



The Minoans in the central, eastern and northern Aegean – new evidence

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Edited by

Colin F. Macdonald, Erik Hallager & Wolf-Dietrich Niemeier



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Middle Cycladic and early Late Cycladic cemeteries and their Minoan elements: the case of the cemetery at Skarkos on Ios*

Marisa Marthari

Cycladic cemeteries in the MB and Early LB: a synopsis

Our knowledge of the Early Bronze Age in the Cyclades, and of the EC (Early Cycladic) I and II periods (Grotta-Pelos and Keros-Syros cultures), in particular, is rooted to a large degree in cemeteries, even though many of these have been found looted. This is due to the identification and excavation of a considerable number of cemeteries, both large and small, scattered throughout the Cycladic islands; to the publication of a number of these sites; and to the combined study of both the cemeteries and burial customs by Doumas.¹ During these periods, cemeteries were situated outside, but close to, settlements. Two main types of graves were used: the cist and the corbelled grave. Some examples of platforms, where funerary rites were conducted, have been found in the cemeteries.²

In EC III (Phylakopi I culture), the evidence for burials starts to become poor. The cist and corbelled types of graves continue to appear, as is shown by occasional examples from sites on Amorgos³ and Syros.⁴ At the same time, two new burial types appear in the Cyclades. On the one hand, infant pithos burials were dug under the floors of houses in the towns at Phylakopi and Paroikia.⁵ On the other, chamber tombs have been recovered on Melos at Aspro Chorio, Spathi and possibly Phylakopi,⁶ and on Thera at Ayios Ioannis Eleemon;⁷ these are rock-cut on the former, and under-dug into the loose volcanic soil on the latter.

The available evidence concerning Cycladic cemeteries in the Middle and early Late Bronze

Age is even poorer. First, they have only been excavated on three islands, at three sites: Ayios Ioannis Eleemon on Thera, Ayia Irini on Keos, and Ailas on Naxos. Second, only the cemeteries at Ayia Irini, have been excavated extensively. At Ayios Ioannis Eleemon, only one tomb has been recovered by excavation, whereas the material from some others has been handed in to the Archaeological Service following destruction caused at the site by the Karageorghis quarry, which was operating in the area. Likewise at Ailas, only two graves have been brought to light by excavation. Third, only the cemeteries at Ayia Irini chronologically cover the whole period under discussion, *i.e.* the Cycladic

* The illustrations were drawn by the painter K. Mavragani (Figs. 7, 9, 12-17, 19, 21, 22-23, 25-27) and the surveyor-engineer Th. Chatzitheodorou (Fig. 4). Most of the photographs of the movable finds were taken by the photographer G. Patrikianos. I thank them all. The illustrations of Figs. 32-33 were drawn by the writer. I would also like to thank the archaeologist K. Karseras for amending the English of my paper and the designer E. Papadea for her help in the presentation of the paper.

¹ Doumas 1977.

² Doumas 1977, 35-52.

³ Barber 1987, 152.

⁴ Barber 1981.

⁵ For the pithos burials at Phylakopi, see Atkinson *et al.* 1904, 15; Dawkins & Droop 1910-11, 6-9; Renfrew with Scarre, Whitelaw & N. Brodie 2007, 49-50, pls. 5a, 7a-b. For the pithos burials at Paroikia, see Rubensohn 1917, 12. On this subject, see also Barber 1987, 83-5, 140.

⁶ Atkinson *et al.* 1904, 23, 234-7; Papadopoulou 1965, 513; Renfrew 1972, 189; Doumas 1977, 49, 53; Barber 1987, 83-5, 140.

⁷ Marthari 2001c, 109-11, 116.



Fig. 1. Map of the Cyclades showing the locations of MC and early LC cemeteries.

dic MB and early LB. The Ayios Ioannis Eleemon cemetery is restricted chronologically to EC III and the early MC, while the Ailas graves date from the end of the MC or the very beginning of LC I. However, the available excavation data demonstrate that the chief EC features of cemeteries and graves survive into the MC and the early LC, although usually altered to a degree, or combined in new ways.

At Ayios Ioannis Eleemon on Thera (Fig. 1),⁸ the aforementioned EC III cemetery of chamber tombs dug into the soft volcanic soil continues to be used in the early MC period, as shown by the pottery recovered from it. This pottery includes characteristic EC III types and wares, such as Dark

Burnished Incised and Geometric pottery, as well as MC types and wares, such as Cycladic White which, however, is in the early phases of its development. As regards the Cycladic White vases from the cemetery, both the continuation of the Cycladic tradition in the beaked jugs and the feeding bottles, and the influence of Minoan types (adapted however to the local style) in the bridge-spouted jar, are apparent.⁹

It seems that some of the chamber tombs at Ayi-

⁸ For the cemetery at Ayios Ioannis Eleemon on Thera, see Marthari 2001c, 109-11, 116.

⁹ Papagiannopoulou 1991, 321-3; Marthari 2001c, 110-1.

os Ioannis Eleemon were used for multiple burials, since three skulls were found in the excavated tomb.¹⁰ This brings to mind the concept of the permanent use of the same tomb for members of a family, which also occurs in the EC cemeteries with cist graves.¹¹ The Ayios Ioannis Eleemon cemetery in the middle of the Caldera probably succeeded the EC cemetery of cist graves, which lay a short distance to the north.¹² It seems likely that the chamber tomb type was only prevalent on the volcanic islands of Thera and Melos, where the ground was favourable to their construction.¹³ This, at least, is the picture that emerges through comparison with the cemeteries at Ayia Irini on Keos (see below), which were largely contemporary with the one at Ayios Ioannis Eleemon on Thera, but which do not contain chamber tombs.

The early MC town at Ayia Irini on Keos (period IV) (Fig. 1) has yielded three extramural cemeteries and one intramural tomb. A variety of grave types were in use there, “largely determined by the physical environment, which is rocky with thin soil cover but with ready access to an abundant supply of stone,” according to Overbeck.¹⁴ They are pit, regular cist, built-cist and pithos graves, most of which have their distant precursors at the Neolithic Kephala cemetery. Towards the end of period IV, larger, more elaborate built tombs make their appearance, resembling some of the small shaft graves at Mycenae. Platforms containing graves also appear at Ayia Irini. It has been suggested that they were also used to make grave offerings or conduct funerary rites. The pottery from the Ayia Irini period IV cemeteries is local, similar in style to that found at the Ayios Ioannis Eleemon cemetery, but also includes some few Minoan and other imports.¹⁵ Only two cist graves, one extramural, the other within the Great Fortification Wall, date from late MC, *i.e.* Ayia Irini period V; this shows the continuation of the cist grave type into this period.¹⁶

In LC I / LM Ia, Ayia Irini period VI, there is continuity but also change in terms of grave types and burial customs. Jar burials continue with three examples, but they are now intramural and in plain coarse jars. A four-slab cist grave was found in the area of the old West Cemetery North. No plat-

forms of this period have been brought to light. Three large stone-built tombs, nos. 28, 29 and 30, have been excavated in the East Cemetery, showing that the construction of monumental tombs, which began as early as late Ayia Irini period IV, continues into period VI.¹⁷

Grave 28 is a vertical shaft covered with three slabs set into a tumulus bordered by upright slabs. Tomb 29 is a rectangular tomb consisting of two compartments, a vertical shaft and an inner chamber. Tomb 30 was similar in construction to 29.¹⁸ All three tombs had been looted but, fortunately, the robbers left 10 clay vases in tomb 29; photographs of this pottery have not been published. According to Overbeck, the vases include conical cups dating to no later than the LC I / LM Ia period, and two vases imitating Minoan stone vases of earlier date, which look to have been heirlooms from earlier periods.¹⁹

Finally, Klon Stephanos excavated two cist-graves, considered to be of MC date, at Ailas on Naxos (Fig. 1).²⁰ The first²¹ of these graves contained bronze metal tools, the second,²² pottery. It is the pottery which dates this latter grave to the end of the late MC, or to the very beginning of the LC I period²³ at the latest, but in any case to before

¹⁰ Marthari 2001c, 110.

¹¹ Doumas 1977, 55–58; Marthari 2001c, 116.

¹² For this EC cemetery, see Karo 1930, 135.

¹³ Marthari 2001c, 109–10, 116; Barber 1987, 140.

¹⁴ Overbeck 1989, 204.

¹⁵ For the Ayia Irini on Keos period IV cemeteries see, Overbeck 1989, 184–205.

¹⁶ For the Ayia Irini on Keos period V graves see, Overbeck 1986, 79–80.

¹⁷ For the Ayia Irini on Keos period V tombs see, Overbeck 1984, 116–7.

¹⁸ Overbeck 1984, 116–117; Schallin 1993, 94–7.

¹⁹ Overbeck 1984, 117.

²⁰ For the chronology of the graves in MC, see Stephanos 1903, 57; Renfrew 1972, 519, no.25; Fotou 1983, 47–8.

²¹ Stephanos 1903, 57; 1905, 224; Papathanasopoulos 1963, 129–30, pl. 62, grave no. 23.

²² Stephanos 1903, 57; 1905, 221, 225; Papathanasopoulos 1963, 130–131, pl. 63–4, grave no. 24; Maragou (ed.) 1990, 179, no. 191.

²³ Barber dates the Ailas graves to the late MC or early LC, Barber 1987, 152–3.



Fig. 2. Map of Ios showing the site of Skarkos.

the Seismic Destruction at Akrotiri, Thera. According to the excavator, eleven clay vases were unearthed, eight of which have been identified in the National Archaeological Museum and published by Papathanassopoulos.²⁴ They are as follows: six, one-handled conical cups (five dark-coated and one with tortoise-shell ripple pattern decoration), a one-handled, semi-globular cup (also with tortoise-shell ripple pattern), and a plain, handleless conical cup. These vases are imports from Minoan Crete and/or local imitations of Minoan prototypes and, consequently, are indicative of the Minoan influence on Naxos, the island of Ariadne, in the late MC and early LC period. This idea of a close relationship between Naxos and Crete is further bolstered by the relatively recent investigations at settlement sites on this island and the adjacent Kato Kouphonisi.²⁵

Furthermore, it is interesting that the graves under discussion were found together with at least another cist grave, although this dates to EC I.²⁶ Thus, the Ailas cemetery is the second cemetery, after Ayia Irini, to display the use of the same site for the burial of the dead over a long period of time

in the prehistoric Cyclades, as well as the survival of the traditional Cycladic grave type, the cist, into late MC, or even to the very beginning of LC I.

Skarkos on Ios (Fig. 1), which has been uncovered in a series of excavations since 1986, is the fourth site that enriches our knowledge of the cemeteries and burial habits in the Cycladic MB and early LB periods. It offers a considerable corpus of new evidence for late MC and early LC cemeteries, particularly of the south western Cyclades, taking into account that cemeteries of these periods of the important towns at Akrotiri on Thera and Phylakopi on Melos have yet to be investigated.

The Skarkos cemetery on Ios: preliminary presentation

Introduction

The site of Skarkos is on a low hill surrounded by a fertile plain near the cove of the large natural harbour of Ios (Figs. 2-3), an island situated at a key point on the network of sea communication routes linking the northern Aegean and mainland Greece with Crete. The excavation has so far uncovered an EC (early EB II, Syros group of the Keros-Syros culture) settlement and the later cemetery under discussion.²⁷ The important EC settlement is bet-

²⁴ See above, note 22.

²⁵ Barber & Hadjianastasiou 1989; Hadjianastasiou 1989; 1993.

²⁶ For the EC grave, see Stephanos 1903, 57; 1905, 221; Papathanasopoulos 1963, 131-132, pl. 65, no. 25; For the chronology of the grave in EC I (Grotta-Pelos culture), based on a cylindrical pyxis found in it, see Renfrew 1972, 519, no.25; Fotou 1983, 36-37; For the possible occurrence of more EC graves, see Fotou 1983, 37 with note 114.

²⁷ For the excavations at Skarkos, see Marthari 1990; 1999; 2001b. For the sealed oblong terracotta objects. from EBA Skarkos, see Marthari 2004. For a study comparing Skarkos to the EBA settlements on the northeast Aegean islands, see Marthari 1997. For the pottery imported to the EBA settlement, see Marthari 2008. For the exhibition of movable finds from Skarkos at the Ios Archaeological Museum, see Marthari 1999, Marthari 2001a; Marthari 2002.



Fig. 3. The hill of Skarkos and the surrounding area.

ter known, given its excellent state of preservation: two-storey buildings have been brought to light, a feature without precedent among Cycladic settlements of the EB. However, the later cemetery is also of great interest for research into the MB and LB Cyclades.

The occupation record of the site is gradually being understood by means of a complex and difficult research project, as it is usually necessary to excavate the earlier settlement and the later cemetery simultaneously. The tombs are usually uncovered high up, at plough level down to a depth of 35 cm, although certain tombs are revealed lower down in the destruction level of the EC site, which they disturb to a depth of 90 cm. The graves have been noted in areas corresponding to open spaces in the EC settlement (Squares 1, 2 and 4), the rooms of EC buildings (Buildings B

and M) and the surviving tops of the walls of these buildings (east wall of Building M) (Fig. 4). Thus it seems very likely that when the area began to be used as a cemetery the EC settlement had been buried to any great extent.

The systematic excavation at Skarkos has, to date, focused on the eastern and northern slopes of the hill, although test trenches have also been opened up on the western slope. The EB settlement is spread across the whole excavated area, whereas the later cemetery lying above it is limited to the north part of the eastern slope of the hill (Fig. 4). The settlement to which the cemetery belongs has yet to be located.

Two groups of graves have been brought to light, group 1 in the north and group 2 in the east of area 26 of the excavation grid (Fig. 4). The graves are of two types: pit-graves and jar burials.

