SKRIFTER UTGIVNA AV SVENSKA INSTITUTET I ATHEN, 4°, XXXII
ACTA INSTITUTI ATHENIENSIS REGNI SUECIAE, SERIES IN 4°, XXXII

Offprint

The Minoan Thalassocracy
Myth and Reality

Proceedings of the Third International Symposium
at the Swedish Institute in Athens, 31 May—5 June, 1982

EDITED BY
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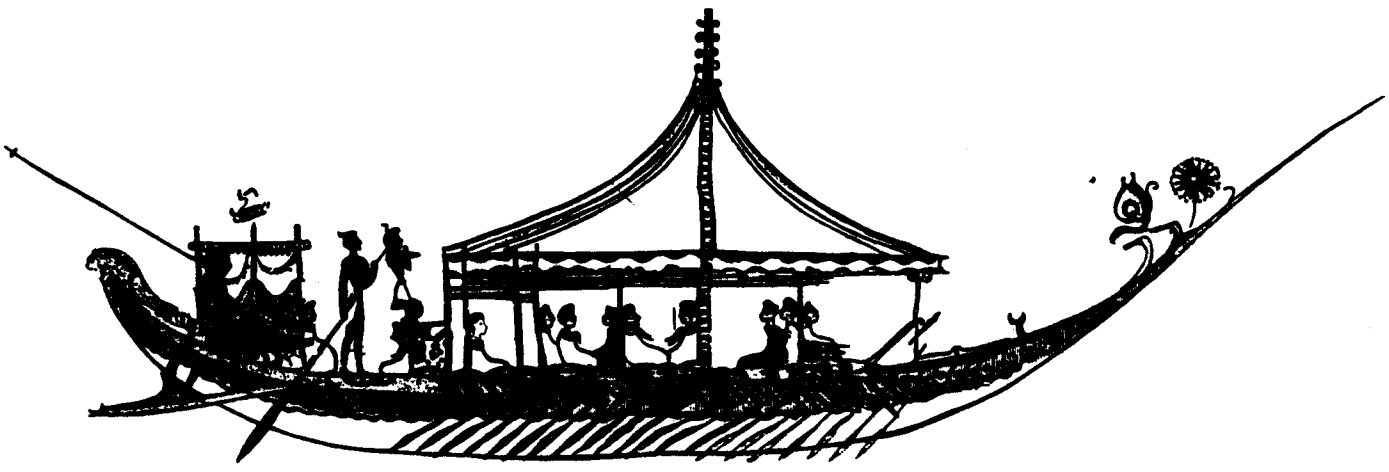

STOCKHOLM 1984

Crete and the Cyclades in LM I: The Tale of the Conical Cups

by
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The nature of Minoan presence and influence in the Cyclades in LM I is my central topic. Before turning to the archaeological evidence, let us consider two cautionary tales of historical interaction between societies. For these two types of interaction, which are polar opposites with respect to movement of people versus adoption of culture, I shall use the terms "karum contact" and "Versailles effect".

As the obvious example of karum contact, consider the Assyrian trading colony of Kültepe—Karum Kanesh. From the tablets we know it existed for 150—200 years as a trading center where large quantities of goods including metals and textiles were exchanged. The tablets show the karum levied taxes on passing caravans, offered storage facilities, provided credit in the manner of a bank and operated a complex judicial system. It had intensive commercial relations with at least one other karum and controlled other Assyrian trading colonies.

Yet as Machteld Mellink, James Mellaart and others have observed, had the tablets not survived little else would suggest the existence of an Assyrian colony, since the colonists adopted local architecture and pottery.[1]

The situation with regard to Karum Kanesh is not unique. Tablets tell us of many Assyrian trading colonies in Anatolia. At other major excavated sites such as Bogazköy and Alishar, again only the tablets give any clear indication of the presence of an Assyrian trading colony.

Whereas trading colonies may leave little or no trace, conversely close similarity in architecture, furniture, painting, decorative arts, clothing, jewelry, the pastimes of youth and even the language of the upper classes may appear in two or more societies without political control, economic domination or a major movement of people from the culturally dominant society. I have termed this type of interaction the "Versailles effect", after the widespread imitation of the court of Versailles in the 18th Century. French influence began to rework the style of polite life in Germany during and after the Thirty Years' War (1618—48), sparked in part by the arrival of Huguenot *émigrés*, during the period known as the Alamode. With the 18th Century came a second, greater wave of cultural influence, as mini-Versailles' sprang up in Gotha, Kassel and Berlin. Voltaire, while in Berlin in 1750, commented: "Je me trouve ici en France. On ne parle que notre langue."[2]

A "Versailles effect" is most likely to occur where the cultural prestige of one society within an interconnecting set of societies is great, as was surely the case in the Bronze Age Aegean with regard to Crete from the beginning of the old palaces through LM IB.

Keeping in mind these cautionary tales, let us begin our inquiry into the nature of Minoan impact on the Cyclades with a brief review of the relevant historical background. The Minoan settlement on Kythera beginning in EM II and the appearance in Crete of gold, silver, tin, ivory, ostrich eggs, Egyptian stone vases and scarabs together with the emergence of what seem to be harbor towns in Eastern Crete at Mochlos, Palaikastro and Zakros in EM II or EM III give the first evidence of Minoan overseas interest. With MM IA, Minoan pottery begins to appear at various sites in

Acknowledgements. My thanks are due first to P. Betancourt, G. Cadogan, E. Davis, J. Davis, O. Dickinson, E. French, V. Hankey, S. Iakovidis, J. Rutter, P. Warren, and V. Watrous for their generous responses to many requests for information and advice. E. Bennett, N. Coldstream, K. Demakopoulou, K. Erim, S. Hood, V. Lambrinudakis, J. Lloyd, Y. Lolos, S. Martin, J. Mellaart, M. Mellink, L. Morgan, J. Muhly, P. Muhly, T. Palaima, and T. Stech have provided comments on a draft of the monograph from which this paper is taken, or given other significant assistance. My apologies go to anyone also deserving of thanks whose name I have omitted inadvertently.

[1] Personal communications. See, however, the paper by K. Branigan at this Symposium (infra) and the references there cited suggesting that intramural burials at the site might indicate the presence of Assyrians. Lacking a cemetery or burials of a known date we do not know what the standard burial practice was, and it is possible that some of the burials encountered may have been extramural before expansion of the site. Without the tablets it seems doubtful there would be any suggestion that these burials were specifically Assyrian. For the Assyrian colonies in general, see M. T. Larsen, 'The old Assyrian colonies in Anatolia', *JAOS* 94, 1974, pp. 468—475. Of course the Assyrian karum was but one type of trading colony, and not all trading colonies lack distinctive artifacts. Relevant factors include ease of transport, whether the settlers include women or artisans, and the acceptability of local pottery both for daily use and ritual.

[2] H. and R. Kahane, 'Decline and survival of western prestige languages', *Language* 55, 1979, p. 188. This article was brought to my attention by J. Davis.

the South-eastern and North-eastern Peloponnese, particularly at Lerna.[3]

With the start of MM IB and the protopalatial period, Crete begins a major advance in all fields, including architecture, hydraulic engineering, metallurgy, stone and sealcarving, ceramics, administration, literacy and (on the evidence of architecture and engineering) numeracy. The palaces themselves speak of the degree of social organization and cohesion in Crete and the aspiration of the governing elites. It would be strange if improvements in shipbuilding and navigation did not accompany these other developments, and if the palace rulers did not show an interest in the luxury goods that could be obtained through foreign trade or raid. In particular it appears likely that Minoan rulers would have wished to control the importation of metal from which was made not only luxury vessels and cult objects but also weapons, of necessity a matter of critical interest for the rulers.

