

9. Identifying population movements by everyday practice. The case of third millennium Cyprus

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Abstract

Many of the innovations which characterize the Early Bronze Age in Cyprus and distinguish it from the earlier Chalcolithic cultural system fall within the domestic sphere, indicating major changes in the ways in which everyday tasks were carried out. The wide range of behaviours represented can be understood within analytical frameworks that consider the patterns of inter-generational learning which underpin social reproduction in small-scale societies. Together with associated concepts of technology transfer, this approach to the evidence provides the basis for arguing for a movement of people to Cyprus, bearing with them the modes of behaviour which develop to form those that characterize the cultural formation we call the Bronze Age.

Introduction

The relationship between Early Bronze Age Cyprus and Anatolia in the mid-third millennium BCE has been the subject of considerable debate for more than a century. Earlier analyses concentrated on similarities in artefact form (Dikaïos 1962: 202–203; Frankel, Webb and Eslick 1996; Gjerstad 1980; Swiny 1986), while more recent studies focus on underlying aspects of behaviour, skills and structure embedded in the material remains (Frankel 2000; 2005; Webb and Frankel 1999). Many of the innovations which characterize the Early Cypriot Bronze Age and distinguish it from the earlier Chalcolithic cultural system fall within the domestic sphere, indicating major changes in patterns of life and

the ways in which everyday tasks were carried out. Some are clearly associated with routines of women's work; others relate to less gender-specific or broader community activities. The wide range of unconscious behaviours represented can be understood within analytical frameworks that consider the patterns of inter-generational learning which underpin social reproduction in small-scale societies. Together with associated concepts of technology transfer, this approach to the evidence provides a basis for arguing for a movement of people to Cyprus, bearing with them modes of behaviour which developed to form those that characterize the ensuing Bronze Age.

These modes of behaviour lie behind the well recognised array of innovations in technology, economy and society which mark the transition from the Chalcolithic to the Bronze Age. These include the introduction of metallurgy (specifically the mining and processing of copper); of new species of animals (specifically cattle, donkeys and probably screw-horned goats); of agricultural technologies, such as backed sickle blades and the sole-ard plough (replacing hoe-based agriculture); of multi-roomed rectilinear architecture (replacing a mono-cellular circular system); of extra-mural burial and other aspects of mortuary behaviour (replacing intra-mural practice); of new ceramic wares, techniques and forms; and of a range of new domestic technologies and practices. Evidence for these innovations is coincident with or derived from a distinctive archaeological entity, defined in terms of pottery and other diagnostic artefacts, which has been known since the 1940s as the Philia cultural system (Dikaïos 1946; 1962: 152–76; Stewart 1962). The Philia system shows some chronological overlap with the Late Chalcolithic and stands at the beginning of the Bronze Age sequence on the island (Webb and Frankel 1999). In recent years important new evidence for Philia material culture and practice has come to light at Marki in central Cyprus (Frankel and Webb 1996; 2000a; 2000b; 2001; 2006a; 2006b; Webb and Frankel 1999). This site, the first and currently only Philia phase settlement to be extensively excavated, provides much of the data for the following discussion.

Competing explanations

The nature and origin of the Philia culture have long been contested (see Webb 2002a). While most scholars accept that Anatolia is the source of

most, if not all, of the innovations, the process by which they reached Cyprus is not agreed upon. Debate has largely polarised around opposing models of internal restructuring on the one hand and migration on the other. Specifically, the development of the Bronze Age in Cyprus has been seen either as:

- a result of internal processes stimulated by contact with and influences from Anatolia (reflecting the movement of goods and ideas but not of people) or
- as a result of the movement of people (as well as goods and ideas) from Anatolia to Cyprus

The first explanation, maintained by Knapp (1990; 1994; 2001, see also Watkins 1981 and Manning 1993), rejects the migration hypothesis in favour of indigenous development, involving an array of political and economic adjustments arising from an external demand for Cypriot copper, a secondary products revolution and the adoption of a prestige goods economy, but not a significant incursion of people. We have elsewhere presented a case for the second explanation: arguing for a mid-third millennium migration into Cyprus of autonomous communities from south-western Anatolia (Frankel 2000; 2005; Frankel, Webb and Eslick 1996; Webb and Frankel 1999). These migration episodes, we have suggested, were followed by adaptation, stabilisation and development, while indigenous Chalcolithic communities underwent parallel processes of reaction, acculturation and eventual assimilation, leading ultimately to the development of a Bronze Age system across the island. In this paper we extend our argument for migration by focusing on residues of everyday practice and processes of cultural transmission.