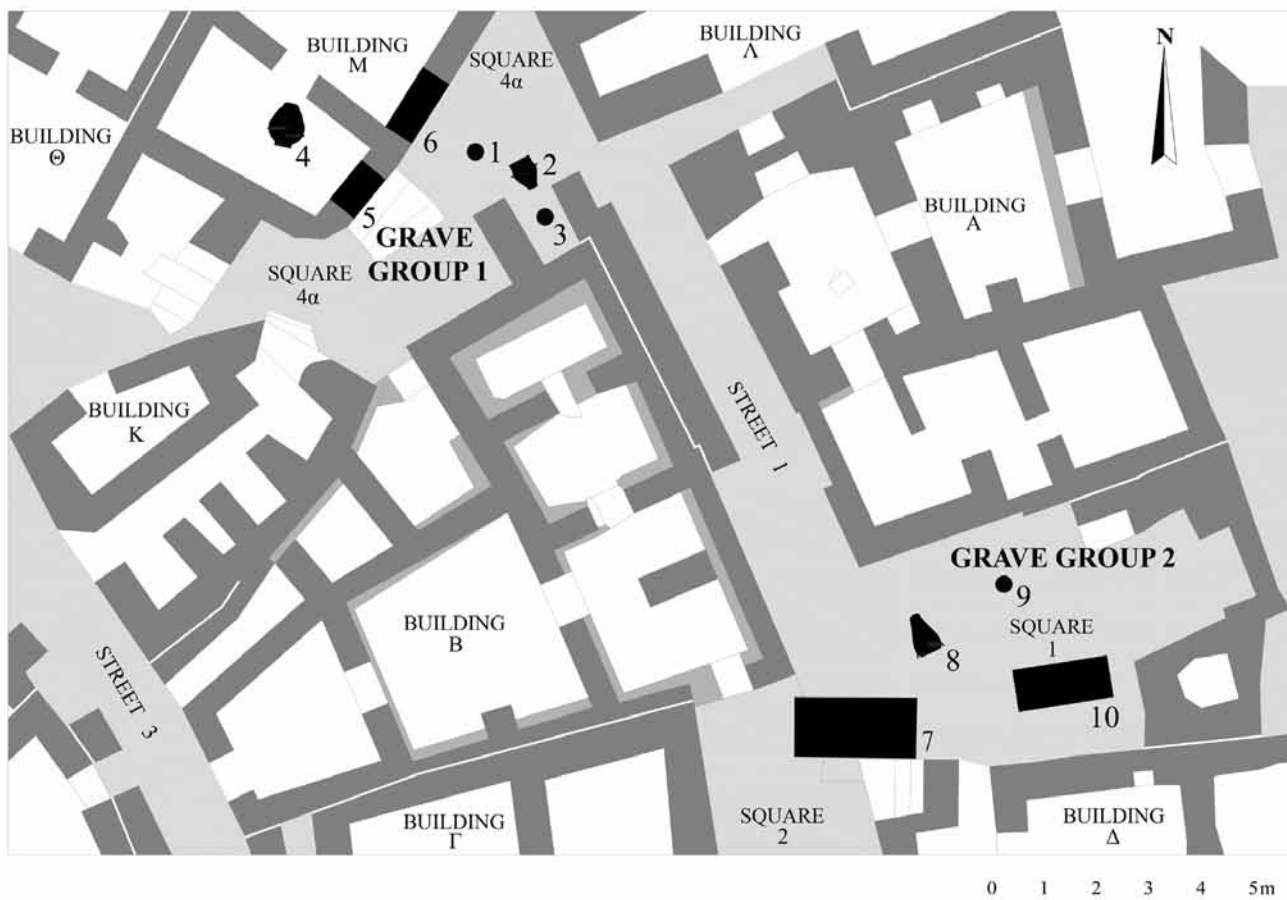


Fig. 4. Plan of the Skarkos site showing part of the EC II settlement (in grey) and the late MB and early LB grave groups (in black) above it.

The graves and their chronology

Grave group 1

Grave group 1 lies above Square 4 and Buildings M and B of the EC settlement. It includes six graves, four of which are jar burials (nos. 1-4), with the remaining two in pits (nos. 5-6).

Jar burial graves 1-3 were found in a row, at depths of between 30 cm and 70 cm, above the west part of Square 4 and the northern room of Building B of the EC settlement. The burial jar of grave 1 (Figs. 4 and 5) was set upright in a cavity dug in the destruction debris of the EC settlement. No human bones or grave goods were found inside it, indicating that this was probably an infant burial. The precise shape of the burial jar is uncertain since its upper part is missing. Therefore, any attempt to date this vessel seems dicey.

The burial jar of grave 2 (Figs. 4 and 6) was

found lying on its side. No human bones or grave goods were found inside this vessel either, meaning that it too probably held an infant burial. The bi-conical shape and crescent-shaped (Fig. 7), in combination with the imprint of a circular mat on



Fig. 5. Grave 1.

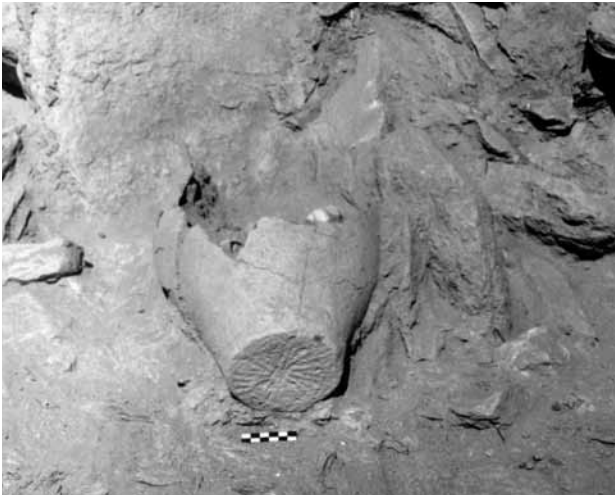


Fig. 6. Grave 2.



Fig. 8. Grave 3.

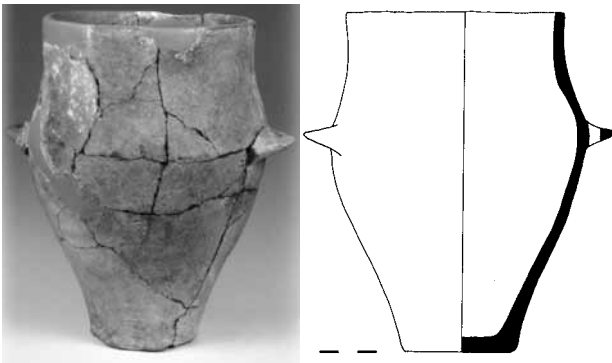


Fig. 7. Grave 2, burial jar (IM 814).

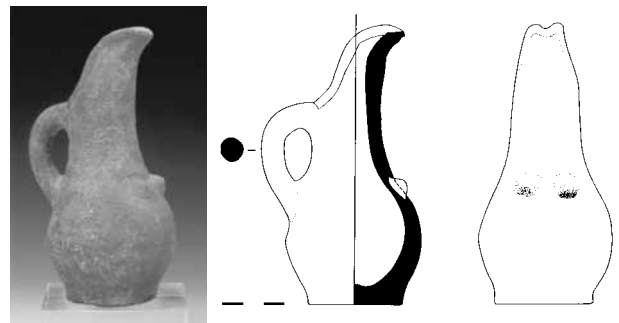


Fig. 9. Grave 3, nipped ewer (IM 606).

its base, suggests a MC date for this medium-sized burial jar. As for the date of the burial, it may be contemporary with or later than the jar.

The burial jar of grave 3 (Figs. 4 and 8) was found smashed by cultivation of the plot. However, large fragments of its lower part, parts of the skeleton, and the grave goods were preserved. A miniature nipped ewer (Fig. 9) and a hollow-mouthed miniature jug (Fig. 10), both local, were found intact among the fragments of the jar. The miniature nipped ewer, a characteristic Cycladic type, has counterparts in the LC I / LM Ia Akrotiri Volcanic Destruction Level,²⁸ even if the broad spout, the thick neck and the absence of painted decoration distinguish it from those examples (Figs. 32 right, 33 right). The hollow-mouthed miniature jug is a minoanising shape,²⁹ which has an abundance of parallels at Akrotiri, Phylakopi and Ayia Irini in early LBA levels.³⁰ Consequently, an early LBA



Fig. 10. Grave 3, hollow-mouthed miniature jug (IM 607).

²⁸ Marthari 1993, type 23:4.

²⁹ For Minoan examples from LM Ia levels, see for instance Catling, Catling & Smyth 1979, no. 237, fig. 35, pl.8i; Popham 1984, pl.131j.

³⁰ Akrotiri, Thera, LC I / LM Ia Volcanic Destruction Level, Marthari 1993, type 28, Phylakopi, Melos (Atkinson *et al.* 1904, 139, pl. XXXV, 6, 9) and Ayia Irini, Keos, LMI a/ LH I and LM Ib/ LH II levels (Cummer & Schofield 1984, no. 92, pl., 48, nos. 429-430, pl. 56, nos. 688-689, pl. 60, no. 851, pl. 65, no. 1442, pl. 81).



Fig. 11. Grave 4.



Fig. 12. Grave 4, burial pithos (IM 904).

date may be suggested for this burial. The small size of the vases used as grave goods most probably indicates that this was a child grave.

Pit-graves 5 and 6 (Fig. 4) have been unearthed north of graves 1 to 3, in a second row and above the surviving top of the east wall of EC Building M. They contained skeletal remains, but no grave goods. As a result, no date can be suggested for these graves.

Grave 4 (Figs. 4 and 11) lay to the west of graves 5 and 6, above the southern room of building M of the EC settlement. This grave is, relatively speaking, quite rich. The burial pithos was found *in situ*, lying on its side and deviating only slightly from the north-south axis, with its mouth facing south and sealed with a roughly cut circular schist slab. It is an ovoid pithos with two crescent-shaped handles, a low cylindrical neck, and a flattened lip (Fig.

Fig. 13. Grave 4, small beak-spouted jug (IM 910).

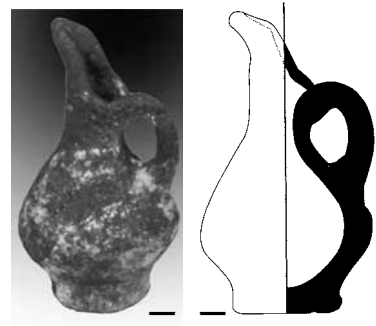


Fig. 14-15. Grave 4, conical cups of low type (IM 906) and of high type (IM 909).



Fig. 16. Grave 4, goblet (IM 666).

12). A rectangular slab of schist was placed under the mouth of the pithos. The upper side of the pithos was recovered directly beneath the cultivation layer at a depth of 34 cm, while the lower side was at a depth of 90 cm, that is to say within the destruction layer of the EC settlement. It is clear that a fairly large pit had been dug to bury this pithos, since it is a large vessel (80 cm high, with a diameter of 60 cm). The funerary pithos was found broken into a number of large pieces which, however, had not been moved out of position; the find had retained its form.

The removal of the slab sealing the mouth and

the upper pieces of the pithos allowed the investigation of the inside of the vessel, which revealed the following: although the bones were found to have been quite disturbed, their positions show that the dead person had been placed inside the pithos in a contracted position, with the head towards the bottom. It seems that during the burial it had been necessary to break the wide lip of the pithos, which had a diameter of 30 cm. (Fig. 12), at certain points in order to manoeuvre the dead person inside. This is indicated by the fragments of the lip found around and beneath the slab that sealed the pithos. The grave goods were all found between the centre and the mouth of the pithos, apparently because they were inserted after the dead person had been placed inside.

The grave goods included six clay vases: a small beak-spouted jug (Fig. 13) along with four conical cups (two of the low type, and two of the high) (Figs. 14-15) and a goblet (Fig. 16). The small beak-spouted jug and the conical cups (Figs. 13-15) are made of the same local red-brown fabric with marble and micaceous inclusions, and seem to have constituted a set. The goblet (Fig. 16) is made of light brown fabric with micaceous inclusions, most probably imported from another Cycladic island.

The hair of the dead person, possibly a girl, seems to have been adorned with a bronze hairpin (Fig. 17), which was uncovered in a slanting position beneath the skull. The hairpin is fairly elaborate in form due to its slender shaft and rolled up head. The external side of the roll is decorated with a series of tiny circular protrusions, which lend a certain grace to the piece. The hairpin belongs to a type, which is also known from other areas in the Aegean and appeared throughout the BA.³¹ An example of the type was found in the Cyclades at Phylakopi, though in a much later context.³²

The way hairpins were used is shown to us on the Altar Fresco decorating the lustral basin in Xeste 3 at LC I Akrotiri.³³ In the Akrotiri fresco, one of the three female figures (the seated figure) wears, according to Televantou, two pins in her hair, one the shape of a lily blossom and the other in the form of a myrtle branch, which are made of sheets of gold and silver.³⁴ The Skarkos example is one

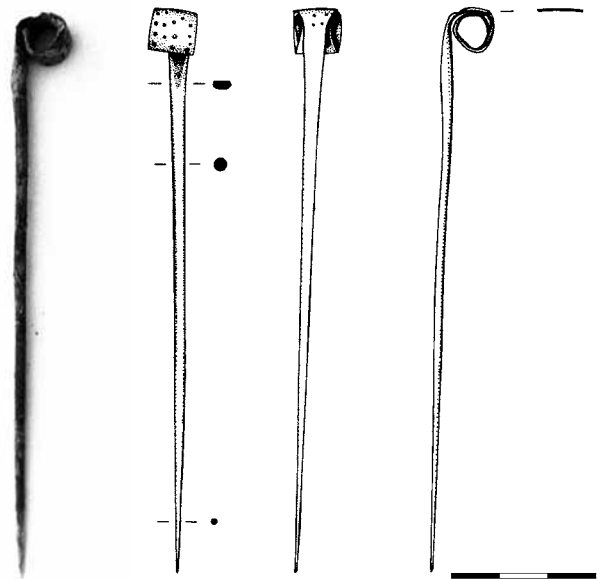


Fig. 17. Grave 4, bronze hairpin (IM 121).

of the finds which document and prove, through excavation, the actual use of hairpins in the Aegean world which were otherwise merely noted in iconography.³⁵

The pottery dates the burial to no later than early LBA. The small beak-spouted jug (Fig. 13) is reminiscent of the numerous miniature beak-spouted jugs from the LC I / LM Ia Akrotiri Volcanic Destruction Level,³⁶ even though it is much more bi-conical in form than those examples. The minoanising shape of the conical cup (Figs. 14-15) had appeared in the Cyclades by the Middle Bronze Age, and continued to be produced until LM IB in Minoan terms, as shown by evidence from Akrotiri, Thera, and Ayia Irini

³¹ Kilian-Dirlmeier 1984, 59-60, pl.5, 146-151.

³² Cherry & Davis 2007, 413 with fig. 10.4, no. 707, 414-415.

³³ For other representations, as well as figures showing the way hairpins were used, see Konstantinidi 2001, 25-26; Sakellarakis & Sakellarakis 1997, 667.

³⁴ Televantou 1984, 26-27, 45-46, *εικ.* 7: 48, 49; According to Dumas 1992, 129, figs.105-106 this female figure wears a pin and a myrtle branch upon her head.

³⁵ For such finds, see Konstantinidi 2001, 25-26.

³⁶ Marthari 1993, type 22e.



Fig. 18. Grave 4 and surrounding area from the east: burial pithos (IM 904) on the right, and cooking pot in the shape of a wide-mouthed jug (IM 636) on the left.

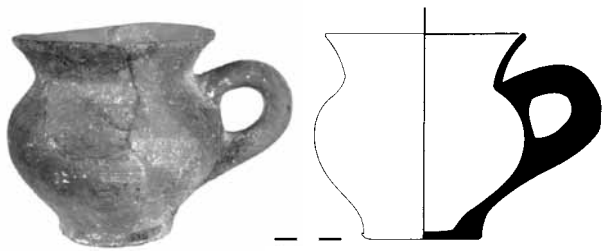


Fig. 19. Area surrounding grave 4: cooking pot in the shape of a wide-mouthed jug (IM 636).

on Keos.³⁷ The goblet (Fig. 16), quite individual in profile, is broadly reminiscent of goblets from Grave Circle B at Mycenae.³⁸ The ovoid-shaped funerary pithos (Fig. 12) can be dated, on the basis of morphological features and the imprint of a mat on its base, to late MC. It can be supposed that it was made in late MC, and that it survived down to the period in which it was used as a burial vessel.

