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Prestige, Distinction, and Competition: The Anatomy of Socioeconomic Complexity in Fourth to Second Millennium B.C.E.

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The Chalcolithic to Early Bronze Age transformation on Cyprus (mid-later 3rd millennium B.C.E.) documents an important stage of social, economic and political development on the island. Many explanations have been offered for this transformation, most based around external intervention or stimulus. However, this paper argues that the potential offered by the external world only became relevant to Cyprus because of, and in the context of, internal developments within Cypriot society. It is suggested that competition among emergent elites on Cyprus, expressed inter alia through competition for prestige and distinction, led to an interest in the external world. This initial contact in turn prompted further rapid changes driven from within Cypriot society, since knowledge of the external world both offered and forced new definitions of power upon Cypriot society.

INTRODUCTION

This article aims to develop an explanation for the emergence of complex society on Cyprus in the mid to late third millennium B.C.E. However, this is also as much an article about someone coming to know the archaeological evidence produced to date from prehistoric Cyprus, about the search to claim knowledge of the human subjects, while overtly and covertly imposing process and framework upon their material produce. It is in truth more about questions than answers, about anatomy and the naming of parts, than the whole. An article that began as a rapidly written ASOR meetings abstract promising magisterial reviews of things like settlement and trade, integrated into a broad interpretative framework (and all in 20 minutes), is instead manifest here as a discussion of questions and problems that interested and side-tracked me as I perused the literature. But from small things. . . . At the same time, the text you read, like all explorations or journeys, is structured by the motivation for the venture, by the overarching id. In particular, I felt most writing to date on the development of social complexity in

prehistoric Cyprus to be overly economic and formalist in orientation. I thus set out seeking to structure an argument in explicitly social terms.

Further, several recent articles argued that external demand for Cypriot copper prompted the development of aspects of social complexity on Cyprus in the third–second millennia B.C.E. That argument made me uneasy. There cannot have been an external knowledge and interest in Cypriot copper until the inhabitants of Cyprus had first found an interest in their local copper reserves, and had begun to develop, and so advertise, them. Sophisticated and knowledgeable external demand therefore appeared as a subsequent process after the prior, real, initial developments on Cyprus. Further, external demand only followed Cyprus' integration into a wider eastern Mediterranean trading system; hence the cause of that integration appeared to hold the true key. Moreover, since Cyprus before the mid–late third millennium B.C.E. exhibits very little evidence of contact or integration with surrounding areas, we may presume that the outside world had little or no knowledge of or interest in Cyprus and its resources. Thus the integration of Cyprus into the eastern Mediterranean “world system” must have

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(by 20 year increments, total
probability under each curve = 1.0)

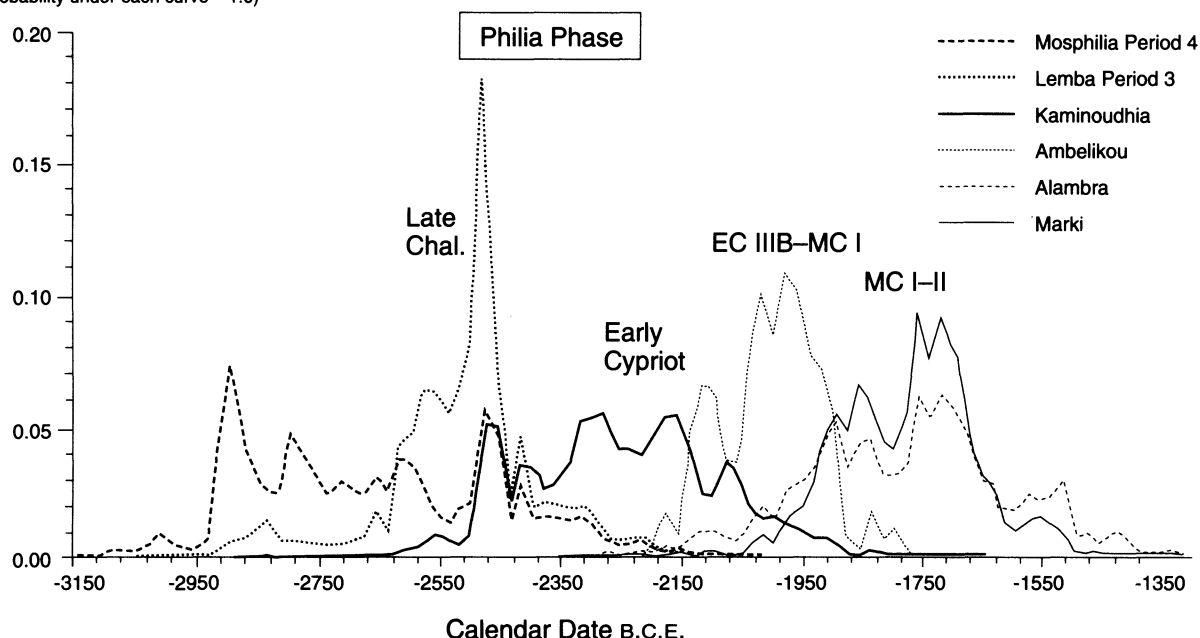


Fig. 1. A chronology for Late Chalcolithic to Early Cypriot Cyprus from the sets of available calibrated radiocarbon evidence. For further details, see Manning and Swiny (n.d.). The calibration employs 1993 bi-decadal data and S. W. Manning 'CALMAKER' computer program.

been an internally-driven process. No one else would have been interested until they had a reason to be.

The ASOR Meetings abstract thus identified the underlying issue as explanation. Additional sub-themes were whether or not there are causes and prime-movers of social, economic, and political change and development, and whether such change and development is best characterized as part of a continuous long-term process, or the result of shorter term discontinuous events and circumstances (for the last, see Trigger 1980: 175 and refs.; Cherry 1983; Spencer 1990). But this is not an honest reflection on composition, where an original glimmer is submerged in the intermittent episodes of writing, before being retrospectively reimposed upon the text.

CHRONOLOGY AND SETTLEMENT

A relative and absolute chronology of the period from the fourth to second millennium B.C.E. is now available from Cyprus (fig. 1; Manning and Swiny, n.d.). The ceramic-technological phases of Late Chalcolithic, Philia culture, Early Cypriot (EC), and Middle Cypriot (MC) appear to follow each

other in neat order. Of course, the Philia culture overlaps with the close of the Late Chalcolithic (and perhaps the earlier Early Cypriot), and the Early Cypriot is mainly known only from tombs now inaccessible on the north coast of the island; but the general trend of evolution seems apparent. Some low degree of social complexity and social differentiation appears in the Middle Chalcolithic, becomes dramatically more apparent in the Philia culture and the Early Cypriot period, reaches its full potential in the Middle Cypriot (especially at Lapithos [Herscher 1978]), and has developed into polities or something similar by the Late Cypriot period. In that context, long-term processual hypotheses have been presented in which a relatively static Chalcolithic world is brought up to speed through the stimulus of foreign contact, the introduction of the secondary products revolution, and the development of and demand for copper metallurgy (Knapp 1990: esp. 161; 1993a). However, even within the universe of thought involved in such work, questions arise. In particular: why were the innovations and developments of the Philia-Early Cypriot "emergence" manifest at that moment, and not at some other moments, since each of the individual constituents would seem to have been available or viable for some time (compare

Calendar Probability

(by 20 year increments, total probability under curve = 1.0)

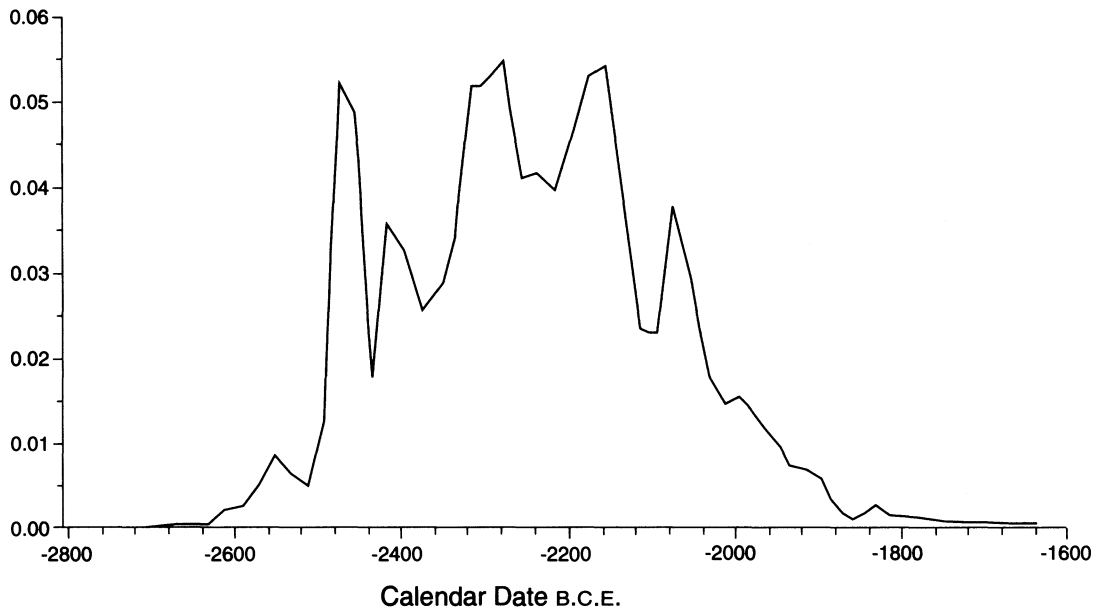


Fig. 2. Combined Calibrated Calendar Probability Distribution for the set of 10 radiocarbon determinations from Sotira Kaminoudhia. For further details, see *Archaeometry* 35 (1993) 321–22; Manning and Swiny, n.d. The calibration employs 1993 bi-decadal data and S. W. Manning ‘CALMAKER’ computer program.

Peltenburg 1991a: 33, n. 7; Peltenburg, quoted in Knapp 1990: 165–66); and what happened in the later Middle Cypriot before the “emergence” of Late Bronze Age urbanization—did the process nearly stall?

If one then steps outside the world of processual archaeology, additional questions and concerns appear. In contrast to an economically driven socio-political model of diachronic process, one starts to read disquieting references to things like: “the ‘demise’ of southwestern sites at the transition to the Prehistoric Bronze Age” (Knapp 1990: 160; Peltenburg 1982: 84, 91, 98–100; 1990: 18–19), or, despite the use of the word “transition” again, the remarkable changes in the “transition” to the Early Bronze Age when “we are confronted by radically new settlement patterns and architecture, new burial customs, pottery styles, metalwork, and spindle whorls: in other words, virtually a completely new material culture and clear evidence for an altered economy and a new religious expression” (Peltenburg 1990: 16). What is going on? Is this just old fashioned culture-historical archaeology, always on the lookout for destructions or migrations, or is it important? How do these observations mesh with long-term process, where

“[T]he inertia of the Sotira and Erimi cultures . . . began to dissipate at the end of the Early Prehistoric period” (Knapp 1990: 161). Do “dissipate” and “transition” refer to the same circumstances as “demise,” “radically,” and “completely new”?

Some further information has been provided by recent work. The new radiocarbon dates from Sotira Kaminoudhia (fig. 2; Manning and Swiny n.d.) at least fill the vacuum left by the previously disappearing Early Bronze Age of the south and west of Cyprus (Herscher 1980; 1981). The site also brings a small area of Middle–Late Chalcolithic sherds and some transitional circular to rectilinear architecture into close spatial association with a few Philia-culture tombs and an Early Cypriot settlement (Swiny 1985a; 1985b; 1986; 1991; Wright 1992: 69, 226–27). More recently, the excavations at Kissonerga *Mosphilia* offer in the last phases of occupation an example of Philia material appearing alongside the previous Chalcolithic assemblage, and coexisting with it (Peltenburg 1991a: 30–31). To this one might add fragmentary evidence from older work, such as from the small soundings by Dikaos in the Ovgos Valley. Two sites, Philia *Drakos* B and Kyra *Alonia/Kaminia*, appeared to show some association between Late Chalcolithic settlements and a

Philia culture cemetery (Dikaïos 1962: 150, 152–59); and, at the latter settlement, where Late Chalcolithic to Red Polished pottery was found, there was evidence of continuity through that period.

However, in general, such evidence of continuity and transition remains more notable for its rarity or ambiguity, especially after the period of the late Chalcolithic–Philia culture overlap. The lack of clear evidence led to the debate between Dikaïos (1962: 192–203) and Stewart (1962: 282–85) concerning whether the Philia culture completely preceded the Early Cypriot or was a regional variant and contemporary with it.¹ The crux of the debate is that although several cemeteries contain both Philia culture and Early Cypriot tombs (e.g., Nicosia *Ayia Paraskevi*, Dhenia *Kafkalla*, Marki *Tavari*, Sotira *Kaminoudhia*), there is no good evidence for the nature of the relationship between the two assemblages. Two tombs (nos. 12 and 14A) at *Ayia Paraskevi* have been held to show that the Philia culture and Early Cypriot assemblages coexisted (Hennessy, Eriksson, and Kehrberg 1988: 19–20, 21–22, 40–41), but the evidence is very weak. Tomb 12 may have two Philia ceramic items (although the bowl is not particularly diagnostic), however, the claimed Early Cypriot link is not supplied by diagnostic pottery, but merely by one Early Cypriot type (button terminal, hook-tanged) spearhead (called a “dagger” by Hennessy, Eriksson, and Kehrberg 1988). The assemblage said to come from Tomb 14A certainly does have both diagnostic Philia and Early Cypriot ceramic material, but there is no evidence that they belong to the same burials. The deposits had been disturbed, and were not well defined; the field notebooks from the excavation have been lost.² Stewart (1962: 269–70, 296–97) also argued for the temporal and spatial overlap of the Philia culture and Early Cypriot assemblages on the basis of his claims of Philia culture material in the Early Cypriot tombs at *Bellapais Vounous*. But subsequent studies have revealed no diagnostic Philia culture material from the *Vounous* tombs. Indeed, no published or reported excavation to date of a secure, nondisturbed, tomb or settlement context provides evidence of the contemporary association of Philia culture and Early Cypriot material. A good example comes from the large cemetery of *Lapithos Vrysi tou Barba* (Herscher 1975; 1978). This extensively excavated site is a mere 4.5 km east of tombs with Philia culture material at *Vasilia Kaphkalla* (Hennessy, Eriksson, and Kehrberg 1988: 25–39), but has yielded no Philia culture material. The earliest material at *Vrysi tou Barba* is early Early Cypriot.