The archaeology of everyday practice

The focus on archaeological residues of everyday practice, and specifically on habitual and learned behaviour, the reproduction of material culture and technology transfer, is founded on two straightforward premises:

Firstly, that material culture is generated and reproduced by what Dobres (1995; 2000; 2001) calls 'mindful communities of practice', through processes involving habitual and learned behaviour, explicit

and implicit knowledge and social agency. Understanding, awareness, the desire to do things in certain ways are rooted in culturally bound beliefs which play an important part in limiting the range of choices and strategies available. A particular way of doing something may be adopted and passed on because it is the only conceivable way to do it rather than because it is the most efficient or the most obvious (Lemonnier 1993; Renfrew 1982; van der Leeuw 1993). If such processes account for at least some intergenerational learned behaviour, it follows that the residues of such behaviour will reflect the movement of people across time and space. Technologies embedded in 'mindful communities' and expressed in everyday practice are inscribed onto the material world and should be archaeologically visible.

Secondly, actions and behaviours which are deeply embedded in everyday practice typically involve habitual, small-scale, personal interactions between closely related individuals. They are especially visible in the domestic domain since domestic tasks are inherently conservative, not subject to elite posturing and are most likely to be reflected in intergenerational expressions of identity, such as culinary practices, child rearing and domestic production strategies.

The data

Although crucial to understanding mid-third millennium developments in Cyprus, sites with Philia material are few in number and in general poorly published (Webb and Frankel 1999: 7–13). Currently Philia material has been recovered from fifteen sites (Figure 1). Five of these are of uncertain type and have produced only isolated finds, seven have small numbers of tombs, the majority of which had been looted prior to excavation, and three have both burials and excavated settlement material. Of these three, Kyra *Alonia* is known from trial trenches excavated in 1945 (Dikaios 1962: 152–55). At Kissonerga *Mosphilia* Philia pottery and other diagnostic elements are dominant in Period 5, which is known only from plough-disturbed deposits (Peltenburg 1998 *et al.*: 52–54, 258–59). At Marki, however, an exposure of over 2,000 square metres has produced reasonably well preserved Philia architecture (Figure 2). At Marki, and for the moment only at Marki, we can see beyond individual objects and burials to a broader system. The argument which follows therefore

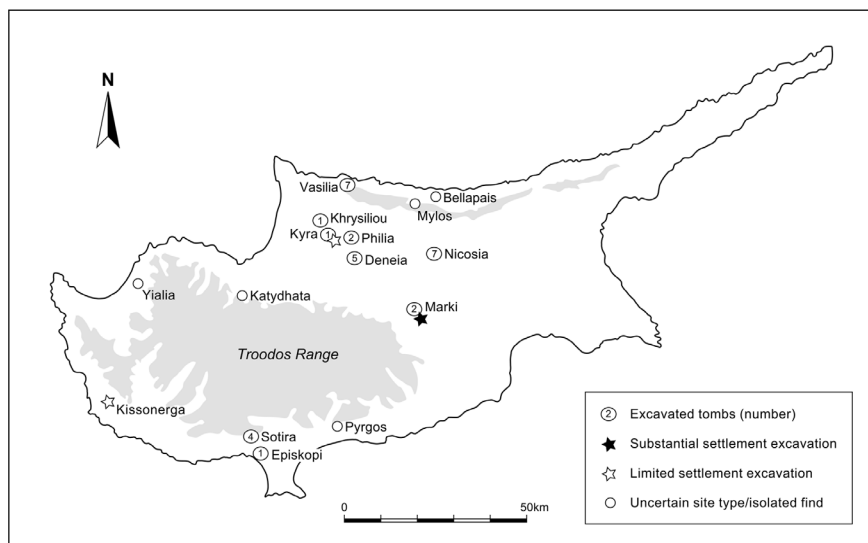


Figure 1. Map of Cyprus showing the location and nature of Philia sites.

draws primarily on evidence from Marki. While this small inland community is likely to have differed in some ways from larger settlements, there is no reason to believe that it was not broadly typical of the Philia cultural system. Most innovations are visible in Philia domestic deposits. Others are indicated by later Early Bronze Age material at this and other sites but can be inferred to have originated during the Philia horizon.

Agriculture and animal husbandry

Cattle, donkeys and screw-horned goats appear in the faunal record of Philia levels at Marki (Croft 2006) and are abundantly represented in Early Bronze Age iconography (Figure 3). These animals were not present on Cyprus in the Chalcolithic. They, and probably also a new breed of sheep, arrived by boat from the mainland around 2,400 BC. The successful introduction (or, in the case of cattle, re-introduction, cf. Vigne *et al.* 2000) of these animals assumes considerable knowledge of breeding, training and feeding schedules. This in turn suggests that they were accompanied by people with these and other skills needed to establish viable populations.