Traces of intense activity associated with the cemetery, and probably with grave 4 in particular, have been noted in the area surrounding the burial pithos of this grave, at a depth of between 30 and 40 cm (Fig. 18). A small cooking pot in the shape of a wide-mouthed jug, a type of vessel common at LC I Akrotiri as well as late MH and LH I Greek Mainland and Aegina (Fig. 19),³⁹ and two conical cups, one of which was filled with animal bones, have been found to the south of, and close to, the sealed



Fig. 20. Grave 7, nipped ewer (IM 610), upside down.

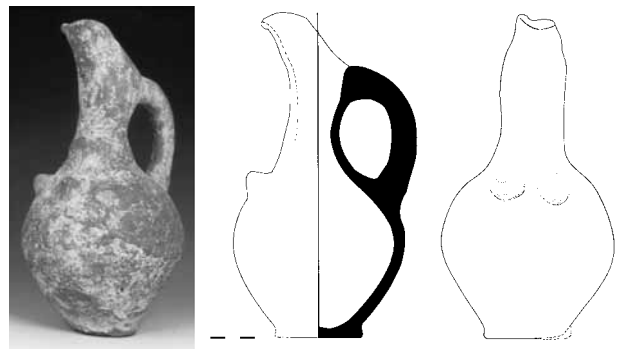


Fig. 21. Grave 7, nipped ewer (IM 610).

burial pithos. Traces of two fires have also been detected in the wider area of the burial at the same depth. This excavation data supports the hypothesis that ritual meals were organised and food offerings were made at the cemetery.

³⁷ For Akrotiri, Thera, see Gillis 1990, 75, fig. 28; Marthari 1993, types 2a and 2b. For Phylakopi, Melos, see Atkinson *et al.* 1904, 133, no. 6, 139, figs. 103-4, pls. XXV, 11, XXVII, 11, pl. XXVI, 3, 5-6, 8-10, 12, 13, 17, 18; Barber 1974, 40-1, fig. 8 (225), pl. 5a, c. For Ayia Irini, Keos, see Overbeck & Overbeck 1979, Davis 1986, pl. 38a; Cummer and Schofield 1984, 47-8, 140, pl. 47, Preston 1972, nos. 28, 29, 30.

³⁸ Mylonas 1972, no. Γ-24, 56, pl. 231 and no. M-148, 154, pl. 231.

³⁹ Marthari 1993, type 56; Dietz 1991, 297; Zerner 1988, 5 (C, IX, no.18), fig. 23, no. 18.

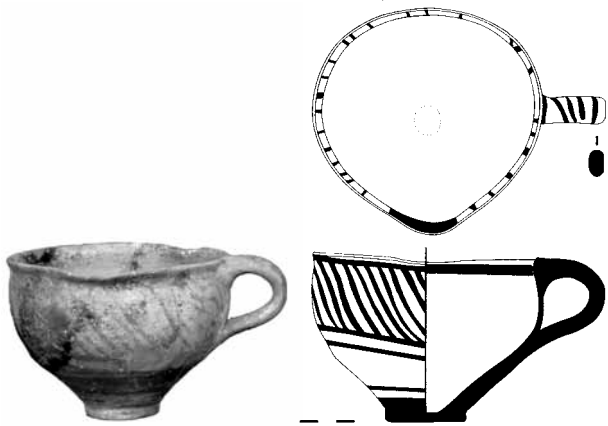


Fig. 22. Grave 7, semi-globular cup with pulled-rim spout (IM 609).

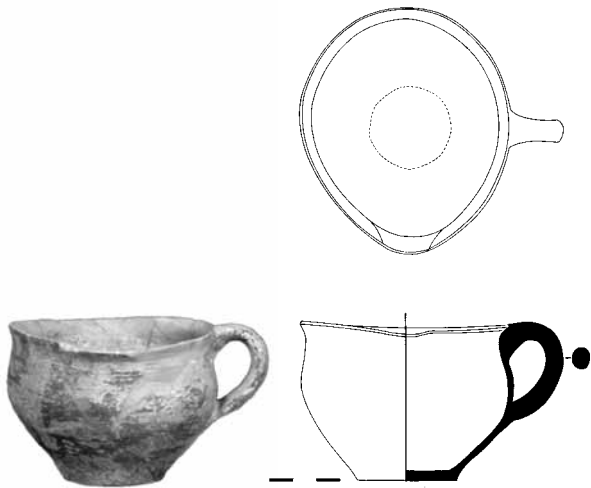


Fig. 23. Grave 7, semi-globular cup with pulled-rim spout (IM 637).

Grave Group 2

Grave group 2 consists of four graves, nos. 7 to 10 (Fig. 4). Grave 7 is thought to be a pit-grave. Graves 8 and 9 are jar burials. Grave 10 is a pit.

The contents of pit-grave 7 (Fig. 4), and the material associated with it, was brought to light above the point where Squares 1 and 2 of the EC settlement meet, northwest of the stairs of EC Building Delta. The grave had been completely destroyed because the layers in this area had been heavily disturbed. None of the grave goods, which were either sepulchral offerings or formed part of the clothing or toiletry implements of the dead, were



Fig. 24. Grave 7, faience bead (IM 1112 a).

uncovered *in situ*. Even so, it appears to have been one of the richest graves at the Skarkos cemetery excavated to date.

Parts of the skeleton, including the skull and bones from the upper and lower limbs, and a considerable number of grave goods were found scattered between the depths of 27 cm and 60 cm. A clay nipples ewer, undoubtedly a local, Iotic product, was found upside down in an almost vertical position and lodged between two slabs (Figs. 20, 21); this is indicative of the heavy disturbance of the grave contents. Two fine imported Minoan semi-globular cups with pulled-rim spouts, the one with dark-on-light decoration and the other simply red-coated, were recovered beside the nipples ewer (Figs. 22, 23). The cups date the burial to no later than the Neopalacial period in Minoan terms.⁴⁰

A faience bead was also found (Fig. 24). The faience bead is of compacted bi-conical shape and decorated with incisions in torsion. Similar beads with radial incisions form part of the Aidonia treasure.⁴¹

Bronze artefacts were also brought to light, such as a punch, (Fig. 25), a pair of tweezers (Fig. 26) and a double-edged, tongue-shaped razor blade (Fig. 27). The bronze punch (Fig. 25), which accompanied the burial of pit-grave 7, is square in section and tapers to a sharp end that is circular in section. It is badly corroded, and as a result looks thicker than it would have been originally.⁴²

The bronze pair of tweezers (Fig. 26) is of a type

⁴⁰ Cups of this shape occur in Neopalacial pottery assemblages in Minoan Crete, see for instance Barnard & Brogan 2003, 46, 48 with no. IB.216 and fig. 8.

⁴¹ Demakopoulou 1996, 67, no. 57.

⁴² For punches and their distribution in BA Aegean, see Branigan 1974, 27.

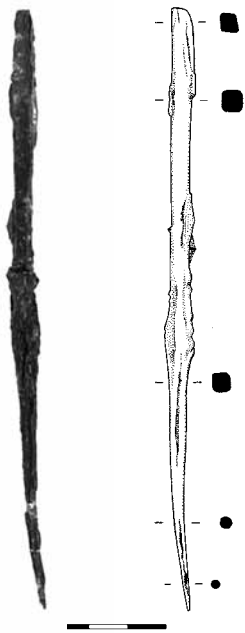


Fig. 25. Grave 7, bronze punch (IM 613).

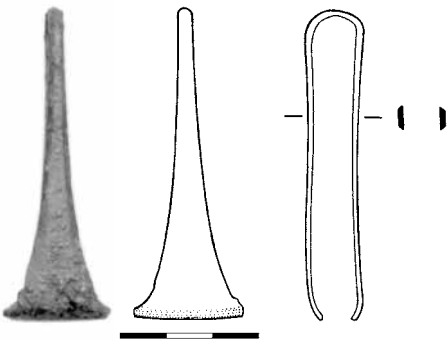


Fig. 26. Grave 7, bronze pair of tweezers (IM 617).

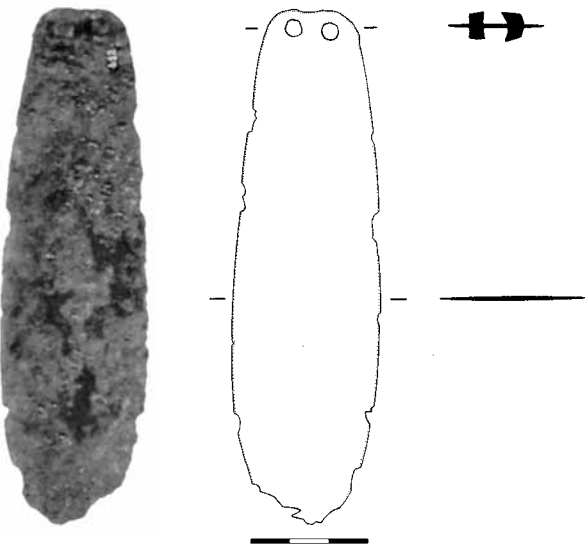


Fig. 27. Grave 7, double-edged tongue-shaped razor blade (IM 612).

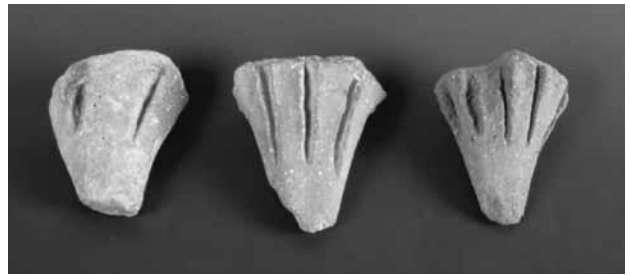


Fig. 28. Wider area of grave 7: legs of tripod cooking pots (IM 207, 1110, 364).

formed by bending a single sheet, widened towards the tips, into two arms, and is close to Branigan's type II. This type is attested on Crete, Mainland Greece, and the islands of the Aegean from the Early to the Late Bronze Age.⁴³

The double-edged tongue-shaped razor blade (Fig. 27) has convex sides and swells to a maximum width not far from the tip; it has two holes in its shoulder for the rivets that secured the handle. The Skarkos razor is reminiscent of Branigan's razor type III. The known examples of this type date from the MB and occur on Crete and the Greek Mainland.⁴⁴ As regards the Cyclades, the closest parallels for the Skarkos razor come from LC I Akrotiri on neighbouring Thera. Two razors of this type were found there, but they are wider than the Skarkos example near their ends, and their handles were attached with three rivets as opposed to two.⁴⁵

The tongue-shaped razor and the pair of tweezers found in Skarkos pit-grave 7 allow us to better understand a group of four artefacts in the Goulandris collection, which are recorded as having been found together on Naxos, and for which an EC II date has already been proposed.⁴⁶ The group includes: 1) a double-edged tongue-shaped razor with two holes at its shoulder for attaching the handle that is similar to Branigan's type IIIa,⁴⁷ and reminiscent of the Skarkos (Fig. 27) and Akrotiri razors (see above);

⁴³ Branigan 1974, 31, 174-5, pl.15; Sakellarakis & Sakellarakis 1997, 602, fig. 629.

⁴⁴ Branigan 1974, 33-34, 177, pl.16.

⁴⁵ Marinatos 1971, 38, pl. 89a; Doumas 2002, 164, fig. 98β.

⁴⁶ Doumas 2000, 211, nos. 357-9, 219, no. 378.

⁴⁷ Branigan 1974, 33, 177, pl.16.



Fig. 29. Grave 8.



Fig. 30. Grave 8, burial jar (IM 608).



Fig. 31. Grave 9.

2) a pair of tweezers of exactly the same type as the one from Skarkos (Fig. 26); 3) a dagger suggestive of LC I Akrotiri examples;⁴⁸ and 4) a bone handle shaped like a truncated cone, which belongs either to the razor or the dagger.⁴⁹ By comparing this group of bronze items in the Goulandris collection to the objects recovered from Skarkos pit-grave 7, it can be suggested that these objects were derived from a group, probably funerary and dating to the late MC or the early LC.

In the wider area of pit-grave 7, and above it, a complete cooking pot in the shape of a wide-mouthed jug was found at a depth of 25 to 27 cm. In addition, legs of tripod cooking pots, which also occur as surface finds at Skarkos, were encountered at a depth of just 27 cm (Fig. 28). This evidence, taken together with the aforementioned evidence from the area of grave 4 in grave group 1, strongly suggest that rituals including the preparation, offering and consumption of food took place at the Skarkos cemetery.

The other three graves of grave group 2 were brought to light a little to the north of pit-grave 7, at a depth of 30 cm (Figs. 4 and 29). The burial jar of grave 8 was found almost intact, lying on its side. No human bones or grave goods were found inside it. The burial vessel is a piriform jar, a type very common at LC I Akrotiri (Fig. 30).⁵⁰

The burial jar of grave 9 was set upright, supported by slabs (Figs. 4 and 31). The upper part of the jar had been smashed during the cultivation of the plot. No human bones or grave goods were found inside this vessel either. The burial vase is a conical jar of medium size. Pit-grave 10 contained human bones, but no grave goods.

Conclusion

The study of the Skarkos cemetery leads to the following conclusions:

This cemetery shares elements with other MC

⁴⁸ Marinatos 1971, 38, pl. 89a.

⁴⁹ Doulas 2000, 219, no. 378.

⁵⁰ Marthari 1993, type 40a.

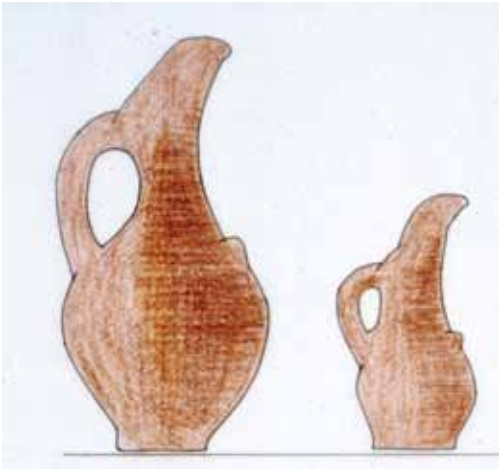


Fig. 32. Iotic nipped ewers.

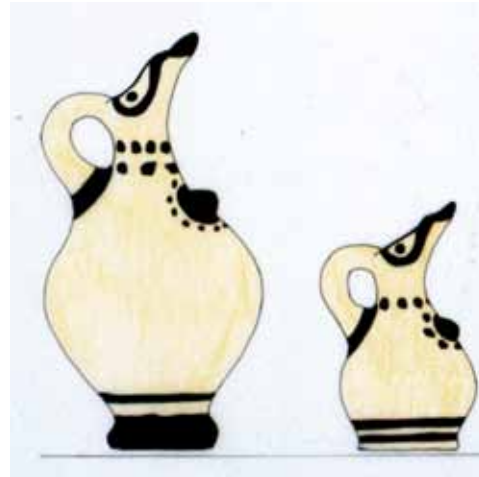


Fig. 33. Theran nipped ewers.

and early LC cemeteries. As regards the plan and range of grave types, it is reminiscent to a degree of the Ayia Irini, period IV and VI, cemeteries (grave groups, pit-, jar- and pithos-burials); in terms of pottery, it recalls to some extent the Ailas grave (Minoan and Minoanising pottery, conical and semi-globular cups).