On the other hand, some forms of relationship may be noted or guessed at between the two assemblages. Several vessel types at *Vounous* do reveal similarities to, or influence from, Philia culture types (e.g., jugs with cutaway spouts, deep spouted bowls, incised bottles and jars). Thus some form of sequential relationship may be inferred. It certainly need not be unilinear, with one discreet period following another. A fashion in one area may have influenced contemporary fashion in another area. We can also consider the nature of the Philia culture material in terms of its own apparent stylistic evolution. In southwest Cyprus, early Philia culture material occurs with local Late Chalcolithic material at *Kissonerga Mosphilia*; subsequently, late Philia culture material occurs in tombs at a cemetery at Sotira *Kaminoudhia* otherwise dated to the Early Cypriot period. The Philia culture thus appears to begin and overlap with southwest Late Chalcolithic, and end by or just within the early Early Cypriot period. In the north of Cyprus the situation is a little more complicated. At Nicosia *Ayia Paraskevi* in northern Cyprus (and Dhenia *Kafkalla* and Marki *Tavari*), there are several early Philia culture tombs in cemeteries with other Early Cypriot (and later) tombs.

Two lines of interpretation seem possible. According to the first, the early Philia tombs are distinct and earlier than the Early Cypriot tombs, and the late Philia culture phase is either absent in a “gap” between the two assemblages, or not represented, but occurring at the same time as earlier Early Cypriot.

The second line of interpretation involves further pursuit of the chronology of the Philia style. At *Ayia Paraskevi* there are early Philia culture tombs, with Black Slip and Combed (Philia) ware and/or White Painted IA (Philia) ware pottery (e.g., Hennessy, Eriksson, and Kehrberg 1988: Tomb 9; White Painted IA only in Tombs 3, 3A, and 4). These have no Early Cypriot associations, and may be supposed to predate the Early Cypriot styles. Two graves (only one with any clarity) with respectively mature and early-mature Philia culture ceramics (Tombs 12 and 14A) then have possible associations with fairly early Early Cypriot pottery (Red Polished I, I–II, II). If one dismisses this evidence of overlap on the grounds of the poor data, then early-mature Philia may predate subsequent early Early Cypriot. Alternatively, if one follows the implications of Hennessy, Eriksson, and Kehrberg (1988), despite the poor records, we might consider the mature Philia culture as overlapping

with early Early Cypriot. The absence of Philia culture artifacts in any later Early Cypriot context shows that the overlap did not continue beyond early Early Cypriot. The early Early Cypriot styles, particularly associated with the north-coast area, might then be seen as originating out of the influence of the earlier-mature Philia style. They then coexist in the mature-late Philia culture period as a new, discreet, rival, fashion. Study of metal artifacts supports a similar view (Philip 1991: 73–75). Thus, while a new early Early Cypriot fashion takes over some areas, like the north coast as represented at Vounous Cemetery A, and completely replaces whatever the earlier tradition was in those areas, later Philia fashion remains in use in some other areas of Cyprus. In places outside the “core” new early Early Cypriot areas, one might expect evidence of contact or exchange between these two fashions groupings. Hence the new early Early Cypriot fashion and assemblage appears in an earlier-mature Philia culture context in one or two tombs in the Mesaoria (Ayia Paraskevi Tombs 12 and 14A) as a new, imported or imitated, prestige style, but not the reverse (i.e., no Philia culture artifacts in early Early Cypriot contexts), since the Philia culture was yesterday’s news in such places (hence no Philia culture material was found at Vounous and Vrysi tou Barba).

However, despite such musing, the main conclusion is that the Chalcolithic–Philia/Early Cypriot transition remains largely undocumented. A significant break or transformation is the most apparent feature between the Chalcolithic and the Early Cypriot. The Philia culture seems to hold the key, but, as we have seen, is itself poorly known and defined. The situation is not helped by the fact that no site unequivocally offers a stratigraphic sequence from the Late Chalcolithic to the Early Cypriot. Most previous claims for Chalcolithic–Philia/Early Cypriot continuity have been rejected (e.g., Ambelikou *Ayios Georghios* [Peltenburg 1991b]). Moreover, the few sites in question do not survive the “transition” if that is what it was (also perhaps Kalavassos *Arkangelos*, Vasilia *Loukkos Trakhonas*, Kyra *Alonia/Kaminia*). In general, it is difficult to review current evidence without being struck by the lack of continuity between the Chalcolithic and Early Cypriot periods (Peltenburg 1990: 18–19; although cf. Peltenburg 1982: 91–98)—certainly in the south and west of the island where research has perforce concentrated in the last two decades. There are plentiful Chalcolithic sites in Cyprus, but only a few Philia culture or

Early Cypriot settlement loci; and, with a very few exceptions, Philia and Early Cypriot sites represent a reorientation from the previous Chalcolithic settlement pattern. As Peltenburg (1982: 98–99) writes: “. . . but this is not to underestimate the significance of changes. The absence of readily located Early Bronze Age settlements is striking and . . . implies a modification of settlement type and perhaps settlement pattern.” A good example is offered by the Vasilikos Valley, where there are several Chalcolithic sites, but an absence of any clear Early Bronze Age site (Todd 1991: 12, 15, fig. 8).³ The pattern, in the south and west, of a number of Chalcolithic sites that end in the Late Chalcolithic with no evidence of later occupation is another frequently cited example. The cluster of major Chalcolithic sites around Kissonerga and Lemba, and the absence of similar succeeding Early Cypriot sites, offer an instance of this fact, although one possible Early Cypriot site is known near Kissonerga *Mosphilia* at Kissonerga *Ammoundhia*.⁴ The change and contrasts in the material culture between the Chalcolithic and Philia–Early Cypriot periods are, of course, manifest and well known.

Such evidence of dislocation and “destructions” (as at the close of Lemba *Lakkous* 3 and Kissonerga *Mosphilia* 4), does not blend easily with a continuous process model. The lack of Early Prehistoric settlement in the major river valleys of the southwest and southeast, in marked contrast to the Chalcolithic, can at best be dismissed by the feeble suggestion that the pattern “need indicate only that . . . [the] . . . population had not increased to the extent that more land was required” (Knapp 1990: 158). The real question is why were major productive areas of the previous millennium or so abandoned in the Early Bronze Age? On a broader scale, one must also consider how the specifics of the Late Chalcolithic “demise” in Cyprus might be linked to similar evidence for collapse and reorientation in the Aegean, in Anatolia, and in Syria–Palestine from about the same time (e.g., Forsén 1992; Doumas 1988; Mellaart 1958; Richard 1987; Wiess et al. 1993a; 1993b: 999–1002).

There are other problems for the continuous process model. It predicts and claims to see an “increase in site size” (Knapp 1990: 158) across the Chalcolithic–Early Bronze Age period, yet provides little evidence to support the assertion, with the sizes of the larger Early Cypriot sites simply unknown and the sizes of even Middle Cypriot sites only about the same size, and certainly the same

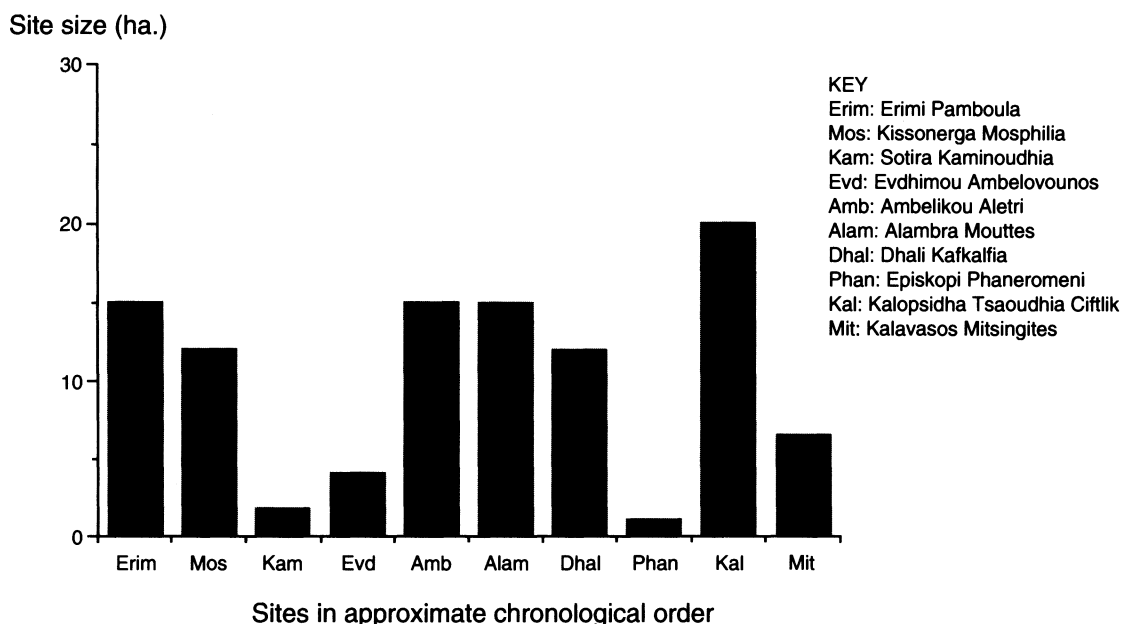


Fig. 3. Cypriot site size: Chalcolithic–Middle Cypriot periods. Note: basis and quality of estimates vary.

general magnitude, as the larger Chalcolithic sites (fig. 3; Knapp 1990: Table 2; Swiny 1981).⁵ Swiny (1989: 16) does indeed state the opposite: “Some settlements such as Kissonerga-Mosphilia . . . or Erimi-Pamboula . . . have artifact scatters of between 12 and 15 ha, but in size . . . they do not compare with EC and especially MC sites, some of which cover 35 ha.” However, there is no solid evidence with regard to the larger Early Cypriot sites, and the one large Middle Cypriot site to which he alludes, Alambra Mouttes, is given a conservative maximum extent of habitation of only ca. 10–15 ha by the excavator (Coleman 1985: 130). We may also note that this large settlement is short lived. Rupp (1987: 220) reports another Middle Cypriot site of 34 ha, but only from artifact scatter, and with no indication of whether the site may be late Middle Cypriot (Late Cypriot I) when the settlement hierarchy does change significantly. Moreover, some overall increase in site size by the Middle Cypriot, some 600–1,000 or so years after the Chalcolithic data, might be expected simply due to the effects of population growth—fueled by the personnel and social needs of small-scale sedentary societies engaged in normal surplus subsistence production (Bender 1978; Friedman and Rowlands 1977; Halstead 1989)—in an otherwise neutral environment (even at a very low annual rate). The issue is the lack of a change of magni-

tude of scale over this substantial time span,⁶ and the repeated cycles of shifting, sequential, settlement hierarchy and collapse. This is not to suggest that there are not obvious qualitative changes between the respective societies (below). Each episode represents a change in magnitude of the type of society (Chalcolithic versus Early Cypriot, etc.). But each episode was discreet.