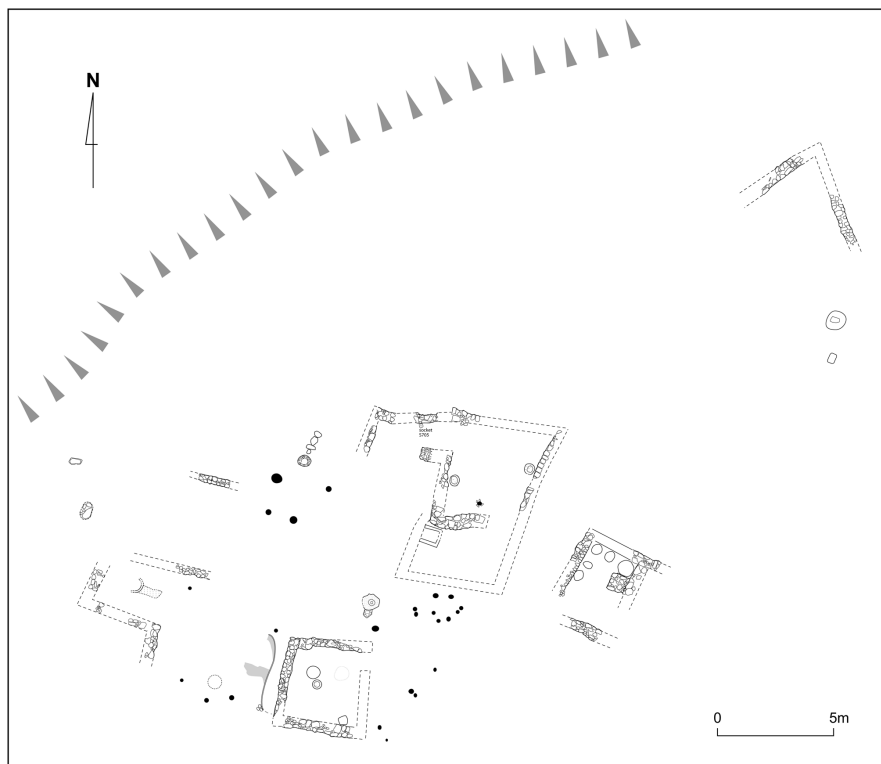


Figure 2. *Philia* phase architecture at Marki Alonia.

Equally, if not more, significantly, the pattern of animal exploitation at Marki is radically different to that visible at Late Chalcolithic sites (Figure 4). Late Chalcolithic communities at Lemba and Kissonerga were highly dependent on deer hunting and swine herding. Deer and pig constitute almost 80% of the identifiable bone sample at these sites (Croft 1985; 1998). In marked contrast, deer and pig comprise only 10% of animal bone from *Philia* levels at Marki, while cattle are present at 24% and reliance on caprines, and particularly sheep, is three times higher at 62% (Croft 2006: 263, Text Table 9.1). A similar situation is reflected in the limited faunal sample from *Philia* Period 5 at Kissonerga *Mosphilia* (Croft 1998: 212–13, Table 10.3; Peltenburg *et al.* 1998: 259). This reflects very different animal husbandry practices, different dietary

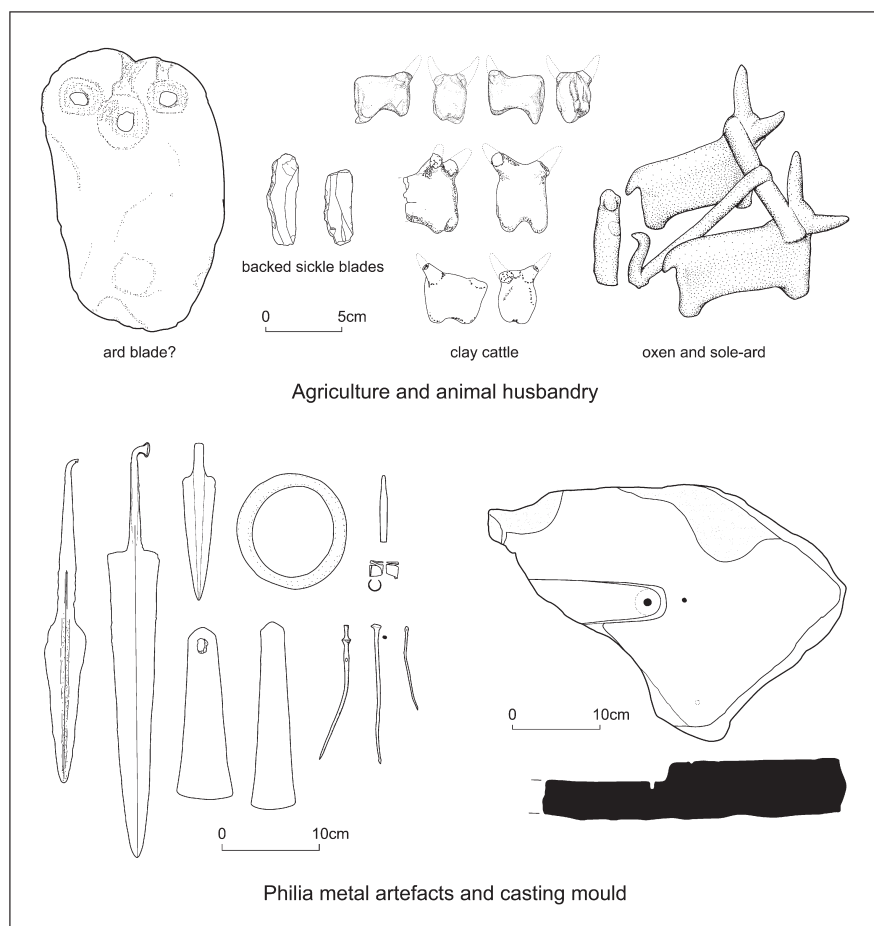


Figure 3. Cypriot Early Bronze Age artefacts related to agriculture, animal husbandry and metallurgy.

