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Kissonerga-Mosphilia: A Major Chalcolithic Site in Cyprus

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Calibrated radiometric dates have shown that the Chalcolithic period in Cyprus lasted from about 3800 to 2300 B.C., much longer than Dikaios (1962) and others thought was the case. Although copper was first exploited then, a dynamic new art style was created, and transmaritime exchanges were initiated, no work has been carried out on a major site of the period since Dikaios' 1933–1935 sounding at Erimi. To remedy this obvious shortfall, the Lemba Archaeological Project has conducted excavations since 1983 at Kissonerga-Mosphilia, the largest prehistoric site in western Cyprus. This article is a descriptive account of some preliminary results that, when analysis of retrieved material is complete, will add significantly to our understanding of the late fifth to third millennia B.C. in the eastern Mediterranean basin.

INTRODUCTION

In studies on the evolution of complex societies, much attention has been devoted to the view that population growth itself inevitably led to cultural change, which in turn triggered profound transformations in the organization of egalitarian and ranked societies. More emphasis is currently given to the interactions among several variables, especially sociopolitical mechanisms, to explain that evolution (see, e.g., Earle 1984; Upham 1990). A major research theme of the prehistory of Cyprus is the explanation of causes for the persistence of small-scale societies, long after adjacent regions—Egypt, the Levant, Anatolia, and Crete—had crossed the threshold to “complexity.” As Upham and others have shown (Upham 1990), “middle range” political systems had powerful mechanisms to defend equality, yet many of the systems possessed settlement-size hierarchies. It is the contention here that it was in the largest of those that pressures for change resulting in the breakdown of kin-based control systems were keenest.

Prior to the development of pristine civilization in Mesopotamia there occurred sites that were far larger than their neighbors and yet they lacked features typical of complex societies. These and other precocious Near Eastern sites include Çatal

Hüyük, Abu Hureyra, ʿAin Ghazal (see Redman 1978; Rollefson *et al.* 1985; Moore 1988: 3–12) and, in Cyprus, Khirokitia (Le Brun *et al.* 1987: 282–316). All were densely crowded with dwellings and hence social relations in those outsized centers probably differed over time from those in smaller, more ephemeral communities. Direct evidence for this differentiation is clear from the finer quality of artifacts, for example, from the large sites. We may also infer differences on the basis of economic patterns. Thus, larger agricultural settlements need more land to support inhabitants and that leads to increasing distances to cultivated plots (Gamble 1982: 161–71). The resulting increase in labor costs are likely to foster changes in the economy of garden agriculture settlements where pack and draft animals were unknown, and economy cannot be divorced from other aspects of society. While in general the communities discussed here may have remained small-scale societies, the exceptionally large population centers merit special attention in considering trajectories toward complexity, since inherent stimuli leading to change in the preexisting social and economic structures are more likely to have emerged there.

Similar site hierarchies also existed in Chalcolithic Cyprus, *ca.* 3800–2300 B.C. While most surveyed sites of the period hardly attain 3 ha, a few

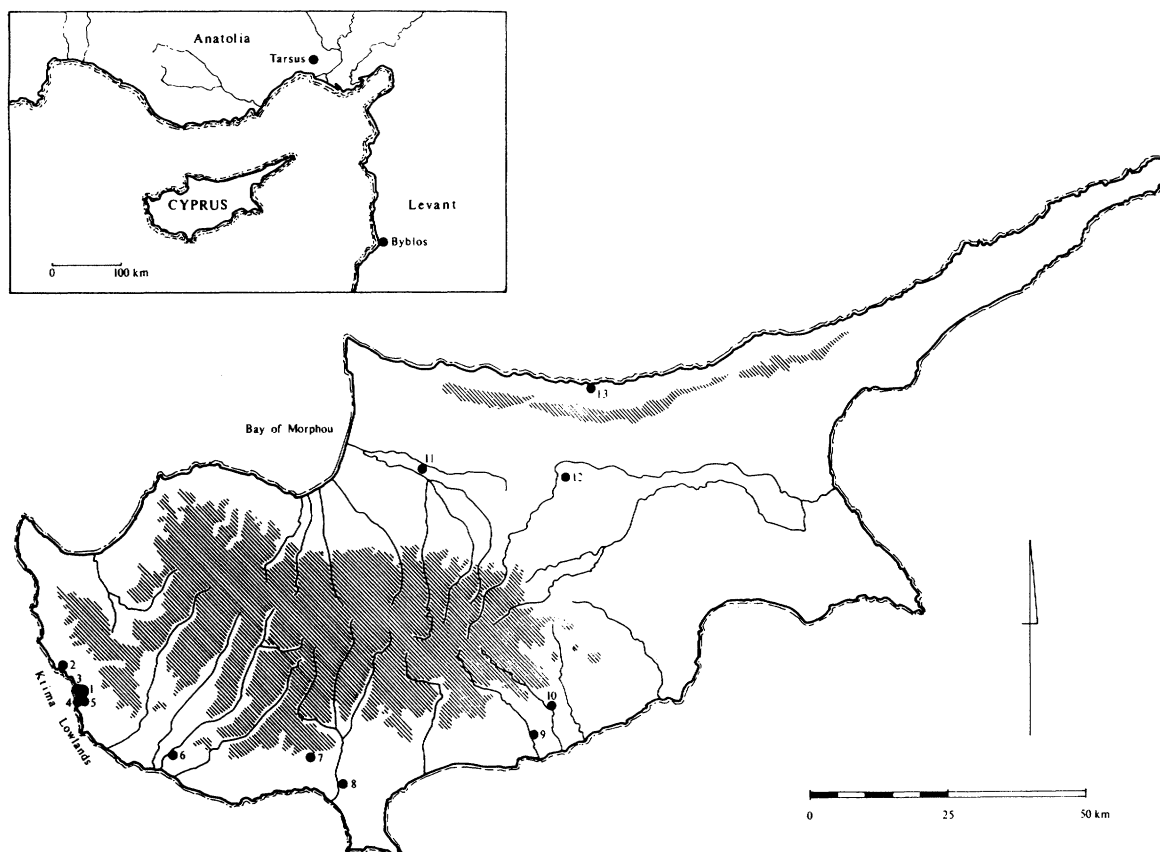


Fig. 1. Location map of some Neolithic, Chalcolithic, and Early Bronze Age sites in Cyprus and on the adjacent mainland. 1. Kissonerga-Mosphilia; 2. Maa-Palaeokastro; 3. Kissonerga-Mylouthkia; 4. Khlorakas-Palloura; 5. Lemba-Lakkous; 6. Souskiou-Vathyrkakas; 7. Sotira-Teppes; 8. Erimi; 9. Kalavassos-Ayious; 10. Khirokitia-Vouni; 12. Nicosia-Ayia Paraskevi; 13. Philia-Vasiliko; 13. Ayios Epiktitos-Vrysi.

extend over much larger areas. For instance, Erimi-Pamboula is 15 ha and Kissonerga-Mosphilia 12 ha (Swiny 1989: 16). Erimi has yielded a wealth of material (Dikaios 1936; Bolger 1988), which may be contrasted with the smaller amount of data recovered from excavations of comparable size at other Chalcolithic sites. The contrasts may also be expressed in terms of population if one accepts Renfrew's (1972: 251) figure of 200 inhabitants per hectare in lowland Mediterranean agricultural sites. That figure, however, must be treated with caution, at least in the Cypriot context. Lemba (see fig. 1 for the location of this and other Cypriot sites mentioned here) had dispersed buildings and hence a low occupation density. Of a total exposure of 612 m² in Area II, only a little over 250 m² comprised roofed dwellings (Peltenburg *et al.* 1985a: 327, fig. 6:6). As much as 40 percent might have

been occupied, for an estimated population of 240. However, even that may be an inflated number, since only part of the site was occupied contemporaneously. Kissonerga on the other hand was densely inhabited, especially in the Late Chalcolithic period; and on the above criteria, with a load factor of about 40 percent occupation, the population may have been nearly one thousand. These crude estimates suggest that there are appreciable population differences among Chalcolithic settlements. The estimates also have implications for social organization, since cross-cultural comparisons indicate that although communities exceeding 500 might still be considered villages, they nonetheless require authoritative officials (Trigger 1978: 156).

In addition to spatial, demographic, and probably social parameters, Erimi and Kissonerga are distinguished by their longevity. Most pre-Bronze

Age Cypriot sites are single-period settlements, and no other prehistoric site in the west has such a long sequence of occupation as Kissonerga. Size and duration could, of course, be interdependent if each occupation phase is accretive onto rather than superimposed over earlier deposits. Stratigraphic evidence from the site, however, reveals a great deal of superimposition; hence, settlement drift alone cannot account for its large size.