Evidence of widespread Minoan trade and maritime activity in the protopalatial periods is seen indirectly in the references to Caphtor—most likely Crete—in the Mari texts and in the widespread appearance of Kamares ware and other Minoan pottery in Anatolia, Syria, and Cyprus, in Egypt as far up the Nile as Aswan, and at Helladic sites such as Ayios Stephanos, Asine, Lerna, Kolonna and Pefkakia Magoula, as well as in the Cyclades. In MM II, imitation Kamares ware sherds in local (or at least non-Minoan) fabric appear in Egypt at Kahun and Harageh and in Rhodes. In MM II—MM III there is evidence for Minoan settlements on Rhodes, Kos, Kasos and Karpathos and on the Anatolian coast at Miletos, Iasos and probably Knidos. Although we have no direct evidence for Minoan naval activity, it seems to me most probable that the bulk of Middle Minoan trade, contact and colonization was carried out on Minoan ships.

In LM I Minoan oversea activity and influence reach their climax. Furumark long ago noted the seeming florescence of the period, and in particular the fact that the settlement at Trianda on Rhodes takes on a more refined appearance in LM IA with houses rebuilt in grander style, some with ashlar facades, on the same foundations without intervening destruction.[4] Evidence for Cretan contact with Egypt increases as depictions of Minoans and Minoan objects appear on the walls of Theban tombs.[5] In Cyprus the first script appears and it is not, as one might expect, a variant of one of the highly developed scripts in use at Ugarit but Cypro-Minoan, a "second cousin" of Linear A.[6]

In Crete itself, there is an increase in site density particularly along the coast, both in the North along the Gulf of Mirabello and in the South between Arvi and Myrtos.[7] The rebuilding in a grander style similar to what Furumark noted at Trianda is evident. Ashlar is used more frequently, not only at Knossos but at many other sites as well. At Gournia, for example, the main building receives a new ashlar facade. The country houses (of which there are now 18 known) appear, many with facades or at least threshold blocks of ashlar. It is these country houses, many sitting isolated and undefended, which as much as the unwalled cities and palaces show the security and prosperity of Crete in LM IA and give evidence of a "Pax Minoica", at least within Crete itself.

The contribution of wide-ranging Minoan trade to the prosperity of LM I in Crete can be seen most clearly at Zakros, which is unique among major Minoan habitation sites in having no significant easily accessible fertile agricultural hinterland. Yet a palace evolved here at the beginning of the neopalatial period to take advantage of the splendid protected harbor and location for the purpose of trade.[8]

Let us now turn to Melos, Kea and Thera in LM I. I shall touch only briefly on Melos. Finds from Phylakopi include considerable imported Minoan pottery, fragments of Minoan stone bowls and of fresco in Minoan style, and a fragmentary tablet in Linear A. The locally made pottery "while always clearly local both in fabric and in style, is instantly recognizable, in the entire repertoire of form and decoration, as based on Cretan prototypes of the Late Minoan IA period."[9] As at Kea and Thera, there are masses of conical cups,[10] with implications which are considered below. Phylakopi also has a pillar crypt, the only one known to date outside Crete.

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[3] See the paper by C. W. Zerner and J. B. Rutter at this Symposium (infra).

[4] A. Furumark, 'The settlement at Ialysos and Aegean history c. 1550—1400 B.C.', *Op Arch* 6, 1950, pp. 180—181.

[5] See generally J. Vercoutter, *L'Égypte et le monde égéen préhellénique*, Cairo 1956, (Institut français d'archéologie orientale, Bibliothèque d'étude, 22); W. Helck, *Die Beziehungen Ägyptens und Vorderasiens zur Ägäis bis ins 7. Jahrhundert v. Chr.*, Darmstadt 1979; and the paper by Y. and E. Sakellarakis at this Symposium (infra).

[6] See, *e.g.*, J. Karageorghis, 'Origine du syllabaire Chypro-Minoen', *RA* 1958, pp. 1—19; A. Heubeck, *Schrift = Arch Hom* III, Ch. X (1979), pp. 54—73; E. Masson, *Étude de vingt-six boules d'argile inscrites trouvées à Enkomi et Hala Sultan Tekke (Chypre)*, Göteborg 1971 (SIMA 31:1); T. Mitford and O. Masson, 'The Cypriot Syllabary', *CAH*[3] III, 3, pp. 71—82; E. Masson, 'L'apparition de l'écriture à Chypre: Témoignage probable des contacts entre l'île de Crète et l'île de Chypre au cours de la première moitié du deuxième millénaire', *Acts of the international archaeological symposium, 1978, "The relations between Cyprus and Crete, ca. 2000—500 B.C."*, Nicosia 1979, pp. 134—138. For a contrary view of the character of the Enkomi tablet, see L. Godart and A. Sacconi, 'La plus ancienne tablette d'Enkomi et le linéaire A', *Relations* (supra), pp. 128—133.

[7] See, *e.g.*, the paper by P. Warren at this Symposium (infra) regarding LM I site density in the Gulf of Mirabello. The south coast between Arvi and Myrtos also has many new foundations in LM I: P. Warren, *The Aegean civilizations*, Oxford 1975, p. 103.

[8] Zakros is calm even on rough days, for it is protected both from the generally prevailing westerly winds and currents and (because the coast extends to the northeast) from the Meltemi which occasionally blows with such force from the North. Hogarth described Zakros at the turn of the century as the best-known port of call for the fishing fleets of the eastern islands and the principal station for sailing vessels on the path from the Aegean to Libya. Often 10 to 20 sailing vessels, carrying crews of between 10 and 35, rode to anchor at once: D. Hogarth, 'Excavations at Zakro, Crete', *BSA* 7, 1900—01, p. 123.

[9] C. Renfrew, 'Prehistoric exchange', in: C. Renfrew and M. Wagstaff, eds., *An island polity: The archaeology of exploitation in Melos*, Cambridge 1982, p. 225.

[10] In trench ΠA covering part of the "Mansion" or main administrative building, a "striking steady increase in locally-made con-

Concerning Kea, one longs first to know more about its relation to the mines at Laurion. As the Gales have shown, Laurion was an important source of silver, lead and perhaps copper for Crete and the Cyclades.[11] At Ayia Irini itself there is good evidence for smelting of copper from copper sulfide ores and for the extraction of lead and silver through cupellation from galena. Many crucibles were found, particularly in Level VII (LM IB), 17 in House A itself.[12] Ayia Irini is clearly a significant metallurgical site. On the mainland directly opposite, Thorikos near Laurion has an impressive MH to LH I—II tomb complex with rich burial goods, and there are traces of MH occupation on the top[13] and in the saddle[14] of Velatouri hill, but as usual LH I habitation is elusive although transitional MH—LH I sherds are present.

It is worth pausing to note the contrast in LM IA—LH I: on the mainland, a society which to date has provided no evidence of writing, of the use of seals to show ownership, origin or administrative sanction, or of impressive dwellings, and which puts much of its wealth into burials; on Crete and Kea the opposite.[15] Did mainland wealth, as shown by the tombs, come from control of the metal source, and Keian wealth from introducing the metal in some form into a Minoan-dominated trade network? Certainly LC I shows a relative explosion in metallurgy,[16] and LM I Crete is rich in bronze, as indicated by the enormous cauldrons from Tylissos, double axes from Nirou Khani and swords from Arkalochori.[17] At this point it is not possible to judge whether the role of Ayia Irini with respect to Laurion was similar, for example, to that of Pithecussae on the island of Ischia with respect to the mines of Etruria in the Iron Age.

The discovery on Kea of a tablet in local fabric with Linear A signs along with three other examples of Linear A and hundreds of potters' marks, many of Minoan type,[18] is of great interest, but standing alone this could be evidence of Minoan trade links rather than the presence of a Minoan colony. The later adoption by the Greeks of a Phoenician script was not the result of Phoenician colonization or the presence of a large percentage of Phoenicians in early Iron Age Greece, although there were in all likelihood Phoenician craftsmen and traders present in Athens, Knossos and other places.[19]

The existence at Ayia Irini of a local stone vase workshop using Minoan techniques is worth noting, as of course are the large terracotta statues with tight bodices and bare breasts excavated in what appears to be the major shrine of the site, which is adjacent to the main building, House A, probably the home of the local ruler.

Fine imported Minoan LM I ceramic wares are found in almost every house, and a wide range of Minoan shapes including cups, bowls, trays and pithoi is imitated in local fabric. (Minyan and matt-painted wares also appear in quantity as might be expected given Kea's proximity to the mainland.) Minoan-type tripod jars, presumably used for cooking or heating liquids, are particularly common.