preferences and different human/animal relationships (for a broader discussion of changing patterns of faunal exploitation at the beginning of the prehistoric Bronze Age see Keswani 1994: 269–71).

A new form of backed sickle blade is also found at Marki in Philia levels (Figure 3 *infra*, Smith 1996: 106–107; 2006: 252–254). These may not be indicative of new harvesting techniques but imply different forms of blade production technology to those of the Chalcolithic. By contrast, backed sickle blades are the most characteristic Late Chalcol-

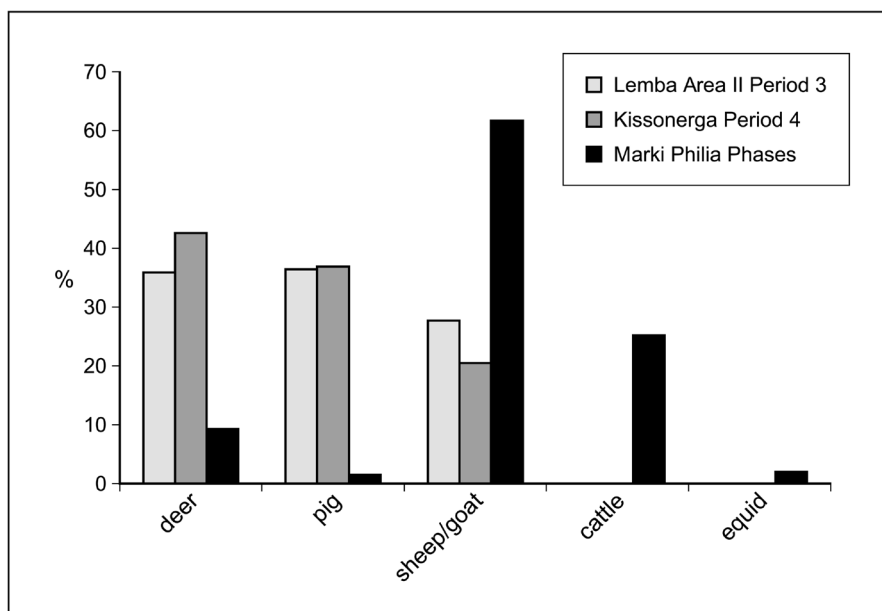


Figure 4. Relative proportions of five major species represented in the faunal assemblages at Chalcolithic Lemba and Kissonerga and Philia Bronze Age Marki.

ithic chipped stone artefact in Israel (Rosen 1982) and Jordan (Hanbury-Tenison 1986: 141) and on some Late Chalcolithic sites in Anatolia (Lourquin 1986: 276). A similar situation exists with regard to at least some elements of the bone tool industry. Rib points, for example, are not known in Chalcolithic Cyprus but present in Philia levels at Marki and widely distributed across mainland western Asia (Croft 1996: 221; Frankel and Webb 2006a: 193).

The single-handled sole-ard plough appears on a clay model and a vessel with modeled decoration from *Vounous* (Figure 3 *infra*, Dikaïos 1940: 127–29, pls IX, Xa, XVIII), both dating to around 2000 BC. Its earlier introduction to Cyprus, at the same time as cattle, is indicated by the robustness of the first phalange of some oxen in Philia levels at Marki, suggesting that these were draught animals (Croft 2006: 271, Text Fig. 9.8) and by the recovery of a possible stone ard blade (Figure 3 *infra*, Frankel and Webb 2006a: 207–208, S547, fig. 6.1, pl. 55. Compare Steensburg 1986: figs 42, 44). Additional evidence for plough agricul-

ture in the Early Bronze Age is visible in increased settlement size and the spread of settlement into areas not suited to hoe-based agriculture. A dramatic increase in cereal grinding equipment, also, is reflected in the ground stone assemblage at Marki, where rubbers and querns account for 69% of all curated artefacts (Frankel and Webb 2006a: 219), compared with 14% in Chalcolithic levels at Kissonerga (Elliott-Xenophonos 1998: Table 19.2) and 18% at Lemba (Elliott 1985). This was accompanied by a twofold increase in the rubber-to-quern ratio and an increase in the size of the grinding surface of both rubbers and querns (Frankel and Webb 2006a: 219, Text Fig. 6.22, Text Table 6.7). Overall this implies a significant increase in cereal production, in productivity per unit of labour and a greater dietary dependence on cereal processing in the Early Bronze Age.