In spite of the exceptional character of these outsized sites, Erimi was only briefly sounded in the 1930s and no other work was carried out on a major Chalcolithic site in the ensuing decades. When Kissonerga was threatened by agriculture, the Lemba Archaeological Project undertook excavations there as part of its multisite excavation and survey program, to decode the qualitative differences that both caused and sustained the unusual status of exceptionally large Mediterranean settlements.¹

THE SITE OF KISSONERGA-MOSPHILIA

Kissonerga is located on gently sloping terrain north of the Skotinis River, about 1 km from the coast in the southwestern corner of Cyprus (fig. 1). It is part of a cluster of several Ktima Lowland sites that belong to the same period, and so this region was relatively well populated during the Chalcolithic. Kissonerga, however, is much larger than the other sites by a factor of two or four. Mylouthkia is about 6 ha, and Lemba and Khlorkas about 3 ha each. This size hierarchy remains to be characterized since there is evidence from Mylouthkia, which comprises dispersed pits, that not all sites were equally densely populated or contemporaneously occupied.

The site was recently deeply terraced to provide flat, extended plots for agricultural development. As a result of that land consolidation, parallel strips of later deposits at the inner, upslope margins of the terraces are missing. The severe disturbance of the site is further exacerbated by plowing, so all late deposits are poorly preserved. Visible on the terraces and in terrace faces prior to excavation were circular stone buildings, walls up to ten courses high, floors with carbonized deposits, stamped and pebbled flooring, burnt, square-sectioned pits, and deep hollows. Finds were prolific, especially in the ashy fields nearest the Skotinis River where excavations have been concentrated (see Peltenburg *et al.*

1984: 59, fig. 2). Most of the site is now planted with banana trees.

Presentation in this article of material according to period without an initial description by levels, strata or floors needs comment since it cuts across accepted convention in Cypriot archaeology. To take but one example, at Sotira-Teppes, Dikaïos (1961: 205–9) went to great lengths to establish the existence of levels across the whole site and through them to determine building phases. Groups of associated levels thus comprise periods. In favorable circumstances, as when radically different building materials are used sequentially or when paved roads link discrete building quarters, it may be possible to discern periods on the basis of stratigraphy alone, but for most prehistoric settlements that is a forlorn exercise. Decayed building materials, which constitute the matrix in which human activity is encapsulated, are seldom regularly differentiated by color or texture in succeeding phases. Nor is there often a uniform, neat build-up of decay between structures, as was the case at Ayios Epiktitos-Vrysi (Peltenburg 1982a). Recycling and erosion destroy such certainties in stratigraphic paradigms, even if one assumes regular and constant rebuilding of all structural units. In settlements comprised of dispersed buildings and graves, intervening deposits are the key to relationships between structures, but unless paved, those essential links are usually destroyed by human interference, and especially by erosion. The latter is a major postdepositional constraint at Kissonerga since precipitation in Cyprus frequently descends in torrents that annually degrade the stratigraphy of its typically sloped and shallowly stratified sites.

To overcome the characteristic discontinuities and to ascertain the chronology of Kissonerga, it has been necessary to isolate vertical sets of occupation depositions, to apply a matrix form of analysis and sometimes to extrapolate from the ceramic record. This procedure allows a fine-grained, intra-period division of occupational episodes that need not be of concern for this article except to note that virtually every period consists of multiple activity phases. Five “periods” can thus be discerned by the above criteria in a coarse temporal division of occupation at Kissonerga.

Radiocarbon dates and artifactual correlations indicate that, quite exceptionally for Cyprus, occupation extended from the Late Neolithic period to the start of the Bronze Age, from about 4500 to

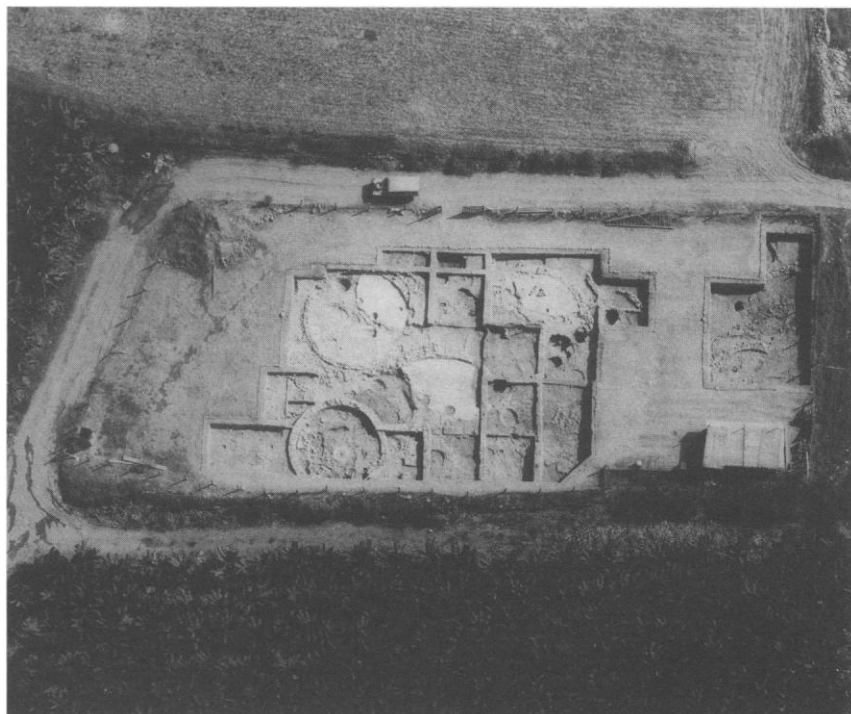


Fig. 2. Aerial view of excavations at Kissonerga-Mosphilia 1986 (Courtesy RAF Akrotiri).

2300 B.C. That occupation probably was not continuous in the main area of our excavations (fig. 2), but interruptions there do not necessarily imply that the site as a whole was subject to cycles of habitation and complete abandonment. To test the representative nature of evidence from the main exposure, monitor trenches were placed in terraces to the east. Although limited in scope, they demonstrate the existence of other types of activities and probable intermediate phases of settlement. While intrasite drift means that Kissonerga could have been continually inhabited, much more extensive excavation is required to resolve whether that was actually so. Detailed as it is, therefore, the project's record cannot yet answer with certainty questions of continuity and variety of occupation. In spite of such critical shortcomings, the evidence from Kissonerga is the most comprehensive from a Chalcolithic site in Cyprus, revealing many of the formative changes between the Neolithic/Chalcolithic and the Chalcolithic/Bronze Age periods, innovating achievements of the Erimi culture, and foreign contacts at a site of unprecedented longevity. A successor was established later in the Bronze Age on the south side of the Skotinis River (Philip 1983).

PERIOD 1

Evidence for the earliest settlement at Kissonerga survives as unabraded Combed and Red-on-White pottery, occasionally in sealed deposits (e.g., Peltenburg *et al.* 1979: pl. 9D; 1980: 8–10, figs. 2. 1, 2, 4, 8; 3. 15, 16). The former continues into the Early Chalcolithic at Ayios Epiktitos-Vrysi, Erimi, Kalavassos-Ayious, Maa-Palaeokastro, and Kissonerga-Mylouthkia, although in much smaller quantities than at Kissonerga-Mosphilia (for those sites, see Peltenburg 1990). The latter belongs to the Late Neolithic Broad Line Style (Peltenburg 1982b: 44–46), which can be differentiated from the patterned styles that occur at sites just mentioned, as well as later ones. Hence it seems likely that the first occupation of Kissonerga took place in the Late Neolithic period. Structures of some kind are indirectly attested by lumps of pisé associated with the pottery, but *in situ* deposits are needed to characterize the nature and extent of settlement here in the later fifth millennium B.C. These are the first excavated Late Neolithic deposits in the west of the island and, as in Cyprus in general, they show no cultural connections with the much earlier Aceramic Neolithic culture, which also reached the west (Fox 1988).

PERIOD 2

Trial trenches below Period 3 deposits at the seaward edge of the main excavation area disclosed a number of pits cut into wash lenses. The pits varied in type, but all contained exclusively Early Chalcolithic pottery like that from Kissonerga-Mylouthkia, Maa-Palaeokastro, Kalavassos-Ayious, and Ayios Epiktitos-Vrysi Late Phase (Bolger 1988: 293). The pits were cut from levels at the base and at the top of the inwash, decisive evidence that erosion took place during the period. It seems that a break in scarp existed at the western edge of the site and that during the earlier fourth millennium B.C. active erosion gradually swept deposits from the upper terrace into the declivity. If that reconstruction of events is correct, the inhabitants either did not attempt, or were unsuccessful in designing, countermeasures. There may have been no pressing need to do so, of course, if they only used the site during the summer when there was minimal rainfall.