Thus evidence for long-term evolutionary trajectories is at best deficient, or at least not of a continuous form. Nor are the locations of any of the larger sites in the respective periods the same. There is no focal locus across this fourth to second millennium B.C.E. era in Cyprus (from current research). Instead there are Chalcolithic clusters, then differing Early Prehistoric clusters, and, it might be argued, different Late Bronze Age foci, when power seems to shift again, away from the north coast, to sites on the east and south coasts and in the Morphou region. Until the dramatic transformation of Cyprus into a set of urban polities in the Late Bronze Age (Knapp 1986a; 1986b; Negbi 1986), Cyprus might be characterized as a village-based society with episodes of larger sites (or agglomerations), which then cease, followed later by another episode, and so on. Within periods, the episodes seem merely to oscillate between the beginnings of emergent complexity, then collapse, and then reorientation. That is the pattern at the few long-lived sites, such as Chal-

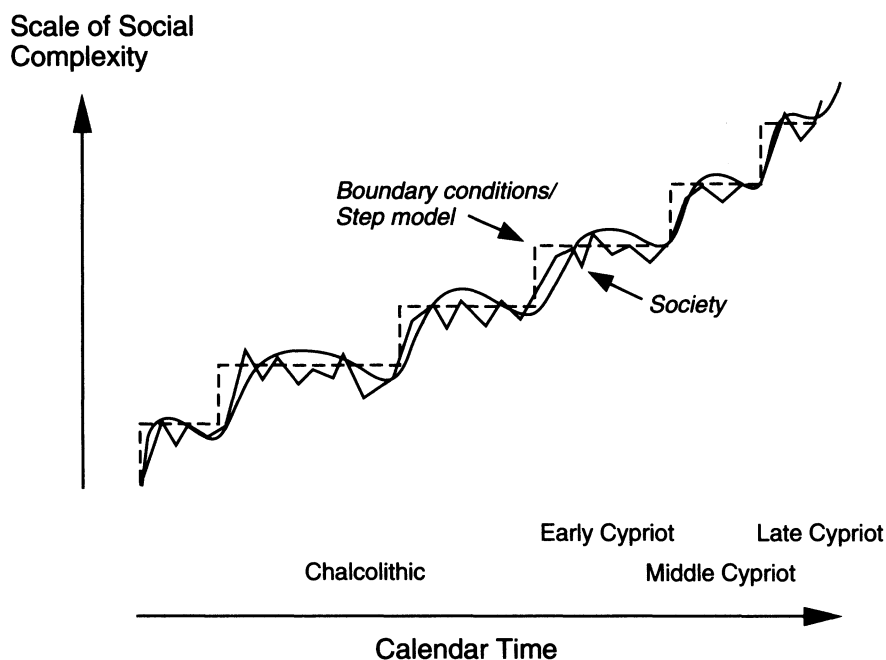


Fig. 4. Suggested step model of social development.

colithic Kissonerga *Mosphilia*, where an episode of development of emergent complexity in one period is followed by collapse or a hiatus, and then another episode, and so on (Peltenburg 1991a). Here either the conditions and requirements for institutionalized stratification were not sufficient (or suitably circumscribed), or the forces of resistance to social inequality were not successfully overcome. However, something else also occurs between periods. Although the period episodes appear separate and discreet, and often largely of the same overall scale, marked *qualitative* changes are apparent between periods (see below on Chalcolithic/Early Bronze Age divide). Thus between the longer episodes of period oscillation, a threshold has been rapidly passed in some form of quantum leap that suddenly overcame previous boundary conditions. Figure 4 presents a sketch of such a model. It could be characterized as a “step” model.

Is this model correct for Cyprus? The brief evidence alluded to here is not really sufficient to judge; and, arguably, there is insufficient suitable data yet available to make a categorical decision. However, it does fit many previous observations on settlement and social development in prehistoric Cyprus, and may be borne in mind as we consider some of the social and economic parameters, and then the question of the Chalcolithic–Early Bronze Age “transition.”

MAGNITUDE OF THE SOCIAL DIMENSION

What was the scale of prehistoric society on Cyprus? The majority of sites appear to have been small. Peltenburg (1991a: 17) suggests that most Chalcolithic sites “hardly attain 3 ha,” and Early Cypriot sites appear little different, with Sotira *Kaminoudhia* perhaps typical at about 2 ha (Swiny 1981: 65, 79). It would appear natural to turn for confirmation to the archaeological survey data published to date, but those data offer problematic evidence concerning site size, especially for the larger sites. The major surveys, in the Palaipaphos by Rupp et al. (1984) and in the Vasilikos Valley by Todd (1991: 12–13), usually do not offer site size estimates based on careful measurement and systematic gridding and intensive recording of sites (but cf., Rupp et al. 1992). Thus round figure data, e.g., of 400 × 250 m and so on, for some Middle Cypriot sites, often with earlier or later components, and with no further information on distribution, density, or periodization, are not satisfactory. Even so, and although coverage of the island is limited, and quoted site areas are frequently for multiperiod scatters, surveys on Cyprus usually suggest a majority of small sites, with larger Chalcolithic, Early Cypriot and Middle Cypriot artifact scatters only rarely greater than 5–10 ha (e.g., Frankel and Webb, in press; Rupp et al. 1984;

Rupp et al. 1992; Rupp 1987; Baird 1987; Todd 1988; Stanley-Price 1979; Swiny 1981; Held 1989; Manning and Conwell 1992).

In the absence of total settlement excavation, and attempts at detailed microspatial and household reconstruction from architecture and artifact assemblages (cf. social and ethnoarchaeological analyses of, e.g., Hillier and Hanson 1984; Kent 1984; Samson 1990), the estimation of the population living at such sites will be problematic at best, since such matters defy simple uniformitarian assumptions (e.g., Fletcher 1981; Schacht 1981; Whitelaw 1983a; 1983b). In some cases, it also appears that only part of an overall site was in use at any one time. At Lemba, Peltenburg (1991a: 18) seems to suggest a site population of 240, on the basis of extrapolation of roofed and occupied areas. The logic is far from clear. In the excavated exposure, about 40 percent comprised roofed dwellings. Is this the 40 percent of the next sentence, or does it mean that only 40 percent of the overall 40 percent was contemporaneously occupied? From a total site area said to be about 3 ha (Peltenburg 1991a: 19; Peltenburg et al. 1985: 9), the respective contemporary roofed dwelling space is either 1.2 ha or 0.48 ha, depending on the above. How do we then arrive at 240? On the assumption that the latter is the working hypothesis, 20 m² must be allowed per person. No explanation is offered. Although ethnographic parallels may be adduced, 20 m² is double the typical cross-cultural standby assumption of about 10 m² in the absence of other evidence (Naroll 1962; see also Whitelaw 1983a: 341–42, n. 6; Kolb 1985).

We might consider two alternative methods of estimation. First, Peltenburg et al. (1985: 315) note that in Period I there were nine buildings in about 300 m², or up to 130 on the site as a whole if that exposure is a representative sample. If about 40 percent were in contemporaneous use or were used as houses (see above; Peltenburg 1991a: 18; Peltenburg et al. 1985), that would mean 52 houses. On a default assumption of nuclear families typically of five persons, we might estimate a population of 260. Second, we might have regard to general population-per-hectare estimates for the Near East and the Aegean.

Such estimates have varied widely, and, as Kramer (1980; 1982: 155–68), and Aurenche (1981) argue, have probably tended to be too high in most of the older literature. The high apparent densities found in imperial Mesopotamia by some calculations, or in recent old Baghdad, Aleppo, Damascus,

or San²a², are probably not relevant to the earlier prehistoric periods, ca. 200–400+ persons per hectare (Hassan 1981: 66, with refs.; Serjeant and Lewcock 1983: 109–12). In addition, in most cases dealing with long-lived settlement sites, one cannot assume all the area of the archaeological site was either contemporary, or in use, nor that all built area comprised habitation space. Adams, for example, recognizing those and other factors, has thus lowered his original estimate of 200 persons per hectare for sites in Mesopotamia (1965: 123): first to ca. 100 persons per hectare (Adams and Nissen 1972: 29–30), and more recently to ca. 125 persons per hectare (Adams 1981: 69, 143–44, 349, n. 6, 350, n. 1). Renfrew's (1972: 251) 200 persons per hectare in the Aegean, derived from the Near Eastern studies, might be similarly lowered. On the basis of comparative ethnography in southwest Asia, Aurenche (1981) suggests population densities around or less than 100 persons per hectare in Neolithic villages, and Kramer (1980; 1982: 155–68) reaches a similar conclusion of typical values of 100–150 persons per hectare for the ancient Near East. Sumner, while rightly warning against any uniformitarian assumptions and stressing the possible range of population densities (Sumner 1979), recently suggests that a figure of 160 persons per hectare is a reasonable "average" (Sumner 1989). On the basis of such estimates, the population of Lemba might be estimated as in the range of 300–480. But that range in fact contains several dubious assumptions; in particular, that the 3 ha of Lemba were all relatively densely settled. Thus it is very much a maximum range (given the choice of an appropriate average of persons per hectare in a dense urban context). We should thus consider the alternative: the likely minimum population. To approach this, we might examine ethnographic data from recent traditional Cyprus. Relatively low density occupation supported by extensive and nonintensive agriculture was the norm in villages (as in the Aegean: see Halstead 1987). Swiny (1981: 78–79) provides some data that yield figures of 35–50 persons per hectare for such villages. Thus a minimum population for Lemba, for example, might be estimated at 105–150 persons. The real population probably lay between 105/150 and 300/480 persons.

Most other Cypriot prehistoric sites would have had similar or smaller populations. Sherd and debris scatters often tend to be considerably larger than the original area of the settlement—due both to human actions during the lifetime of the settlement and to subsequent erosion and so on—so

many sites with supposed areas from surface scatters up to 5–6 ha. (especially where they have not been systematically nor intensively studied) may well represent villages of only 1–2 ha of contemporaneous structures. The majority of Cypriot prehistoric villages may thus be assumed to have had populations of *less than* 400–500. That is as expected. Such prehistoric Cypriot villages show only limited evidence of social complexity, and fit naturally into the category of small village with only limited development of hierarchy, and a variety of other low-level social mechanisms, which seem to exist the world over with populations of up to about 500 people (see, e.g., Naroll 1956; Carneiro 1967; Flannery 1972; Forge 1972; Dumond 1972; Johnson 1982; 1983; Lee 1986; Kosse 1990; Upham 1990b: 100–101).

Our attention is therefore drawn to the few significantly larger Chalcolithic and Early Cypriot–Middle Cypriot sites (12–15 ha+). There is no evidence that those sites were not relatively densely inhabited. Some, like Alambra *Mouttes*, were short-lived and must represent largely contemporary habitation. Other long-lived settlements, like Kissonerga *Mosphilia*, might be reduced by some factor for noncontemporary residences (say the 40 percent used above). However, any form of analysis would still have to suggest populations of around 500–1,000, and probably around 1,000–2,000, people for any of the sites. The sites clearly have broken through the threshold of the small village. In most cases the change also requires the development of a more complex, central or hierarchical, social organization.⁷ Some evidence from *Mosphilia* indeed appears to support such views of the likelihood of new or more complex social developments. Support comes from the evidence of some buildings of notable size (and differentiated structures in general), evidence for the development of bulk storage vessels (pithoi), and evidence of some form of organized religious activity (Peltenburg 1991a: 22–27; 1991d).

Compared to the relative ease of the creation of the mildly hierarchical small village, this next step appears to occur relatively rarely in human history as a whole, and so must be assumed to involve creating, overcoming, or balancing, considerable resistance (see Upham 1990a; note also the ca. 1.0–1.5 ha site size barrier category of Fletcher 1986). Among possible alternatives, fission is perhaps the most likely response to such scalar and social stress, unless denied by some form of social or environmental circumscription.

SUBSISTENCE AND CIRCUMSCRIPTION

The slow and intermittent progress of emergent complexity in Cyprus until the Late Bronze Age suggests that resistance often won out in the long run. One reason is that no environmental or geographical factors appear decisive in Cyprus. For example, there are limited water resources, but they are still available in several areas. Geography favors a few, but discreet areas. The social dynamic also appears to lack the necessary ingredients. Chalcolithic society does not appear to have gone beyond the small-scale agricultural model, where subsistence, social reproduction on a household and village level, and ancestry, are the central and related foci. There is no indication that any person or group was able to make itself the key focus of society, and the source or intermediaries of the ultimate sanction within the society—even at the exceptionally large site of Kissonerga *Mosphilia*. Instead, ideology seems to concentrate around the house, and figurines—usually of women and often giving birth (Goring 1991a; 1991b; Peltenburg 1989: 113–22; 1991d)—and secondary burial practices (Niklasson 1991). The former two imply the precedence of the domus (Hodder 1990), and some sort of earth-mother power, rather than any secular power or intermediary, with humans generally acting as husbands who care for and inseminate a maternal figure, and in return reap life and harvests. The latter suggests the role of cemeteries and ancestry in establishing rights and ownership, and the importance of ancestors as intermediaries between the living and the supernatural. The increasing attention to juvenile burials in the Chalcolithic, and the multiple burials at Souskiou (Christou 1989), would suggest the development of lineages, and the diachronic possession of rights and status. However, there is no single secular–sacred focus, and no basis for institutionalized power whereby existing differentials, such as the status of kin lineages, becomes of such central competitive importance as to become capable of leading to legitimization of permanent rule.

The Chalcolithic economy of Cyprus was perhaps also incapable, as constituted, of supporting further complexity in the given environment and with the package of farming resources available. For example, in his discussion of possible acreages of cereals at Lemba on the basis of the Period 2 store area, Peltenburg refers to the figures for cereal yields from traditional Cyprus (Peltenburg et al. 1985: 326). The implicit assumptions may be questioned. Traditional Cypriot agriculture was based around extensive

plow agriculture. But Chalcolithic Cyprus had no plows, nor cattle or equids.⁸ A form of agricultural regime based on intensive human labor versus extensive animal labor might be envisaged instead (as Halstead 1981; 1987 argued for the Neolithic, and some later periods and areas, of Greece). Despite the high yields per unit area under intensive cultivation, considerations of time and transportation limit such an economy. A population of 1,000–2,000 people would require some 650–1300 ha per annum, and double if one allows for grazing or fallow areas (employing yield and consumption data in Gallant [1991] for Greece). That is all land within about 2–3 km of a site, or all land within about one hour's walk when carrying a burden. But not all such land will be suitable, and the distances become uneconomic given the ability to supply the necessary labor at perhaps 150–200 man days per hectare (on the basis of traditional vegetable or pulse cultivation [Gallant 1991: 76]), and to transport the harvest. In particular, it is necessary to have good water supplies, and to be present to protect one's garden from pests and scavengers. For those reasons, a number of the northern Greek Neolithic settlements in fact appear to have practiced a form of dispersed settlement, with houses at a site spaced apart with gardens in between. However, there is no evidence for such dispersed settlement in the Chalcolithic at sites like Lemba and Kissonerga. Hence, on the assumption of nucleated settlement, the costs involved in subsistence thus become higher and higher as the settlement population grows (compare also Gamble 1982). The combination of such escalating economic costs and stresses, along with the tensions created among any large concentration of population, lead to two alternatives: some form of managerial specialization, or fission (e.g., Johnson 1973; 1982). Unless there are other strong factors, incentives or constraints to the contrary, fission is the easiest choice. Peltenburg (1991a: 27) notes in that regard that in Chalcolithic Cyprus the "relative sparsity [of settlements] meant that additional territory was available for occupation by disaffected groups, and that the opportunity for competition among interacting peer groups was limited." Chalcolithic development perhaps had a rudimentary socioeconomic ceiling in the absence of special constraints.