It is clear that only a part of the Skarkos cemetery has been detected and excavated to date. The surface finds show that the cemetery may also extend over other areas of the Skarkos hill. To the best of our knowledge, the grave groups brought to light date to the late MC and early stages of LC, given that most of the pottery is coarse, and fine vases, which are valuable for ascertaining precise chronology, are rare.

The Skarkos cemetery included primarily infant and child burials, indicating that the mortality rate of infants and children was high during its period of use. Most of the graves have no grave goods, or are poorly provided for; the exceptions of some rather rich graves show that differences in wealth and status existed in the settlement associated with the cemetery.

Two grave types, pit and jar/pithos, were in use, and inhumation was the only form of burial practice. Each grave contained one body placed in a contracted position. These general features of graves and burial practices show continuity from the EC and early MC cemeteries.

According to the excavation data, rituals took

place in the Skarkos cemetery involving the preparation of food and its offering, particularly in conical cups, as well as the possible organisation of meals in the cemetery. This evidence on the one hand points to a continuation of the rituals occurring in the EC and early MC cemeteries, and on the other reflects certain aspects of Minoan burial habits.

The majority of the pottery is local, made of a characteristic coarse, red-brown fabric with mica and marble inclusions. A great variety of shapes are of the Cycladic tradition. They include the nipped ewer (Fig. 21), the miniature nipped ewer (Fig. 9), the small beak-spouted jug (Fig. 13), and a range of open jars which are bi-conical (Fig. 7), or piriform (Fig. 30) in profile. One form, the cooking pot in the shape of a wide-mouthed jug, is of the Cycladic-Helladic tradition (Fig. 19). However, Minoanising shapes, such as the conical cup (of both high and low type) (Figs. 14-15), the hollow-mouthed miniature jug (Fig. 10), and the tripod cooking pot (Fig. 28), are also represented. The closed ovoid jar (Fig. 12) is a rather unique type that combines Cycladic elements, such as crescent handles at its shoulder, with others of Minoan derivation, such as the cylindrical neck and flat lip. Most of these shapes have counterparts at the three extensively-excavated prehistoric Cycladic towns, namely Akrotiri on Thera, Phylakopi on Melos, and Ayia Irini on Keos, in levels of the late MC and early stages of LC, which correspond

chronologically to the New Palace period on Crete.

It is noteworthy that the local, Iotic, nipples ewers (Fig. 32) recall similar jugs from other Cycladic sites (Fig. 33); however, they display individual features, such as the broad spout, which set them apart. Thus, it is once more suggested that in the late MC and early LC the pottery of every Cycladic island still bore its own special characteristics.

In addition to the local, Iotic pottery there are also vases imported to Ios. They comprise the Minoan, fine one-handled semi-globular cups with pulled-rim spouts on the side (Figs. 22, 23), and the semi-coarse goblet (Fig. 16), which gives the impression of being the product of a Cycladic, but not Iotic workshop. It should be noted that surface finds from Skarkos corresponding chronologically to the horizon of grave groups 1 and 2

of the Skarkos cemetery include imports from the adjacent islands of Thera and Melos, as well as the Greek Mainland.

The moveable finds, and the clay vessels in particular, reflect the co-existence of local and Minoan elements, as is usual for Cycladic sites of the late MC and early stages of LC. Consequently, the pottery evidence from the cemetery at Skarkos shows us that the Minoanisation of Ios advanced in tandem with that of other investigated Cycladic islands, including Keos, Melos, Thera, Naxos, Kato Kouphonisi, and Delos. In addition, the moveable finds, and in particular the bronze artefacts, also present parallels with Crete, Thera and the Greek Mainland, showing strong interconnections throughout the Aegean area during the period under discussion.

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Discussion after Saturday's sessions

Warren I have one comment to make at this stage, on Irene Nikolakopoulou's paper. With all the new discoveries outside Crete what we are looking at is different levels of complexity and different kinds of 'Minoan' influence or Minoanisation. We have to explore these different forms of complexity very thoroughly; they tell us not only about the different Aegean settlements of which we have been hearing, but also about Crete itself. One level, perhaps the most straightforward and at least in part aesthetic, is that of fine products exported from Crete and the reasons for this. More complex are matters like the transference of religion and religious forms, which did not previously (before MM I A in Cretan terms) exist in places like Philerimos, and the transfer of administration, which had major implications for local levels of activity and about which we shall hear more from Dimitris Matsas and others. We have also seen a little of such complexity with the weights which Anna Michailidou has worked on, the balance weights, and what this too implies for the transfer of certain levels of administration.

Macdonald I wanted to bring something up at this moment, because I suspect that it won't be appropriate at the end of the discussion tomorrow afternoon, and that is particularly for two speakers, Irene Nikolakopoulou and Toula Marketou, and their different sites. Firstly, for Toula Marketou: something that struck me about the pottery in this worrying, single MBA phase, was that the carinated cups you showed us from the Philerimos hill seem to me to be Minoan carinated cups of the normal MM IB and II types, whereas the MBA carinated cups we saw from the settlement appear to be a local development with the handle attached to the interior of the rim. Keeping in mind this matter of the single MBA phase and turning to Akrotiri, with phase C of Irene's paper we are faced with a bit of a problem concerning the end of the phase here and at Trianda on Rhodes. In the case of Akrotiri, the end is placed, in Minoan terms, in MM IIIA, at the end of MM IIIA; in the case of Ialysos, I'm not sure where the MBA ends since the bridge-spouted jars that you showed us are, in my opinion, impossible to date in Minoan terms. In each case, the Late Bronze Age town is then built on top of a destroyed settlement which had come to an end before the end of the Cretan Middle Bronze Age. We are left at this moment, I think, on Rhodes and on Thera with a grey area in the seventeenth century (MM IIIB), which we really don't know very much about although we thought we did until a few years ago.

Marketou I have shown some of the MM Ib/II Cretan imports from Mt Philerimos, as well as from the MBA settlement at Trianda in an attempt to suggest some synchronisms with Middle Minoan Crete. However, the percentages of MM imports on Rhodes are very small. The architectural remains of the Middle Bronze Age at Trianda cover a single period, without sub-phases, which seems to start around 1950/1900 BC,

after the final abandonment of Asomatos, while the succeeding phase, in terms of the architectural remains, belongs to the so-called transitional MM III-LM IA period. On the other hand, the fabric of the carinated cups from Phileremos seems local, while the majority of the red-slipped carinated cups from Phileremos have their handles attached to the interior of the rims, a characteristic which does not appear in the Minoan carinated cups.

Momigliano

I would like to thank Toula Marketou because she has solved the problem of where some of the pottery from Iasos came from! As to the question of the carinated cups, since I started working at Iasos and learned more about Anatolian pottery, I have become more and more sceptical about carinated cups being imitations of Minoan pottery. In my opinion, the evidence from Asomatos and Trianda shows very clearly that carinated cups in this part of the Aegean have much to do with Anatolia and very little with Minoan Crete, because they just go on from the Early Bronze Age down to the Middle Bronze Age; in addition, the technique of manufacture is different from Minoan Crete. The conical cup, however, is another matter.

Papazoglou

I would like to comment on the Middle Bronze Age at Trianda. Twenty years ago, when we excavated Middle Bronze Age strata in the Theochares plot, the pottery, now published in the *Deltion* (*ArchDelt.* 37 (1982), 139-190), included carinated cups and spouted cups and spouted vessels of typical Minoan type. At that time, I thought they were MM III, yet now that I see them, I think they are MM II. And so I can't understand very well why Toula said that Middle Bronze Age strata have not been excavated before at Trianda since it is clearly stated in my paper that there is a MM phase at Trianda. There is a misunderstanding here. Toula has stated, as I recall, that there is not MM material in previous excavation at Trianda. The truth is that Monaco's Trianda I is actually Furumark's Trianda I- LMIA but I have proposed in my paper the following, different, scheme: Trianda I- MMIII and Trianda II (sealed by tephra) LMIA. The new scheme is mentioned in RAP.

Nikolakopoulou

I want to return to Colin's question concerning strata belonging to the end of the Middle Bronze Age; we do not appear to have levels equivalent to MM IIIB stratified at Akrotiri.

Van de Moortel

Peter Warren has said that we should look into Minoanisation and the export of Minoan practices, like administration, religion, and so on, to the islands. Irene brought up another very important matter, namely the adoption of the potter's wheel in the islands. An interesting thing is that the wheel is used not for prestige pottery, but rather for simple pottery, ledge-rim bowls, straight-sided cups – Minoan shapes, but simple shapes. The wheel is not just a technological feature; it also has to do with the organization of production. Once you start using the wheel, you can produce large amounts of pottery. So we have to ask why somebody was producing on Thera large amounts of very simple cups. Was some kind of Minoan practice or habit exported at the same time as the wheel?

Momigliano

I wonder really how intensively Minoanised Çeşme is. Yes, you have imports of Minoan pottery, but do you have locally made Minoan pottery? Conical cups? You

do seem to have more evidence of contacts with the Minoan world than, say, Troy, but I think that even Iasos is not as Minoanised as Trianda, and Çeşme is even less so.

Erkanal/Keskin That is the case. Actually, Çeşme has more of an Anatolian character, and, compared to the sites of Miletus and Iasos, there is less original Minoan material.

Momigliano What is even more interesting is that you have Minoanising material from the Cyclades.

Marthari First I would like to congratulate you for such a clear excavation and presentation. It would be very helpful if we could have another look at the imports, which are very interesting indeed. You have some Cycladic material. I think that a panelled cup you showed, a bichrome one (Erkanal and Keskin this volume, fig.12), cannot be Theran, because, according to the evidence, the production of such kind of cups has stopped in Late Cycladic I/Late Minoan IA Akrotiri, so this could be Melian or from another Cycladic island. On the other hand the Cycladic White jug (Erkanal and Keskin this volume, fig.13), should be Theran, and probably an heirloom at this level from an early Middle Cycladic context. This jug finds a close parallel as far as the decoration is concerned in a vase from the Aghios Eleimon cemetery, Thera I referred to in my paper (Marthari this volume), although I haven't shown the specific vase; it has exactly the same pattern, chequers, a Theran pattern that starts in MC and continues into the Late Cycladic I period. Another variety of this pattern occurs on a Late Cycladic I jar from Akrotiri.

Niemeier What Momigliano says is of course important; that is why we are having this symposium – we want to see the different degrees of Minoanisation. Of course, it's different at Miletus, Iasos, and so on. About the so-called Cycladic imports, there are undoubtedly Cycladic imports, like this Middle Cycladic jug, the heirloom, and when I first saw the material two or three years ago I said it was Melian. It looks Melian. But then I read Sinclair Hood on Emporio, and he described this bichrome and also monochrome dark; he said, this looks local Melian. He also identified the same pottery on Samos, and I will try to study that from the old German excavation since it includes some pieces. And perhaps we have another local group, an east Aegean group of Minoanising pottery. It is possibly that the so-called Melian bichrome ware from Çeşme is not imported, but is local, like the similar pottery on Chios. This will have to be investigated.

Marthari I don't believe it.

Darque What is Minoan in your Building F (on Iasos)?

Momigliano The building technique and the finds.

Niemeier The architecture?

Momigliano The architecture: the use of these big wedge-shaped, triangular stones that others

have suggested look very similar to Cretan examples. I think other people have made parallels between these and Maison Z at Malia. We saw similar architecture at Trianda this morning. The other Bronze Age houses at Iasos are not built in this technique; they use much smaller stones.

Melas Building techniques, generally, wouldn't be a strong argument when you talk about introduction of culture and so of architectural influence.

Momigliano I have no problem with that. I can't say if we should accept this as a Minoan feature. As I said, I wish I knew more about local architecture especially in the earlier periods.

Caskey I simply wanted to point out that one of the valuable things in your paper is your dismissal of models. I personally think that we've been overwhelmed by models, and its high time we looked at the basic facts. And the other point I would like to make is surely the stone used for what you build is going to be the key influence on how you build it.

Momigliano Sure. But then why do we have buildings built in two different ways at the same site, using different stones? For me, if people are building in a particular way, they do it for a particular reason. Why is Building F different? Maybe because this is a more monumental structure, it's a more important building, or because this is a technique imported from some other area. I don't know. But I don't dismiss the models; all I am saying is that no single model can explain the variety of Minoanisation, because for me, for example, it is the directional trade model suggested by Jack Davis and by Colin Renfrew before him that helps to understand why Miletus is more Minoanised than Iasos, and why there are certain sites in the Aegean that are more 'international' than others. Other models – for example, models of human mobility on a much smaller scale, as suggested more recently by Horden and Purcell (*The Corrupting Sea*) for the whole of the Mediterranean, explain other situations. I don't have much time for the thalassocracy, *i.e.* for a grandiose colonizing movement out of Crete but I have a lot of time for human mobility being a characteristic of the Mediterranean, and not just in the Bronze Age, in all periods. Mobility is also one of the main ways with which people cope with food shortages. I think we have a lot of human mobility in the Aegean, but it may be on a smaller scale. When you look at the general picture it seems to me that, while Iasos shows very strong links with Rhodes and Kos, Çeşme, to the north, shows more links with the Cyclades and possibly Chios, which is just opposite. This phenomenon I can explain with smaller scale mobility. So, I wouldn't dismiss models: models are good to think with. But I don't want to accept a single all encompassing model to explain the diversity of Minoanisation; I don't think there is a single process that can explain all this.

Warren The local pottery (at Miletus) appears to be Anatolian, but the kiln for local production is entirely Minoan.

Niemeier Yes, indeed. So we have locally produced Minoan pottery. The pieces that I showed

you are of the highly characteristic local Milesian clay. But I agree with you, I was surprised when we found this kiln, indeed.

Macdonald A brief question about the tripod cooking pot, of which we have seen examples from other sites this morning. The rather globular shape seems entirely un-Minoan.

Niemeier I would agree with you on that. As I have said, we also have many imports from the Messara in the semi-coarse clay. With fine pottery, it is very difficult to distinguish between Knossos and the Messara. I don't know if I mentioned one very important object: a clay sealing, which, Erik I think will agree, is of Minoan type (**Hallager**, in the background: ... absolutely) and unknown in Asia Minor, is of local Milesian clay; so it was made in Miletus. It's not an import like the sealing from Thera that I showed this morning. And this perhaps says something about Minoan presence, of which I haven't said a word yet. We shall keep it for the tomorrow's discussion.

Unidentified Congratulations on the finds. If you have Anatolian material in the kiln what does it mean?

Niemeier Amy Raymond and I perhaps do not agree completely on this; Amy sees the possibility of some Minoan presence, but she also accepts that this could just represent trade connections. I am more positive of some Minoan presence because of the clay sealing; it is a typical Minoan sealing, not Anatolian, and it was produced at Miletus.