Evidence for other Early Chalcolithic activities at Kissonerga was located in monitor trenches about 100 m east. They were densely pitted extra-mural areas. Among the pits were specially constructed burial slots that consist of oblong cuts for the reception of single inhumations covered by stone slabs, in the manner well known at nearby Lemba (Peltenburg *et al.* 1985a: 241–45). One, Grave 554, deserves special comment since below and at right angles to the covering slabs lay another slab roughly carved in human form (fig. 3). Both the position of the stone over the body and its coarsely-worked shape are highly unusual. Also remarkable was the inclusion of malachite in a bivalve shell at the feet of the inhumation. Very few Early Chalcolithic burials are known, so it is not possible to state if the funerary rites seen here were normal. The malachite is one of the first instances of the use of copper on Cyprus. It could have been procured from a local copper source; analytical results are pending. In Mesopotamian and Egyptian burials where there are similar instances of colorful minerals in shells, they are usually interpreted as cosmetics and toilet articles (see Peltenburg *et al.* 1989: 29–30 for fuller discussion).²

It is clear even from the fragmentary data that Kissonerga was used for funerary and daily life purposes during the Early Chalcolithic period. As at other contemporaneous sites (cf. Todd 1981: 57–68), erosion proceeded unchecked and hence little



Fig. 3. Pit Grave 554, Period 2; the anthropomorphic slab rests over the single inhumation.

is left on the old, deflated ground surface. Stone-based structures at prehistoric sites in similar topographies survive moderately well, so it seems reasonable to suggest that structures at that time were more prone to erosion, were probably built of less weather-resistant materials, and may not have been maintained for permanent occupation. The evolution of building materials at Lemba and Erimi, from pisé and wood to more durable walls with stone foundations, also points to the existence of less permanent structures (see Peltenburg *et al.* 1985a: 314–28, with references). Early Chalcolithic Kissonerga thus probably once comprised a settlement with upstanding buildings.

PERIOD 3 (fig. 4)

At some stage during the Middle Chalcolithic a contiguous group of some of the largest buildings of prehistoric Cyprus, divided by a paved track

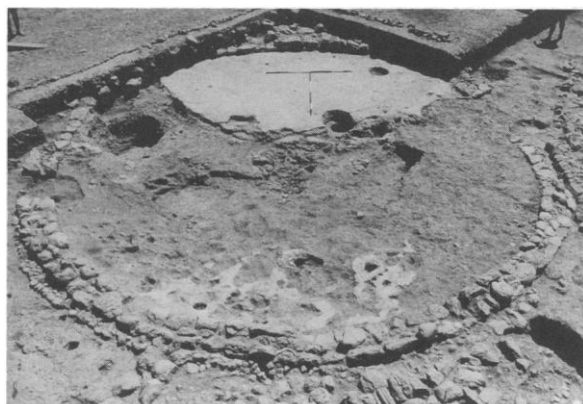


Fig. 5. Building 2, Period 3, with 2 m scales in the paved eastern room.

Some of the round structures retained restorable vessels on their floors, showing that impoverished compositions of Period 2 Red-on-White were replaced by imaginatively articulated designs of the Close Line Style. Many bear linear patterns such as latticed squares dependent from rim and base, or curvilinear designs that introduce tension and motion into an otherwise static repertoire (see Bolger, this issue pp. 81–93). Storage vessels, the first *pithoi* in Cyprus, were kept in the buildings and some were also boldly painted, unlike their plain, utilitarian successors. Other pottery may have possessed applied decoration since one Red-on-White figurine (Peltenburg 1987: 223, fig. 2) is clearly broken away from a larger object. In contrast, the small earlier buildings nearby only possessed plain pottery. So, there is evidence for significant changes in ceramic as well as architectural products during Period 3.

The rectilinear structures vary in size and fittings. Thus the interior of one, Building 1161 (4.5 × 5 m), was mainly occupied by an oven placed in such a way that when the building's door was opened, it would have struck the oven. The latter may have been a secondary feature in a building riddled with animal disturbance. An adjacent example was also poorly kept, unlike the impressive circular structures. It had a conventional circular platform hearth, which occurs both in preceding Late Neolithic and succeeding Late Chalcolithic habitations. The dissimilarities between the small, rectilinear structures indicate that they were not all made for the same purpose, nor were they all found to one side of the road. A fragmentary example was

located among the large circular buildings; but, unlike others of its type, it was neatly constructed, like the adjacent buildings. That some were overtly utilitarian and required less labor to fashion is clear, and one at least would seem to be a dwelling. So striking are the architectural contrasts that social and functional differences may be inferred within Middle Chalcolithic Kissonerga. That diversity means that it is difficult to assess the architectural "norm" for the period, although structures elsewhere indicate that examples like Building 206 are outsized and that Kissonerga possesses a group of exceptional, sophisticated structures.

Other noteworthy features of Period 3 are several kinds of pits. One is for single inhumations, although there are so few of these that some of the dead must have been buried elsewhere. Small pits were designed to receive infants, some of whom wore necklaces of a few beads and pendants. Assuming that pit size corresponds to size of the deceased, an exceptional adult grave was cut through Building 2. There was no body in its disturbed shaft, and the capstone had been thrown back into the pit so that it no longer rested as normal on the ledge above. That was not the action of grave robbers since two splendid Red-on-White flasks and a fine stone bowl were set along the ledge, presumably as post-capping offerings (Peltenburg *et al.* 1985b: 55, fig. 2). That the only possible adult burial of the period should be disturbed may mean that it was an unconventional grave and that adults normally were buried outside the area of excavation.

Other pits ultimately were used to receive domestic rubbish. One was filled largely with the stone lids of pottery *pithoi*, neatly carved and polished mushroom-shaped limestones with diameters up to 30 cm.

Hemispherical pits dug outside buildings for getting rid of burnt materials contained fire-cracked stones and ash, unlikely debris from the clean hearths inside the circular buildings. The numerous stones could conceivably be pot-boilers from vats set over the hearths or from other, outdoor, activities. There is little in the pits to indicate other than domestic discards, but two neatly cut pits, 1015 and 1225, are decidedly extraordinary.³

Hoardings, Public Ceremony, and Discontinuity

Below the floor of Building 994, Chalcolithic people cut a 1 × 1.5 × 0.36 m pit, Unit 1015, and

deposited in it a startling array of burnt and broken objects. Its contents may be divided into two groups: heat-fractured stones, ground stone tools, some stained with red ochre, organic remains, and some sherds that filled most of the pit; and against its south wall, a stack of pottery vessels with, in and around the lowest, a total of 41 figurines and other objects (see Goring, this issue pp. 153–61, fig. 1). Within the stack, the upper painted bowl was upright and intact, part of its rim projecting at the floor level of the building. Beside and below it were two inverted bowl halves. At the bottom was another upright bowl packed with stone and pottery figurines, a large triton shell, a four-legged model stool, a pierced terracotta cone, pestles, pounders, rubbing stones, a polisher, a flint blade, and pebbles. Wedged upright around its base or laid on their sides were more figurines. Nowhere in the deposit was there evidence for a burial, so this is evidently the rarest of Chalcolithic assemblages, a nonmortuary hoard in which highly unusual objects were taken out of circulation, not stored temporarily.

Of the ten stone figures, six were inside, four outside the lowest bowl. The anthropomorphic ones resemble the popular cruciforms only to the extent that their arms are outstretched. Blue-green microlite, the stone *par excellence* for Chalcolithic cruciform pendant figures, is completely lacking in the assemblage, so personal adornments were apparently excluded. The preferred stone for figures of this deposit was a type of limestone. At the simplest, it was carved to produce plain, schematic figures, symmetrically balanced like a “gingerbread man.” More complex types are still not very elaborate, but they do indicate the sex of the figures. One is rendered standing with flat breasts, wide hips that extend in a “bustle” around the back, and short legs with feet demarcated by an incision. Less easily identified images include an elongated pebble with a stem-like terminal set obliquely to the body. Viewed from the side it appears like a recumbent animal with its haunches perfunctorily indicated. From above, however, it could be interpreted as a reclining human figure with its legs divided by a single groove as in other representations (cf. Swiny and Swiny 1983: 56–59). All are unsuitable as pendants, ideal as hand held objects.