What is especially notable as a Minoanizing feature at Ayia Irini, however, is the enormous number of conical cups. House A alone produced over 8,000, of which 820 came from at single undisturbed LC I deposit in room 18! A small room in Area C produced another 566 conical cups.[20]

Because the presence of tens of thousands of conical cups constitutes a special category of evidence respecting Aegean interrelations, further consideration is in order.

The contrast is striking between Ayia Irini and a site like Ayios Stephanos, for example, which produced a small stone object with two Linear A signs[21] and where pottery of Minoan style and technique in local fabric is sufficiently common in MM III—LM I to suggest the possible presence of Minoan or Kytheran potters, but where conical cups are rare.[22] Conical cups are generally present only in relatively small numbers if at all at mainland sites.[23] Yet they are ubiquitous in Crete in the neopalatial period, constituting a large proportion of the pottery at every site and reaching their numerical peak in LM I. Conical cups appear much

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ical cups" was noted in the sequence of five LC I floors: J. Cherry and J. Davis, 'Phylakopi in LC I: A pottery seriation study', a paper read at the workshop on Cycladic chronology held at the Institute of Archaeology, London, 1983.

[11] N. Gale and Z. Stos-Gale, 'Lead and silver in the ancient Aegean', *Scientific American* 244, June 1981, p. 188; Gale and Stos-Gale, 'Bronze Age copper sources in the Mediterranean: A new approach', *Science* 216/4541, 2 April 1982, pp. 11—20; Gale and Stos-Gale, 'Cycladic lead and silver metallurgy', *BSA* 76, 1981, pp. 169—221; Gale, 'Cycladic metallurgy', a paper read at the workshop on Cycladic chronology held at the Institute of Archaeology, London, 1983.

[12] Personal communication from J. Davis.

[13] V. Stais, *Arch Eph* 1895, col. 222 ff.

[14] H. F. Mussche, J. Bingen, J. Servais, J. DeGeyter, T. Hackens, P. Spitaels and A. Gautier, *Thorikos 1965: rapport préliminaire sur la troisième campagne de fouilles*, Bruxelles 1967, pp. 20—24 and *Thorikos 1966/67: rapport préliminaire sur la quatrième campagne de fouilles*, Bruxelles 1969, p. 68, n. 7; O. Dickinson, *The origins of Mycenaean civilisation*, Göteborg 1977 (SIMA 49), pp. 96 and 124, n. 16; R. Hope Simpson and O. Dickinson, *A gazetteer of Aegean civilization in the Bronze Age*, I, *The mainland and islands*, Göteborg 1979 (SIMA 52), p. 209.

[15] On Kea we do not yet have sufficient evidence from unplundered tombs.

[16] Gale, 'Cycladic metallurgy', (supra n. 11).

[17] J. Muhly has observed that it would be necessary to go to Anyang in China to match the size of the Tylissos cauldrons, and that the material from the Arkalochori cave, including masses of bronze double axes as well as the swords, was what remained after the great bulk of the metal objects had been removed and sold to coppersmiths. (Personal communication.)

[18] T. Palaima, 'Linear A in the Cyclades: The trade and travel of a script', *TUAS* 7, 1982, pp. 15—22.

[19] J. N. Coldstream, *Geometric Greece*, London 1977, pp. 70 and 132.

[20] E. Schofield, 'Kea and its Aegean connections in the Late Bronze Age', typescript of talk delivered at the London Mycenaean Seminar, 16 May 1979, p. 6; E. Schofield, *Keos* III. *Ayia Irini: House A*, Mainz 1983. At the Troullos hilltop 500 meters from Ayia Irini parts of 149 conical cups of LM IB/LH II type were found: J.L. Caskey, 'Investigations in Keos, part I: Excavations and explorations, 1966—1970', *Hesperia* 40, 1971, p. 395.

[21] R. Janko, 'A stone object inscribed in Linear A from Ayios Stephanos, Laconia', *Kadmos* 21, 1982, pp. 46—48.

[22] J. B. and S. H. Rutter, *The transition to Mycenaean: A stratified Middle Helladic II to Late Helladic IIA pottery sequence from Ayios Stephanos in Laconia*, Los Angeles, Calif., 1976 (Monumenta Archaeologica, 4), pp. 3 and 64—65.

[23] See n. 40 (infra).

less frequently after LM IIIA1, become rare during LM IIIB and are almost extinct in LM IIIC and sub-Minoan.

Conical cups seem to be all-purpose vessels, used not only to hold food and drink but for various other things as well. The scorched lip on some and the blackened rim of more suggest a use as lamps,[24] although there are other Minoan lamp shapes better suited for the purpose. They may have been used as spindle whorls, to judge from deliberately pierced examples.[25] At Phylakopi a conical cup was built into the base of another pot, at Akrotiri one was used as a stopper for a large stirrup jar, and at Ayia Irini conical cups are built into the breasts of female terracotta figures from the shrine.[26]

Some kind of ritual use of conical cups seems likely. Hogarth found almost 200, containing carbonized remains of food, inverted in rows in the pillar crypt of a house on the lower Gypsades hill near the Palace of Knossos.[27] In an altar-like construction in the Diktaian Cave he found many more, together with fragments of about thirty offering tables and several "fruit stands".[28] They are present in great numbers at peak sanctuaries: at Juktas there were masses of conical cups, many of them inverted and in layers in one of the rooms against the upper terrace wall, and at Kato Syme many again along with numerous chalices.[29] From Karphi comes a cup containing a figurine with raised arms bearing a miniature conical cup on her head.[30] A house by the acropolis above the village at Knossos yielded a "foundation deposit" of minute conical cups,[31] and another foundation deposit of conical cups, accompanied by bones of young sheep, was found in the Palace of Zakros.[32] In an open space in the southeast section of the Palace of Knossos, in an area of rooms with ritual remains, Evans found numerous fragments of tripod offering tables and so many conical cups that the workmen named the area "the Kapheneion".[33] An LM IB deposit from the North side of the Royal Road included a cup with two Linear A signs in ligature, which had been used as a lamp.[34] At Nirou Khani a "votive deposit" of hundreds of diminutive conical cups was found in a small walled enclosure under a doorway which once connected two rooms, the smaller full of ashes and the larger containing four enormous ceremonial bronze double axes. Most of the conical cups held a lump of pumice, causing Platon to suggest a connection to the eruption of Thera.[35]

Conical cups are also found in great numbers in tombs. At Myrtos Pyrgos the LM IA tomb deposit contained about 450 conical cups,[36] at Poros the LM IA tomb had many, at Kythera tombs D and E each contained between 75 and 100 conical cups, and at the Phourni cemetery of Archanes scores of conical cups were found in the W. room of Building 4 adjacent to Tholos B.[37]

At Ayia Triada a Linear A tablet lists much smaller numbers of other vessels, but 3,000 conical cups.[38]

Why there should be such masses of conical cups at Minoan or Minoanized LM I sites, even allowing for a multiplicity of uses, is a mystery. Were they used only once in frequent religious and funerary rites? Were they broken after banquets? Was there a system of communal meals, as in Iron Age Dorian Crete, during which food and drink were passed in cups? Whatever the reason, "a superabundance . . . was essential to the well-being of any Minoan society of this period", as Coldstream observed in the publication of Kythera.[39]

The appearance of this superabundance of conical cups at Kythera, Phylakopi, Ayia Irini and (as described below) Akrotiri seems to me better evidence for the actual presence of significant numbers of Minoans or descendants of Minoans than the appearance of Minoan or Minoanizing architecture, wall paintings or luxury goods, all of which could result from a "Versailles effect" without any significant movement of people, or of people other than itinerant artisans. The appearance at these sites of Minoan or Minoan-inspired cooking ware and loomweights for weaving is further evidence of a similar nature, pointing in the same direction.[40]

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[24] Schofield (supra n. 20).

[25] E. A. Catling, H. W. Catling, and D. Smyth, 'Knossos 1975: Middle Minoan III and Late Minoan I houses by the acropolis', *BSA* 74, 1979, p. 15.