Momigliano Why does the kiln have to be Minoan? I'm asking out of sheer ignorance. I mean, how many Bronze Age Anatolian kilns do we know? And, second, the Kamares type pottery – which is neither Cretan nor made in Miletus – any idea where it could be from?

Niemeier No idea.

Erkanal I know of no Anatolian parallel for this type of kiln.

Niemeier What is interesting for the Aegean World is that we know this type only from Crete. And it is also very interesting that Ivonne Kaiser will show a kiln of this type from LM IA, but this type of kiln survives in Miletus V, the first Mycenaean settlement (Late Helladic IIIA:2) and up until now I only know of this type of kiln from Crete and from Miletus, but, as Erkanal said, we need to look for more evidence.

Melas I think that technology as an imported idea and borrowed process is more important than the specific find itself. There is no reason why the design of a kiln like that should not have travelled from Crete to Miletus as technology that must have served, within the receiving society, both functionally and ideologically.

Marketou A note concerning the Middle Bronze Age Kiln. The overfired carinated cup from Serayia on Kos, which I have shown in my presentation, was found fallen *in situ* in one of the channels of a MBA kiln. Kos provided good examples for the develop-

ment of three pottery kilns, the earliest dated to the EBA and the other to MBA and LBA respectively, while another kiln found at Trianda, is dated to late LH IIIA:2/beginning of LH IIIB:1. The presentation of all the above kilns, which will shed more light on pottery manufacture and technology in general, is in the process of publication in collaboration with the Demokritos laboratory.

Niemeier Between Miletus III and Miletus IV things change; that is very clear.

Unidentified Changes in the architecture could indicate that cult also changed. That would be very interesting.

Tournavitou I would like to ask about a single find from the altar area. You showed us a piece of rhyton with a plastic lion in flying gallop. That's definitely a rhyton, right?

Niemeier Yes. It has to be turned like this. I placed it in a way so that you could see the motif better. The lion is upright, galloping towards the rim.

Tournavitou I mention it because I have an almost identical piece from a plaque, like a dedicatory plaque, from the peak sanctuary on Kythera.

Niemeier If you see a section drawing you can see it is rounded and that it comes from a rhyton. Is yours flat? This one is certainly a rhyton and it's not flat.

Tournavitou And it's LM IA?

Niemeier It's earlier. It was found under the burnt chair, in the earlier phase, so it could be MM III, but we have no diagnostic pottery with it; it's in the level just under the last phase of Miletus IVa. So it's the level underneath, let's say, that of the Theran destruction. [Theran] ash was found together with the throne, but we won't discuss chronology.

Nikolakopoulou (to Kaiser): If I understand correctly, you are saying that 90% of your coarse ware is of Minoan type, 5% is Anatolian and 5% is something else?

Kaiser Yes. There are Milesian things that have no parallels. The percentage grows each year that we see the pottery. These are preliminary numbers.

Nikolakopoulou Do you have any idea of how these two traditions, two different ways of producing pottery, are consumed? Are there two parallel traditions? Are there, for example, drinking vessels in only Minoanising shapes and not the other? Are they producing all pottery types in both ways?

Kaiser The Anatolian shapes are mostly open shapes, for drinking, whereas the Minoan shapes are cooking pots, but we also have conical cups, cups and tumblers. I would say from my present knowledge that the more limited group is the Anatolian group.

Nikolakopoulou And you say that this is mostly for drinking and consuming food.

- Kaiser** That is how it appears right now.
- Michailidou** Do you have Anatolian material in the Minoan sanctuaries?
- Kaiser** Yes. With the tumblers we have a small amount of red-wash sherds, but they are too small for us to say if they belong to bowls, cups, or whatever. But every deposit has approximately five per cent of Anatolian red-wash material.
- Niemeier** This is important. There are no distinctive deposits. We have no Minoan house with Minoan domestic pottery and next to it an Anatolian house with Anatolian red-wash pottery; it's all mixed.
- Tournavitou** I wanted to ask you about the tripod cooking pots. First of all, do you have an approximate number of the vases represented, and, secondly, what percentage of these do you have that has traces of burning, of use?
- Kaiser** There are cooking pots and cooking trays.
- Tournavitou** Yes, excuse me; I wanted to ask about the trays, too. The number of tripod cooking pots and cooking trays, how many do you have approximately?
- Kaiser** This is a complicated question. For one big deposit that was excavated in 1994, there were the three cooking pots that I showed you, and then there must be at least eleven more, because we have thirty-four more legs. So from this one huge deposit we have almost fifteen pots.
- Tournavitou** And out of those, how many had burning?
- Kaiser** Almost every pot. Some legs may have traces of burning and the others not. So this is a phenomenon, because none of the other pots show traces of burning.
- Tournavitou** And the same applies for trays?
- Kaiser** Yes.
- Tournavitou** But you are not talking about huge number – not hundreds?
- Kaiser** No, no. Trays – we may have ten.
- Momigliano** I wanted to ask you about pitharia, pithoi.
- Kaiser** I left those out, because I have not studied them yet. So I really cannot comment. I simply do not know whether they are of Minoan type or not. But we do have several different shapes and types.
- Niemeier** I can comment on the pithoi, because I had a look at them. We have many Minoan pithoi with a rope pattern, like you have, and also imported ones. And then we have

an Anatolian or west Anatolian type with bands. You showed us one from Iasos and there is a parallel from Chios; what is it, a pithos?

Momigliano The one with painted decoration? It's from Rhodes and it's handmade.

Niemeier Ours, too, I think.

Momigliano Toula Marketou's too.

Rethemiotakis How do we understand the function for these bizarre vessel forms, the ones with the horns? Were they for domestic use or did they have a religious function?

Kaiser You cannot use it as a rhyton because the horns are solid and the inside is hollow.

Rethemiotakis I was thinking of the possibility of a resemblance between this and the way you hold masks. There is some similarity.

Kaiser Yes, but they were mostly found in areas used for industrial purposes or with typical household items.

Niemeier And we have some which don't stand up; they have a rounded base and so they have to be held up. And in one slide that both Kaiser and I showed, we have a group of three of these very close together, and, my colleague Reinhart Senff will confirm, we have similar in the Archaic period as pot-stands, and so we thought this is what they might be. But both of us would be very interested if you know parallels from elsewhere. I've heard a rumour that Toula Marketou has things like that from Rhodes; is that true?

Marketou No. We have them from Kos, but without the horns, and they continue into the historical period.

Van de Moortel About the function of these Anatolian cups and bowls that you have in the same assemblage; there are a lot of very simple, Minoan-type, conical cups and lipless bowls – masses of them – then far fewer of the high quality Anatolian ones. John Chadwick wrote an article (*Antiquity* 33.132 (1959) 269–278) where he discussed the cups referred to in tablet 31 from Hagia Triada, which lists masses of conical cups, then fewer but larger conical cups, and then even fewer high quality cups. He suggested that there might be, in this assemblage, a sort of social differentiation which would reflect the social differentiation of the participants in social events. It would be very interesting if your Anatolian cups and bowls play that role, because it seems to me that they are actually integrated into what appears to be a Minoan gathering or feast.

Discussion after Sunday's sessions

Tsipopoulou (to Boulotis): First, regarding metallurgy: it seems you interpreted evidence for metallurgy that you have found in that room as evidence for metallurgy taking place there or that the various objects connected with metallurgy were stored there. Of course, we know that one cannot practice metallurgy in a closed area and within a settlement because there are these poisonous gases.

Boulotis It certainly was an open area, like a court. For me it would be strange to find a metallurgical installation inside a settlement. But we do have evidence from Mesopotamia that metallurgy could be practiced inside a settlement. The area and its contents are quite new discoveries (October 2004), so we still have to study it more carefully.

Tsipopoulou Secondly, you seem to see a pattern since you connected it with Samothrace; yet, if I understood correctly, what Dimitris Matsas found there was Protopalatial (MM II) in Minoan terms. But your material is Neopalatial, although not of the last phase of the Cretan Neopalatial, LM IB; rather a sort of transitional MM IIIB–LM IA.

Boulotis Yes, we have some sherds that appear to belong to MM IIIB, while other sherds, some of them imported, are probably LM IA. There is no LM IB.

Tsipopoulou You have LM IB pottery, Marine Style etc., from other areas, but this seems somehow different. This is not after the LM IA destruction. Your evidence of influence of the Minoan palaces does not extend beyond the LM IA phase. A third point I would like to raise is the presence of many loom weights all over the site. Do you think the weaving was practiced by local women, using their local method, and that at some moment they suddenly changed to the Minoan method with Minoan type of loom weights?

Doumas This is a subject that can be discussed in the General Discussion this afternoon.

Marthari Are the strange flask/amphora and the conical cups of local production?

Boulotis The conical cups must be locally produced. The flask is really enigmatic, combining the flask shape with the oval mouth. I think the fabric is local, slightly polished. It fits into the category of local production.

Marthari I could make a suggestion about it. I have noticed that it is characteristic of the pottery workshops outside Crete that produced 'Minoanising' pottery to create new combinations of Minoan types in ways never attempted in Crete where they knew the rules. Locally, they are not aware of rules, so they create new shapes. The flask

shape, which we also have at Akrotiri, is here combined with an oval-mouthed amphora shape.

- Boulotis** I did not have time to find good parallels, but in the context of our excavation it is a unique piece. To me the most important point about the vase is the red lustrous surface with incisions filled with white material, typical of the Koukonisi luxury wares. The quantity of this material is impressive, with its very baroque shapes. Blegen mentioned a sherd of this in Troy VI early. In Poliochni, there is just one sherd. But it seems that for several centuries in the Middle Bronze Age – it does not cover a complete phase – Koukonisi produced this type of ware, at least for the north Aegean. I am looking for Anatolian parallels.
- Niemeier** Massimo Cultraro brought us back to the Early Bronze Age. This afternoon we have to discuss the problem of changing trade patterns. You demonstrated convincingly that we have a very different trade pattern in the Early Bronze Age from that of the beginning of the Late Bronze Age. You showed us that the Cyclades are a mediator between the north and the south, and that tin-bronze metallurgy comes from the north-east, as J. Muhly has argued in a recent paper. This brings us also to the question of who imports the tin which probably comes from Central Asia. In the north-east we have not only Troy, the maritime Trojan culture, but we must also think of important players on the islands. And remember, we have the Mari texts and there we learn – either at the end of the Old Palace period or just at the beginning of the New Palace period – that we have the Cretan agent sitting in Ugarit acquiring tin from the agents of the palace of Mari. So here Crete appears to be an importer of tin into the Aegean. This is a major difference between the Early Bronze Age and the beginning of the Late Bronze Age. The influence of the northern Aegean on Crete seems to me, at least from what you have shown, to be somewhat superficial: we have no 'Poliokhnization' or 'Trojanization' of Crete. The contact is probably indirect, via the Cyclades.
- Michailidou** You spoke about this north-south axis: did the technology of alloying tin travel down this axis, or just the tin itself?
- Cultraro** In my opinion, I think that technology of alloying tin and tin travelled together along this north-south axis.
- Michailidou** Copper ores, of course, can be found in many places. We conclude that tin was brought from this area since real bronzes (that is, tin-copper alloys) were produced at an early stage. As far as I know, we have not identified any actual sources of tin. We know tin, probably coming from Afghanistan, was imported through Ashur to Asia Minor, to the Old Assyrian emporia like the one at Kültepe. And we know of tin sources in the Taurus mountain region, but we can only identify active sources in this area in the Early Bronze Age. In the Aegean, we see the technology but we know nothing of the source of the tin unless they were co-operating with the Old Assyrian traders or others coming from the eastern Aegean coasts.
- Cultraro** New data come from Caucasus. Some of the tin-bronze artefacts from Mound III,

Catacomb Tomb n. 11 at Velikent in Daghestan (Maikop Phase I – Middle of Third Millennium BC), fall on the same cluster as the early tin-bronzes from Troy II and Poliochni in particular (L. Weeks pers. comm.).

Papagianopoulou I would like to ask Boulotis for some information concerning the introduction of the potter's wheel at Koukonisi. And why do you suggest that the potter's mark is an indication of southern influence?

Boulotis In Keos we have two or three abnormal potter's marks as early as the Early Bronze Age. We appear to have great stimulus from Crete in Keos V and VI. At Koukonisi, all the potter's marks come from the end of the Middle Bronze Age and the beginning of Late Bronze Age I, the equivalent of MM IIIB and LM IA.

Papagianopoulou In Thera, where we are studying the potter's marks, there seems to be a great drop in potter's marks after the Middle Bronze Age. It would be interesting to ascertain whether this is part of the same phenomenon, because you say that at Koukonisi they do go on into the Late Bronze Age.

Boulotis At Koukonisi we have evidence, as early as the start of the Middle Bronze Age, for the use of the potter's wheel for small open shapes. Closed forms remain hand-made until the end of the Middle Bronze Age.

Papagianopoulou Regarding Thera, Marthari placed the introduction of the wheel in later Middle Cycladic, but we have discovered that the bridge-spouted jar from Agios Ioannis Eleimon, which is wheel-made, belongs to an even earlier phase. One thing that you could look into is whether the introduction of the wheel is connected with the introduction of Minoan shapes.

Boulotis No, the earliest use of the wheel is definitely earlier than the importation of Minoan pottery.

Doumas We must not forget that the potter's wheel was introduced to Troy long before this. Do not expect ex Creta lux for everything!

B. Hallager (to Cultraro): I was wondering about the interesting murex shell theory. I heard that David Reese is studying a lot of murex shells from a site in SE Crete. So my question is: did they not have enough murex themselves?

Cultraro First of all, as an archaeological problem, we are able to date exactly the first appearance of murex shell in the northern Aegean. According to recent evidence from Poliochni, the exploitation of murex starts in the island in the later Early Bronze Age or early MB I (Poliochni Yellow Period). This evidence is comparable with that is documentable in the same period at Lesbos. I don't know the relative quantity of murex found in the northern Aegean versus the SE of Crete, but we probably have two specific clusters, one in the southern Aegean, with Crete, and a second area including the islands of north Aegean. It is worth noting that in Hittite texts, there is a clear mention of purple dying in the islands of the Ahhiyawa kingdom. This

could be one of the reasons for the interest shown in the northern Aegean by the Hittites and the Mycenaeans – and by the Minoans before them.

Boulotis (to Guzowska): In Koukonisi MM IIIB–LM I, there were fragments of a large vase with plastic bands around the waist and plastic rivets. This is very similar to your example and constitutes a very important link between this category of ceramics and the other which includes the bridge-spouted jar with exactly the same brownish-yellow polish. I have to underline that the enigmatic flask from Koukonisi, with its combination of motives from the south Aegean, *e.g.* Crete, and Anatolia, is slipped with exactly the same colour. In this phase, together with other Minoan elements, notably the ceramics, we have a great amount of pottery with these plastic rivets, not only at ‘functional’ points, imitating metal vases, but as exaggerative, decorative motives *i.e.* large plastic rivets. I think that this category of ceramics, the bridge-spouted jar with exactly the same burnished surface, and the other with the wavy bands, really have very good parallels in our MM IIIB–LM IA level.