The pottery figures are much more varied than the stone ones. Six were placed inside, three outside the bowl. All except one are female, an uneven proportion of sexual types that recurs in one of the

Souskiou tombs (cf. Christou 1989). The single male figure is in fact a cylindrical vessel with a boldly modeled face below the rim. Its conical eyes and pouting, serrated lips are encircled by red bands with a pendant (labret?) dangling below the lips. It is uncertain if there were enormous ears and arms since the broken stubs may also be restored as two vertical handles, like the handles of a *depos*. One of the females, a matronly figure with arms raised to the shoulders, is also hollow and presumably served as a vessel (see Goring, this issue pp. 153–61, fig. 5). One leg is placed slightly in front of the other to achieve stability. The figure has small breasts, a ridge-like fold along the stomach and another around the hips and back. Elaborate painted designs suggest that it was heavily tattooed or wore trousers. Head and neck are missing. The unusual position of the arms corresponds in general to that of a seated male in the Pierides collection in Larnaca (Karageorghis 1985: 46–47). Its provenance, from Souskiou or the Balkans, is disputed and so the undoubted Cypriot Chalcolithic context of the Kissonerga parallel strengthens the case for a Cypriot origin for the Pierides male.

Of the remaining painted figures, one is a mutilated vessel; one is a standing cylinder; two are small and worn with wide, flat bases; and three, though fragmentary, are so similar that they can be restored as tall females with cylindrical necks and bodies and outstretched arms. Unlike all the others, these are seated on four-legged circular stools and are in the act of giving birth (see Goring, this issue pp. 153–61, figs. 2, 3). Here, then, is explicit evidence that concepts of fertility, indeed parturition and life itself, motivated the creation of the figures.

All the pottery and most of the stone figures were in a fragmentary condition when they were deposited in the pit. That this was not solely due to normal wear is indicated by the fresh breaks (see Goring, this issue, pp. 153–61), the position of some of the breaks, and by the state of the lowest bowl. Quite unlike any other known Chalcolithic bowl, this one depicts a building with entrance, detachable door, bracket and pivot in which the door rotated, central hearth, and floor ridges (fig. 6). Its walls are painted with bizarre designs including squares arranged as steps with strokes set obliquely at their corners, other squares set on series of tangential bands, a line with attached blobs and a vertical with zigzag fringes like a pole with streamers. None of the elaborate interior decoration was visible at the time of discovery. It, together with

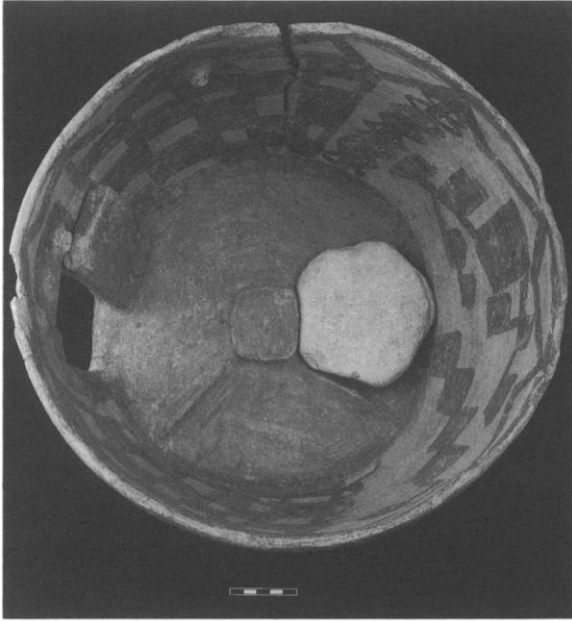


Fig. 6. Red-on-White pottery vessel in the shape of a building with detachable door, central hearth, radial floor dividers, and stone platform. This comes from Period 3.

the red-framed doorway, was coated with an unfired buff slip of uniform thickness that concealed the patterns. The slip also covered the broken stubs of nine protomes that had been deliberately detached from their position above the entrance. Other projections, such as the wall bracket, door tenon, and internal features had also been snapped away. The whole building model therefore had been intentionally defaced and its presumably symbolic internal decoration hidden. That corresponds to the mutilated state of many other objects in the deposit. Either before or during the fire rites that accompanied the deposit, the participants in the ritual made a concerted effort to desanctify, or “kill” many figurative components of the hoard.

Excavation has shown that the model is no mere fantasy but one based on a specific building type. The vast majority of Chalcolithic structures are circular and many retain the door pivot on the inside of the entrance exactly as portrayed in fig. 6. What they normally lack are square hearths and the low radial floor ridges of the model. Those have been found in only three contemporary structures at Kissonerga (see Peltenburg 1989: 111, fig. 15.1d for an example). In Period 3 the large circular buildings have radial walls instead of ridges, and those define elaborately paved floors that are al-

ways situated in the east quadrant of the building. It could also be argued that the Lady of Lemba (Peltenburg *et al.* 1985a: frontispiece and fig. 11) comes from such a special room and that there is thus some evidence that those eastern rooms played an important role in settlements. Whatever that function, it is at least clear that the bowl is a realistic building model of a type of structure that is atypical within Late Neolithic-Late Chalcolithic architectural traditions.

The deposits were discovered beneath Building 994, the last structure belonging to Period 3 within our exposure of the settlement. There followed a stage when that area was given over to quarrying, burials, and—to the south—possible building. Later, construction of buildings resumed on a more general pattern. In all the first post-Period 3 units, the pottery is radically different from earlier finds; it is characterized by dominant proportions of the new Red and Black Stroke Burnished ware. Building types have also changed, though the circular plan remains ubiquitous. In at least one instance a Period 4 building was placed directly on the wall stubs of a Period 3 building, but that is no guarantee of continuity. The marked alterations in pottery and architectural styles suggest an occupation interval of unknown duration, perhaps as long as a few centuries, after Period 3.

These considerations of relative chronology demonstrate that Unit 1015 occurred at a critical juncture within the history of Kissonerga. According to available evidence the hoard was buried some little time before the inhabitants abandoned at least that part of the settlement, if not the whole of it. In that sense we may speak of the hoard with its attendant rites as a closure ceremony, the public deposition and “deconsecration” of important symbolic items before the community vacated the area. That it was a peaceful episode is suggested by the fact that there was no violent destruction either in the out-sized buildings or in the relatively empty Building 994. Yet the final burial of so many overtly symbolic objects, surely a communal rather than a domestic act, must have been traumatic because of its rarity and because it effectively brought to an end those practices previously connected with the objects. There is no evidence for continued production of those types of objects later.

The conclusion that Units 1015 and 1225, the latter comprised of a nest of bowls surrounded by numerous heat-cracked stones in a pit, are the result of a closure or departure ceremony is at odds

with most interpretations of hoards. Such hoards normally are regarded as caches hidden in times of trouble and not recovered in antiquity, or as foundation deposits. But there are no signs of danger and both of the units discussed here are associated with an extramural group of firepits that lie well beyond the later Building 994. That its builders and occupants were nonetheless aware of the underlying deposits is evident from the manner in which the wall base touches but does not break the nested pots of Unit 1225 and the way in which part of the rim of the uppermost bowl in Unit 1015 projected through the floor of the building. The delicate rim must have been treated with care since it is in excellent condition. In this case, stratigraphic proximity at least implies respect for earlier deposits. The deposits therefore may well have involved the closure of earlier buildings together with the foundation of a new structure. The one need not preclude the other. Unfortunately, little survives of the new Building 994 to indicate its function.

It is clear from these aspects of Units 1015 and 1225 that rare items were deliberately deposited. Such ritual activity has been conspicuously absent from the nonfunerary archaeological record of prehistoric Cyprus and it requires reassessment of the islanders' socioreligious organization. The goods were intentionally and permanently taken out of circulation, not merely stored for subsequent retrieval. Given the timing and formalities of the deposits, there are implications for the nature of settlement drift that is such a pervasive characteristic of Cypriot prehistory.

This is the earliest hoard of figurines and building model from Cyprus. Although general parallels for such deposits may be found in other regions, such as Syro-Palestine, Greece, and the Balkans, there is no convincing argument for a foreign inspiration for the figurines, model, or deposition custom. Such arguments are unconvincing because of chronological difficulties, major stylistic differences, and the absence of evidence for significant long distance trade in late fourth millennium B.C. Cyprus. All components of the hoards are local products. The style of the figurines can be traced back to the formative Early Chalcolithic period, a time when many changes occurred in Cyprus without foreign involvement. It might also be argued that the unique character of those deposits implies an intrusive custom; but current studies are based on only minimum exposures of settlements and cemeteries of the Chalcolithic period, which lasted some 1500 years. The origins of the practice are to be found in

the social and religious developments of fourth millennium B.C. Cyprus.

Clay building models are a cross-cultural phenomenon found in the Balkans, the Aegean, Egypt, and the Near East in prehistoric and later contexts (Peltenburg 1988a). They have been interpreted in various ways, but in terms of style the closest analogy to the Kissonerga model is the "Sacred Enclosure," from a tomb in the Early Bronze Age cemetery of Vounous in Cyprus (Dikaios 1940: pls. 7-8). Like the Kissonerga model, it has a hardly-modified open bowl shape, internal fixtures, and a clearly articulated entrance. Both are decorated and each has 19 associated figures. It seems reasonable to conclude that the whole concept of the Vounous bowl has an enormously lengthy and unsuspected pedigree, within the Chalcolithic period at least. This is important for considerations of continuity and disruption through the crises that mark the advent of the Bronze Age in Cyprus. But it is equally important to note the differences in detail for they epitomize the changes in the ideological, social, and economic domains of the two periods. The Vounous bowl is populated by figures with folded arms—one holding an infant—by penned bulls, and by snakes. None of that exists in Chalcolithic representations. The form has thus persisted yet the content has changed dramatically.