THE SECONDARY PRODUCTS REVOLUTION AND SOCIAL CONTEXT

The limitations inherent in the Chalcolithic economy all changed in the next periods with the

introduction of plow agriculture (Knapp 1990). That created the possibility both of a much greater agricultural surplus in terms of invested labor, and of its mobilization. In retrospect, we can tick off the beginning of a new episode of socioeconomic complexity on Cyprus. But the real question is why this development occurred suddenly with the Philia–Early Cypriot period? After all, the secondary products revolution and associated technologies had been available in neighboring lands for many centuries. Cypriot society had, however, remained insular, with only a handful of value objects (a couple of metal objects, some faience beads, some shells: Peltenburg 1991a) encroaching from outside the island. Why the change? Moreover, how does the process relate to, and perhaps help explain, the demise of the Chalcolithic? For an answer, we need to look first at the changes in the next period.

VALUE AND SYMBOLS: THE CHALCOLITHIC/ BRONZE AGE DIVIDE

At first glance, the early Bronze Age episode of emergent complexity is not markedly different from the Chalcolithic in terms of settlement size, economy, or even degree of social differentiation (i.e., merely a two-tier picture of richer and poorer burials). In most cases, it seems another temporary cycle, with Late Bronze Age sites in different locations and with different orientations. However, whereas a long series of episodes of larger sites in Neolithic and Chalcolithic Cyprus were undoubtedly based around things like the priority of existence, and so centrality in regional social relations and reproductive universes, and strategic locations, the Philia Culture and Early Cypriot period represent a new turn. A major qualitative transformation is apparent. Yes, we are largely restricted to funerary evidence, but even what we do have appears decisive. I note just a few well known points.

Metal Artifacts. Significant numbers of a limited range of metal artifacts (Stewart and Stewart 1950; Stewart 1962: 242–56; Swiny 1989: 26–27; Muhly 1991; Balthazar 1990; Philip 1991) appeared, many of them weapons, and they are deposited in selected tombs. Further, pottery imitations of those metal types occur (e.g., Tomb 114 at Vounous Cemetery A [Stewart and Stewart 1950: 152–55]), as well as non-utilitarian over-sized, or even miniature, versions (Philip 1991: 68–69, 90).

A "package" is also evident of a spear or knife and a whetstone in a select suite of burials.⁹

Foreign Influences. The appearance of several imports and exports and general foreign influences in technology, style, and fashion has been noted (Swiny 1986; Mellink 1991; Åström 1989; Catling and MacGillivray 1983; Branigan 1966; 1967; Gale 1991; Merrillees 1979; Rutter 1985; Knapp 1990: Table 3), along with, again, the deposition of many such objects in selected tombs.

Collective Burials. The appearance, especially from later Early Cypriot, of rich collective burials used over a span of time for only a part of the population, may be contrasted either with less rich tombs, or, more particularly as at Vasilia, "a considerable cemetery of simple pit graves" (Swiny 1989: 26–27; Hennessy, Eriksson, and Kehrberg 1988: 25; Knapp 1990: 159). Although even the most rudimentary skeletal data are often absent, we might still make a reasonable guess that, like similar tombs from later third millennium B.C.E. Crete (Soles 1992: 251–55), the select collective tombs in use over time were the burial places of the few elite families or lineages. Such evidence suggests the rise of a sustained and inheritable power.

New Vessel Forms. The significant development, enlargement, refinement, or appearance of a whole new complex of portable storage, pouring, or serving vessels (especially jugs and bowls) associated with some forms of liquids (see Stewart 1962; 1988; 1992). This new complex, and its association with tomb deposits, is part of a wider mid-third millennium B.C.E. process across the eastern Mediterranean, the Aegean and Europe (Sherratt 1981; 1987). The contexts, the prominence of those artifacts, the frequent complex stylistic decoration and signaling, and even sometimes the virtuoso, elaborate, nature of multipiece vessels (e.g., Stewart 1988: pl. 12), all combine to reveal their social importance and value, and so the social and political importance of the associated activities. We may guess that the activity was the drinking of alcoholic beverage. That is no small moment. To quote Sherratt (1987: 92): "The introduction of alcoholic drinks, with their properties of intoxication and the generation of conviviality—a socially accepted alteration of consciousness—is a major event for any society. . . . The religious and elite overtones of wine in later European and Near Eastern societies point to its fundamental social importance, and its use in prehistoric times is likely to have been ac-

companied by cult and ceremony. . . . The preparation of alcoholic drinks required investment and the ability to concentrate surplus for conspicuous consumption, as did also the manufacture of appropriately ostentatious vessels. Such privileges may have been available only to the few." Thus the significance here is that drinking is a group activity, but one that requires an elite (or similar hierarchical organization) for the production of the lubricant. It is thus both facilitated and controllable by the elite. Alcohol drinking therefore offered the means to power and to social integration in one, avoiding the usual problems of conflict or negotiation (cf., Mann 1986). As Sherratt (1987: 93) writes quoting Fried (1967: 178), ranked and stratified societies are particularly characterized by their frequent intercommunity activities, most notably feasts, parties, ceremonies and other events predicated on organized hospitality. The developed drinking complex thus displays the presence in Cyprus of a new group mentality, and an elite, within society.

Secular Holders of Power. The appearance of an institutionalized, secular, form of power concentrated in, or expressed by, a key individual.¹⁰ This view is based on a reading of the available iconography, and in particular the model from Vounous Tomb 22 (Dikaios 1940: 118–25, 173, pls. 7, 8; Karageorghis 1976: 106; Morris 1985: 281–83; Peltenburg 1991d: 24–26, 105–7). Here a figure (male) is seated on an elaborate, raised, chair presiding over a complex and composite scene. The figure is the largest in the composition, and the focus of attention for an assembly. His importance and authority are evident and actively reinforced by the presence of the surrounding group of males. Moreover, although the scene is very probably religious in nature (Dikaios 1940: 118–25), the status and power of the seated male do not stem solely from some temporary action or association as the celebrant of a deity. Another kneeling figure is instead performing a rite in front of the altar with triple bucranian element on the opposite wall. The seated male is thus shown as permanent in his status; further reinforced by the positioning of the actual celebrant so as to create balance between the seated male and the altar. In addition, the key sources of life, power, wealth, and social reproduction are displayed around the seated figure (cattle, woman with baby and child watching her, the social group, and perhaps the ancestors [a possible interpretation of the three relief figures with chthonic associations; see Dikaios 1940: 121–23]).

In short, one may recognize an hereditary elite and all the ingredients for further development into entities like polities or states. However, to return to the question at the close of the previous section, why did this development occur here and now, and not in the Chalcolithic, and not in the west, when and where the incipient elements also appear to be present. I argue that trade is the key. It prompted the beginning of a nexus, or multiplier effect, which relatively suddenly led to a transformation in Cyprus.

Trade is an unfortunate word, however. We find it difficult to divorce it from modern connotations. Trade in early prehistoric Cyprus involved two types: first, a very few imports or exports from outside the island, and second, intransland movement of both a few select classes of materials, such as picrolite (Peltenburg 1991c) and, although archaeologically invisible, other likely local or regional networks of exchange, reciprocity, and risk-buffering in necessary utilitarian items.

The latter, local trade, is not relevant here. As Peltenburg (1991c: 117; from Hastorf 1990: 152–54) argues, intransland, or local, trade permitted the maintenance of group relations and contacts, access to other necessary resources, and maintenance of the status quo. Such local trade often takes some form of gift exchange. In general, such mechanisms are noninflationary, and do not create wealth for individuals. Instead, prestige and status accrues from expenditure in the reciprocal cycle of exchanges, and the existing social system and its alliances are maintained. Local trade by itself is unlikely to lead to a transformation in social and political structures.

In contrast, interregional, or long-distance, trade is concerned with either those relatively few, non-bulk, nonstaple, goods that had value and prestige for the societies in question (e.g., Helms 1979; Schortmann and Urban 1987; Sherratt and Sherratt 1991: 353–54, 358–60), or sometimes special utilitarian materials (such as the spread of Melian obsidian in the Aegean). The acquisition and possession of value or prestige items frequently is associated with prestige, power, and elites. They are part of a political trade. For example, their acquisition forms an aspect of conspicuous consumption, permits the rewarding of followers, denotes resourcefulness and leadership, and generally confers status. Prestige, symbolism, and power flow from the possession and control of such items, and from the possession and control of the necessary knowledge and relations with distant places (Helms 1988). Although a very few imports may be noted from the Chalcolithic period in Cyprus,

the appearance of foreign or foreign-influenced prestige goods and fashions distinguishes the Philia–Early Cypriot period. However, this is not an explanation by itself. Hastorf (1990: 154) comments that, “Prestige exchange is not linked to the onset of political rank, but to the extension of power in an already differentiated society.” But, the introduction of prestige and novel items and ideas into an emergent society can lead to rapid social, political, and economic transformation through the extension and development of existing divisions (as in early contact Polynesia [Bargatzky 1989]). For example, as in the Philia–Early Cypriot case, there are a number of cultures where an elaboration of mortuary practices is associated with periods of competition or culture contact.

The initial question is thus the explanation of the end of Cypriot isolation, and the location of the spatial and temporal context for rapid change. One could simply resort to older arguments, and posit a migration of peoples from Anatolia. But positive evidence for that explanation is lacking, and better ideas are available. Let us return to the Late Chalcolithic. Period 4 at Kissonerga *Mosphilia* sees the development of a large site with evidence of clear social differentiation, and—from finds such as a conical stamp seal—some form of diachronic formal ownership and administration (Peltenburg 1991a: 29). Some prestige goods appear, including copper, shell, and faience (Peltenburg 1991a: 29–30; Gale 1991). In particular, as Peltenburg notes, these include a couple of typically Philia-culture or Early Bronze Age objects. The typically Philia–Early Cypriot chamber tomb also occurs. What was happening elsewhere on the island? The truth is, we do not really know. But a good guess may be made (Peltenburg 1991a: 31–32; Model 1; Knapp 1990: 153). The northwest of Cyprus (Ovgos Valley and the area north to the coast, between Cape Kormakiti and Bellapais) has both a greater density of Philia–Early Cypriot sites, and the majority of the most impressive assemblages of those periods. The region is also the closest part of Cyprus to the apparent sources of the foreign influences behind several of the new styles in artifacts and associated elite fashions (e.g., drinking of alcoholic beverages). In combination with the few apparent Philia linkages with Period 4 at Kissonerga, it therefore seems likely, pending firm chronological data to the contrary, that the Philia culture was developing in the northwest of Cyprus contemporary with the Late Chalcolithic (Erimi) culture elsewhere.

If this chronology is correct, an explanatory framework becomes available. Just as large settle-

ments of 1,000+ people had arisen with some social differentiation at Kissonerga and Erimi, with interest by some in prestige items, we *must* imagine one or more similar sites and episodes of emergent social complexity in the fertile northwest in the Late Chalcolithic period. The emergent elite at those sites would have also been interested in acquiring prestige goods. By luck, and in contrast to sites in southern and western Cyprus, they were close to a source of such goods, exotica, and influences (southern Anatolia). Geography also would have led seaborne trade between other more advanced eastern Mediterranean societies of the region to voyage along the southern Cilician and north Cyprus coastal corridor, as attested by North Syrian, Minoan, and perhaps northwest Anatolian links from the Early Cypriot period. Circumstances thus permitted the emergent elite of this one area of Cyprus to have a special opportunity. There is little evidence of Chalcolithic seafaring in Cyprus, so the initial contacts were probably reliant on outside initiative or accident. By historical circumstance, the mid-third millennium B.C.E. saw the extension of the eastern Mediterranean "world system" into that very region (Sherratt and Sherratt 1991: 367–68; Marfoe 1987). However, some intrepid northern Cypriot adventurers may have traveled to urban centers like Tarsus (the few Red-on-White Ware sherds, and then Red and Black Streak Burnished Ware sherds [Mellink 1991: 170–72]). Such exploration and resultant knowledge would have formed a source of considerable prestige and power in isolated Cyprus (Helms 1988). At any rate, once in contact, the more advanced southern Anatolian civilizations offered an incredible source of prestige, fashion, and influence to be acquired, emulated, and displayed by the emergent elite in Cyprus as an ingredient of power. The "emergent" northwest Late Chalcolithic sites thus became the new Philia culture sites (contemporary with Late Chalcolithic elsewhere). Indeed, a few sites near Vasilia, for example, offer hints of the above process. These include Vasilia *Kladomandra* (Catling 1963, no. 156) which has a surface assemblage with Chalcolithic to Philia culture/Early Cypriot components, and Vasilia Alonia where an assemblage of Chalcolithic ceramics also is associated with a Philia culture knife and a few Red Polished Philia culture or Early Cypriot sherds (Karageorghis 1966: 326, figs. 70–72).