Guzowska I am glad to hear this because we should expect to have the imports from Poliochni and Lemnos. I haven’t mentioned this, but I also have some small sherds that in terms of the fabric are quite similar to material that Bernabò Brea published from Poliochni, but as you know the publication is old and in black and white and it is very hard to say exactly, so this still has to be checked.

Cultraro I hope that you could extend your project towards the islands of the northern Aegean, because we have discussed for a long time the possibility of transmission of technology and pottery from western Anatolia to the islands or in the other direction. About a specific shape, the bridge-spouted jar that you mention is locally produced: this interpretation is confirmed by the evidence of Emporio on Chios, where Hood suggested that this shape was produced in Emporio I. I have reassessed the archaeological context where the jar was found and I attributed the level to the Violet Period (Late Bronze Age I-II), where some TE I-II Aegean–Mycenaean pottery was found (M. Cultraro, *Indizi della sopravvivenza di Poliochni (Lemnos) nella media e tarda età del Bronzo*, in *Studi di Preistoria e Protostoria in onore di L. Bernabò Brea (Quaderni del Museo Archeologico Eoliano di Lipari, Suppl. 1)*, Messina 2001, 213–40).

Sakellarakis I want to say a few words about the figurine. Today, not one Aegean archaeologist would think that the figurine came from Troy. Efi Sakellarakis in her book, *Die bronzenen Menschenfiguren auf Kreta und in der Ägäis* (1995), has proved that it did not. It was probably acquired in Smyrna. I know a good deal about the smuggling trade, not only of today, but even of the 19th century, and of forgeries; we know that Smyrna was a centre, even for the islanders, and that is the way it came to Berlin. Evans acquired Minoan objects from Smyrna. The ‘Volantrock’ is a common theme and it occurs on Thera wall-paintings; it is a Creto–Mycenaean feature, so I don’t see any reason to use that to suggest cult activity at Troy. But on the other hand, I have been struck by the ewer, which is a libation jug. Every scholar of Minoan religion would recognize it immediately; Martin Nilsson showed us that it is a typical vase used for libation. That seems noteworthy. Why was it found in Troy?

- Guzowska** I repeat that there is a problem with the figurine. We just don't know where it comes from and we will never know. I know the ewer is clearly a libation vase. The question is why it was found in such a poor grave. The grave has just this ewer, and a very small bowl.
- Sakellarakis** If the bronze figurine comes from Anatolia, certainly it comes from Milet, Miletus, Miletos – that is the point.
- Niemeier** I take it with pleasure. I am also sceptical that this is a fake because we find those statuettes in real Minoan contexts, or in contexts that are very close: Keos shows much more Minoan influence than you can show at Troy. The libation jug is an important point. If I remember correctly it was a child's grave. I would also want to comment on pillar cults: I agree with everything you showed, except seeing Minoan influence in pillar cults. We don't know what a 'Minoan pillar cult' really is, nor do we know if a 'Minoan pillar cult' ever existed. We have rooms with pillars that are probably cult rooms. But there is no indication that the pillar was the focus of the cult. I think it was Spyridon Marinatos who argued that these may be architecturalized caves with stalagmites. At Troy, the pillars are by the gate – this has no parallel in the Aegean. I think it was Manfred Korfmann who has argued from Hittite literary sources that this is an Anatolian phenomenon – and you saw it in the reconstruction, where there are these faces on top of the pillars. We have baetyls all around the Mediterranean, from Byblos, from the Levant. So I would see these pillars in front of the tower gate more as an Anatolian phenomenon, than Minoan or Aegean.
- Guzowska** I am not exactly sure about this, but this is the only indication we have of cult at Troy in this period.
- Momigliano** I would like to make a point that follows on what Prof. Sakellarakis has said. This is a libation jug, but it is found in a child's grave. You have Minoan objects, Minoanising objects, but do you really have Minoan behavior? No. The context can tell you about the behaviour. Also, you're mostly talking about the elite. I would like you to talk a little bit more about the 'Lumpenproletariat' of Troy ...
- Guzowska** Loom weights are very good evidence for this. They do not make sense. At least we did not find a sense. There are just a few of them, and as you have seen, a couple of them are so well finished, so well burnished, which is something you don't do with loom weights. I don't really believe that this groove is important technologically, as Jill Carrington-Smith has argued. I don't think this is the reason. I don't think they were using them at all.
- Momigliano** Would you go so far as saying that although these are Minoan-type loom weights, they are not necessarily used as such?
- Guzowska** No, but whatever you say, please don't forget the plan of Troy I showed you. We are missing large parts of the citadel. I wouldn't say they weaved in the Minoan way. They are simply Minoan-type loom weights.

- Tournavitou** I would like to make a very short comment on the possible Kytheran origin of some pithos sherds you showed us. I would not put my life on the line for any kind of sherd, but the clay that you showed us here is not of the consistency of 99% of material made of the miraculous clay from Kythera. 98-99% of the sherds have much redder clay with more micaceous inclusions.
- Guzowska** That was just the photograph. If you picked up the sherd you would see it sparkling with mica and the clay is reddish.
- Tournavitou** Of the pithos sherds that we have at the peak sanctuary, only 1% or so are made out of red micaceous clay. The rest is plain coarse clay. So it is a very small percentage confined to this ware. And I just wondered why that would be transported abroad. This kind of clay is used mostly for cooking ware, tripod cooking pots and the like, but still only a very small percentage of the total. So to find in Troy a pithos made out of red micaceous clay from Kythera just strike me as a little surprising.
- Guzowska** There isn't just one pithos. There are actually several sherds from different locations and they represent about ten pithoi.
- Tournavitou** Even worse!
- Guzowska** The point is that from this grave we only have coarse-ware sherds. We tried to compare the petrography: macroscopically, it looks very much like Kytheran. But I am not a petrographer, so for more information you will have to talk to my colleague. This particular pithos has some inclusions that have not yet appeared on Kythera.
- Tournavitou** Not present in the existing pottery collection?
- Guzowska** Quite. But I have to admit that I do not understand the implications of this. The fact that an inclusion is present in this sherd, and not in the others, I do not know how far that affects the issue. It is about 95% similar to Kytheran clays; 5% seems different.
- Touchais** Concerning the presence of the Minoan jug in the grave, we have this same phenomenon in Grave Circles A and B at Mycenae; thus the same model of an elite group trying to stress their own power with reference to Cretan civilization. It is not just a fashion, but in a broader sense, it is a religious practice but not in a religious context. It is exactly the same in Mycenae.
- Boulotis** I am not certain that this kind of jug is only for religious rituals. It is very simplistic to interpret this kind of precious jug exclusively within a religious/cult framework. I should also refer to the conical rhyta which are not only for cult practices; they are also used as funnels in everyday life and can be beautifully decorated.
- Doumas** But this could be considered luxury item. It is not an object of mass production. In this respect, I would like to make a point on the social hierarchy that you mentioned. I don't think it is a new phenomenon. It goes back to the Palaeolithic when

every group had a leader and the means of expression change. We find material evidence of this hierarchical distinction in the form of luxury commodities, behavioural patterns (which we do not know), in different things. So one has to be very cautious as to how the material evidence is interpreted.

Guzowska The way I see it, at the very end of Troy V and the beginning of Troy VI, there is a rugged social change, the character of which we still do not completely understand. Luckily, at the same time, the Minoans are very active in the general area – we see their activities at Koukonisi, on Samothrace, and at Troy. Unlike what many, including Manfred Korfmann, have said, Troy does not really have as strong a connection to the Hittite world, which could be another powerful source of ideological symbolism, as to the Aegean world.

Doumas We have Minoan objects found here and there. We do not know whether they were brought by Minoans, or by other islanders, or were brought directly or indirectly through in many different stages. This is the archaeological evidence and we are trying to find out what it means. We don't know whether the ewer was brought for its own sake as a luxury item, or because it contained something important.

Guzowska This particular shape is not very practical for transportation.

Doumas But with a luxury content?

Guzowska Unfortunately it cannot be analyzed because the vase is in the Canakale museum and is not accessible for analysis.

Doumas There are many possibilities concerning how it reached the grave.

Bouzek Many years ago there was a similar discussion about the Cypriote Base-ring juglets, containing something used during ritual, some substance, perhaps an opiate. Perhaps the contents of this vase were indeed important.

Chrysoulaki I would like to stress the question about an object used in the ritual and then transformed for domestic use. I don't think it is so. For the rhyton, we can refer to the R.B. Koehl's book *Aegean Bronze Age Rhyta* (Philadelphia 2006): we cannot characterize every object with two holes as a rhyton. There are various strict conditions that have to be fulfilled for a vessel to be interpreted as a rhyton. Vessels that have an entrance for the liquid and a way to take it out can be domestic, everyday vases – but these are not rhyta. As far as transport is concerned, this kind of vase (the Troy ewer) containing something, perhaps a very good wine, is not a good shape for long distance voyages. That's why you have shapes specially designed for transport over long distance. Thirdly, I don't think that if we have a ritual vase transported from one place to another where they may not have known exactly how it should be used, we can say a great deal, particularly when there is just one vase.

Guzowska I disagree with this point, although it is not exactly related to this paper. We have historical examples of sacred objects being looted and used elsewhere for secular

purposes – the looting of Constantinople is a good example, or cases from the Holy Land. The question is that we don't know exactly how this vessel was used. It could be taken as evidence for Minoan cult practices at Troy. But it may also have been used in a purely secular way. We know only where it was deposited at the end. I would not exclude, for theoretical purposes, that it could have been used in a secular context, and that it is just a vase that comes from Crete, a very beautiful object, something that decorates the table or the house of the owner.

Doumas Many years ago I went to Japan and brought back a tea ceremony set. Does this mean that the Athenians or the Greeks were there, or that the Japanese were active in the Aegean, or that I introduced the tea ceremony in my home?

E. Hallager With regard to the seal impressions from Samothrace, you certainly have got evidence for Minoan administration. I think it is a very convincing case. I was not aware of the direct sealing you showed from the northern sector. The old ones you say are of local clay.

Matsas This direct sealing is not local.

E. Hallager That is what I wanted to ask you. It looked to be foreign although it is a very well-known type.

Matsas This one has a completely different appearance from the other sealings. The clay has a reddish colour. It is certainly imported.

E. Hallager It is difficult to judge from photographs but it looks like one of those that have been enclosed around something. Are there string impressions on the inside?

Matsas Unfortunately we have not been able to take a cast because the object is very fragile. It is very small, about 2 cm in length.

E. Hallager As you know, we have many examples of this kind from Crete. And we also have the comparanda from Keos. One brief question: your loom weights – also very interesting with the incisions – are they of local clay as we have seen elsewhere?

Matsas They are local. They are another example of the Minoanisation of the site.

Niemeier I just wanted to comment on one seal you showed with the concentric circles. I have seen a very similar one from Miletus. This is a rectangle, while ours is a half-cylinder, but the motif is exactly the same. You showed a comparison from Ayia Irini, which comes from the Malia Workshop. So your piece probably comes from Malia. This is very typical for Malia, the material and the motif.

Matsas Ingo Pini certainly believes it is from Crete. Its date is MM II.

Niemeier Yes, that is the date of the Malia Workshop. It is very exciting that your roundels are of local clay. This means that people had the seals on Samothrace and were sealing with

Cretan seals. This is not just a token that has travelled somehow, but Minoan administrators were sitting on Samothrace and sealed these roundels. This is a very important point: a certain indication for Minoan presence or at least agents of the Minoan presence.

Doumas This is evidence for the importation of a system.

Niemeier This is such a typical Minoan phenomenon.

Matsas I think we have to make a distinction between Samothracian and Cretan seal owners. The Samothracian seal owners in the last phase of the settlement own only clay seals. These imitate, probably not very successfully, hieroglyphic seals.

Niemeier That is an important point.

Boulotis I just want to underline that this is a very interesting phenomenon. Two settlements so close to one another, Koukonisi and Mikrovouni, have very striking similarities in the ceramics especially at the end of Troy V and in the early Troy VI, but the differences are also of interest: very local wares and styles. For example, I saw many sherds (from Mikrovouni) that are absent from Koukonisi, and this is a very good example of how to define local ceramic workshops and examine the trade routes and so on. On another matter, I am really impressed by the presence of mini-documents, noduli, nodules, sealings, seals, and I think Dimitris Matsas has excavated only a small area, perhaps two per cent, and I think we have to expect really very impressive results in this respect.

Doumas We may find them at Koukonisi, too.

Macdonald What was the context of ΣK 512, the bridge-spouted jar?

Matsas The context of the bridge-spouted jar was the same as that of the serpentine seal with the tubular drill ornament – on the same floor – it is late Troy V.

Niemeier And the seal is MM II.

Matsas Yes, but this means nothing.

Unidentified Did you find any evidence of metallurgical debris, such as copper alloys?

Matsas Yes, there is evidence for (the processing of) copper from the last occupation phase, corresponding to Late Minoan IA, the phase also of the documents.

Unidentified Did you find a Minoan-type cooking pots, tripod vessels?

Matsas There are tripod cooking pots, but not of the Minoan type, at least among what we have found so far.

Boulotis It is the case both at Koukonisi and Poliochni that tripod vessels have a long tradition in the north Aegean; they do not need to import the Minoan type.

Final summing up

Peter M. Warren

It is a great pleasure to begin by reaffirming our warmest thanks and congratulations to the organizers of the Colloquium, Erik Hallager, Wolf-Dietrich Niemeier, Colin Macdonald and their excellent team. Given how much it has already achieved it is worth reminding ourselves that the Minoan Seminar began only one year ago – its birth was at a dinner party given by Colin in his beautiful home here in Athens. We wish it continued success and progress, something we can be fully confident about since we are in the hands of dedicated Minoans, ancient and modern.

Much new and highly interesting material has been presented. So what are we to make of it? In the presentations we have been offered strikingly different interpretative models and approaches. With Wolf Niemeier we have (as too, we certainly would have had from Malcolm Wiener) a picture of the high civilization of palatial Crete exercising a powerful presence in the Aegean, albeit in varying forms. Others are less sure of the strength of this Minoan vision, less entranced by the *ekstatiko orama* (to quote another scholar). They look hard at each situation and find a local picture, each with more or less Minoan influence. They find almost infinite variety in a kaleidoscope of networks. So how do we progress or produce a new synthesis (which in any case tomorrow's new finds will change)?

First, with Nicoletta Momigliano, we need to ask just what we mean by “the Minoans”. Of itself the term does not convey very much beyond its use for the inhabitants of Crete in the 3rd and 2nd millennia BC. What then of ‘Minoans’ outside Crete? One might suggest a definition along these lines: a distinctive (Minoan) way of behaving expressed in distinctive material culture terms, for example the total package we see when we look at, say, Zakros or Miletus Period IV, or at, say Juktas or Aghios Georghios Sto Vouno. At these, and of course many other sites, there is a highly distinctive and recognizable way of doing things, composed of all the brilliant elements we know and love, and so need not repeat. Gerald Cadogan once remarked that no two Minoan villas and their contents are the same, but you always know a Minoan villa when you see one.