Period 3 with its road, differentiated and elaborate structures, finely painted pottery, varied array of coroplastic and other art forms, including the largest microlite cruciform figurine from Cyprus (fig. 7), and occasional imports such as flint and obsidian, has evidence for a thriving population. That it was not unique to Kissonerga is evident from remarkable contemporary finds in Building I at Lemba, much of the Souskiou cemetery, and the later levels at Erimi (see Vagnetti 1980; Peltenburg *et al.* 1985a: 67-70, 77-78). The flourishing character of that period may be epitomized by the amount of specialized labor needed to construct some of the enormous buildings at Kissonerga. They may also provide insights into the reasons for observed changes insofar as they contrast so markedly in size and sophistication with nearby habitations. In other words, labor was explicitly concentrated on certain buildings that possessed special pottery and storage containers. This may well be a reflection of increased social divisions leading to the production of more "luxury" goods.

In addition to its sharply gradated house sizes, Kissonerga 3 has also yielded evidence for public ritual. Units 1015 and 1225 were deposited in an

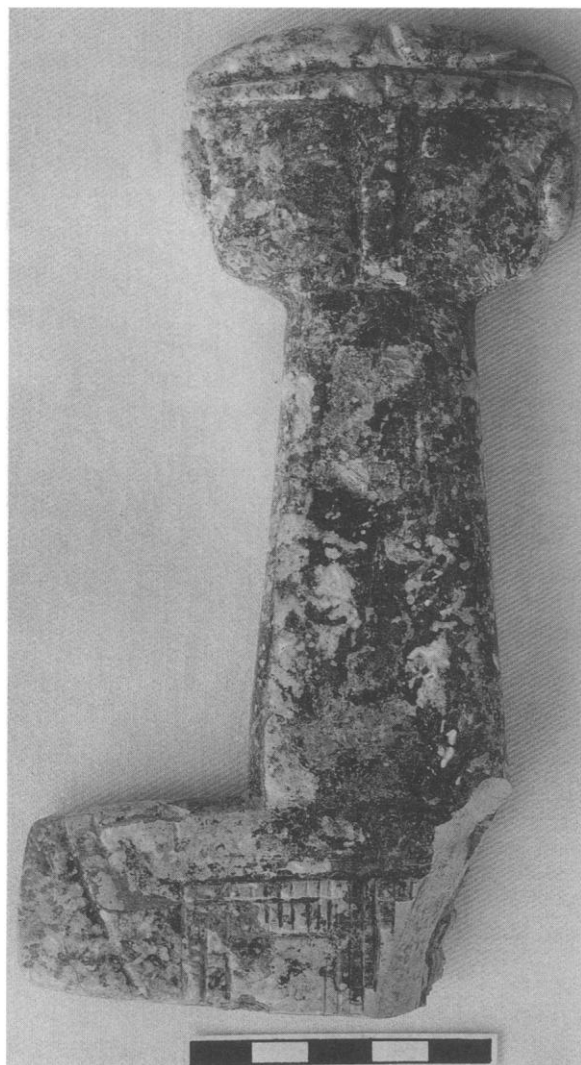


Fig. 7. Fragment of the largest picrolite cruciform figurine from Cyprus, Period 3; surviving height, 16.3 cm.

open space and hence they are likely to have concerned the community. The objects also are likely to have come from a single, special place since, had they come from individual households with similar wants and needs, there probably would have been a repetition of types rather than the remarkable stylistic heterogeneity of old and new figures. Public ritual and ceremony enhance the importance of participants and the status of the centers in which they occur. The ceremonies are integral in maintaining, defining, and modifying the structure of society. Therefore the social importance of these deposits ought not to be underestimated. While their scale attests to Kissonerga as a ceremonial

center, the burial of all those quasiutilitarian objects at a time of movement away from the area is to be linked with abandonment procedures and may shed light on why relatively large Cypriot population aggregates did not develop more obviously stratified and centralized organizations.

Dwelling size differences, the likelihood of special structures and leaders of ritual, and the advent of large intramural storage containers and differential burial rites are indicative of emerging asymmetrical social relationships in Kissonerga 3. Had the process continued, such a large center probably would have developed hierarchical political units and eventual urbanization, as happened in neighboring lands. That did not occur in Chalcolithic Cyprus. One form of resistance to the loss of autonomy was settlement shift, and perhaps social fissioning, an abiding aspect of prehistoric Cypriot "sedentary" communities. Clearly there were stresses in the evolving dynamics of power negotiations within social networks of prestate societies in Cyprus. Two features commonly linked with the appearance of complex societies were also largely lacking in the island prior to the Late Chalcolithic period. These are long distance trade and surplus production. The selective control of those activities are here regarded as symptoms of the appropriation of power by emerging elites. In spite of the richness of Kissonerga 3, there are very few exotica, and metal remains extremely rare. There is also no evidence, in terms of storage, that comestibles were centrally distributed or controlled. Low population density on the island as a whole may also have been a contributing factor to the retention of communal society. Relative sparsity meant that additional territory was available for occupation by disaffected groups, and that the opportunity for competition among interacting peer groups was limited. Why such low population densities persisted for millennia on an isle of plenty is a question common to many island demographies, but Lunt's observation of high infant mortality rates at Lemba (in Peltenburg *et al.* 1985a: 245–49) and Kissonerga (Lunt, personal communication) may supply a crucial explanation for Cyprus. It may also help to explain why such unprecedented emphasis was given to the overt depiction of birth in the figurine repertory (see Goring, this issue, pp. 153–61).

PERIOD 4 (fig. 4)

As stated, there may have been a hiatus before the main area saw further settlement in the form of



Fig. 8. Building 3, Period 4, with masses of storage vessels lying in destruction debris on the floor.

a quarry dug for poor quality marl and *havara* and for some graves. Thereafter, dispersed small buildings were constructed, gradually filling in the entire area preserved at this level. Three or four phases can be discerned with—in a final phase to be dated to the mid-third millennium B.C.—numerous small structures placed beside a major establishment, Building 3. The settlement plan is quite different from that of Period 3, but it closely resembles nearby Lemba 3, in which a large structure is also associated with several smaller ones. Again, as at Lemba, several of the smaller units are reserved for special functions. Thus one building, 1052, has an oven that occupies a significant proportion of the interior space; another, Building 1046, has three spacious, compartmentalized basins and could not have been used for ordinary residence. The settlement seems to consist of a major all-purpose building with several subsidiary dwellings and ancillary structures devoted to specific functions. At Lemba the major building was associated with a group of tombs uniquely supplied with libation holes (Peltenburg *et al.* 1985a: 114–18, fig. 41, pl. 28.1), at Kissonerga with a remarkable concentration of storage vessels.

The pots were found in Building 3, which was destroyed in a fire that caused roof timbers to come crashing onto the floor. Among the trapped objects were some 40 pithoi and 20 smaller vessels (fig. 8). They occupied fully half the internal floor area. Measurement of pithoi body diameters, moreover,

reveals that there would not be enough space for all those jars had they stood on the floor. Since there was no evidence for a loft, the problem of spatial congestion is best overcome by assuming that many were stacked. Sherd concentrations indicate that the jars were densest near the central hearth. The lighter concentration near the wall corresponds with two rows of jar stands. In other words, there was a permanent complement of 11 pithoi near the wall and the remainder were stacked temporarily between them and the hearth. Since access to all but the jars nearest the entrance would have been impractical, the building could not have operated as an effective dispensary of stored commodities at the time of its destruction. Indeed, if this reconstruction of a stacked assemblage of jars is correct, the jars were probably empty since it is unlikely that such friable, handmade pots could have supported stacked vessels which, when full, would have been quite heavy.

There is negative evidence that the jars may have been empty. In a Mediterranean horticultural community like Kissonerga, one would expect that contents belonged to the standard polyculture of cereals, oil, and wine. Flotation of Building 3 burnt deposits, however, yielded only a few pistachio seeds. Cereals, if present, were not there in the form of seeds. The olive was also domesticated in Cyprus at that time; but had the vessels contained olive oil, burning would have been far more intense than was the case. Wine also seems unlikely since

these were large-volume jars and without lids wine quickly would have become rancid. It seems reasonable to assume exceptional, depleted, or no contents. Rather than opt for idiosyncratic contents, it might be more appropriate to conclude that Building 3, which had normal domestic furnishings such as the circular platform hearth, was converted into a central repository of pithoi at certain times in the agricultural cycle. Presumably it was burnt down unexpectedly, since the body of a child was found trapped by fallen masonry.