Architecture

Philia buildings at Marki are rectilinear multi-roomed structures built of mould-made mud-bricks on stone footings and associated with semi-enclosed rectangular courtyards (Figure 2). They are radically different to the circular hut compounds of the Chalcolithic and imply radical differences in the nature, size and structure of households, the organization of household production and the use of domestic space (Frankel and Webb 2006a: 311–315; 2006b). They are also likely to reflect significant differences in family and community structures consistent with the wider complex of societal changes which characterise hoe and plough-based agricultural systems, perhaps involving a shift from polygynous to monogamous nuclear or extended family groups, an increased emphasis on private storage and consumption and the intergenerational transfer of property (Bogucki 1993; Flannery 1972; Halstead 1995; Sherratt 1981).

Mortuary practice

There were major changes, also, in mortuary practice. Although a Middle Chalcolithic cemetery of rock-cut tombs is known at Souskiou, in the Late Chalcolithic most burials were single inhumations located in intramural pit graves (Peltenburg *et al.* 1985; 1998). In the Philia these gave way to the widespread use of rock-cut chamber and pit tombs in extramural cemeteries, multiple burials and the deposition of large com-

plements of ceramic and metal grave goods (Webb and Frankel 1999: 7–13). Keswani (2004: 41; 2005) has suggested that the establishment of formal burial grounds was accompanied by an elaboration of mortuary ritual involving extensive communal participation in funerary rites linked with new forms of wealth accumulation and the hereditary transmission of economic and social capital. Philia jar burials, reflecting western Anatolian practice (Wheeler 1974), are also evident at Marki (Frankel and Webb 2000a: 764; 2006a: 285, pls 26c–e, 64a–b), Kissonerga (Peltenburg *et al.* 1998: 72) and elsewhere (Dikaios 1946; Hennessy *et al.* 1988: 29).

Metal and metalworking

In the industrial domain the dominant innovation was the introduction of copper ore extraction, primary and secondary processing and smelting technologies and the production and use of mould-cast copper-based artefacts. While some small-scale processing of local copper is evident at Late Chalcolithic Kissonerga (Peltenburg *et al.* 1998: 188–89), a complex metal industry seems to have appeared quite suddenly in Cyprus around 2,400 BC and to have developed rapidly in something akin to the so-called *Metallschock* visible in the Aegean in EB 2 (Broodbank 2000: 292–93; Nakou 1995: 1–2, fig. 1; Renfrew 1972: 338). Recent compositional analyses leave no doubt that metalsmiths in Cyprus at this time had the expertise required to produce arsenical coppers and tin bronzes (Giardino *et al.* 2003; Webb *et al.* 2006). Lead isotope analyses further suggest that Cyprus was receiving copper, both in ingot form and as finished artefacts, from both the Cyclades and southern Anatolia in the early years of the second half of the third millennium (Webb *et al.* 2006). This may be seen in the context of increasing evidence for long-range resource acquisition networks extending from the Aegean along the western and southern coasts of Anatolia and even perhaps as far as the southern Levant from the early third millennium (Kassianidou and Knapp 2005: 236–38; Philip *et al.* 2003). The involvement of Cyprus, and in particular of north coast sites such as Vasilisa, in an interregional metal trade may have prompted exploration of the interior and led to the establishment of copper ore extraction and production technologies on the island.

The Philia metal assemblage includes axes, swords, spearheads, knives, chisels, awls, needles, razors, earrings, pendants, toggle pins and ring- and perhaps axe-shaped ingots (Figure 3 *infra*, Webb *et al.* 2006; Webb and Frankel 1999: 31–33). With the exception of the chisel, which appears among Late Chalcolithic items and may be earlier, all are new to the island and closely related to western and central Anatolian types, leaving little doubt that influences from one or both of these areas were dominant in the development of the Cypriot repertoire. At Marki metal was routinely used instead of or alongside other materials for basic tasks. No stone axes or adzes, for example, were recovered from Philia levels, in marked contrast to their representation in Chalcolithic deposits at Kissonerga and Lemba, where they comprise 35% and 45%, respectively, of curated stone artefacts (Elliott 1985; Elliott-Xenophontos 1998). This suggests a well-established conception of the appropriate use of metal in everyday practice. The scale of the Philia copper industry at Marki is evident also in the recovery of a stone mould used to cast axes or axe-shaped ingots of over a kilogram in weight (Figure 3 *infra*, Fasnacht and Künzler Wagner 2001: 40–41; Frankel and Webb 2001: 35–36, figs 2.3, 10.2; 2006a: 216–217, fig. 6.7, pl. 57).