It follows that we can discuss the Minoans or Minoan influence outside the Megalonesos, saying if appropriate whether we mean Knossians or Phaistians or east Cretans or west Cretans, on many different levels in the transfer of relationships. There is, for example, a simple demographic possibility. Crete, in relation to the technology available for exploiting the environment, was quite ‘full’ in Late Minoan I, as site distribution in lowland zones has shown. Was this an encouragement for groups to move outside the island?

Next, an off-island dimension more obviously inviting discussion is commerce, exports in order to achieve imports. What did the high civilization of Crete need in order to maintain and develop itself? The basic answer seems easy: metals (as Malcolm Wiener and others have often argued). We note the informative slide shown by Professor Hayat Erkanal, documenting many metalliferous deposits in the

Izmir region, a matter of obvious relevance to Miletus. Beyond metals the Neopalatial inhabitants of Crete desired and sought out many other raw materials, a remarkable range of hard and attractive semi-precious and other fine stones, ivory, fine woods such as cedar of Lebanon, ostrich eggs, murex shells for purple dye (though these were also available in abundance in Cretan waters) and surely a range of now invisible goods (such as the contents of the Melian amphorae in the Temple Repositories) and living creatures. For proof of these desires we see recently the workshop contents of Herakleion Poros or the raw material imports at Mochlos or Zakros. When we say Minoan Crete needed or desired raw materials we of course need to consider, though not at this off-island Colloquium, the internal political and social structures prosecuting the needs and desires.

Next, what were the mechanisms for achieving these objectives? Settlements of Cretans abroad? It has seemed to me, as the Colloquium has developed, that a strong case can be made for directional differentiation. Based on excavation the strongest cases for external settlement seem to lie north-west of Crete, on Kythera, and north-east, at Trianda, Miletus (if Miletus in its Period IV is not a community of people from Minoan Crete it is very hard to know what else could be, in material terms) and, most remarkable of all, given its location, Samothrace. The site of Mikro Vouni introduces a new mechanism for Minoan objectives, the actual emplacement of Minoan administration with stamping, sealing, possibly use of Linear A (well documented at other sites) and weighing systems, on which latter Anna Michailidou, building on Karl Petruso's work, has recently thrown so much light. The exciting finds shown by Christos Boulotis from Lemnos Koukonisi will also certainly promote further evaluation. Another mechanism is the transfer of Minoan ideology and belief; this is clearly expressed in the peak sanctuaries of Kythera and, I would think, Keos Troullos and, after hearing Toula Marketou building on the proposals of Mario Benzi and Yannis Sakellarakis, Ialysos Philerimos. Meanwhile in the central Aegean directly north of Crete, by contrast, it is hard to see any exclusive Minoan presence. The presence of some Cretans at Akrotiri and Keos, just possibly Melos too, does however seem more likely than a "Versailles Effect" at these places.

If the main object of Cretan off-island interests was the acquisition of raw materials and emplacements abroad were a major mechanism for achieving this should we not see these emplacements as way-stations en route to source areas, especially of metals? Surely no Minoan settled at Mikro Vouni for its own sake, since Samothrace in itself had little or nothing to offer, nor indeed, land requirements apart, did Kythera (unless its deposits of murex shells were of crucial importance) or even Trianda. But all make sense, as too Miletus, as geographically critical points en route to Peloponnesian, western, north Aegean and Anatolian sources of raw materials. That such sites were deliberately selected also seems to be the case from a negative argument, namely the very much slighter evidence for Minoan contact at adjacent sites, such as, for the north-east Aegean, Troy and Poliochni, as the papers of Marta Guzowska and Massimo Cultraro have shown; Ios Skarkos, Iasos, Çeşme and Teichiousa we have seen did have clear Minoan elements, but the extent of any Minoan presence remains a tantalizingly open question. Exploitation of their local resources, such as the famous red marble of Iasos, is a clear possibility. Nor should we forget the evidence of sites and islands referred to by Wolf Niemeier in his introductory paper but not presented as such at the Colloquium, the significance of

which Minoan-Aegean relationships is clear: Chios, Samos, Knidos, Kos, Telos and Kalymnos (Vathy Cave). One thinks immediately of a further example: Aigina.

Commerce of course involves reciprocity, unless Cretan communities or their elites were simply acquiring raw materials without 'payment', which raises questions of the use of power in one or more forms. Crete exported pottery and other fine finished goods in metal, stone, ivory and ostrich egg; it, probably Knossos specifically, also exported its own raw material, gypsum and probably building timber to Thera (Akrotiri). But it is not at all easy to see such finished goods and materials as have survived as an equivalence for the known range of raw materials acquired.

Next, what were the consequences arising from these Minoan interests, apart from commerce? Here we enter on the concept of 'isings', Minoanising in this case, a situation many would think as if not more interesting than the economics of import/export trade. We must surely discuss the reception, adaptation and modification of Cretan forms and the use of the consequent new forms of material objects. Two contrasting examples are (1) the white-on-dark-on buff ceramics in the south-east Aegean, forms far removed from their Minoan originals, and (2) the many new combinations of Minoan and Cycladic decorative styles at Akrotiri and Phylakope. In social terms does not the selective acquisition of goods from outside a community and the use of those goods to create new local forms create status and power differentials among local recipients? Good examples would be the, surely valuable, bronze adorning statuettes, Minoan-type ladles and other stone vases offered at peak sanctuaries, most obviously at Aghios Georghios Sto Vouno on Kythera.

Lying between the export of finished products from Crete and the 'Minoanising' just referred to is the highly visible transfer of technology, as Manolis Melas reminded us. Many speakers have displayed as significant evidence Minoan types of discoid loom weights (which are standard in Crete from at least as early as Early Minoan II), ubiquitous conical cups, everted rim bowls, fireboxes, lamps and braziers, tripod cooking pots and other artefacts of Minoan form, all in local clays. The social significance of these technological packages (intermarriage?) merits questions.

Crete was the main driver and motivator in all this. It is striking that while the island sought and acquired many foreign raw materials there appears to have been very little transfer of aesthetics or beliefs or styles or technologies or ways of behaving from Aegean to Cretan communities. Economic and social relationships were unequal or asymmetrical, Crete being dominant in the Neopalatial period. Something approaching a reversal of this position is discernible in the relationship of Crete to Egypt, from where both beliefs and goods were received, adapted and modified; but that is outside the bounds of our present discussion.

Finally there is the diachronic factor. An obvious area for discussion is the fact that economic, social and probably political relationships changed. For example, as we have seen, Miletus was wholly Minoan in its Period IV, less so in the preceding Period III; Trianda had clear Late Minoan I B elements but, as shown by Toula Marketou, was a much more cosmopolitan community than its much more strongly Minoan form in Late Minoan I A.

Let us therefore move to discussion of these themes, economic, social, demographic, political, aesthetic, technological, ideological and the fundamental matter of the mechanisms of operation of the relationships and their diachronicity, as well as other themes I will certainly have omitted.

General discussion

- Melas** The transfer of technology is a very significant matter indeed.
- Warren** Technology is important. I talked to you about the transfer of relationships, and in that indeed I include the transfer of technology, I should have said so – the transfer of technological relationships and what that might mean, whether it might mean anything or whether it might mean a great deal, what is behind it? But thank you indeed for mentioning it.
- Melas** In order to understand social structures, within Minoanising populations, it is necessary to include technology in one's account. Apparently, technology was not borrowed just for its functional merits, but certainly also as an ideology and social strategy relating to the legitimization of hierarchy and status.
- Warren** It is perfectly correct that behind all of this there is our subtext: what were the social correlates of all of these social forms of behaviour and these different receptions of material things in all those different places? What were the social correlates? This is fundamentally important since we need to recognize that it is people, not objects or material goods, that we are actually trying to understand.
- Melas** A good example for the relationship between borrowed technology and local social evolution was just mentioned by Marta Guzowska. She refers to the transition from Troy V to VI, focusing on a rearrangement of the social structure just at the time when the Minoan products, including Minoan loom weights, enter Troy.
- Warren** Well this is right, and this is exactly what I was just saying near the end of my introduction, that when you receive foreign goods this itself comes to create status differentials and power differentials in the receiving community, because not everybody is receiving it. This was a very fruitful point in our discussions about Aegina that those who have these beautiful things – the same would be true of Cretan objects – are in some kind of a special position. It's not the same for everybody since not everybody is receiving these things; everybody might have loom weights, but not everybody had a beautiful stone vessel or something like that.
- Niemeier** And even people. There is also the political dimension, of course, which is very difficult to analyse from archaeological finds, but I think we all agree that Crete at that time, at least at the beginning of the Neopalatial period was the great power in the Aegean like America is today in the western world. Of course we must also take this into consideration since it goes together with economic power – the flag and trade always go together.
- Tsipopoulou** From our perspective, the Cretan, Minoan perspective, we try to understand the

function of palaces and what they really were. I think we all agree that all this expansion, no matter which aspect we choose to examine, whether cultural or political, is due to the presence of a central authority or authorities. And I would like to ask if we can discern any difference between the Protopalatial and the Neopalatial periods? You spoke about diachronic... but there must be some difference, because there were also changes in Crete.

Warren Many people will speak of this diachronic factor but before doing so maybe we should just remind ourselves that we're discussing the Aegean here, the central and northern Aegean and so on, but if you want them to say where is the best manifestation of Protopalatial MM II material, then the answer is certainly the Levant and Egypt. This is where these beautiful cups and bridge-spouted jars, which are classically Minoan, they are not –ising, they're not imitations or anything, they're straightforward exports, and so there was a very considerable activity in the Protopalatial period; but not in the Neopalatial period as the number of exports to these regions in the LM I is very small. So maybe there was a change in that sense, a change of emphasis perhaps between the Protopalatial and the Neopalatial period.

Guzowska I would like to say that while we are talking about all these factors that you mentioned, we should always remember that they depend not only on the impact of what was coming out of Crete, which I agree was the driving force, but also on the state of the social development of the society impacted by the Cretan elements. Because when we talk about Troy, the impact is on a highly developed, stratified society with a long history; so these people will never get really very Minoanised. By contrast, when the impact is on Kythera, a more or less empty island, you can be what you want; you can be Minoan there, not just Minoanised.

Warren That may be a reason of course why the Minoan impact on Troy was so small, a flourishing culture...

Guzowska Yes, I believe it was limited only to certain spheres.

Melas I would like to congratulate Professor Warren for his perfect introduction and I would also like to stress another couple of points, which are essential for an up to date study of Minoan civilization. Instead of more facts, simplistic culture historical approaches and "scientific" methodologies, what we really need most today, one hundred years after Arthur Evans and twenty-three years after the Thalassocracy conference, are more insights taken from various intellectual fields, like philosophy, including phenomenology and realism, material culture studies, structuralism, and also ideas relating to sociology, Marxist philosophy, sociology and political economy, modern social thinkers like Foucault and Bourdieu, and above all interpretive hypotheses deriving from anthropology, especially borrowing examples and analogues and from ethnography, ethnohistory and ethnoarchaeology, and so on.

Warren Thank you for mentioning these broader perspectives, which are very relevant to what we should be thinking.

- Van de Moortel** I would like to add to what Marta Guzowska was saying: we should look at societies that came into contact with the Minoans, but also which elements in society, which social classes actually had that contact, and also what impact Minoan influence had on society? Do we see an increase in social and political complexity, which is what often happens when a society of a high order of complexity comes into contact with a society of a lower order of complexity. I thought that the discussion about the libation jug in the Trojan grave was very symptomatic. It is such an isolated find; we really don't know the social class of the child that was buried there; it could be, as Christos Doumas said, just the child of a sailor who happened to pick up the jug.
- Guzowska** Not necessarily, excuse me, the child was buried inside the citadel. That already shows something.
- Van de Moortel** Ok, but in your case we need to have a good idea of the society that is receiving...
- Warren** This is exactly what I meant by this question of the receiving community; it helps to create status and power differentials.
- Niemeier** I would like to disagree a little bit with you (Warren) when you talk about the problem of the economic expansion of Crete. In the Old Palace period we have to look only to the Levant. In this conference we are presented with an expansion within the Aegean. We have two seals and one sealing at Miletus; more impressive, of course, is what Dimitris Matsas found in Samothrace, and his seals and sealings especially he gave a date MM IIB-MM III, the border between the Old and New Palace periods. We know about the problem of dating seals from their context because they can survive a long time. However, what he has shown, all the impressions on the roundels, is that all these seals are pure Old Palace period seals, particularly the Hieroglyphic seals. So I see that what Dimitris has shown us of Minoan administration in Samothrace appears to me to be an Old Palace period phenomenon. We, therefore, have two sites in the Aegean, where we have strong indications – stronger at Samothrace than at Miletus – that there was at least an economic expansion in the Aegean as early as the Old Palace period.
- Momigliano** I apologize, but I would like to bring us back to the very beginning. You gave us a definition of the Minoans, which is very much what I said in my paper, a way of behaving, a way of doing things, and I assume – correct me if I'm wrong – by doing this you remove any kind of ethnic connotations; and perhaps we can start talking more about cultural affiliations, especially in terms of material culture, but also symbolic affiliations. And I would like to know how many people agree with these ideas?
- Warren** Well, the question of ethnicities is, as we all appreciate, a very difficult one. I'm trying not to get too deep into the question of ethnicity, but I do mean this was something that originated from Crete and came from Crete. After all we have the discoid loom weights in EM IIA and onwards, probably in EM I, and you find that this particular way of doing things is already there, so if you want to call it ethnicity in

the sense that it originated in Crete, that is fine. It is at least a cultural phenomenon, but I think it is also more than that. This particular way of behaving, that manifests itself at Miletus, began in Crete, not Rhodes, nor the Argolid nor Aegina.

Momigliano Yes, but then you assume that Crete is a homogenous ethnic unit.

All Not necessarily...

Momigliano Actually I prefer this definition precisely because it got us away from the problems of ethnicity.

Warren I don't necessarily assume homogeneity, I did actually say that we can try and discern whether it's the Knossians who are doing it, or the Phaistians or east Cretans; perhaps not the west Cretans. But on the other hand, a powerful argument for the cultural homogeneity, and homogeneity in belief in Crete, at least in LM I is a very strong argument.

Nikolakopoulou I would like to take this a little bit further and discuss physical presence and what it means – the actual presence of whatever these people are and how we are to perceive this. For example, even if we find the evidence for the physical presence of so-called Minoans somewhere else, what do these people consider themselves to be over there, in Miletus? It's a matter of identity. These people then die, and what do the next generations consider themselves to be? I think this is an incorrect approach; it is about identity. At Akrotiri, you cannot discern a group of Minoans using specific assemblages which clearly contrast with assemblages used by other people living there. So even if these people came from Crete, they are no longer Minoan on this level. They acquired the identity of Therans.

Warren You are very right to raise the question of identity; maybe we should not say ethnicity, but identity.

Momigliano That is the point I was making!

Warren So then we have to ask: how can we test for the continuum of identity? The answer might be if you find, over a period of time, that the same way of doing things is continuing, from period to period, to me that suggests that there is an identity, which is developing of course in relation to the new location of these people. Of course they did not shut themselves off from the Anatolians or whoever, but if you find that the assemblage is being modified, as with the southeast Aegean ware, then something else is going on. That is a new kind of identity, insofar that we can connect identity and material culture. It is quite difficult to determine an identity otherwise, without written texts. But in cases like Miletus, where Period IV has more than one phase, for example, there is a certain passage of time, one hundred, one hundred and fifty years maybe. Kythera, Kastri, had several phases; it wasn't just one period. But the identity, in terms of material culture, appears to stay strong in relation to the original identity. I'm just looking for ways of testing whether we can speak about identity or not.