Building 3 clearly served as a focus of communal activity. Its 11 permanent storage jars alone give some idea of its exceptional status. The significance of this concentration can be put into perspective in another way by comparing it with Myrtos in Crete, a contemporary settlement that yielded a total of 44 similarly-sized pithoi, little more than the full complement from this building. Warren, the excavator of Myrtos, argued that the pithoi represent a surplus of oil amassed for exchange, an important step in the evolution of palatial redistributive economies (Warren 1972: 145–46). While the exact size of the Kissonerga Period 4 settlement is unknown, the concentration of so much storage capacity in Building 3, a major dwelling, not a specialized or public structure, is strong evidence for the impressive wealth and degree of control exercised by its occupants over productive labor. The material disparities between Building 3 and other dwellings suggest that, as in Period 3, unequal concentrations of energy expenditure were typical of prestate Chalcolithic Cyprus. In a broader context, this evidence points to the growth of large container, intramural storage in both Crete and Cyprus by the mid-third millennium B.C.

The sequence of levels at Building 3 is also important for an understanding of developments toward the end of the Chalcolithic period. After the building's destruction, pits and other features cut into the debris contained evidence for the production of luxury materials. For example, wasters were left behind by a shell carver. Among his intended finished products were dentalium beads and spurred, annular pendants, the latter well known from Philia contexts in the central part of the island, where they are sometimes referred to as fish amulets (cf. Dikaios 1962: 175, fig. 84.18–22; Hennessy *et al.* 1988: fig. 25). At Kissonerga, however, they have only been found together with Late Chalcolithic pottery and not Red Polished (Philia) pottery as elsewhere, thereby raising the issue of the



Fig. 9. Limestone conical stamp seal with impression, Period 4.

origins of this new type of jewelry. Copper ore from the same level suggests an association with copper extraction process, at least on a limited scale. It may not have come from the prolific Troodos copper belt since there are small, local sources available (Zwicker 1988: 427–28). Another innovation was a conical stamp seal (fig. 9), the earliest securely dated example from Cyprus. Similar poorly dated examples are known from other sites (e.g., Peltenburg *et al.* 1985a: pl. 47.11), so it is evidence for the beginning of a new custom, not an isolated experiment. On the mainland, such seals are often used for the administration of property in stratified societies. If it was adopted for the same reasons in Cyprus, it provides supporting evidence for the trappings of control systems seen in the immediately underlying Building 3. Its close association with high-value objects like copper and shell pendants may indicate the growing convergence of power and “wealth” in Late Chalcolithic society.

Sunk into the prolific residues of Building 3 was the third element of the sequence, a small, fine structure, Building 86. In spite of its size it ranks as one of the best constructed prehistoric buildings of Cyprus (Peltenburg *et al.* 1985b: 57, pl. 2A). Its



Fig. 10. Double inhumation Grave 539, Period 4. The lower parts of the bodies extend out of sight beneath what remains of the roof of the chamber.

neat southern facade was flattened, its entrance jambs carefully thickened and its masonry pecked flat in rustic technique on its inner face. *In situ* wall collapse provides evidence for a stone wall almost 2 m high, by far the tallest recorded Chalcolithic elevation. Thus there is continuity in the occurrence of high quality materials at this location. Building 86 had two phases before it collapsed. Over it were basins, pits, and disturbed wash containing material of Period 5, the clearest sequence in Cyprus for the transition from the Chalcolithic to the Early Bronze Age. Pre-Philia material at Kissonerga demonstrates either that artifacts previously regarded as diagnostic of the Bronze Age were current in the preceding Late Chalcolithic or that innovations made in a newly emergent Philia group in the Morphou Bay area were adopted by existing communities.

Indicators of greater social differentiation in Kissonerga 4 are also evident in mortuary practices. Chamber graves with funerary furniture now ap-

pear alongside the traditional pit graves that normally lack offerings. With their appearance there occurs a shift from single to multiple interments (fig. 10). That is not to be interpreted as simply a shift to more elaborate graves, but one that entails new attitudes toward access to certain tombs and perhaps a greater emphasis on distinctive social relations. The multiple burial tradition may already have been reserved for special social groups, since it is first found in Cyprus in selected Middle Chalcolithic graves. Almost all the evidence comes from Souskiou (Christou 1989: 82–94) where multiple interments were inhumed in shaft graves, and hence the particular novelty at Kissonerga is the chamber. Since the soft marl of the site is unsuitable for well-constructed chambers, the tomb type was probably introduced. It was to become the standard tomb type throughout the rest of antiquity in Cyprus.

Grave 505 is a bilobate example of the Late Chalcolithic chamber tomb (see Peltenburg *et al.* 1985b: 58–61, where it is referred to as Grave 5). Its 1.6 m deep shaft was sealed below the hearth of Building 98. At the base of the shaft a triangular platform was bisected by a rickle of stones that proved to be an extension of a stone-built pier dividing the burial area into two chambers. There were at least two interlocked adults in the 1 × 2 m Chamber 1, each provided with a spouted pottery flask. Dentalium shells and other objects in the shaft may have belonged to those interments or to earlier graves through which this one was cut. A single, flexed inhumation was placed against the back wall of the similarly sized Chamber 2 and a bowl was placed on the edge of the platform leading to the chamber. It seems to have been the custom to provide the dead in Late Chalcolithic chamber tombs with a single vessel and sometimes other goods, including necklaces of small stone and faience disc beads. The latter are the earliest examples of a synthetic material from the Mediterranean region and they arrived as part of developing exchanges with the Levantine mainland. Their advent soon after in the Aegean to the west (Foster 1979: 34, 56–59) is hardly likely to have been fortuitous.

PERIOD 5

The upper culture-bearing deposits are disturbed by plowing and extensive terracing. The stratigraphic distinction between Periods 4 and 5 therefore is fraught with difficulties, since, for example,

late sherds often may be plowed into underlying levels.⁴

Certain novel burials exemplify these problems of stratigraphy. They include two urn graves in Period 4 levels but probably cut down from higher up (e.g., Peltenburg *et al.* 1985b: 58–59, pl. 3A). A tightly crouched child lay in one urn, its feet at the base of the jar. The vessel does not strictly conform to Late Chalcolithic shapes or finishes and it has analogies in transitional and Early Cypriot contexts (e.g., Dikaïos 1962: 171, fig. 83.9; Stewart 1962: fig. 109). The custom of urn burial is intrusive and while there may have been indigenous reasons for its appearance, one cannot overlook that this was a time of foreign contact with the Levant and with EB I/II Anatolia where it was the most common burial type (Wheeler 1974). Grave 529 is another burial that belongs to this or the preceding period. With the inhumed child was a miniature dentalium shell necklace, annular shell pendant of the type manufactured on the site, and a copper spiral ring with expanded terminal (Peltenburg 1988b: 234–35, fig. 3). The combination of traits often regarded as distinctive of the Chalcolithic (shallow pit burial, dentalia) and the Early Bronze Age (annular pendant, spiral ring) in a single burial provides conclusive evidence that there was no sharp break between the two periods.

Other distinctive features undoubtedly belonging to Period 5 are terracotta spindle whorls and two classes of pottery. The whorls are no longer made from flat, pierced sherds. Instead, they are fashioned into decorated biconical and ring shapes from the new, finely levigated clays used for Red Polished (Philia) pottery; they are almost indistinguishable from types found at Philia-Vasiliko (cf. Dikaïos 1962: 175, fig. 84.13–17). The pottery survives principally as sherds from flasks with rod handles and cutaway spouts. Part of a small jar has an incised herringbone design on its shoulder and it corresponds in shape and decoration with jars from Philia tombs in the center of the island (Peltenburg *et al.* 1984: 62, fig. 58; cf. Hennessy, Eriksson, and Kehrberg 1988: 60, fig. 15.11). The other class of pottery is Black Slip-and-Combed, known previously from Philia sites in the north and center of the island and EB II Tarsus.⁵ It has a dark core with organic filler. Its decoration is effected by scraping away a dark slip (when reduced) to reveal an underlying red surface. One carefully executed example has rows of dots rather than the usual banded decoration. Their arrival with Red

Polished (Philia) in the west indicates that these vessels are not the result of occasional interregional exchanges, but rather part of a new, intrusive ceramic package.