Ceramics

Philia sites are characterized by new ceramic forms, including flat-based ovoid-bodied jugs and juglets with tall cutaway spouts or round mouths, amphorae, flasks and storage jars and flat-based conical, hemispherical or ovoid bowls with pierced vertical or horizontal lugs or down-turned horned handles (Figure 5). These involve new techniques of manufacture, most notably the use of disk bases and rod handles, and new types of surface treatment, including differential firing, band burnishing and white-filled incision. Some of these innovations, notably new flask shapes, an increase in the use of small bowls, deliberate surface blackening and burnishing, occur during Late Chalcolithic Period 4a at Kissonerga, suggesting some contact with and influence from southwestern Anatolia prior to the Philia phase (Peltenburg *et al.* 1998: 257). By 2400 BC, however, these innovations represent a complete replacement of earlier forms and fabrics.

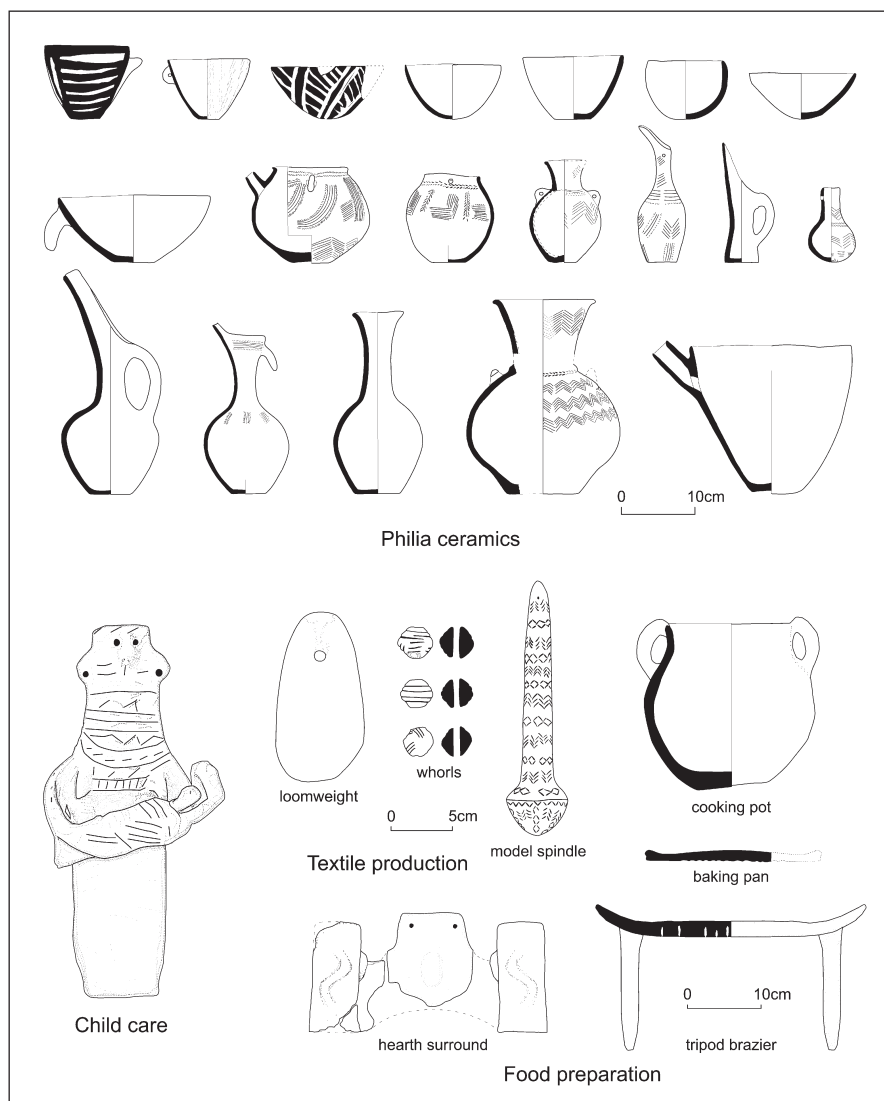


Figure 5. *Philia ceramics and items related to Bronze Age textile production and food preparation and indicative of childcare practices.*

These discontinuities in ceramic technology are likely to reflect the movement of potters, bringing with them a particular cultural understanding of vessel form and function and related technical skills. We do

not have evidence for a period of experimentation, as potters learned, for example, to construct vessels with disk bases (Pétrequin 1993: 48–49, fig. 1.10) or cooking pots capable of withstanding thermal stress. This suggests that the idea of new vessel types was not transmitted alone but with the knowledge of proven techniques to go with them. New vessel types, particularly where these apply, as they do in this case, across a whole assemblage, are also likely to reflect new consumption, production and storage practices, new ways of handling vessels and new types of food and drink. The range of pouring, mixing and serving vessels in Philia red monochrome has been linked to the introduction of exotic alcoholic drinks, with suggested connotations of elite investment in agricultural surpluses and a new group mentality characterized by the use of organized hospitality as a means of social integration and control (Manning 1993: 45; Peltenburg 1996: 23). The Philia repertoire, however, is remarkably similar across excavated assemblages. If these vessels were involved in episodes of special-purpose consumption, perhaps during public feasting or mortuary rites, it would appear that ceramic innovation was not a key currency in elite competition or that drinking and eating served as vehicles of horizontal integration rather than vertical differentiation within Philia communities.