[26] J. L. Caskey, 'Excavations in Keos, 1964—1965', *Hesperia* 35, 1966, pp. 370—371; K. Thorpe-Scholes, 'Akrotiri, genesis, life and death', in: *TAW* I (1978), p. 442. Several of the examples of the uses of conical cups were brought to my attention by V. Watrous.

[27] D. G. Hogarth, 'Knossos:—II. Early town and cemeteries', *BSA* 6, 1899—1900, p. 76.

[28] D. G. Hogarth, 'The Dictaian cave', *BSA* 6, 1899—1900, p. 98.

[29] A. Karetsou, *Praktika* 1979, p. 415; *Ergon* 1978, pp. 62—64; 1979, pp. 29—30; P. Muhly, personal communication.

[30] M. Seiradhaki, 'Pottery from Karphi', *BSA* 55, 1960, p. 11 and Pl. 4c, cited in A. Kanta, *The Late Minoan III period in Crete—a survey of sites, pottery and their distribution*, Göteborg 1980 (SIMA 58), p. 268.

[31] Catling, Catling, and Smyth (supra n. 25), p. 77.

[32] C. Boulotis, 'Ein Gründungsdepositum im minoischen Palast von Kato Zakros—minoisch-mykenische Bauopfer', *Archäologisches Korrespondenzblatt* 12, 1982, pp. 153—166.

[33] Evans, *PM* II (1921), pp. 307—308. The relationship of the 'Kapheneion' to the surrounding structures may be seen clearly in the recently published plan: S. Hood and W. Taylor, *The Bronze Age palace of Knossos, plans and sections* (BSA Suppl. Vol. 13, 1981), ground plan.

[34] S. Hood, 'An inscribed cup from a Late Minoan IB deposit at Knossos', *Kadmos* 3, 1965, pp. 111—113.

[35] N. Platon, *KrChron* 1, 1947, pp. 631—640, cited in S. Hood, 'Traces of the eruption outside Thera', in: *TAW* I (1978), pp. 681—690.

[36] V. Hankey, personal communication.

[37] Poros: A. Lembese, "Ανασκαφή τάφου εἰς Πόρον Ἡρακλείου', *Praktika* 1967, pp. 199—200. Kythera: J. N. Coldstream, in: *Kythera: Excavations and studies*, London 1972, p. 285. Archanes: Y. Sakellarakis, *Ergon* 1977 (pr. 1978), p. 171, Fig. 113. Conical cups continue to appear in quantity in some LM III tombs, for example tomb B at Episkopi in the Pediadha district in Crete which contained 64 conical cups and relatively few other shapes: Kanta (supra n. 30), p. 268.

[38] L. Godart and J. P. Olivier, *Recueil des inscriptions en Linéaire A* I (Études Crétoises 21, 1976), pp. 58—59. This tablet was called to my attention by R. Stieglitz.

[39] Coldstream (supra n. 37), p. 285, cited in: E. Schofield, 'The Western Cyclades and Crete: A "special relationship" ', *Oxford Journal of Archaeology* 1, 1982, p. 18.

Fig. 1. Conical cups from Mycenae (see footnote 40). (Photograph by Dr. Elizabeth French.)

[40] Limitations of space permit only a brief summary of conical cups on the mainland. The shape (FS 204) appears, generally in relatively small numbers, at some sites in LH I—II, continues into LH IIIA1 and goes out of use thereafter. Examples include pre-LH IIIB deposits at Pylos, the Gouvalari tombs, Nichoria (a few in LH I—II; 4% by rim count in an LH IIIA1 deposit), Korakou (even among unpainted wares, jugs and stemmed goblets more common), Prosymna, Asine, Dendra and Tiryns (*Pylos* I, pp. 223, 359—360 and Figs. 337, 353—354; III, pp. 35, 42, 47, 51, 52, 92, 198 and 205; G. Korres, 'Messenia', *Ergon* 1975, p. 132; O. Dickinson and S. Martin, pers. comm. re Nichoria; C. Blegen, *Korakou: A prehistoric settlement near Corinth*, Boston 1921, pp. 43, 57—59 and Fig. 81, and J. Davis, 'Late Helladic I pottery from Korakou', *Hesperia* 48, 1979, pp. 234—263; C. Blegen, *Prosymna*, Cambridge, Mass. 1937, pp. 413—414; B. Frizell, *An early Mycenaean settlement at Asine: The Late Helladic IIB—IIIA1 pottery*, Göteborg 1980, pp. 32, 44, 49, 68 and 109, Fig. 8, nos. 152 and 153 and Fig. 12, nos. 249 and 250; P. Åström, *The Cuirass Tomb and other finds from Dendra*, SIMA IV, Göteborg 1977, p. 100; A. Persson, *New tombs at Dendra near Midea*, Lund 1942, p. 42 and Fig. 47, nos. 2 and 3, pp. 92—93 and Fig. 104, nos. 3 and 4, and p. 99 and Fig. 110, no. 5; H. Döhl, in: *Tiryns* VIII, Mainz 1975, p. 145, nos. 51—52.). At Voroulia in a closed LH I deposit totaling 120 vases and many sherds no conical cups appeared (Y. Lolos, pers. comm.). Their scarcity at Ayios Stephanos has already been noted. In Athens, 4 wells with LH IIB—IIIA1 material contained conical cups; in one well 196 fragments represented 5.6% of the identifiable sherds. Certain aspects of the nearby contemporary tombs also suggested ties with Crete (P. Mountjoy, *Four early Mycenaean wells from the south slope of the Acropolis at Athens*, MIGRA Fasc. IV, Gent 1981, pp. 70—71 and 79; S. Immerwahr, *The Neolithic and Bronze Ages*, Princeton 1971, The Athenian Agora XIII, p. 151; *idem*, 'The use of tin on Mycenaean vases', *Hesperia* 35, 1966, p. 386 (3 tin-coated examples); see also M. Benzi, *Ceramica Micenea in Attica*, Milan 1975, pp. 48—50.). At Kokla an important tholos recently excavated by K. Demakopoulou yielded three conical cups of silver, the first examples known in precious metal. The tomb seems to show other Minoanizing features and to have been in use in LH II—IIIA1 (K. Demakopoulou, pers. comm.). At the hilltop sanctuary of Apollon Maleatas near Epidauros early Mycenaean levels revealed part of a terrace wall, ashes, bones of bulls and goats, fragments of stone vases, and a long series of double axes. The pottery includes about 100 conical cup fragments comprising about 20% of the total sherds, compared to about 30% each for Vaphio cups and kylikes (V. Lambrinudakis, pers. comm. See also V. Lambrinudakis, 'Remains of the Mycenaean period in the sanctuary of Apollon Maleatas', in: *SCABA* (1981), pp. 59—63; *Praktika* 1974 (pr. 1976), p. 96; 1975 (pr. 1977), pp. 167—171; 1976 (pr. 1978), pp. 202—207; 1977 (pr. 1980), pp. 187—191).

The most significant appearance of conical cups on the mainland occurs at Mycenae. Wace, describing the pottery from below the W. Lobby of the palace lists "Handleless cups, five fragments" and adds, "This type of cup . . . is extremely common in all the deposits below the floors of the Palace. . . . (T)his type . . . with pronounced string-marks on the base showing how it had been cut off from the wheel . . . seems to be very characteristic of LH I—II deposits. They occur in LH I—II strata at Korakou, and one was found with the earliest group of interments in Tomb 517 . . . At Knossos and other Cretan sites cups of this shape are extremely common at the end of the Middle Minoan Period and in LM I—II. Here too below the floor of this lobby we find them with LH I sherds. On the other hand, in tombs which contain typical LH III pottery, cups of this type are as rare as they are common in the earlier period. For instance, in the deposits of the early strata by the Lion Gate, cups of this type hardly occur. This type of handleless cup begins at Mycenae in LH I, was common throughout LH II and died out at the beginning of LH III, and can therefore be used as valuable evidence in dating deposits when painted pottery is lacking." (Refs. omitted. A. Wace, 'Excavations at Mycenae, 1921—1923', *BSA* 25, pp. 150—151, Fig. 33c.) Conical cups were also "very common" in the drain below the room N. of the W. Portal (p. 218). (*Fig. 1* shows 11 of the conical cups excavated by Wace.) From below the court of the palace came 13 fragments (p. 197) and a small test below the Ante-Chamber to the Domestic Quarters yielded 27 cups, listed as LH II (p. 259). About ten sherds were found in the dromos of the Tomb of Aegisthus, possibly coming from the fill (p. 311). Many conical cups also appeared in units of the fill levels of the Citadel House along with LH II—IIIA painted ware; here conical cups were much more frequent than goblets. (My profound thanks go to Dr. E. French for the photograph, information about the Citadel House and much other advice and aid.)