In consequence, there would have been a very strong incentive for the emergent elite of northern Cyprus to have, and so trade for, such prestige goods, symbols, technology, and knowledge. Competition among the emergent elite at such sites

alone would have made those goods a necessity merely to maintain relative status and control. The emergent elite would have been encouraged, even forced, to invest in the necessary means (e.g., Earle 1985). However, the ability to invest, to engage in long-distance trade in prestige goods, must be supported by some form of surplus production (Brumfiel and Earle 1987). That is a critical issue. A few people in society require a significant surplus for forms of investment. Although the simple intensive agricultural model likely for Neolithic–Chalcolithic Cyprus may be seen from finds of pithoi and store rooms to have produced some surplus, a few emergent elites now required a much greater surplus just for themselves. Moreover, such surplus items must be capable of mobilization.

I suggest at this point, and for this reason, the acquisition by members of the emergent elite of cattle and equids and the technology of the secondary products revolution (from the same southern Anatolian area, and in emulation of the elites there). For a given labor input, the technology permits greatly increased agricultural yields (especially of cereals) and provides the necessary transport. It is also suited to specialized extensive cultivation of a few crops, the requisite for a mobilized surplus and typical of elite agriculture in the Aegean and Near East, but the antithesis of ubiquitous cautious small-scale diversified subsistence production in the Mediterranean environment (Halstead 1990; 1992; Jones 1992; Halstead and O'Shea 1989; Forbes 1982; Osborne 1987: 36–40; Gallant 1991).¹¹ In sum, the secondary products revolution package permits systemic change and the development of a new order of magnitude of production, and consequent activities. The new developments were previously impossible within the constraints of hand-hoe, intensive, agriculture (Sherratt 1986).

The emergent elite may also seek to produce their own value resources, or prestige goods, with which to trade, or for immediate display of status and wealth. Their agricultural surplus thus allows their support and sponsorship of specialized production. The evidence for the first significant exploitation of Cypriot copper in the Early Bronze Age, and the rapid development of Cypriot metallurgy in the Early Bronze Age (e.g., Gale 1991: 53–54, fig. 20; Gale and Stos-Gale 1989: 253–54, pl. 63; Stos-Gale, Macdonald, and Gale 1991; Balthazar 1990; Muhly 1991; Philip 1991), in apparent emulation of foreign metallurgy and its influence, may be a case of such specialized surplus production sponsored and supported by the (pre-existing) emergent elite in the context of a prestige goods economy and foreign

stimulus.¹² The limited range of metal types—notably a few weapon types—and their restriction to a small number of burials adds further emphasis to the case (Philip 1991). Philia pottery might also be ascribed to specialized production associated with the emergent elite. Its origins in emulation of a perceived superior foreign fashion are obvious, but its nature and its distribution in Cyprus perhaps reveal it as a specialist Cypriot prestige commodity. Whereas Late Chalcolithic monochrome ware fabrics have strong regional characteristics (Peltenburg 1991b), Philia pottery from all over Cyprus shows a marked uniformity of fabric (Bolger 1991). This is the first time such a situation occurred in Cyprus, and it either reflects the rise of one dominant specialist production center exporting all over the island or the spread of a specialist type and technology across the island as a valued prestige assemblage (metal artifact types represent another pan-island prestige fashion, see Philip 1991).

THE DEAD SPEAK: PRESTIGE, THE PLOW, WEALTH, AND HIERARCHY

The notable feature of finds of metalwork, Philia-Red Polished pottery, and other foreign imports, is their predominant association with mortuary contexts. Further, the association is with just *some* mortuary contexts.¹³ This second observation of mortuary differentiation may probably be employed, in accord with a number of ethnographic parallels, as an indication that some of the living also enjoyed similar differentiation. However, the first observation is perhaps of more importance. The value objects are buried and removed from circulation. That appears a classic instance of a prestige goods economy in action (on such economies, see Frankenstein and Rowlands 1978). Status depended on access to, and control of, prestige goods and their trade. So, if one has some, what to do? Use or display of status symbols is one possibility, but consumption by ceremonial burial (or other destruction, or permanent removal from circulation) is better (e.g., Meillassoux 1968). First, it conforms to the existing social and ideological formulation based around burial and ancestors; second, it displays status in an irrevocable way, unlike gift-giving or similar reciprocal forms; and third, it simultaneously removes the particular prestige item(s) from circulation, ensuring the lack of inflation or oversupply of such necessarily restricted

goods. In such a way, religion, the social, and the economic can become interwoven and reversible.¹⁴

In Cyprus, the rise of a complex prestige goods economy, and the development of the secondary products revolution, would have led to dramatic and rapid change. The increased accumulation and power of wealth on the part of a few is only a reflection. The sociopolitical impact is more profound. First, the introduction of plow agriculture would have fueled a politics of exclusion on the part of the emergent elite. Plows and equipment had to be constructed or obtained; oxen or donkeys or horses had to be acquired and—equally important—fed. The ordinary subsistence household at the bottom of the emerging sociopolitical system probably could not meet those overheads (Halstead 1987: 84; Renger 1990: 272–73). They could not compete. Even those further up the existing socioeconomic scale, who could afford to participate with the minimum elements (an ox or equid and a plow), would find themselves in a trap. They could not maintain enough animals to breed their own cattle, donkeys, or horses, nor could they afford to keep a spare plow (consider Hesiod, *Works and Days*, 426ff.). Hence, in an attempt to stay competitive, they would become dependent on those larger-scale livestock owners or the specialists in the employ of the elite, who could supply them with their means of production (Gilman 1990: 161, n. 7).

Second, the extensive nature of plow agriculture leads to shortages of land in favorable locations. For this reason, in Europe, the spread of plow agriculture is linked with a dispersal of settlement (e.g., Shennan 1986; Thomas 1987). However, in Cyprus, prime arable areas with good water supplies are more restricted. Increased competition for land might therefore be expected. This situation could see a growing importance in legitimization of land rights. Resort to depth of ancestry, to lineage, is a common response in such circumstances, and in turn begins to lay the foundations for a hereditary aristocracy. The rise of larger multiple burial tombs, and a growing respect for previous burials and ancestors during the course of the Early Cypriot period, might form material correlates of such a process.

In any event, plow agriculture transformed society (in general, see Goody 1976), and immediately and dramatically widened the gap between those at the top and those at the bottom. The elite glorified in their new power of surplus production, as witnessed in the appearance in the Early Cypriot period of prestige objects featuring oxen and plow scenes (e.g., Morris 1985: 275, 278–79, 285–86).

Moreover, the surplus had to be mobilized, as in turn did the products derived from or supported by surplus production. Further, the supported products were designed for elite consumption, thus the distances were substantial: between villages or geographical areas. Thus an integral part of the secondary products revolution, and the extensification of agriculture, was the provision of ox and equid transport. They both empowered and created a means of control for those in possession. Equids are attested in use for transport from the late Early Cypriot (Sherratt 1981: 274, fig. 10.11). In such circumstances, and given the "costs" to obtain and support them, oxen and equids were themselves prestige items (Piggott 1992); they, too, thus join metal objects and "models" in select tombs (e.g., ox bones in several of the select tombs with metal objects at Vounous Cemetery A for example [Stewart and Stewart 1950: Tombs 96, 105, 107, 111, 161, 164A]; and equid remains in Tomb 322B at Lapithos, one of the 9 outstandingly "rich" tombs in the cemetery [Philip 1991: 90]).

CONCLUSIONS

This article explains the Chalcolithic–Early Bronze Age divide in terms of a rapid revolution set amidst the normal pattern of oscillating social

development within a given chronological and technological horizon. The revolution, and its location in the northwest, occurred because of a nexus between the luck of geography and a stage in history (both an emergent Late Chalcolithic on Cyprus, and the spread of the general mid-third millennium B.C.E. eastern Mediterranean "world system" [e.g., Sherratt and Sherratt 1991]). In this northwestern area, the potential availability, influence, and cachet of foreign goods, ideas, and fashions stimulated change, and in particular lead the existing emergent elite to create a surplus economy to acquire the foreign desiderata. The northwest became the core for the extension of the new prestige goods and secondary products economies over the rest of Cyprus. The preexisting Chalcolithic sites elsewhere, based on intensive agriculture, simply would have been made redundant and larger sites unviable, replaced by a few dispersed small sites of the new plow agriculturalists in what was now a peripheral region of Cyprus. In the new geopolitical paradigm, the south and west received their prestige goods and styles from the northwest (e.g., Philia culture artifacts, the odd north-coast Early Cypriot imports), a poor second division to the core northwest area that was integrated into the Aegean–Anatolian–eastern Mediterranean "world system."

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NOTES

¹See also: Merrillees 1966; Hennessy 1973; Stanley-Price 1979: 21–22; Watkins 1981: 18–19; Peltenburg 1982: 91–101; 1987; 1991a: 31–32; 1991b; Bolger 1983; 1991; Swiny 1985a; 1986; Hennessy, Eriksson, and Kehrberg 1988; Knapp 1990. Please note: the term Philia "culture" is employed in the sense that it is a term now given widespread use in Cypriot archaeology (references above). It is not yet shown that this "culture" conforms to Childe's definition of a culture as a recurring assemblage; nor is it argued that "cultures" are in fact valid archaeological entities (e.g., Shennan 1989).

A terminological problem also envelops the subsequent Early Cypriot period. The elaborate EC I–III scheme, with further subdivisions, employed by Stewart (1962) has been criticized as an artificial and overcomplex classificatory system (e.g., Knapp 1990). Seriated stratified data simply do not exist. Nonetheless, a basic division is evident in the Early Cypriot assemblages between earlier groups, which would be within Stewart's EC I–IIIA, and the later groups, which would be within his EC IIIB and EC IIIB–MC I periods. At the ASOR meetings in November 1992, S. Swiny and E. Herscher

proposed that the two groups be called Early Early Cypriot and Late Early Cypriot. Those terms are not to everyone's liking. Alternatives, such as the pre BA 1–2 system of Knapp (1990), also are of less than universal appeal. Other ideas abound. The EC I–IIIA material could be called “canonical” Early Cypriot, and the Early Cypriot IIIB–Middle Cypriot I material left as Late Early Cypriot, for example. This article does not impose any new terminology, and deliberately avoids definite terms. I use the term Early Cypriot, and then adjectives, such as early, mature, or late to qualify this. Sometimes a definition is offered in terms of the *Swedish Cyprus Expedition* conventions, other times it is left vague in line with the evidence. In general, early Early Cypriot = Early Cypriot I–IIIA (and especially Early Cypriot I–II as found at Vounous Cemetery A), mature Early Cypriot = Early Cypriot IIIA (e.g., Vounous Cemetery B), late Early Cypriot = Early Cypriot IIIB and Early Cypriot IIIB–Middle Cypriot I (e.g., as at Lapithos *Vrysi tou Barba*).

²Hennessy, Eriksson, and Kehrberg (1988: fig. 8c) show the locations of 14 of the 16 finds reported from two burials (“upper burial” and Tomb 14A; Hennessy, Eriksson, and Kehrberg 1988: 21–22). The locations of only three of the four Early Cypriot objects from Tomb 14A are shown (nos. 2, 7, and 11; no. 13 is not plotted). The “upper burial” is later Early Cypriot, and its objects cluster together (upper left fig. 8c). There are then two groups of Philia objects (bottom right, and top right of fig. 8c; nos. 3, 5, 6, and 8, 9, 10 respectively). The three plotted Early Cypriot Tomb 14A objects (nos. 2, 7, and 11) rather tend to lie in a center to bottom left group of their own. The Philia culture vessels nos. 1 and 4 do, however, appear closely associated, especially no. 4, which is shown apparently superimposed on top of Early Cypriot no. 11. The photo of the in situ deposit (Hennessy, Eriksson, and Kehrberg 1988: fig. 24b) is less than helpful. The spout of Early Cypriot no. 11, in fact, appears to be above Philia culture no. 4. Moreover, the excavated pit around no. 4, and its condition in the photograph, suggest that is not in situ at all, but has been lifted and replaced(?). Early Cypriot nos. 2 and 7 do, however, appear to be part of the Philia culture deposit. Nonetheless, the context is disturbed and not a clearly defined burial chamber or dromos.

³Despite Todd's writing that “Philia-type pottery has not been found in the Vasilikos Valley” (1991: 15), one Philia culture site might appear to exist from references by other authors to Philia culture material at the otherwise Late Chalcolithic site of Kalavassos *Arkangelos* (e.g., Swiny 1985a: 14, n. 3; 1986: 30; Bolger 1991: fig. 3.1).

⁴I thank E. J. Peltenburg for drawing this site to my attention.

⁵But cf. Knapp (this issue, pp. 85–106, figs. 2, 3), where an exponential curve is incorrectly created by re-ordering the site data out of their approximate chronological sequence (e.g., Middle Cypriot Phaneromeni and Early Cypriot Kaminoudhia are placed before Late Chalcolithic Moshphilia).

⁶The number of settlements did, however, increase significantly from the Chalcolithic to Early Cypriot–Middle Cypriot periods (Swiny 1989: 16).