Philia traits at Kissonerga are of considerable interest for the momentous transition to the Early Bronze Age; but because the Philia group of sites around the Bay of Morphou remains ill-defined in chronological terms, a number of interpretations are possible. Before evaluating alternatives, it should be noted that, contrary to J. R. Stewart (1962: 287–89) and Herscher (1981) the western instances confirm that Philia cultural traits were widespread and pervasive and that the west was not isolated from the profound changes that affected the rest of Cyprus in the mid-third millennium B.C. Of the likely explanations for the Kissonerga data, two commend themselves for assessment: model 1 (M_1), in which there is such pronounced regional variation that Kissonerga 4 and Philia are contemporary; and diachronic model 2 (M_2), in which Kissonerga 4 provides a *terminus post quem* for Philia throughout Cyprus.

Synchronous, Regional Variation. M_1 assumes that the Philia group already existed in central Cyprus during Kissonerga 4 (fig. 11). According to the Kissonerga 4 radiometric dates (Peltenburg, in press) Philia should therefore start before 2400/2300 B.C. That corresponds with conventional dates for Tarsus II, which possesses Philia-type material. If the Tarsus Black Slip-and-Combed pottery proves to come from Philia sites in Cyprus, its occurrence in the earlier part of EB II Tarsus means that Philia started well before the mid-third millennium B.C. The fact that Red Polished (Philia) pottery only appears in Period 5, after the spiral ring and annular pendant, suggests three stages of interaction between the west and central parts of Cyprus: contact, followed by influence, concluding with radical structural changes in traditional Erimi culture societies.

Unfortunately, the poor preservation of Period 5 deposits does not allow for detailed assessments of those changes; but scholars ought not to underestimate them in view of the completely different techniques and clay sources used to produce the local Red Polished (Philia) pottery and spindle whorls. These are not solely matters of fashion: they imply a radical departure from traditional modes of production. According to this model, Grave 529 probably belongs to Stage 2.

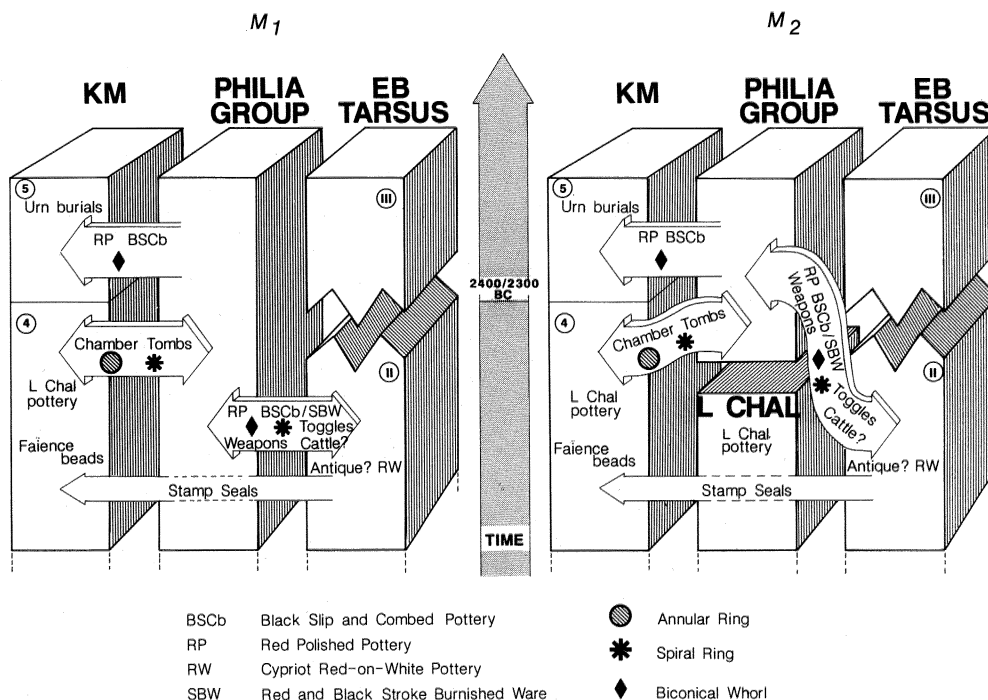


Fig. 11. Early (M_1) and late (M_2) models for the role of the Philia group of sites in changing cultural patterns in Cyprus during the transitional phase to the Early Bronze Age. "KM" is Kissonerga-Mosphilia.

Diachronic Evolution. Alternative M_2 stipulates that Philia in central Cyprus is contemporary only with Period 5 (and later), and that important changes in Period 4 were generated entirely within the late Erimi culture. The changes could not be a consequence of interaction Stages 1 and 2 as defined above. The Period 4 increased complexity includes more social differentiation (building and burial hierarchies) and the appearance of foreign prestige items (e.g., faience beads) and customs (e.g., stamp seals). This interpretation requires that exceedingly rapid changes took place in the Morphou Bay area subsequently and that the newly evolved culture spread speedily throughout the island, perhaps as a sudden migratory movement. The destruction of Lemba 3 and the disappearance of the Erimi culture further suggest that this was catastrophic as far as the native population was concerned.

Kissonerga dates indicate that the destruction of Lemba 3 occurred after 2400/2300 B.C., about the time of the destruction of EB II Tarsus. Many have argued that the culture of the Anatolian refugees prospered in Cyprus while new cultures developed in their homeland.⁶ That explanation allowed

scholars to explain the similarities between pre-2400 B.C. Tarsus and post-2400 B.C. Cyprus, and it requires a sharply curved arrow between Tarsus and Philia in M_2 of fig. 11. But if, as proposed above, Black Slip-and-Combed pottery at Tarsus came from Philia sites in Cyprus, M_2 is faulty. The existence of chamber tombs, annular spurred pendants, and spiral rings in Kissonerga 4 and Philia sites strengthens the case for contemporaneity and regional variation. While the two models have little explanatory value for culture change, the adoption of M_1 allows us to consider change in a clearer temporal framework. Research may now be aimed to refine M_1 , to investigate the origin of the Philia culture and to document its formative interaction with more conservative Erimi culture groups.

Kissonerga is one of a very few sites in Cyprus to span the transition to the Early Bronze Age. Most Late Chalcolithic sites ceased before or during that critical time. Kissonerga's long history, size, and importance may have conferred an exceptional degree of stability that enabled it to survive such upheavals. But no community exists in isolation and the abandonment and destruction of so many associated villages must have been a determining

factor in its demise in the final quarter of the third millennium B.C.

CONCLUSION

Kissonerga provides valuable information on several perennial problems of Cypriot prehistory. In terms of cultural homeostasis and change, this includes environmental conditions during the Neolithic/Chalcolithic transition, and chronological and cultural data for the momentous upheavals at the start of the Bronze Age. The desultory use of copper is a surprising feature throughout most of its existence, given the importance of the metal in contemporary societies outside the island and ready availability on the island. Such neglect is revealing of the isolated status of Cyprus prior to the Late

Chalcolithic when evidence for transmaritime exchanges becomes obvious and increased use of metal begins to affect traditional stone adze working (Elliott 1985: 167). Checks on growth toward complexity have been inferred from the recurrence of single period sites, in other words from mobile economies. Although there are no tells in Cyprus, Kissonerga demonstrates the existence of long-term site occupation on the island. In the two periods where settlement evidence is good, there are pronounced spatial disparities in architecture and other material goods, but no evidence for public institutions. Unequal control of energy, or social practices, was thus not an evolutionary tendency of those ostensibly "middle range" societies, but an established feature, well before the Bronze Age.⁷

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NOTES

¹Results of six seasons of excavations at Kissonerga, from 1983 to 1989, have so far mainly appeared in preliminary reports (see Peltenburg *et al.* 1985b; 1989, with references). The aim of this contribution is to present a selection of the principal discoveries mentioned in scattered reports, and which appear to distinguish Kissonerga as a major prehistoric settlement of Cyprus. Another season of investigation and much postexcavation work still need to be carried out, hence inferences from these discoveries are kept to a minimum here pending final analyses. Although a firm chronology exists for the penultimate period of occupation (see Peltenburg, *in press*), further radiocarbon dates are awaited to provide a more secure framework for earlier periods.

²Copper, perhaps as malachite, is available in the vicinity of the site, at Khlorkas for example (Zwicker 1988: 427–28).

³The material from these and associated pits is currently being prepared for publication in the Lemba Archaeological Project series (see Peltenburg *et al.* 1985a). For some preliminary accounts and illustrations, see Goring, this issue, pp. 153–61 and Peltenburg 1988a; 1989).

⁴We have been rigorous in excluding any suspect material, but not all data have been processed and so final analysis may necessitate revisions of assessments made here.

⁵For this important ware, see the discussions in Dikaios 1962: 201 and Stewart 1962: 225. At the conference on Cypriot ceramics in Philadelphia in 1989, I examined relevant Tarsus material (stored at Bryn Mawr) through the kindness of D. Bolger. Although analytical confirmation is required, Tarsus Streak Burnished fabric and finish are visually so like Cypriot Black Slip-and-Combed that they may be regarded as the same diagnostic ware. This reassessment has important repercussions on the nature of the transition to the Bronze Age in Cyprus (see below).

