisation.

Given the present evidence, it appears that craft production during the Late Neolithic/Copper Age does not fit neatly into a single modality of specialisation. At the heart of debates surrounding plaque makers and other Late Neolithic/Copper Age craftspeople is not simply how we refer to them, but how to reconcile the disconnect between the scale of production and information about social roles and social differentiation in fledgling Late Neolithic/Copper Age political economies. Numerous attempts to resolve this theoretical impasse in North American contexts have stressed examining small-scale specialisation in terms of social practices which require specialised skills and ritual or technical knowledge related to rarefied objects and materials. It is assumed *a priori* that the emergence of complexity, however ill-defined, subsumes the emergence of specialisation (Chapman 1996: 74). However, by momentarily turning this view of specialisation on its head, we can see how the development of expertise connected to the use and efflorescence of prestigious types of material culture may in fact have had a reciprocal or recursive relationship with the evolution of socially complex groups.

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