That conical cups appear at Mycenae in LH IIA—IIIA1 (LH I—II in Wace and Blegen's terms) and are common in deposits beneath the palace and in the Citadel House fill but not in graves or tombs, in contrast to Crete where they appear in vast numbers much earlier and in tombs, seems significant. While conical cups may have been more common at Mycenae than at other excavated mainland sites, it is unlikely the numbers or proportion relative to other pottery approached those of Crete, Melos, Kea or Thera. The lack of well-preserved LH I—II habitation levels makes interpretation hazardous, but the nature of the finds at Mycenae may possibly offer some support for the proposed presence of Minoan or Minoanized traders or craftsmen (e.g., E.N. Davis, *The Vaphio cups and Aegean gold and silver ware*, New York 1977, p. 332). Other explanations such as adoption of a Minoan cult practice or custom, high-level intermarriage with accompanying retainers, or merely enthusiastic local acceptance of a useful shape cannot be entirely excluded. Further, we have no way of knowing whether the putative craftsmen came in response to the attraction of Mycenaean wealth, were sent because of a "special relationship" between a Cretan palace and Mycenae (Dickinson, supra n. 14, pp. 53—55) or came from Thera after the earthquake or eruption. What can be said is that on the mainland conical cups appear more frequently at sites which show other indications of significant Minoan contact and influence.

Let us now turn to Thera, where the suggestive presence of masses of conical cups is accompanied by many other kinds of archaeological data. In weighing the Theran evidence, we should first recognize the present limits of our knowledge. We have as yet no cemeteries or sanctuaries (apart from household shrines). Except for the area east of Sector Delta in the stream bed and a few other places where there were stratified remains beginning in MC, what we have is largely limited to a part of an LC I—LM IA town. We do not know whether the section excavated is representative of the whole, or whether further excavation would reveal a Minoan palace. What, for example, lies beyond the splendid facade at Xeste 4? What rests at Potamos, 600 meters to the East, where in 1899 Zahn uncovered nine stone vessels, four of them Minoan? Or at Balos, over 1,000 meters toward the North, where in 1867 and 1870 Mamet and Gorceix discovered remains of Bronze Age houses with large pithoi and fresco fragments of lilies? S. Marinatos suggested in 1976 that the Akrotiri site might extend to Balos, in which case what we have to date is a very small part of an enormous settlement.[41]

At Akrotiri, as at Phylakopi and Ayia Irini, the whole Minoan pottery repertory of bowls, basins, jars, pithoi and cooking trays, both tripod and flat, is imported or produced locally. The decoration of almost all the large storage pithoi is Minoan of Minoanizing. Minoan types of spindle whorls and Minoan shapes of lamps and "fireboxes" (or, perhaps better, containers for distillation or incense burners) are common. At Akrotiri as at Phylakopi[42] there is evidence for increasing Minoanization during the course of LC I: the local pottery of late MC III-early LC I date recovered from the pits dug to hold the roofing pillars and from the excavation of the NW corner of Xeste 2 in 1978 is significantly different in the degree and manner of adaptation of Minoan features from the pottery of the final destruction level.[43] However, the local ceramic tradition persists throughout LC I in the way Minoan-inspired motifs are applied and in many shapes, including loop-handled bowls of Middle Cycladic origin, oblong vessels (*kymbai*) often lavishly decorated, ribbed vases, cylindrical "plant pots", and particularly nippled ewers. Some of the nippled ewers have painted eyes, some ears, some single or double necklaces, and sometimes they are portrayed on other vessels; the decoration may contain religious iconography and imply cultic use.[44] There are also small numbers of mainland vases in the final LC I destruction level at Akrotiri, just as there are a few Theran or Theran-inspired vases in the Shaft Graves, but this in itself suggests nothing more than minor trade contact.[45] What is most striking again, however, are the thousands of conical cups, some perhaps from cultic contexts.[46]

Apart from pottery, Minoan stone bowls are imported in quantity, and a local stone vase industry using Minoan techniques flourishes.[47] Linear A appears in the form of an inscription of four signs on a Theran nippled ewer.[48] Horns of consecration are present in Sector Delta and are depicted in the "miniature fresco" and the frescoes from Xeste 3 and the "Porter's Lodge" in Sector Alpha. Ostrich eggs, red jarosite paint pigment perhaps from Cyprus and Canaanite pottery all suggest participation, direct or indirect, in a widespread trade network, as does the appearance of many lead weights.[49]

As to Akrotirian architecture, we note the use in one building of gypsum imported from Crete, the appearance of the pier-and-door partition, the resemblance of the southwest corner of Delta room 16 to a Minoan shrine storeroom, and the Minoan-type lustral basin in Xeste 3, with its remarkable wall paintings incorporating iconography familiar in Crete. The use of ashlar is common, as in Crete. There are also architectural features with no exact parallels in Crete such as the location of windows, and the absence to date of Minoan light wells or pillar crypts has also been noted.[50] If our view as to the presence of Minoans and degree of Minoan influence were to depend on architecture

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[41] P. Warren, 'The stone vessels from the Bronze Age settlement at Akrotiri, Thera', *ArchEph* 1979, p. 109; N. Platon, *Zakros: The discovery of a lost palace*, New York 1971, p. 272; F. Fouqué, *Santorin et ses éruptions*, Paris 1879, pp. 110—111; S. Marinatos, *Excavations at Thera* VII, Athens 1976; J. Sperling, *Thera and Therasia*, Athens 1973, p. 13 and pp. 53—56.

[42] See n. 10 (supra).

[43] M. Marthari and C. Palyvou, 'A late MC III-early LC I destruction in Akrotiri: Archaeological evidence', a paper read at the workshop on Cycladic chronology held at the Institute of Archaeology, London, 1983.

[44] C. G. Doumas, 'The Minoan thalassocracy and the Cyclades', *AA* 1982, p. 9; Thorpe-Scholes (supra n. 26), p. 444.

[45] M. Marthari, *ArchEph* 1980, pp. 182—210. See also J. F. Cherry and J. L. Davis, 'The Cyclades and the Greek mainland in LC I: The evidence of the pottery', *AJA* 86, 1982, pp. 333—341.

[46] C. G. Doumas, *Santorini. A guide to island and its archaeological treasures*, Athens 1980 (English edition), p. 27. Separate deposits are noted in C. G. Doumas, *Thera: Pompeii of the Ancient Aegean*, London 1983, pp. 61—62, Pl. 11 (conical cups fallen from an upper storey of Room 6 in the West House); S. Marinatos, *Excavations at Thera* IV, Athens 1971, p. 15 ("dozens of small handleless cups" from Delta 7 "were used in the religious ceremonies and were sometimes placed upside-down on the sacred ground"); *idem*, *Thera* V, Athens 1972, p. 13 and Pl. 6*a* (deposit from the NW corner of the Vestibule of the Ladies, described as "a hoard of handleless bowls peculiar to sanctuaries"); *idem*, *Thera* VI, Athens 1974, p. 21, Pl. 33*b*.

[47] Warren (supra n. 41), pp. 105—106.

[48] Marinatos, *Thera* IV (supra n. 46), p. 14.