⁶E.g., Gjerstad 1980. Although his interpretation would seem to be a conflation of M₁ and M₂, it cannot work for chronological reasons and because of the absence of Red Polished (Philia) pottery at Ambelikou prior to the topmost disturbed pits (see Peltenburg, *in press*).

⁷Knapp (1990) has misdated the Kissonerga evidence and appropriated it to support his contention that incipient stages of complexity were associated with the secondary products revolution in the Bronze Age. Most of the cited evidence for innovations, specialist production, and expansion of capital factors that he attributes to the Philia culture (Knapp 1990: 157, Table 5) in fact belongs to Kissonerga Period 3, which is late fourth millennium B.C. and hence well before Philia and evidence for cattle in Cyprus.

BIBLIOGRAPHY

- Bolger, D.
1988 *Erimi-Pamboula. A Chalcolithic Settlement in Cyprus*. BAR International Series 443. Oxford: British Archaeological Reports.
- Christou, D.
1989 The Chalcolithic Cemetery 1 at Souskiou-Vathyrkakas. Pp. 82–94 in *Early Society in Cyprus*, ed. E. Peltenburg. Edinburgh: Edinburgh University.
- Dikaïos, P.
1936 The Excavations at Erimi 1933–1935. *Report of the Department of Antiquities of Cyprus*: 1–81.
1940 The Excavations at Vounous-Bellapais in Cyprus, 1931–2. *Archaeologica* 88: 1–174.
1961 *Sotira*. Philadelphia: University of Pennsylvania.
1962 The Stone Age. Pp. 1–204 in *Swedish Cyprus Expedition IV.1A*. Lund: Swedish Cyprus Expedition.
- Earle, T., ed.
1984 On The Evolution of Complex Societies. Essays in Honor of Harry Hoijer 1982. *Other Realities* 6. Malibu: Undena.
- Elliott, C.
1985 The Ground Stone Industry. Pp. 161–95 in *Lemba Archaeological Project I. Excavations at Lemba Lakkous, 1976–1983*, by E. J. Peltenburg et al. *Studies in Mediterranean Archaeology* 70: 1. Göteborg: Åström.
- Foster, K.
1979 *Aegean Faience of the Bronze Age*. New Haven: Yale.
- Fox, W. A.
1988 Kholetria-Ortos: A Khirokitia Culture Settlement in Paphos District. *Report of the Department of Antiquities of Cyprus*: 29–42.
- Gamble, C.
1982 Animal Husbandry, Population and Urbanisation. Pp. 161–71 in *An Island Polity. The Archaeology of Exploitation in Melos*, eds. C. Renfrew and M. Wagstaff. Cambridge: Cambridge University.
- Gjerstad, E.
1980 The Origin and Chronology of the Early Bronze Age in Cyprus. *Report of the Department of Antiquities of Cyprus*: 1–16.
- Hennessy, J.; Eriksson, K. O.; and Kehrberg, I. C.
1988 *Ayia Paraskevi and Vasilia. Excavations by J. R. B. Stewart*. *Studies in Mediterranean Archaeology* 82. Göteborg: Åström.
- Herscher, E.
1981 Southern Cyprus and the Disappearing Early Bronze Age. *Report of the Department of Antiquities of Cyprus*: 17–21.
- Karageorghis, V.
1985 *Ancient Cypriote Art in the Pierides Foundation Museum*. Larnaca: Pierides Foundation.
- Knapp, A. B.
1990 Production, Location and Integration in Bronze Age Cyprus. *Current Anthropology* 31: 147–76.
- Le Brun, A.; Cluzan, S.; Davis, S.; Hansen, J.; and Renault-Miskovsky, J.
1987 Le néolithique précéramique de Chypre. *L'Anthropologie* 91: 283–316.
- Moore, A. M. T.
1988 The Prehistory of Syria. *Bulletin of the American Schools of Oriental Research* 270: 3–12.
- Peltenburg, E. J.
1982a *Vrysi, a Subterranean Settlement in Cyprus. Excavations at Prehistoric Ayios Epiktitos Vrysi 1969–73*. Warminster: Aris and Phillips.
1982b *Recent Developments in the Later Prehistory of Cyprus*. *Studies in Mediterranean Archaeology*, Pocket-book 16. Göteborg: Åström.
1987 Lemba Archaeological Project, Cyprus, 1985. *Levant* 19: 221–24.
1988a A Cypriot Model for Prehistoric Ritual. *Antiquity* 62, 235: 289–93.
1988b Lemba Archaeological Project, Cyprus, 1986. *Levant* 20: 231–35.
1989 The Beginnings of Religion in Cyprus. Pp. 108–26 in *Early Society in Cyprus*, ed. E. Peltenburg. Edinburgh: Edinburgh University.
1990 Chalcolithic Cyprus. Pp. 5–22 in *Cyprus before the Bronze Age: Art of the Chalcolithic Period*, eds. V. Karageorghis, E. J. Peltenburg, and P. Flourenzos. Malibu: Getty Museum.
- In press Toward Definition of the Late Chalcolithic in Cyprus: The Monochrome Pottery Debate. In *Cypriot Ceramics: Reading the Prehistoric Record*, eds. J. Barlow, D. Bolger, and B. Kling. Philadelphia: University of Pennsylvania.
- Peltenburg, E. J., et al.
1979 Lemba Archaeological Project, Cyprus, 1976–77: Preliminary Report. *Levant* 11: 9–45.
1980 Lemba Archaeological Project, Cyprus, 1978: Preliminary Report. *Levant* 12: 1–21.
1984 Lemba Archaeological Project, Cyprus, 1982: Preliminary Report. *Levant* 16: 55–65.
1985a *Lemba Archaeological Project I. Excavations at Lemba Lakkous, 1976–1983*. *Studies in Mediterranean Archaeology* 70:1. Göteborg: Åström.
1985b Lemba Archaeological Project, Cyprus, 1983: Preliminary Report. *Levant* 17: 53–64.

- 1989 Excavations at Kissonerga-Mosphilia 1988. *Report of the Department of Antiquities of Cyprus*: 29–40.
- Philip, G.
1983 Kissonerga-Skalia Ceramics. Pp. 46–53 in *The Prehistory of West Cyprus: Ktima Lowlands Investigations 1979–82*, by E. Peltenburg *et al.* *Report of the Department of Antiquities of Cyprus*.
- Redman, C.
1978 *The Rise of Civilization*. San Francisco: Freeman.
- Renfrew, C.
1972 *The Emergence of Civilisation*. London: Methuen.
- Rollefson, G., *et al.*
1985 Excavation at the Pre-Pottery B (PPNB) Neolithic Village of ʿAin Ghazel (Jordan) 1983. *Mitteilungen der Deutschen Orient Gesellschaft* 117: 69–116.
- Stewart, J. R.
1962 *The Early Cypriote Bronze Age*. Pp. 205–391 in *Swedish Cyprus Expedition IV.1A*. Lund: Swedish Cyprus Expedition.
- Swiny, S.
1989 From Round House to Duplex: A Reassessment of Prehistoric Cypriot Bronze Age Society. Pp. 14–31 in *Early Society in Cyprus*, ed. E. Peltenburg. Edinburgh: Edinburgh University.
- Swiny, H., and Swiny, S.
1983 An Anthropomorphic Figure from the Sotira Area. *Report of the Department of Antiquities of Cyprus*: 56–59.
- Todd, I. A.
1981 Current Research in the Vasilikos Valley. Pp. 57–68 in *Chalcolithic Cyprus and Western Asia*, ed. J. Reade. British Museum Occasional Publications 26. London: British Museum.
- Trigger, B.
1978 *Time and Traditions*. Edinburgh: Edinburgh University.
- Upham, S., ed.
1990 *The Evolution of Political Systems. Sociopolitics in Small-Scale Sedentary Societies*. Cambridge: Cambridge University.
- Vagnetti, L.
1980 Figurines and Minor Objects from a Chalcolithic Cemetery at Souskiou-Vathykakas (Cyprus). *Studi Micenei ed Egeo-Anatolici* 21: 17–72.
- Warren, P.
1972 *Myrtos: An Early Bronze Age Site in Crete*. London: Thames and Hudson.
- Wheeler, T. S.
1974 Early Bronze Age Burial Customs in Western Anatolia. *American Journal of Archaeology* 78: 415–25.
- Zwicker, U.
1988 Investigations of Material from Maa-Palaeokastro and Copper Ores from the Surrounding Area. Pp. 427–31 in *Excavations at Maa-Palaeokastro 1979–1986*, eds. V. Karageorghis and M. Demas. Nicosia: Department of Antiquities of Cyprus.