Domestic technologies

Alongside the new pottery forms, new hearth and oven types and related cooking equipment were introduced during the Philia period. The latter include horseshoe-shaped hearth surrounds or pot stands, of which numerous examples have been found at Marki, baking pans, tripod braziers and direct fire-boiling vessels (Figure 5 *infra*, Frankel and Webb 1994; 1996: 130–35, 166–71, 181–86, figs 7.10, 7.23, 8.1–2; 2006a: 17–21, 100–101, 130–138, figs 2.5–2.7, 4.10, 4.42–4.47, pls 9, 41, 46–47). Each of these artefact types has specific antecedent and contemporary parallels in western and central Anatolia. Braziers from Anatolia and Cyprus, for example, both have base punctures to increase surface area and disperse heat (Frankel and Webb 2006a: 130–133; Eslick 1992: 54, pls 68.21, 110d–e, 112f; Goldman 1956: figs 276.667, 280.668). They share form, function, a common understanding of physics and application of the same solution to a particular technical problem. Horseshoe-shaped

pot stands, similarly, suggest the transmission of form, function and in this case perhaps also symbolic value. Across Anatolia these objects frequently have anthropomorphic features and are widely believed to have served a symbolic role in the household (Amiran 1989; Koşay 1976: 145–48; Smogorzewska 2004; Takaoğlu 2000). Together with the advent of new sources of meat and other secondary products and a greater emphasis on cereals, these hearth-related innovations imply new ways of preparing food and an expansion in the range of foods used. They involve object types, techniques of manufacture and related practices, preferences and beliefs.

From Philia levels at Marki we also have evidence for the earliest use in Cyprus of clay loomweights, indicating the presence of the vertical warp-weighted loom, and terracotta spindle whorls (Figure 5 *infra*, Frankel and Webb 2000b: 85, fig. 11; 2006a: 160–162, 175–177, figs 5.5–5.6, 5.17; Webb 2002b). We have argued elsewhere that Cypriot spinners practiced a low whorl spinning technology from at least as early as the beginning of the Bronze Age (Frankel and Webb 1996: 194; Webb 2002b). This is now widely accepted (Crewe 1998; Waltz and Swiny 2003: 406). In low whorl spinning the whorl is mounted below the mid-point of the spindle or at the base of the shaft. Conversely, high-whorl spindles are spindles with the whorl mounted above the middle of the shaft. While both are equally effective and produce an identical product, high- and low-whorl spinning have traditionally been practiced in different places at different times and those trained from childhood to use one form find great difficulty in adjusting to the other. The identification of Bronze Age Cypriots as low-whorl spinners is suggested by clay spindle models (Figure 5) and a copper spindle with whorls mounted on the lower shaft, and a pattern of abrasion on the lower terminal of almost all Cypriot whorls, probably resulting from contact between the whorl and the ground during drop spinning or from the use of wedging material inserted into the lower terminal on a tapered shaft (Crewe 1998: 59–62, figs 8.1–3; Webb 2002b).

Elizabeth Barber (1991: 56–64) has identified four zones of textile development in Europe and the Near East prior to the second millennium. Across Anatolia and Europe the vertical warp-weighted loom and low-whorl spindles were in use, while in Egypt and the Near East the horizontal ground loom and high-whorl spindles were the norm. Cypriot

Bronze Age textile production clearly belongs within the north-western zone and the key elements of this technology must have been introduced by practicing spinners from this region.

Another innovation associated with the domestic domain is less overt but no less significant. Domestic structures in Neolithic and Chalcolithic Cyprus normally contain a wealth of *in-situ* artefactual material which appears to have been deliberately sealed on house floors when structures were abandoned, remodeled or rebuilt (Peltenburg 1985; 1993: 12–14; Peltenburg *et al.* 1998: 234–37). During the Early Bronze Age, in contrast, households were routinely cleared of systemic inventories upon both localized and final abandonment (Frankel and Webb 1996: 72–73; Webb 1995). This suggests a fundamental shift in attitudes and behaviours relating to maintenance and discard practices and household abandonment among Chalcolithic and Bronze Age Cypriots.