⁷This generalization is just that: a generalization. It applies in most cases, but there are exceptions (whether societies, or specific instances). Criticism of the generalization must be specific. For example, Soles criticized Whitelaw (1983a) for employing the above observations. He stated, “. . . the assumption that large populations always exhibit a hierarchical social organization is incorrect. There are many large populations that do not, and population size is not a necessary determinant of social ranking” (1988: 50). But Soles' view is not valid. Soles is, of course, correct that there are some instances of large populations without evidence of hierarchical, or more usually, marked hierarchical, social organization. However, the issue is his use of the word “many.” That is incorrect; such instances are uncommon among recorded human societies. For example, only ca. 3 percent of one recent large worldwide sample of hunter-gatherers had populations of ca. ≥ 500 (Whitelaw 1991: figs. 1–3). Similarly, in another study of non- or low-hierarchy sedentary societies, over 80 percent of cases had < 400 population (Kosse 1990). Further, the examples of larger communities (> 500 population) with a supposed lack of hierarchical social organization usually do not stand up on examination. They may not have a clear centralized hierarchy, but an elaborate social organization is usually present (of a type not found in other smaller nonhierarchical societies). The Indian communities of the northwest coast of North America are good examples.

Such communities were often of considerable size, but were internally segregated into separate productive housegroups. Socially, the members of each household were ranked, and the relations between different members of the group were regulated by social conventions. The different houses within a community would be inter-linked by alliances, and by kin relations between individual members of the different houses. In addition, each house was ranked relative to the others, and each lineage would have a senior chief, among the chiefs of each house of that lineage. Village chiefs might be recognized, though their authority depended very much on the abilities of the individual holding that position. Thus, such communities were held together by an elaborate series of social conventions, and hierarchical differentiation. . . . Such relatively elaborate social organization allowed the maintenance of relatively large and dense communities” (Whitelaw 1991: 176).

If we accept the above approximate 500 population threshold as an empirical observation, the question arises as to whether it may be explained. Here, as Upham (1990b: 101) notes, it is interesting that “a community of 500 is also the approximate size of the minimum local

population in which endogamy is possible on a regular basis." Thus one could argue that once the principle of least effort as applied to mating strategy favors effective group closure, a circumscribed social environment develops, and so the potential for hierarchical evolution. For example, as Upham suggests, once a group is largely endogamous, paradigms of power through control of mating and reproduction become viable (e.g., Meillassoux 1978; Friedman and Rowlands 1977).

The other approach is to develop the arguments of Johnson (1982) concerning scalar stress. On the one hand, as community size grows, so do face-to-face interactions and thus the potentials for stress and conflict. On the other hand, low-level mechanisms of social organization that can overcome those stresses at lesser population levels (e.g., extended families or simultaneous hierarchies) can no longer manage when the population becomes too large. Thus at some point a new tier of management is necessary (cf. also, Johnson 1978; van der Leeuw 1981: 254–60, 315, Johnson comment). In addition, since most settlements of ca. ≥ 500 population are sedentary, the effects of sedentism are relevant. The sedentary way of life intensifies and institutionalizes the interaction and management stresses; and it may certainly be observed that as societies become sedentary their settlement densities become lower (e.g., Whitelaw 1991: Table 2). That is usually explained in terms of an adaptation to minimize unwanted interaction with strangers or nonkin. However, this spatial extension, and consequent fragmentation of the society into discrete (kin) groups, also offers another explanation for the development of social organization. In contrast to a tightly knit, densely settled, hunter-gatherer camp where information passes rapidly and easily without its being specifically directed or administered, the lower density, fragmented, sedentary society requires information to be specially sent to the various discrete elements each of which is busy minimizing its unwanted social contacts. Thus, as group size increases, hunter-gatherer style horizontal organization will not work or becomes too costly, and a vertical organization is more suitable.

⁸If Croft is correct to discount a few finds from "unreliable contexts" (1991: Table 2; notes b, c).

⁹I thank S. Swiny for drawing this to my attention.

¹⁰Two likely routes to this position seem possible. First, it could be a dependent role, based on another power source, such as being the head of a particular lineage (or a nominee). Second, it could be an independent role—once created—based around successful competition and negotiation among several lineage groupings.

¹¹The key point of note is that the secondary products revolution does not by itself create an elite. Instead, it is a technology and economy taken up or exploited by an existing emergent elite in appropriate social, economic, and political circumstances.

¹²Metallurgy itself did not create the elite (compare arguments of, e.g., Gilman 1981; Hastorf 1990: 157–58). This point is distinct from the *subsequent* use of metallurgy, and its control and restriction, to offer a source of power (Morris 1989; Knapp 1990; 1993a).

We may see the sequence as: imported prestige items create incentive to acquire and develop extensive secondary-products-revolution-based agriculture in order to support an ability to engage in sociopolitical competition, which leads to an elite, who then control the directed means to create and support specialist production, including metallurgy. This sequence is also required from the context of social power. Social competition, and social power within society, are determined by negotiation and interpretation within societal norms and their reproduction: thus individuals act in their perceived best interests (which may be altruistic), and attempts change in their favor but at the same time are constrained by the accepted cultural norms (Giddens 1981; 1984; Foucault 1980). This includes even the incipient elite. To be successful, a dramatic change or innovation is therefore most likely to be a development from the logic of the existing social norms. Prestige goods were within the realm of social competition in Chalcolithic–Early Cypriot Cyprus. Thus the elaboration of the means for the acquisition of such value items, given the incentive, is reasonable. Since agriculture, its control, and some forms of storage and mobilization were also being practiced by the Middle–Later Chalcolithic at larger sites, the development of a further extensification and mobilization to meet a socially acceptable inflation in competitive values and needs would also be reasonable. Only when the first two developments had redefined society to include a new set of norms based around an elite, could the further development, within this context, of specialist production take place.

Thus metals did not offer a starting point. Indeed, their first importance was subsequent to the secondary products revolution, and developed metallurgy was later still. Metals were initially rare value items that acted as prestige goods which symbolized and denoted the differentiation and status created and supported by the secondary products revolution. Many early metal items on Cyprus were thus imports, even though Cyprus was a significant metal source. Only in a subsequent step, around the close of the third millennium B.C.E., once elite sponsored and controlled specialist production had begun and the inflation of prestige and complexity had set in, did metal production become desirable for a further magnitude of internal competition, and external integration and trade. At that point the role of metallurgy changed "from being essentially a representation of distinctions rooted in the local subsistence situation to one in which its control could actually be used in appropriate circumstances to create social and economic distinctions" (Shennan 1986: 117).

¹³For example, consider the cemetery of Lapithos *Vrysi tou Barba* (Herscher 1978; Swiny 1989: 27). The whole complex is better off than many, but major internal differentiation is apparent: 97 burial chambers were excavated, 34 have no metal finds, and a mere 9 burial chambers have 64 percent of all copper and bronze artifacts (446 of 701).

¹⁴This is based on Gregory (1980; 1982); the argument has been exploited in archaeology by Bradley

(1982; 1984: 96–127; 1985), among others. Competitive consumption based around gifts and similar reciprocal modes contains the inherent limitation that the social rules of reciprocity allow a status gain, or imbalance, in favor of the giver at one occasion, to be redressed at a later occasion. Thus net gain is not catered for in terms of any one transaction, rather a systematic form of alternating disequilibrium. Net gain in such a system can only come from the overall number and scale of reciprocal relationships with different persons which an individual can maintain. In contrast, gifts made to the gods, or ancestors, create the possibility of a socially acceptable,

ideological, form of display that enhances the giver's status but without the risk of the gift being returned in due course (from within the secular world). All such gifts offer a net gain of prestige. Further, their one-way nature has the added advantage of removing the gifts from circulation, thus helping to maintain the value of such items and making it more difficult for others to emulate the gift without obtaining new supplies of the rare prestige items. In such circumstances, as Bradley (1984: 105) argues, "[R]eligion can function as economy and economy as religion (cf., Friedman 1979: 304–17)."

BIBLIOGRAPHY

- Adams, R. McC.
 1965 *Land Behind Baghdad: A History of Settlement on the Diyala Plains*. Chicago: University of Chicago.
 1981 *Heartland of Cities: Surveys of Ancient Settlement and Land Use on the Central Floodplain of the Euphrates*. Chicago: University of Chicago.
- Adams, R. McC., and Nissen, H. J.
 1972 *The Uruk Countryside: The Natural Setting of Urban Societies*. Chicago: University of Chicago.
- Åström, P.
 1989 Early Connections between Anatolia and Cyprus. Pp. 15–18 in *Anatolia and the Ancient Near East: Studies in Honor of Tashin Özgüç*, eds. K. Emre, B. Hrouda, M. Mellink, and N. Özgüç. Ankara: Turk Tarih Kurumu.
- Aurenche, O.
 1981 Essai de démographie archéologique. L'exemple des villages du Proche-Orient ancien. *Paléorient* 7, 1: 93–106.
- Baird, D.
 1987 Survey in the Stavros tis Psokas 1985. *Report of the Department of Antiquities, Cyprus*: 15–18.
- Balthazar, J. W.
 1990 *Copper and Bronze-working in Early through Middle Bronze Age Cyprus*. Studies in Mediterranean Archaeology and Literature, pocket-book 84. Jonsered: Åström.
- Bargatzky, T.
 1989 Innovation and the Integration of Sociocultural Systems. Pp. 16–32 in *What's new? A Closer Look at the Process of Innovation*, eds. S. E. van der Leeuw and R. Torrence. London: Unwin Hyman.
- Bender, B.
 1978 Gatherer-hunter to Farmer: A Social Perspective. *World Archaeology* 10: 204–22.
- Bolger, D.
 1983 Khryslion Ammos, Nicosia Ayia Paraskevi, and the Philia Culture of Cyprus. *Report of the Department of Antiquities, Cyprus*: 60–73.
 1991 Early Red Polished Ware and the Origin of the "Philia Culture". Pp. 29–35 in *Cypriot Ceramics: Reading the Prehistoric Record*, eds. J. A. Barlow, D. L. Bolger, and B. Kling. University Museum Monograph 74/University Museum Symposium Series, vol. 2. Philadelphia: University of Pennsylvania.
- Bradley, R.
 1982 The Destruction of Wealth in Later Prehistory. *Man* 17: 108–22.
 1984 *The Social Foundations of Prehistoric Britain: Themes and Variations in the Archaeology of Power*. London: Longman.
 1985 *Consumption, Change and the Archaeological Record: The Archaeology of Monuments and the Archaeology of Deliberate Deposits*. Occasional paper 13. Edinburgh: University of Edinburgh.
- Branigan, K.
 1966 Byblite Daggers in Cyprus and Crete. *American Journal of Archaeology* 70: 123–26.
 1967 Further Light on Prehistoric Relations between Crete and Byblos. *American Journal of Archaeology* 71: 117–21.
- Brumfiel, E. M., and Earle, T.
 1987 Specialization, Exchange, and Complex Societies: An Introduction. Pp. 1–9 in *Specialization, Exchange, and Complex Societies*, eds. E. M. Brumfiel and T. Earle. Cambridge: Cambridge University.
- Carneiro, R. L.
 1967 On the Relationship between Size of Population and Complexity of Social Organisation. *Southwestern Journal of Anthropology* 23: 234–43.

- Catling, H. W.
1963 Patterns of Settlement in Bronze Age Cyprus. *Opuscula Atheniensia* 4: 129–69.
- Catling, H. W., and MacGillivray, J. A.
1983 An Early Cypriot III Vase from the Palace at Knossos. *Annual of the British School at Athens* 78: 1–8.
- Cherry, J. F.
1983 Evolution, Revolution, and the Origins of Complex Society in Minoan Crete. Pp. 33–45 in *Minoan Society. Proceedings of the Cambridge Colloquium 1981*, eds. O. Krzyszkowska and L. Nixon. Bristol: Bristol Classical Press.
- Christou, D.
1989 The Chalcolithic Cemetery 1 at Souskiou-Vathykakas. Pp. 82–94 in *Early Society in Cyprus*, ed. E. Peltenburg. Edinburgh: Edinburgh University.
- Coleman, J. E.
1985 Investigations at Alambra, 1974–1984. Pp. 125–41 in *Archaeology in Cyprus 1960–1985*, ed. V. Karageorghis. Nicosia: Leventis Foundation.
- Croft, P.
1991 Man and Beast in Chalcolithic Cyprus. *Bulletin of the American Schools of Oriental Research* 282/283: 63–79.
- Dikaios, P.
1940 The Excavations at Vounous-Bellapais in Cyprus, 1931–2. *Archaeologia* 88 (Second Series 38): 1–174.
1962 The Stone Age. Pp. 1–204 in *The Swedish Cyprus Expedition Vol. 4, part 1A*. Lund: Swedish Cyprus Expedition.
- Doumas, C. G.
1988 EBA in the Cyclades: Continuity or Discontinuity? Pp. 21–29 in *Problems in Greek Prehistory. Papers Presented at the Centenary Conference of the British School of Archaeology at Athens, Manchester April 1986*, eds. E. B. French and K. A. Wardle. Bristol: Bristol Classical Press.
- Dumond, R.
1972 Population Growth and Political Centralization. Pp. 286–310 in *Population Growth: Anthropological Implications*, ed. B. Spooner. Cambridge: Cambridge University.
- Earle, T.
1985 Prehistoric Economics and the Evolution of Social Complexity: A Commentary. Pp. 106–11 in *Prehistoric Production and Exchange: The Aegean and Eastern Mediterranean*, eds. A. B. Knapp and T. Stech. Monograph 25, Institute of Archaeology. Los Angeles: University of California at Los Angeles.
- Flannery, K. V.
1972 The Origins of the Village as a Settlement Type in Mesoamerica and the Near East: A Comparative Study. Pp. 23–53 in *Man, Settlement and Urbanism*, eds. P. J. Ucko, R. Tringham and G. W. Dimbleby. London: Duckworth.
- Fletcher, R.
1981 People and Space: A Case Study on Material Behaviour. Pp. 97–128 in *Pattern of the Past: Studies in Memory of David Clarke*, eds. I. Hodder, G. Isaac and N. Hammond. Cambridge: Cambridge University.
1986 Settlement Archaeology: World-wide Comparisons. *World Archaeology* 18: 59–83.
- Forbes, H. A.
1982 *Strategies and Soils: Technology, Production and Environment in the Peninsula of Methana, Greece*. Ph.D. dissertation, University of Pennsylvania. Ann Arbor: University Microfilms.
- Forge, A.
1972 Normative Factors in the Settlement Size of Neolithic Cultivators (New Guinea). Pp. 363–76 in *Man, Settlement and Urbanism*, eds. P. J. Ucko, R. Tringham, and G. W. Dimbleby. London: Duckworth.
- Forsén, J.
1992 *The Twilight of the Early Helladics: A Study of the Disturbances in East-Central and Southern Greece Towards the End of the Early Bronze Age*. Studies in Mediterranean Archaeology and Literature, pocketbook 116. Jonsered: Åström.
- Foucault, M.
1980 *Power/Knowledge: Selected Interviews and Other Writings*, ed. C. Gordon. New York: Pantheon.
- Frankel, D., and Webb, J. M.
In press Archaeological Research at Marki, Cyprus, 1990. *J. B. Hennessy Festschrift, Supplementary Volume, Mediterranean Archaeology*.
- Frankenstein, S., and Rowlands, M.
1978 The Internal Structure and Regional Context of Early Iron Age Society in South-Western Germany. *Institute of Archaeology Bulletin, University of London* 15: 73–112.
- Fried, M. H.
1967 *The Evolution of Political Society*. New York: Random House.
- Friedman, J.
1979 *System, Structure and Contradiction in the Evolution of "Asiatic" Social Formations*. Social Studies in Oceania and Southeast Asia 2. Copenhagen: National Museum of Denmark.
- Friedman, J., and Rowlands, M. J.
1977 Notes Toward an Epigenetic Model of "Civilization." Pp. 201–76 in *The Evolution of*