[49] See H. G. Buchholz, 'Some observations concerning Thera's contacts overseas during the Bronze Age', in: *TAW* II (1980), pp. 227—240. One system of lead weights in use at Akrotiri, Ayia Irini and Phylakopi is said to be the standard Minoan system, but the existence of large numbers of weights said to belong to other systems, and the process of "rounding off" variations in weight required to research the conclusion may make it prudent to suspend judgement in this regard until further evidence is available. See K. M. Petruso, 'Systems of Weight in the Bronze Age Aegean', Indiana University dissertation, 1978 and 'Lead weights from Akrotiri: Preliminary observations', in: *TAW* I (1978), pp. 547—554. Critiques of the evidence are presented by E. Bennett in *Kadmos* 19, 1980, pp. 12—23, and by J. Cherry in 'Quantal analysis of metrological data from the prehistoric Aegean', a paper presented at the 82nd general meeting of the Archaeological Institute of America, New Orleans, 1980. In any event the adoption of a convenient system of weights and measures need not in itself indicate any profound impact of one society on another or even very extensive trade, any more than in the case of the adoption of the Maria Theresa Thaler by Abyssinia.

[50] J. W. Shaw, 'Consideration of the site of Akrotiri as a Minoan settlement', in: *TAW* I (1978), p. 434.

alone, it would be difficult to judge whether the differences could be explained by differences in local building materials or by the style of a particular architect, and conversely whether the similarities could be due to the "Versailles effect", or to resident or itinerant Minoan craftsmen. We should note, however, that the toilets in the individual houses at Akrotiri connect to a well-built common drainage system, indicating central planning, and that at Akrotiri as at Trianda and many sites in Crete LM IA is a period of grand building or rebuilding.

When we come to the wall paintings, we face the accident of preservation and recovery in a special sense. What the volcanic tephra has preserved is so striking that it rivets attention and sways judgement. Consider the wall paintings from above the lustral basin in Xeste 3, which include Minoan iconographic features such as women gathering saffron crocuses and pouring them on the ground near a seated female, probably a goddess. The seated female wears a gold pendant of the Mallia bee or wasp pendant type. In front of her is a monkey, and a griffin appears at her flank as in the two Minoan seals discussed by Dr. Helga Reusch.[51] Finally, the lustral basin fresco of Xeste 3 includes a representation of horns of consecration, as does the lustral basin fresco at the Minoan palace at Zakros.[52] The influence of Minoan religious iconography seems evident.

The "miniature fresco" has already spawned a considerable literature, including suggestions of Minoan, Cycladic and Mycenaean elements present in the fresco and by extension at Thera.[53] Here in particular, penetrating the world of painter and patron involves difficult questions of naturalistic depiction versus artistic convention, of specific incident versus genre scene, of cultural characteristic versus international style or Versailles effect—in short, of the inspiration of the artist and the aspiration of the owner. Consider, for example, what a visitor to Syme might have seen on the walls of the house of Nireus, whose three ships are the smallest contingent in Homer's Catalogue, "a weak man with a small following."[54] Surely Nireus might well have chosen to be depicted with other ships and wearing the status military item of the day, the boar's tusk helmet, and to have his wife or daughter shown wearing large round gold earrings.

We know the boar's tusk helmet first and best from Middle Helladic and Mycenaean contexts, but this may be due to the great difference between Helladic and Minoan burial customs and to the fact that almost all our evidence for LH I comes from burials, whereas almost all our knowledge of LM I comes from settlements and sanctuaries. Worked boar's tusks probably intended for a helmet have been found in an LM IA tomb at Poros in Heraklion.[55] The sealing from Ayia Triada showing what Levi described, probably correctly, as a boar's tusk helmet, listed by J. Borchhardt as MM III[56] but more safely described as burnt in the LM IB destruction, is in any event from a Minoan seal which is not later than LM I. One of the Zakros sealings from the LM IB destruction appears to show a helmet with a few boar's tusks.[57] There are pierced boar's tusks from Kea in LM I.[58]

Boar's tusk helmets are clearly not limited to the mainland in LB I. Even if we assume mainland manufacture for all of them, boar's tusk helmets would have made splendid items for gift exchange or trade, and it is easy to imagine Minoans receiving them in exchange for the Type A swords and Minoan luxury goods found in the Shaft Graves. In the Iliad, Autolycus steals a boar's tusk helmet in Boeotia and gives it to Amphidamas of Kythera, from whom it goes as a guest-gift to Molos the Cretan, who gives it to his son Meriones, who gives it to Odysseus.[59] Given the fact that the tusk of a boar splinters easily,[60] it may be that such helmets were for display rather than fighting. If, however, these helmets were effective for warfare, then they would constitute a "survival factor" of the kind neighboring societies in violent times quickly adopt if they can.[61]

It should be noted that other helmets are also shown in the miniature fresco, including a hooked type which we know from Minoan representations.[62]

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[51] Marinatos, *Excavations at Thera* VII, Athens 1976, pp. 58—66, Pl. C; C. G. Doumas, *Ergon* 1980 (pr. 1981), pp. 40—41 and supra n. 46, pp. 106—07, Figs. 5 and 7, and Pls. 30—32; H. Reusch, 'Zum Wandsschmuck des Thronsaals in Knossos', in: *Minoica*, Berlin 1958, pp. 334 ff.

[52] A. Megaw, 'Archaeology in Greece, 1966—67', *ArchRep* 1966—67, p. 23.

[53] S. Immerwahr, 'Mycenaeans at Thera: Some reflections on the paintings from the West House', in: K. H. Kinzl, ed., *Greece and the Eastern Mediterranean in ancient history and prehistory. Studies presented to Fritz Schachermeyr on the occasion of his eightieth birthday*, Berlin—New York 1977, p. 177; L. Morgan Brown, 'The ship procession in the miniature fresco', in: *TAW* I (1978), pp. 629—644; O. Negbi, 'The "miniature fresco" from Thera and the emergence of Mycenaean art', ibid., pp. 645—655; S. Iakovidis, 'Thera and Mycenaean Greece', *AJA* 83, 1979, p. 101; P. Warren, 'The miniature fresco from the West House at Akrotiri, Thera, and its Aegean setting', *JHS* 99, 1979, pp. 115—129; G. Gesell, 'The "town fresco" of Thera: A reflection of Cretan topography', *Proc4CretCongr* 1 (1980), pp. 197—204; J. Davis, 'Mycenaeans at Thera: Another look', *AJA* 85, 1981, pp. 69—70; J. L. Crowley, *AJA* 87, 1983, pp. 83—85; E. Davis, 'The iconography of the ship fresco from Thera', in: W. Moon, ed., *Ancient Greek art and iconography*, Madison, Wisconsin 1983, pp. 3—14.

[54] Homer, *Iliad* 2.671—675.

[55] Lembese (supra n. 37), p. 208 and Pl. 192*b*.

[56] J. Borchhardt, *Homerische Helme: Helmformen der Ägäis in ihren Beziehungen zu orientalischen und europäischen Helmen in der Bronze- und frühen Eisenzeit*, Mainz 1972, Kat. 9B1, p. 52.

[57] Evans, *PM* IV,2, p. 867 and Fig. 854.

[58] Schofield (supra n. 20).

[59] Homer, *Iliad* 10. 260—270, cited in G. L. Huxley, *Minoans in Greek sources: A lecture*, Belfast 1968, p. 1.

[60] Personal communication from H. Blitzer Watrous.

[61] The immediate assimilation by the North American Plains Indians of guns and horses, acquired from East Coast tribes before the arrival of Caucasians on the Plains, and the resulting transformation of Plains Indian culture is a notable example: J. Jablow, *The Cheyenne in Plains Indian trade relations*, Seattle 1952 (American Ethnological Society, Monograph 19); F. Secoy, *Changing military patterns in the Great Plains*, Seattle 1953 (American Ethnological Society, Monograph 21). Also illustrative is the diffusion of defensive improvements via the "fortification families" of Sangallo, Savorgnano, Peruzzi and Genga, who carried the "trace italienne" from the Baltic to the Caribbean. See, *e.g.*, J. Keegan, 'Command performances', *New York review of books* 29, 21 and 22, 1983, p. 10.

[62] See the remarks of L. Morgan at this Symposium (infra).