Childcare practices

Childcare practices are deeply embedded in the domestic domain and inherently conservative. At Marki three of five human skulls examined, including that of an infant from a Philia jar burial, show anterior-posterior headshaping of a sub-type known as occipital flattening and a fourth shows plagiocephaly (Lorentz 2003; 2006). Both are likely to be a result of an infant being kept in a consistent supine position while attached to a relatively hard, flat surface. They are consistent with regular use of cradleboards, examples of which are depicted on Cypriot terracottas from the late Early and Middle Bronze Ages (Figure 5 *infra*, Karageorghis 1991: 77–81, 94–97, pls XLIV–XLVII, LII–LIV). Frontal impressions in some of the modified crania may relate to accessories used to bind the head to the cradleboard. Anterior-posterior headshaping is also indicated for two of six Early Bronze Age skulls from Sotira *Kaminoudhia* (Lorentz 2003). There is no evidence for headshaping of any sort during the Chalcolithic, despite sizeable collections of human skeletal remains. This clearly suggests that anterior-posterior headshaping was introduced to Cyprus at the beginning of the Bronze Age, probably as a secondary effect of infant care practices such as cradleboarding.

Discussion

At Marki we have a comprehensive set of data across a wide array of activities. Here *Philia* artefacts and innovations were not components within a broader system but form an entire cultural inventory: a set of material markers and attendant behaviours which constitute habitual practice at every level.

Using Dobres' notion (2000; 2001) of social agency and 'mindful communities of practice' we can suggest that the inhabitants of Marki had access to a set of skills and an array of implicit and explicit knowledge which gave them the capacity and led them to choose to do certain things in certain ways. Many of these things involved the use of everyday objects, such as hearth surrounds, low-whorl spindles and cradleboards, which are unlikely to have reached Cyprus through external trade or to have been imported simply as ideas or mental templates. They are not prestige items or overt cultural markers and not in themselves superior technologies, merely different or particular ways of doing things. Nor are they behaviourally or functionally isolated. On the contrary, each belongs to an interrelated set of material items and practices. Hearth surrounds appear as one element within an extensive set of new food processing and consumption equipment; low-whorl spindles within a set of new textile equipment; backed sickle blades within a new agricultural package. Each of these reflects an embedded set of technologies and corresponding skills, motor habits and cultural preferences. They conform to a broader social logic and are both fixed in and partly a result of non-technical considerations (Lemonnier 1993).

Cultural preferences, social relationships and value systems play a major role in constraining, defining and enabling technical choice and strategies of artefact production and use (Dobres 2000; 2001; Renfrew 1982; van der Leeuw 1993: 240–41). They reflect learning and experience, they impact on the acquisition of technical skills and they determine attitudes about appropriate ways to make and use things. Within this context everyday artefact production and practice are particularly meaningful. Even the most mundane objects are made within a social context and imbued with particular value. Their production and use constitute culturally filtered social practice which is expressed in material culture and can be derived from the archaeological data (Dobres 2001: 53–54).

Could what we see at Marki be a result of an indigenous restructuring with some allied independent invention? There can be no doubt that the economic base of the Bronze Age was radically different to that of the Chalcolithic. If, however, a restructuring took place entirely within existing communities, prompted by an incipient elite and a trade in prestige goods, how do we explain the penetration of new behaviours, new technologies and new cultural dispositions into the non-prestigious domestic realm? Similarly, the incorporation of Cyprus into an expanding network of metal-producing and metal-transporting systems may have provided a general context within which developments took place but it does not in itself explain them. If foreign prospectors, miners, smiths or merchants stimulated an indigenous social restructuring, this would surely have remained in many ways embedded in older traditions of everyday practice, especially in the domestic realm. While some things could have been invented *de novo*, this is unlikely to account for the simultaneous introduction of equipment, technologies and modes of action. The advent of specific practices, of related artefacts and of embedded cultural preferences and the rapidity of the spread of these innovations across the island argue for the arrival of practitioners operating within an active social, material and cultural context.

What we see in Cyprus in the mid-third millennium is innovation rather than evolutionary change and we see it across the full behavioural spectrum – from complex technologies requiring explicit knowledge and lengthy processes of intergenerational learning to relatively small-scale innovations in the domestic realm without overt social or economic significance, involving habitual practice, tacit knowledge and deeply embedded behavioural norms. These domestic practices belong to a cultural matrix which is unlikely to have taken hold in Cyprus without people and, in particular, women as agents of social reproduction. Our argument, ultimately, is one which appeals to a whole system and attempts to account for all elements in that system. No doubt the full story involves a range of mechanisms operating at different scales across the island. There can be no doubt, also, that the arrival of settlers in the mid-third millennium was preceded by a lengthy period of more casual interaction between Cyprus and the Anatolian mainland (Peltenburg 1993; Peltenburg *et al.* 1998: 256–60, Table 14.7) Our key argument, however, is that the only transmission process which accounts for the diversity and com-

plexity of these innovations and their vertical depth within Early Bronze Age Cypriot society is one which involves a significant movement of people: of men, women and children, of potters, weavers, herdsmen and metallurgists, of cattle, donkeys, goats and sheep and of some copper and tin. General parallels may be drawn between these developments in Cyprus and more-or-less contemporary events in the Aegean, although quite different processes appear to have been involved.

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