- Social Systems*, eds. J. Friedman and M. J. Rowlands. London: Duckworth.
- Gale, N. H.
 1991 Metals and Metallurgy in the Chalcolithic Period. *Bulletin of the American Schools of Oriental Research* 282/283: 37–61.
- Gale, N. H., and Stos-Gale, Z. A.
 1989 Some Aspects of Cypriote Metallurgy in the Middle and Late Bronze Age. *Aegaeum* 3: 251–56.
- Gallant, T. W.
 1991 *Risk and Survival in Ancient Greece: Reconstructing the Rural Domestic Economy*. Cambridge: Polity.
- Gamble, C.
 1982 Leadership and “Surplus” Production. Pp. 100–105 in *Ranking, Resource and Exchange: Aspects of the Archaeology of Early European Society*, eds. C. Renfrew and S. Shennan. Cambridge: Cambridge University.
- Giddens, A.
 1981 *A Contemporary Critique of Historical Materialism. Vol. 1: Power, Property and the State*. London: Macmillan.
 1984 *The Constitution of Society: Outline of the Theory of Structuration*. Cambridge: Polity.
- Gilman, A.
 1981 The Development of Social Stratification in Bronze Age Europe. *Current Anthropology* 22: 1–23.
 1990 The Mafia Hypothesis. Pp. 151–69 in *When Worlds Collide: The Indo-Europeans and the Pre-Indo Europeans*, eds. T. L. Markey and J. A. C. Greppin. *Linguistica Extranea, Studia* 19. Ann Arbor: Karoma.
- Goody, J.
 1976 *Production and Reproduction: A Comparative Study of the Domestic Domain*. Cambridge Studies in Social Anthropology 17. Cambridge: Cambridge University.
- Goring, E.
 1991a Pottery Figurines: The Development of a Coroplastic Art in Chalcolithic Cyprus. *Bulletin of the American Schools of Oriental Research* 282/283: 153–62.
 1991b The Anthropomorphic Figurines. Pp. 39–60 in *Lemba Archaeological Project. Volume II.2: A Ceremonial Area at Kissonerga*, by E. Peltenburg. *Studies in Mediterranean Archaeology* 70:3. Göteborg: Åström.
- Gregory, C. A.
 1980 Gifts to Men and Gifts to God: Gift Exchange and Capital Accumulation in Contemporary Papua. *Man* 15: 628–52.
 1982 *Gifts and Commodities*. London: Academic.
- Halstead, P.
 1981 Counting Sheep in Neolithic and Bronze Age Greece. Pp. 307–39 in *Pattern of the Past: Studies in Memory of David Clarke*, eds. I. Hodder, G. Isaac and N. Hammond. Cambridge: Cambridge University.
 1987 Traditional and Ancient Rural Economy in Mediterranean Europe: plus ça change? *Journal of Hellenic Studies* 107: 77–87.
 1989 The Economy Has a Normal Surplus: Economic Stability and Social Change Among Early Farming Communities of Thessaly, Greece. Pp. 68–80 in *Bad Year Economics. Cultural Responses to Risk and Uncertainty*, eds. P. Halstead and J. O’Shea. Cambridge: Cambridge University.
 1990 Quantifying Sumerian agriculture—some seeds of doubt and hope. *Bulletin on Sumerian Agriculture* 5: 187–95.
 1992 Agriculture in the Bronze Age Aegean. Towards a Model of Palatial Economy. Pp. 105–16 in *Agriculture in Ancient Greece. Proceedings of the Seventh International Symposium at the Swedish Institute at Athens, 16–17 May, 1990*, ed. B. Wells. *Skrifter Utgivna av Svenska Institutet i Athen*, 4°, XLII. Stockholm: Åström.
- Halstead, P., and O’Shea, J., eds.
 1989 *Bad Year Economics. Cultural Responses to Risk and Uncertainty*. Cambridge: Cambridge University.
- Hassan, F. A.
 1981 *Demographic Archaeology*. New York: Academic.
- Hastorf, C. A.
 1990 One Path to the Heights: Negotiating Political Inequality in the Sausa of Peru. Pp. 146–76 in *The Evolution of Political Systems: Sociopolitics in Small-scale Sedentary Societies*, ed. S. Upham. Cambridge: Cambridge University.
- Held, S. O.
 1989 *Early Prehistoric Island Archaeology in Cyprus: Configurations of Formative Culture Growth from the Pleistocene/Holocene Boundary to the Mid-3rd Millennium B.C.* Unpublished Ph.D. dissertation, Institute of Archaeology, University of London.
- Helms, M. W.
 1979 *Ancient Panama: Chiefs in Search of Power*. Austin: University of Texas.
 1988 *Ulysses’ Sail: An Ethnographic Odyssey of Power, Knowledge, and Geographical Distance*. Princeton: Princeton University.
- Hennessy, J. B.
 1973 Cyprus in the Early Bronze Age. Pp. 1–9 in *The Cypriote Bronze Age: Some Recent Australian Contributions to the Prehistory of Cyprus*, ed. J. Birmingham. *Australian Studies in Archaeology* 1. Sydney: University of Sydney.
- Hennessy, J. B.; 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.
 1975 New Light from Lapithos. Pp. 39–60 in *The Archaeology of Cyprus: Recent Developments*, ed. N. Robertson. Park Ridge: Noyes.
 1978 *The Bronze Age Cemetery at Lapithos, Vrysi tou Barba, Cyprus: Results of the University of Pennsylvania Museum Excavations, 1931*. Ph.D. dissertation, University of Philadelphia. Ann Arbor: University Microfilms.
 1980 Southern Cyprus and the Disappearing Early Bronze Age. *Report of the Department of Antiquities, Cyprus*: 7–21.
 1981 Southern Cyprus, the Disappearing Early Bronze Age and the Evidence from Phaneromeni. Pp. 79–85 in *Studies in Cypriote Archaeology*, eds. J. C. Biers and D. Soren. Monograph 18, Institute of Archaeology. Los Angeles: University of California at Los Angeles.
- Hillier, W., and Hanson, J.
 1984 *The Social Logic of Space*. Cambridge: Cambridge University.
- Hodder, I.
 1990 *The Domestication of Europe*. Oxford: Blackwell.
- Johnson, G. A.
 1973 *Local Exchange and Early State Development in Southwestern Iran*. Anthropological Paper 51. Ann Arbor: Museum of Anthropology, University of Michigan.
 1978 Information Sources and the Development of Decision-making Organisations. Pp. 87–112 in *Social Archaeology: Beyond Subsistence and Dating*, eds. C. L. Redman, M. Berman, F. Curtin, W. Langhorne, N. Versaggi, and J. Wanser. London: Academic.
 1982 Organisational Structure and Scalar Stress. Pp. 389–421 in *Theory and Explanation in Archaeology: The Southampton Conference*, eds. C. Renfrew, M. J. Rowlands, and B. A. Segraves. New York: Academic.
 1983 Decision-making Organization and Pastoral Nomad Camp Size. *Human Ecology* 11: 175–99.
- Jones, G.
 1992 Weed Phytosociology and Crop Husbandry: Identifying a Contrast between Ancient and Modern Practice. *Review of Palaeobotany and Palynology* 73: 133–43.
- Karageorghis, V.
 1966 Chronique des fouilles et découvertes archéologiques à Chypre en 1965. *Bulletin de Correspondance Hellénique* 90: 275–370.
 1976 *The Civilization of Prehistoric Cyprus*. Athens: Ekdotike Athenon.
- Kent, S.
 1984 *Analyzing Activity Areas: An Ethnoarchaeological Study of the Use of Space*. Albuquerque: University of New Mexico.
- Knapp, A. B.
 1986a Production, Exchange and Socio-political Complexity on Bronze Age Cyprus. *Oxford Journal of Archaeology* 5: 35–60.
 1986b *Copper Production and Divine Protection: Archaeology, Ideology and Social Complexity on Bronze Age Cyprus*. Studies in Mediterranean Archaeology and Literature pocketbook 42. Göteborg: Åström.
 1990 Production, Location, and Integration in Bronze Age Cyprus. *Current Anthropology* 31: 147–76.
 1993a Emergence, Development and Decline on Bronze Age Cyprus. In *Development and Decline in the Mediterranean Bronze Age*, eds. C. Mathers and S. Stoddart. Sheffield: Collis.
 1993b Social Complexity: Incipience, Emergence, and Development on Prehistoric Cyprus. *Bulletin of the American Schools of Oriental Research* 292: 85–106.
- Kolb, C. C.
 1985 Demographic Estimates in Archaeology: Contributions from Ethnoarchaeology on Mesoamerican Peasants. *Current Anthropology* 26: 581–99.
- Kosse, K.
 1990 Group Size and Social Complexity: Thresholds in the Long-term Memory. *Journal of Anthropological Archaeology* 9: 275–303.
- Kramer, C.
 1980 Estimating Prehistoric Populations: An Ethnoarchaeological Approach. Pp. 315–34 in *L'archéologie de l'Iraq du début de l'époque néolithique à 333 avant notre ère: perspectives et limites de l'interprétation anthropologique des documents*, ed. M. T. Barrelet. Colloques Internationaux du Centre National de la Recherche Scientifique no. 580. Paris: Editions du Centre National de la Recherche Scientifique.
 1982 *Village Ethnoarchaeology: Rural Iran in Archaeological Perspective*. New York: Academic.
- Lee, R. D.
 1986 Malthus and Boserup: A Dynamic Synthesis. Pp. 96–130 in *The State of Population Theory*, eds. D. Coleman and R. Schofield. Oxford: Blackwell.
- van der Leeuw, S. E.
 1981 Information Flows, Flow Structures and the Explanation of Change in Human Institutions. Pp. 228–329 in *Archaeological Approaches to the Study of Complexity*, ed. S. E. van der Leeuw. Cingula 6. Amsterdam: Universiteit van Amsterdam.
- Mann, M.
 1986 *The Sources of Social Power. Vol. 1: A History of Power from the Beginning to A.D. 1760*. Cambridge: Cambridge University.