Other aspects of the wall paintings have also been cited as evidence for Mycenaean presence or influence at Akrotiri, including rectangular body shields, earrings resembling jewelry from the Shaft Graves, and the similarity of the profile of the "admiral" to the profile head on the amethyst bead seal from Shaft Grave Gamma.[63] The general observations made regarding the helmets apply as well to the shields.[64] The jewelry seems to me insufficiently diagnostic or (with respect to the scalloped earrings) not traceable to a particular source, except perhaps in the case of the Mallia-type insect pendant worn by the seated figure in the lustral basin scene. Jewelry above all is subject to the dictates of style and to the Versailles effect. As for the profiles in the painting and seal, I would follow J. Betts, J. Boardman, and S. Hood in regarding the seal as Minoan in manufacture and probably in subject; the detailed analysis by J. Betts is particularly persuasive.[65] A dagger[66] or fragment of sword blade[67] inlaid with gold battle axes, purchased in 1873 in Athens and said to come from Thera,[68] has been called a simpler counterpart of the grand inlaid daggers from Shaft Graves IV and V,[69] but the complex pyrotechnology required for such "painting in metal" makes it unlikely in my view that these daggers were the product of a mainland tradition established prior to the eruption of Thera.[70]

The nature of the wall paintings permits, indeed invites, a variety of interpretations. As evidence of the presence of particular people, I prefer the many thousands of conical cups.

On the whole, evidence of Mycenaean presence or influence on Thera toward the end of LC I seems slight, compared to the weight of Minoan impact. Let us recall, however, our cautionary tales, for at a time of increasing Mycenaean wealth and foreign contacts there could well have been a Mycenaean "karum contact", or other contact of a kind difficult to detect in the archaeological record, particularly here due to the Versailles effect and other pervasive imprint of Minoan culture. There may have been significant Mycenaean-Theran trade in the kind of goods that generally leave little or no trace, such as metals, textiles, hides, foodstuffs and slaves. A millennium later, the Carthaginians were formidable mariners and traders, but we would never know it from non-literary archaeological evidence. Moreover, even identity of ethnic background and geographic origin may not be a reliable indicator of political relationships. For example, it is remotely possible that the wall paintings reflect the moment when a Minoan or Minoanized colony on Thera gained independence with Mycenaean aid.[71] However, the evidence we do have suggests a heavy Minoan impact at Akrotiri. Indeed, this is what we should expect at a site so close to Crete at the time of maximum Minoan wealth, security and expansion in LM IA.

What then can we say in summary about the nature of the relationship of Minoan Crete to the Cyclades and about the thalassocracy? Various views and models have been advanced including those of K. Branigan, J. Davis, C. Doumas, C. Renfrew, E. Schofield, and P. Warren.[72] Let us here address the question simply in terms of (1) political control, (2) economic impact, (3) religious and cultural influence and (4) movement of people.

As to political control, we may never know the answer, unless Thera holds an archive of Linear A tablets with relevant information. We should note, however, S. Hood's "Melian dialogue" argument that in the Bronze Age force was frequently exercised and the stronger prevailed.[73]

K. Branigan has recently suggested that the lack of evidence of a total destruction indicating conquest, or of barracks or other indications of a garrison, argues against a belief that Melos, Kea and Thera were governed directly or indirectly from Crete. Cretan dominion or overlordship, however, could have come about gradually and relatively peacefully (or at least without a violent destruction leaving unmistakable signs of warfare in the archaeological record), and forms of control could have been exercised without the prior stationing of a garrison, as in the case of the Athenian subjugation of Melos when it refused to join the Delian League. The gradual growth of a Minoan trading colony and intermarriage (perhaps including intermarriage of leading or ruling families) could have led to Minoan political control. Nor is impoverishment of native inhabitants a necessary concomitant of control, direct or indirect, exercised

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[63] Immerwahr (supra n. 53); Crowley (supra n. 53); Iakovidis (supra n. 53). For a contrary view, see especially Davis (supra n. 53).

[64] L. Morgan has observed that mainland representations of the rectangular body shield appear only on four objects from Shaft Grave IV at Mycenae and one sherd from Tiryns, compared to at least eight representations on the "miniature fresco" from Thera (personal communication). At least two of the four objects from Shaft Grave IV—the Lion Hunt Dagger and the Silver Siege Rhyton—are debatable as representative of a Mycenaean artistic tradition.

[65] J. Betts, 'The seal from Shaft Grave Gamma—A "Mycenaean Chieftain"?', *TUAS* 6, 1981, pp. 2—8; J. Boardman, *Greek gems and finger rings*, London 1970, p. 54, Pl. 44; S. Hood, *The arts in prehistoric Greece*, Harmondsworth 1978, pp. 224—242, and 273, n. 105.

[66] Hood (supra n. 65), pp. 181 and 267, n. 57 ("The low midrib suggests a dagger rather than a sword.").

[67] Dickinson (supra n. 14), pp. 68 and 117. n. 7 ("The Thera hilt-fragment was bought, with a fragment of inlaid blade that from its dimensions should belong to a sword, perhaps the same weapon, in 1873 . . .").

[68] Thorpe-Scholes (supra n. 26), p. 440.

[69] Iakovidis (supra n. 53), p. 101; photographs in E. Vermeule, *Greece in the Bronze Age*, Chicago 1964, Pls. XII and XIIIC.

[70] A workshop for manufacture of the inlaid blades may have been established at some point at Mycenae, but if the technological tradition has its origin elsewhere the Theran blade may also. A 'Caphtorite' weapon decorated with gold and lapis lazuli is listed on one of the Mari tablets burnt in the destruction attributed to Hammurabi in the 18th Century B.C.: G. Dossin, *Syria* 20, 1939, p. 112, cited in Hood (supra n. 65), p. 178.

[71] The American colonies established independence with French aid at the moment when their artifacts and architecture most closely resembled those of England.

[72] Warren (supra n. 7), p. 103 and (supra n. 41), p. 108; Doumas (supra n. 43), pp. 5—14; Schofield (supra n. 20); J. L. Davis, 'Minos and Dexithea: Crete and the Cyclades in the later Bronze Age', in: *Papers in Cycladic Prehistory* (1979), pp. 148—150; K. Branigan, 'Minoan Colonialism', *BSA* 76, 1981, pp. 23—31; Renfrew (supra n. 9), pp. 223—227; Renfrew, 'Bronze Age Melos', (supra n. 9), pp. 40—41; Renfrew, 'Polity and power: Interaction, intensification and exploitation', (supra n. 9), pp. 271—290.

[73] See the paper by S. Hood at this Symposium (infra).

by a Cretan palace, in the Cyclades any more than in Crete.[74] Even unprepossessing colonies sometimes acquire friends at court. Moreover, a "tithe for Minos", or even a quarter, might have seemed a small price to pay for security and expanding horizons.

As to economic impact, P. Warren's conclusion that the wealth of the islands can only be explained in relation to a wider Minoan-dominated trading network seems justified.[75] Throughout history the Cyclades have experienced isolation, abject poverty and partial abandonment at times of insecurity and piracy, as in the transition from Early to Middle Cycladic, beginning of the Iron Age, and 16th Century A.D.,[76] and on the other hand relative prosperity particularly during periods when a dominant power provided security for sea-borne trade, as in the case of Venice, Genoa, Byzantium, Athens for a time, and, I believe, Crete in LM I.[77] Intensive trade in metals, luxury goods and many other items, often accompanied by Minoan traders, appears likely from the evidence.

Religious impact seems likely, particularly at Akrotiri given the lustral basin fresco and the existence of what appear to be household shrines of a Minoan type.[78] Indeed, as N. Marinatos has argued, it may not be possible in the case of neopalatial Crete to separate religious influence from political and economic impact.[79]

Cultural influence is obvious. However, while I would describe Minoan influence on the mainland and particularly Mycenae during LM I as resulting largely from the Versailles effect, acting primarily through the upper strata, perhaps facilitated by some movement of craftsmen or other people or even by high-level intermarriage,[80] the Minoan impact on Melos, Kea and Thera surely represents something greater. Our tell-tale superabundance of conical cups widely distributed throughout the sites of Phylakopi, Ayia Irini and Akrotiri in LC I strongly suggests the adoption by a large part of the populace of a peculiarly Minoan ritual or custom, and probably some movement of people creating a population with a significant component of Minoans or descendants of Minoans.