- Manning, S. W., and Conwell, D. H.
1992 Maroni Valley Archaeological Survey Project: Preliminary Report on the 1990–1991 Field Seasons. *Report of the Department of Antiquities, Cyprus*: 271–83.
- Manning, S. W., and Swiny, S.
n.d. *Sotira Kaminoudhia and the Chronology of the Early Bronze Age in Cyprus*.
- Marfoe, L.
1987 Cedar Forest to Silver Mountain: Social Change and the Development of Long-distance Trade in Early Near Eastern Societies. Pp. 25–35 in *Centre and Periphery in the Ancient World*, eds. M. Rowlands, M. Larsen, and K. Kristiansen. Cambridge: Cambridge University.
- Meillassoux, C.
1968 Ostentation, Destruction, Reproduction. *Economie et Société* 2: 760–72.
1978 “The Economy” in Agricultural Self-sustaining Economies: A Preliminary Analysis. Pp. 127–57 in *Relations of Production*, ed. D. Seddon. London: Cass.
- Mellaart, J.
1958 The End of the Early Bronze Age in Anatolia and the Aegean. *American Journal of Archaeology* 62: 9–33.
- Mellink, M. J.
1991 Anatolian Contacts with Chalcolithic Cyprus. *Bulletin of the American Schools of Oriental Research* 282/283: 167–75.
- Merrillees, R. S.
1966 Finds from Kalopsidha Tomb 34. Pp. 31–37 in *Excavations at Kalopsidha and Ayios Iakovos in Cyprus*, P. Åström. *Studies in Mediterranean Archaeology* 2. Lund: Bloms.
- Merrillees, R. S.
1979 Cyprus, the Cyclades and Crete in the Early to Middle Bronze Ages. Pp. 8–55 in *Acts of the International Archaeological Symposium ‘The Relations between Cyprus and Crete, ca. 2000–500 B.C.’*, ed. V. Karageorghis. Nicosia: Department of Antiquities, Cyprus.
- Morris, D.
1985 *The Art of Ancient Cyprus*. Oxford: Phaidon.
- Morris, I.
1989 Circulation, Deposition and the Formation of the Greek Iron Age. *Man* 24: 502–19.
- Muhly, J. D.
1991 Copper in Cyprus: The Earliest Phase. Pp. 357–74 in *Découverte du métal*, eds. J.-P. Mohen and C. Éluère. *Amis du Musée des Antiquités Nationales, Millénaires, Dossier* 2. Paris: Picard.
- Naroll, R.
1956 A Preliminary Index of Social Development. *American Anthropologist* 58: 687–715.
1962 Floor Area and Settlement Population. *American Antiquity* 27: 587–99.
- Negbi, O.
1986 The Climax of Urban Development in Bronze Age Cyprus. *Report of the Department of Antiquities, Cyprus*: 97–121.
- Niklasson, K.
1991 *Early Prehistoric Burials in Cyprus*. *Studies in Mediterranean Archaeology* 96. Jonsered: Åström.
- Osborne, R.
1987 *Classical Landscape with Figures*. London: Philip.
- Peltenburg, E. J.
1982 *Recent Developments in the Later Prehistory of Cyprus*. *Studies in Mediterranean Archaeology, pocketbook* 16. Göteborg: Åström.
1987 A Late Prehistoric Pottery Sequence for Western Cyprus. Pp. 53–67 in *Western Cyprus: Connections*, ed. D. W. Rupp. *Studies in Mediterranean Archaeology* 77. Göteborg: Åström.
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. 6–22 in *Cyprus Before the Bronze Age: Art of the Chalcolithic Period*. Malibu: Getty Museum.
1991a Kissonerga-Mosphilia: A Major Chalcolithic Site in Cyprus. *Bulletin of the American Schools of Oriental Research* 282/283: 17–35.
1991b Toward a Definition of the Late Chalcolithic in Cyprus: The Monochrome Pottery Debate. Pp. 9–20 in *Cypriot Ceramics: Reading the Prehistoric Record*, eds. J. A. Barlow, D. L. Bolger and B. Kling. University Museum Monograph 74/University Museum Symposium Series vol. 2. Philadelphia: University of Pennsylvania.
1991c Local Exchange in Prehistoric Cyprus: An Initial Assessment of Picrolite. *Bulletin of the American Schools of Oriental Research* 282/283: 107–26.
1991d *Lemba Archaeological Project. Vol. II.2: A Ceremonial Area at Kissonerga*. *Studies in Mediterranean Archaeology* 70:3. Göteborg: Åström.
- Peltenburg, E. J. et al.
1985 *Lemba Archaeological Project. Vol. I: Excavations at Lemba Lakkous, 1976–1983*. *Studies in Mediterranean Archaeology* 70:1. Göteborg: Åström.
- Philip, G.
1991 Cypriot Bronzework in the Levantine World: Conservatism, Innovation and Social Change. *Journal of Mediterranean Archaeology* 4: 59–107.
- Piggott, S.
1992 *Wagon, Chariot and Carriage: Symbol and Status in the History of Transport*. London: Thames and Hudson.

- Renfrew, C.
1972 *The Emergence of Civilization. The Cyclades and the Aegean in the Third Millennium B.C.* London: Methuen.
- Renger, J.
1990 Report on the Implications of Employing Draught Animals. *Bulletin on Sumerian Agriculture* 5: 267–79.
- Richard, S.
1987 The Early Bronze Age: The Rise and Collapse of Urbanism. *Biblical Archaeologist* 50: 22–43.
- Rupp, D. W.
1987 The Canadian Palaipaphos Survey Project: An Overview of the 1986 Season. *Echos du Monde Classique/Classical Views* 31 (new series 6): 217–24.
- Rupp, D. W.; Sørensen, L. W.; King, R. H., and Fox, W. A.
1984 Canadian Palaipaphos (Cyprus) Survey Project: Second Preliminary Report. *Journal of Field Archaeology* 11: 133–54.
- Rupp, D. W.; Clarke, J. T.; D'Annibale, C.; and Stewart, S.
1992 The Canadian Palaipaphos Survey Project: 1991 Field Season. *Report of the Department of Antiquities, Cyprus*: 285–317.
- Rutter, J. B.
1985 An Exercise in Form vs. Function: The Significance of the Duck Vase. *Temple University Aegean Symposium* 10: 16–41.
- Samson, R., ed.
1990 *The Social Archaeology of Houses*. Edinburgh: Edinburgh University.
- Schacht, R. M.
1981 Estimating Past Population Trends. *Annual Review of Anthropology* 10: 119–40.
- Schortman, E. M., and Urban, P. A.
1987 Modeling Interregional Interaction in Prehistory. *Advances in Archaeological Method and Theory* 11: 37–95.
- Serjeant, R. B., and Lewcock, R., eds.
1983 *Sanʿaʿ: An Arabian Islamic City*. London: World of Islam Festival Trust.
- Shennan, S. J.
1986 Central Europe in the Third Millennium B.C.: An Evolutionary Trajectory for the Beginning of the European Bronze Age. *Journal of Anthropological Archaeology* 5: 115–46.
- Shennan, S. J.
1989 Introduction: Archaeological Approaches to Cultural identity. Pp. 1–32 in *Archaeological Approaches to Cultural Identity*, ed. S. Shennan. *One World Archaeology* 10. London: Unwin Hyman.
- Sherratt, A. G.
1981 Plough and Pastoralism: Aspects of the Secondary Products Revolution. Pp. 261–305 in *Pattern of the Past: Studies in Memory of David Clarke*, eds. I. Hodder, G. Isaac, and N. Hammond. Cambridge: Cambridge University.
- 1986 Wool, Wheels, and Ploughmarks: Local Developments or Outside Introductions in Neolithic Europe? *Bulletin of the Institute of Archaeology, University of London* 23: 1–15.
- 1987 Cups that Cheered. Pp. 81–114 in *Bell Beakers of the Western Mediterranean: Definition, Interpretation, Theory and New Site Data. The Oxford International Conference 1986, part i*, eds. W. H. Waldren and R. C. Kennard. British Archaeological Reports International Series 331(i). Oxford: British Archaeological Reports.
- Sherratt, A., and Sherratt, S.
1991 From Luxuries to Commodities: The Nature of Mediterranean Bronze Age Trading Systems. Pp. 351–86 in *Bronze Age Trade in the Mediterranean. Papers Presented at the Conference Held at Rewley House, Oxford, in December 1989*, ed. N. H. Gale. Studies in Mediterranean Archaeology 90. Jönköping: Åström.
- Soles, J. S.
1988 Social Ranking in Prepalatial Cemeteries. Pp. 49–61 in *Problems in Greek Prehistory. Papers Presented at the Centenary Conference of the British School of Archaeology at Athens, Manchester April 1986*, eds. E. B. French and K. A. Wardle. Bristol: Bristol Classical Press.
- 1992 *The Prepalatial Cemeteries at Mochlos and Gournia and the House Tombs of Bronze Age Crete*. Hesperia Supplement 24. Princeton: American School of Classical Studies at Athens.
- Spenser, C. S.
1990 On the Tempo and Mode of State Formation: Neoevolutionism Reconsidered. *Journal of Anthropological Archaeology* 9: 1–30.
- Stanley-Price, N. P.
1979 *Early Prehistoric Settlement in Cyprus: A Review and Gazetteer of Sites, c. 6500–3000 B.C.* British Archaeological Reports International Series 65. Oxford: British Archaeological Reports.
- Stewart, E., and Stewart, J.
1950 *Vounous 1937–38. Field-report on the Excavations Sponsored by the British School of Archaeology at Athens*. Lund: Gleerup.
- Stewart, J. R.
1962 The Early Bronze Age in Cyprus. Pp. 205–391 in *The Swedish Cyprus Expedition Vol. 4, part 1A*. Lund: Swedish Cyprus Expedition.
- 1988 *Corpus of Cypriot Artefacts of the Early Bronze Age: Part 1*, eds. E. Stewart and P. Åström. Studies in Mediterranean Archaeology 3:1. Göteborg: Åström.
- 1992 *Corpus of Cypriot Artefacts of the Early Bronze Age: Part 2*, eds. E. Stewart and P. Åström. Studies in Mediterranean Archaeology 3:2. Jönköping: Åströms.

- Stos-Gale, Z. A.; Macdonald, C. F.; and Gale, N.
 1991 New Studies of Final Chalcolithic and Early Bronze Age Copper Metallurgy in Cyprus. Pp. 341–56 in *Découverte du métal*, eds. J.-P. Mohen and C. Éluère. Amis du Musée des Antiquités Nationales, Millénaires, Dossier 2. Paris: Picard.
- Sumner, W. M.
 1979 Estimating Population by Analogy: An Example. Pp. 164–74 in *Ethnoarchaeology: Implications of Ethnography for Archaeology*, ed. C. Kramer. New York: Columbia.
 1989 Population and Settlement Area: An Example from Iran. *American Anthropologist* 91: 631–41.
- Swiny, S.
 1981 Bronze Age Settlement Patterns in Southwest Cyprus. *Levant* 13: 51–87.
 1985a The Cyprus American Archaeological Research Institute Excavations at Sotira-Kaminoudhia and the Origins of the Philia Culture. Pp. 13–26 in *Acts of the Second International Congress of Cypriot Studies, Nicosia, 20–25 April 1982, vol. A*, eds. T. Papadopoulos and S. A. Hadjistyllis. Nicosia: Society of Cypriot Studies.
 1985b Sotira-Kaminoudhia and the Chalcolithic/Early Bronze Age Transition in Cyprus. Pp. 115–24 in *Archaeology in Cyprus 1960–1985*, ed. V. Karageorghis. Nicosia: Leventis Foundation.
 1986 The Philia Culture and its Foreign Relations. Pp. 29–44 in *Acts of the International Archaeological Symposium 'Cyprus Between the Orient and the Occident' Nicosia, 8–14 September 1985*, ed. V. Karageorghis. Nicosia: Department of Antiquities, Cyprus.
 1989 From Round House to Duplex: A Re-assessment of Prehistoric Cypriot Bronze Age Society. Pp. 14–31 in *Early Society in Cyprus*, ed. E. Peltenburg. Edinburgh: Edinburgh University.
 1991 Reading the Prehistoric Record: A View from the South in the Late Third Millennium B.C. Pp. 37–44 in *Cypriot Ceramics: Reading the Prehistoric Record*, eds. J. A. Barlow, D. L. Bolger, and B. Kling. University Museum Monograph 74/University Museum Symposium Series vol. 2. Philadelphia: University of Pennsylvania.
- Thomas, J.
 1987 Relations of Production and Social Change in the Neolithic of Northwest Europe. *Man* 22: 405–30.
- Todd, I. A.
 1988 The Middle Bronze Age in the Kalavassos Area. *Report of the Department of Antiquities, Cyprus*: 133–40.
- 1991 The Vasilikos Valley and the Chalcolithic Period in Cyprus. *Bulletin of the American Schools of Oriental Research* 282/283: 3–16.
- Trigger, B. G.
 1980 *Gordon Childe: Revolutions in Archaeology*. London: Thames and Hudson.
- Upham, S., ed.
 1990a *The Evolution of Political Systems: Sociopolitics in Small-scale Sedentary Societies*. Cambridge: Cambridge University.
 1990b Analog or Digital?: Toward a Generic Framework for Explaining the Development of Emergent Political Systems. Pp. 87–115 in *The Evolution of Political Systems: Sociopolitics in Small-scale Sedentary Societies*, ed. S. Upham. Cambridge: Cambridge University.
- Watkins, T.
 1981 The Chalcolithic Period in Cyprus: The Background to Current Research. Pp. 9–20 in *Chalcolithic Cyprus and Western Asia*, ed. J. Reade. Occasional Paper 26. London: British Museum.
- Wiess, H., et al.
 1993a Session on Late Third Millennium B.C. Collapse in the Eastern Mediterranean at the Society for American Archaeology Meetings in St. Louis, April 1993.
 1993b The Genesis and Collapse of Third Millennium North Mesopotamian Civilization. *Science* 261: 995–1004.
- Whitelaw, T. M.
 1983a The Settlement at Fournou Korifi Myrtos and Aspects of Early Minoan Social Organization. Pp. 323–45 in *Minoan Society. Proceedings of the Cambridge Colloquium 1981*, eds. O. Krzyszkowska and L. Nixon. Bristol: Bristol Classical Press.
 1983b People and Space in Hunter-Gatherer Camps: A Generalising Approach in Ethnoarchaeology. *Archaeological Review from Cambridge* 2, 2: 48–66.
 1991 Some Dimensions of Variability in the Social Organisation of Community Space Among Foragers. Pp. 139–88 in *Ethnoarchaeological Approaches to Mobile Campsites: Hunter-Gatherer and Pastoralist Case Studies*, eds. C. S. Gamble and W. A. Boismier. Ethnoarchaeological Series 1. Ann Arbor: International Monographs in Prehistory.
- Wright, G. R. H.
 1992 *Ancient Building in Cyprus*. Handbuch der Orientalistik 7. Kunst und Archäologie. Leiden: Brill.