But whether the sons of Minos became governors of the islands, and if so whether through colonization, conquest, or dynastic intermarriage (either at their insistence or in response to the coaxing of Cycladic parents), none can say.

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[74] For a somewhat contrary view of Cycladic economic history and the consequences of the appearance of a dominant power, see Renfrew, 'Polity and power: Interaction, intensification and exploitation', (supra n. 9), pp. 275—276.

[75] Warren (supra n. 41), pp. 107—108.

[76] C. Renfrew, *The emergence of civilization: The Cyclades and the Aegean in the third millennium B.C.*, London 1972, pp. 366—370; J. Rutter, 'Some observations on the Cyclades in the later third and early second millennia B.C.', *AJA* 87, 1983, pp. 69—76; Wagstaff and Cherry, 'Settlement and population change', (supra n. 9), p. 140; W. Miller, *The Latins in the Levant*, 1908, cited in Renfrew (supra); F. Hasluck, 'Depopulation in the Aegean islands', *BSA* 17, 1910—1911, p. 151, cited in Renfrew (supra).

[77] J. Cherry, 'Four problems in Cycladic prehistory', in: *Papers in Cycladic Prehistory*, pp. 43—46; Wagstaff and Cherry, 'Settlement and population change', pp. 136—155 and 'Settlement and resources', pp. 246—263, in: Renfrew and Wagstaff, eds. (supra n. 9); see generally, F. Braudel, *The Mediterranean and the Mediterranean world in the age of Philip II*, 1972; A. Tenenti, *Piracy and the decline of Venice 1580—1615* (translated from *Venezia e i corsari, 1580—1615*, Bari 1960), Berkeley and Los Angeles 1967. Of course the correlation is not absolute; the islands have enjoyed periods of prosperity in the absence of a dominant power, for example from the 8th to 6th Centuries B.C., and at times the relative prosperity of certain islands may have largely been due to piracy.

[78] See the paper by N. Marinatos at this Symposium (infra).

[79] N. Marinatos (supra n. 78).

[80] Supra n. 40.

Discussion

Ch. Starr: We have to be careful about terms. The term 'colony' suggests something to us which would not be applicable to antiquity. The colony of the Assyrians was a trading post without overtones of political control. Perhaps the word 'post' (applicable to British, French, Portuguese, Danish settlements on the coast of India) would be more appropriate than 'colony'.

N. Marinatos: Would you consider frescoes, such as the ones found at Akrotiri, luxury items?

M. Wiener: I presume that members of the higher classes were expected to have frescoes in their houses. The frescoes found near the lustral basin in Xeste 3 at Thera may be in a somewhat different category, in view of their Minoan or Minoanizing religious content.

N. Marinatos: This is exactly what I was getting at. When speaking about frescoes one has to take into account their content, the iconology, in order to determine the degree of Minoanization. If the religious/symbolical meaning is Minoan, this shows a high degree of Minoan influence. The other point regards the absence of shrines at Akrotiri, Thera. I have in fact identified many shrines which are discussed in my paper.

M. Wiener: I mentioned that we do not have as yet from Thera any evidence for cemeteries or sanctuaries, as distinguished from household shrines. Also, sometimes religious iconography in one culture becomes status iconography in another. For example, on the mainland the religious content of what we take to be Minoan cult objects may have been lost. I agree, however, that the wall painting from the lustral basin in Xeste 3 certainly appears to retain its religious content.

J. Davis: The earliest context in which pictorial fresco fragments have been found at Ayia Irini is not in House A nor in the Temple, but in House J in the western part of the site near the fortification wall: namely the dolphin fresco recently published by K. Abramowitz (*Hesperia* 42, 1973, pp. 284—296).

This does not, of course, preclude the possibility that other frescoes were as early or earlier but remained *in situ* on reused walls for a longer time. It is worth noting that we have no pictorial fresco from the Temple, but we have pictorial frescoes from House A and from other houses in the eastern part of the site.

M. Wiener: What is the quality of the house with the earliest pictorial fresco?

J. Davis: Although its plan in LM IA is imperfectly known, it does not seem to have been on the scale of House A and is no grander than other houses.

R. Hägg: I was interested in what you told us about the burial customs at Kültepe and the contrast between the literary and the archaeological evidence. We think that burial customs are conservative. The Assyrian residents, however, had, as you said, adopted new burial customs. It would be interesting to investigate what they kept and what they adopted from this new environment.

M. Wiener: Anatolian burial customs is a subject about which I know very little. K. Branigan has called my attention to the fact that T. and N. Özgüç have suggested that burial under the floor is an Assyrian custom from which the presence of Assyrians at Kültepe might be inferred. It is clear that there are differing views among specialists as to whether an Assyrian custom can be detected at Kültepe. Of course, there are various burial customs in Anatolia at this time. I think it would be very difficult to identify something which is specifically Assyrian without the tablets.

J. Davis: To continue with burial customs, Middle Cycladic graves continue many Early Cycladic burial customs, as shown by John and Gatewood Overbeck ('Consistency and Diversity in the Middle Cycladic Era', in: *Papers in Cycladic Prehistory*, pp. 106—121), and exhibit a great degree of conservatism.

S. Immerwahr: In defense of the Mycenaean presence in Thera: I agree with G. Cadogan about the Minoanization of the Cyclades and the Dodecanese, but we cannot discount the fact that the Mycenaeans are developing at exactly the same period. We have a meld of Minoan and Mycenaean elements during this period of expansion. The Mycenaean presence is not equally strong everywhere. It is true that we have no Mycenaeans in Trianda until after the LM IB period, and we have more of a Mycenaean presence in Kea than at Akrotiri for example.

It is important to trace the Mycenaean elements such as the boar's tusk helmet or the large shield and other war-like elements. Boar's tusks are present in the mainland since Middle Helladic times.

O. Dickinson: There are boar's tusks and plates from Eutresis and Eleusis at the end of the Middle Helladic period which, in fact, is not much earlier than the Shaft Graves themselves, which contain boar's tusks and plates also. However, I am unhappy about assuming that armament found in the Shaft Graves is necessarily Mycenaean. We do not know what Minoan or Cycladic warriors looked like, and we cannot assume that they did not wear boar's tusk helmets.

Going back to Ch. Starr's paper and the "peaceful" Minoans created by Evans, Evans never implied that the Minoans controlled the Aegean by entirely peaceful means. Indeed he thought that Greek myths went back not to the Greeks but to the Minoans. I am sure that there were Minoan warriors and they probably did wear boar's tusk helmets and figure-of-eight shields, but the fact is we just do not know.

M. Wiener: Apparently, the Minoans developed sophisticated weapons during Middle Minoan times as the swords from Mallia show. And S. Hood has shown that type A swords, found in the Shaft Graves, originate in Crete.

W. Niemeier: We have a representation of a boar's tusk helmet on a sealing from Hagia Triada dated LM IB (Borchhardt, *Homerische Helme*, Pl. 4,9). A representation of a figure-of-eight shield even appears on a seal of the protopalatial era from Knossos (*CMS* II 2, no. 32).

Ch. Doumas: One has to take the environment into account. On the islands there would be less of a need to use armour since the sea acted as a protective moat and the ships as shields. On the mainland, however, cities would fight each other and thus there would be a greater need for weapons.

G. Cadogan: I agree with Ch. Doumas, but I would like to point out that our evidence from the mainland comes from tombs, whereas from Crete we have very few tombs and our main evidence comes from buildings.

L. Morgan: Regarding the tower shield: Although there are at least eight represented in the Theran Miniature, there are only about five examples from the mainland, all but one of which come from Shaft Grave IV, and two or three from Crete. There are therefore few in all, and more from Thera than from anywhere else.

Regarding boar's tusk helmets: It is worth pointing out that in the Theran Miniatures this type of helmet is only depicted in the N. Wall scene; on the S. Wall, with the ship procession, none of the helmets is strictly of the boar's tusk type—they are variants of the zone helmet and all are individualized.