Sakellarakis Thank you or your fine introduction, Peter, made in your perfect and perfectly understandable English. I think that the discussion has been somewhat sidetracked by details. I hear discussion of nationality or identity, and I am very much afraid that no-one here in this auditorium, not even the two young ladies, can tell us how we can tell identity, how we can demonstrate identity or nationality. (Just one moment, Mrs Tsipopoulou, as I shall talk for some time.) It is very difficult to well nigh impossible. I would be very happy if someone in this hall could tell me if I am Greek, and how Greek, or how English you are. These matters are very difficult to demonstrate for the second millennium BC. Certainly I try to and it behoves us to ask these questions; it is our job as researchers. But researchers depend on 'evidence', that great word, 'evidence'. What is our 'evidence'. The two per cent excavated by Dr. Matsas? In other words, nothing. We all know very well how museums are full of unpublished material and what a small proportion has actually been excavated, even if well excavated. Consequently, the evidence that we do have is of very poor quality in terms of being able to answer these questions. In my opinion, you Peter, Christos and I are very lucky to have lived in two golden ages. When we began, we began in an organized manner – you worked on Minoan stone vases, still today a key study; Efi Sakelleraki worked on dress, I on religion, Cameron on wall-paintings – all still basic works – and Branigan. So, in this way, progress was made in the Minoan archaeology that we are now discussing and concerning which we have learnt so much. I am afraid that now the body of evidence continues to grow every day, as you rightly said, so that we change our minds daily because of this or that new piece of evidence, so much so that we cannot assimilate it all. The only great work that has come out of Minoan archaeology is the CMS, so that we now all know our seals. It is our duty, as the seniors in Minoan archaeology, to steer the younger generation in that direction so that we do not let them ask theoretical questions that cannot yet be answered, since our actual knowledge is really very small, of course not in the Socratic manner of knowing very few things.

Doumas Please, we have to bear in mind that only when we talk about Crete are we entitled to use this distinction: Prepalatial, Palatial and Postpalatial. It's tragic. You see a map of the Aegean where it says 'Prepalatial sites' for the north, in Thrace! The second point is that according to what you said, there are many different categories of evidence relating to our subject: perhaps imports, maybe indirect influences, maybe technology, and the indirect evidence from Classical sources. There I think we have to be very sceptical, too, because we don't know why this information was put into the Classical sources; sometimes it is mentioned once, for example by Herodotus, and then copied by everybody, thus producing a false accumulation of 'evidence', which is not evidence at all. And in this respect, although Folegandros is mentioned in sources, we have nothing Minoan so far from that island, whereas Thera is completely out of the Classical sources. And if these sources had any value, I think that Thera would be the first to be mentioned.

Warren Perhaps it disappeared with the eruption.

Doumas There's also Melos. Is Melos mentioned in the sources as a Minoan colony? In terms of the needs of Cretans, you mentioned metals, and I would add services. The

Cretans have a surplus from their land and they need commodities from the outside, but they needed services to do this. I never believed that Crete had a fleet; they did not need a fleet, and were safe and flourishing on the resources of their land. On the contrary, the wealth and affluence of the islands is nothing but services; it results from services, and therefore I think that one of the needs of Crete was this. And then talking about colonies, we must also find out what was the function of these colonies? We can say 'this is a colony', but why was it needed? Crete was not a poor island that needed to expand, so I do not agree with Warren that it was for reasons of overpopulation. And finally, Crete might be a passive force in the sense that it was for others to who imported ideas or commodities from Crete, taking what they required and then adopting or adapting according to their needs. The force is from outside the island, and it extracts what it needs from the passive source, namely Crete.

Warren The question of services I think is a very interesting one, and certainly deserves attention. I think that you are perfectly correct to say we should ask, if a place is a colony, why it is there; and, I think it was Christos Doumas who had a very good phrase when speaking about Lemnos, calling it an *anagkastikos stathmos* or "station of necessity" *i.e.* these were stations, very critical points for economic purposes to gain access to routes for the command of stone or metal or other natural resources and this very well explains the position of Kastri and indeed of Trianda and of Miletus. Samothrace I'm sure was again an *anagkastikos stathmos* because they were seeking metals from further north.

Niemeier There were many interesting issues I would like to comment on. Of course, I can't resist responding to Christos Doumas's: 'Crete had no fleet'! This I don't believe at all, because it is so passive. I can't imagine that the Cretans were waiting and saying "Somebody will send us metals, let's wait to see if they arrive"! From the beginning of the Middle Bronze Age, just before the first palaces were founded in Crete, we have a large corpus of depictions of ships on Minoan seals; this started in MM I, and I showed some later ones. There are also the talismanic seals. So we have a lot of ship representations, and even if it is a great island, they also needed their ships. And if you want to get raw materials you have to be proactive; you can't wait. And this is the same in Mesopotamia, the so-called Ur expansion is connected with a search for raw materials, to import them; so you can't wait for someone to bring the metals, you have to be proactive. This doesn't mean that the inhabitants of the Aegean islands – and I agree completely with you here – did not play a role in this as Herodotus (I.171) tells us that the islanders had manned the ships of King Minos if he needed. Of course this was a collaboration but I think you can't really argue that Crete didn't have a fleet. You have so many representations of ships. The only almost complete corpus of Aegean antiquities is that of Minoan and Mycenaean seals, as Yannis Sakellarakis mentioned; and if you look through it, you see how many ship representations we have in Crete. Both Thucydides and Herodotus say that Minos was the first to own a fleet or to have constructed a fleet.

Now, ethnicity. This is of course a big problem, because, I agree with Nicoletta and Irene that the term 'Minoans' is very problematic. It was coined by Sir Arthur Evans at a time in modern history when the nation states were formed, which have

brought many troubles to the world, unfortunately twice in Germany. But before, we did not have a nation state; Italy only became a nation state in the nineteenth century. Therefore it is problematic to say the “Minoans”, as if there was a Federal Republic of Minoan Crete, or something. I would prefer to use Peter’s term of identity. There is a book by John Myers, entitled “Who were the Greeks?”, where he uses a good phrase: “The Greeks were always in the way of becoming”. What is Greek identity in Antiquity? Or Phoenician? They never called themselves Phoenicians, but rather said “I’m from Sidon, I’m from Tyre”. The Minoans probably never said “I’m a Minoan”. And the process of becoming Minoan, or creating a consistent identity for the whole island, can be seen in the development of Crete. If you look in the Prepalatial period, you have many different local pottery wares and no unified material culture; this slowly changes in the course of time, and, I think, by the Neopalatial period, although we still have local differences, we do find some unified material culture, in architecture – lustral basins, pillar halls, the Minoan megaron –, in pottery and fresco painting. Then there is some kind of Minoan identity. I think if John Myers said that “the Greeks were always in the way of becoming”, even we could become a Minoan, so that living in Miletus as a local Carian you can adopt this material culture and live together with people coming from Crete or other centres. And what ethnicity means is a problem. I am German, I have French and Polish ancestors; so what is German, what is British? I think ethnicity today doesn’t mean a great deal.

Voigtländer I want to provoke a little bit. If you want to identify Minoans, you have to do it only on architecture. Everything else can be imported. But if you find architecture, like on Lemnos, you need the idea to come from somewhere to there, and that means that people are coming and are building this architecture. Then we can identify people who are living in that place.

Michailidou I quite agree that if you have architecture this is a strong argument for identifying culture and people, but I would like to provoke the other way. I was very astonished when I studied Kültepe, where the merchant enclave of Assyrians is being excavated for many years. The scholars who deal with this material have noticed that the architecture and all the equipment used in the city and at the palace on the cliff are local in style, and that had no archives been found, we would never have understood that the Assyrians were there. Taking this example from the old Assyrian colony, we have to decide how we will be sure of the presence of the bearers of the culture and what that means.

Warren The other half of Malcom Wiener’s distinction was the ‘Versailles effect’, which is a culture taking on the forms of another culture that is not in any way subservient to that culture; that was the Prussian court taking on the trappings of Versailles civilization. With Kültepe, it was the exact opposite (‘Karum Kanesh contact’) since we would never have known that there was this Assyrian contact at all from the material culture only; it is merely due to the texts that said so.

Hallager I agree with Voigtländer that architecture is very important when you want to identify people, but I disagree that it should be the only criterion. We were discussing

this in coffee breaks as you know, and to take an example from what we have been discussing in the colloquium here I believe firmly that the evidence that Dimitri Matsas has excavated in Samothrace does prove the presence, at some point, of Minoan administrators. To me there can be no doubt about that. I mean if the two roundels and the two noduli were found in the temple repositories at Knossos nobody would have doubted that they belonged there. There is a very firm system. So I see Minoans, in certain periods, working in Samothrace; and I agree with Peter Warren and Dimitri Matsas, that it has something to do with the acquisition of raw materials from further north. Lastly, I would ask Christos Doumas, would the Minoans do that without having transportation of their own?

Doumas May I answer? How many countries need oil today and how many countries own tankers to transport it?

Hallager Denmark has.

Doumas Not every country has, and Greece has a lot more transport that she needs. I meant services. If somebody needs services, they order them from those who provide them.

Boulotis Please do remember the evidence from Crete itself, Kommos especially, where there are fine harbour installations – Kommos, Amnisos and Poros.

Marketou I would like to add some of my thoughts concerning matters of “ethnicity” and the long debate about “Minoan colonies”. We have again heard in this symposium that Kythera, Trianda, and Miletus have been Minoan colonies. During the LM IB phase at Trianda – let me call it LB (Late Bronze) IB,-, we do have some Minoan together with Mycenaean imports, as well as Cypriot imports, some of them existing there since LB IA. In the meanwhile, large amounts of Cypriot imitations, in both closed and open shapes were produced locally. However, although these local products are similar to Cypriote WS I milk-bowls, as well as Base ring I and Red Lustrous Wheelmade pottery, we could never think of the existence of a Cypriote colony on Rhodes.

This is just an example to understand that what I meant by participating in the Aegean network of exchange, which is a very complex mechanism, I meant that Trianda and other ‘Minoanising’ sites imitate locally several Cretan shapes and decorative motifs. This means that they were making ‘fakes’ for trading purposes across the Aegean and Asia Minor. The presence of Minoan, Cypriot and Egyptian bears the meaning of ethnicity; for me, ethnicity is just the town that produced these products and not the surroundings. For example, in the Dodecanese, Koans were very different from the Milesians although they had similar cultural traits; but the Koans exported large amounts of Light-on-Dark pottery – it is not ‘southeast Aegean’, but pottery made at Serayia on Kos – and Trianda imported this pottery from Kos, and sometimes they also imitated this Coan pottery, perhaps ultimately inspired by Cretan MM pottery. So this is a very complex situation and mechanism which was developed in a process to produce and sell things to other areas. That’s why they imitated Cypriot pottery, just as they imitated Minoan pottery in LM IA.

I have also noticed that most of the imports found at Trianda, on Samothrace and at Miletus are not from Knossos, but rather from the Messara; why did they import from the Mesara when Knossos was the palace of Minos? Perhaps we have to transfer the focus from Knossos to the Mesara and Phaistos.

Boulotis By Minoan thalassocracy we don't only mean Knossos, as in Minos, but the palatial centres or other sites in Crete, not necessarily just Knossos.

Chrysoulaki I would like to get back to Metaxia Tsipopoulou's thoughts about differentiation in chronology, which now is very important; we need to understand that during the EM period, before the emergence of the state, the character of the different sites in the Aegean with Minoan presence is very different than in the period when the states had emerged. I would like to explain that in terms of ideology. I agree with Metaxia Tsipopoulou about it being important to differentiate between the Early and Late Palace periods, between the period when we have fledgling states in Crete and late, when Knossos may have had a more dominant role and a different kind of presence in the Mediterranean in economic and political terms. Secondly, I would like to stress what Peter Warren said in his introduction. It is very important to differentiate between production, what objects and materials arrived in different parts of the Mediterranean, and ideology, which is in that period, religion. So goods could be Cretan, but the religion, which is the expression of the ideology of the state, is a very different thing requiring a different kind of analysis. So I think we can talk of the power of Minoan, state ideology, which is why Cycladic did not have the same effect on Crete, because the Cyclades did not have a form of state system.

Warren Thank you for that. I recall that a very nice conjunction of religion together with the goods and raw materials is found at Hagios Giorgos sto Vouno, where raw material is offered in a Minoan peak sanctuary.

Tsipopoulou If you will allow me a few words about identities. First of all identities existed in the past as they do exist today. However, it is only during a crisis that people feel the need to express identity. And I believe that these people from Crete, if they emigrated to Miletus, or Kythera, or other places where their presence seems certain, were not under the control of a far away central authority or state – and Miletus is far away from Crete. I think, however, they maintained their own identity, whatever you want to call that identity, Minoan let's say. At Miletus they live in a Minoan way, so they had an identity. Identities existed, and, if you will allow me, it is not a matter of blood by any means. You and I may be of the same blood, but you're British and I'm Greek.

Marthari Concerning the pottery from Late Cycladic I Akrotiri, *i.e.* the Volcanic Destruction Level pottery, I would like to say that there is Minoan influence in all three levels: a) shapes, including the ritual ones, b) decoration, and c) pottery technology. However, we have to consider the quantities and the percentages of both the minoanising vessels and those of the Cycladic tradition and make comparisons to understand better what happened there; it is not as if one piece can speak the truth

to us. Furthermore, what I've noticed at Akrotiri is that even in this late period, the Late Cycladic I, new Cycladic types are being produced. The potters are creative from this point of view. For instance, they create new forms of Cycladic jugs. On the other hand, they adopt, at the same time, several shapes of jugs from Crete, because the latter suit them or are technologically better than the local ones; or perhaps, because they are embedded in the Minoan way of life and they are attracted from it.

Concerning clay ritual vessels from Late Cycladic I Akrotiri most of them, and there are large numbers, are of the specifically Theran forms, namely nipples ewers (nipples ewers are very different on Keos, Melos, Thera, and Ios, Marthari this volume, figs 32-33), cylindrical rhyta and ribbed vessels. However, characteristic Minoanising forms, such as chalices, triton-shell vases, rhyta in the shape of animals or animal heads etc also occur in small numbers. Both local and Minoanising ritual vessels are found side by side in the same deposits. Such kind of material culture indicates that the same thing may happen regarding the content of the religion itself? Some Minoan rites and probably beliefs have been adopted by and/or adapted to the Theran religion. On the other hand, Peter Warren has said that Crete was the driver during this period; it was. However, since all rules have their exceptions, I draw your attention to some Cycladic nipples ewers imported to Pyrgos, Commos and other sites in Crete, including the exclusively Theran libation form with the horn protuberances. In addition, two ewers which look to be of the LM I A style in form and decoration, yet they bring nipples, have been recovered at Akrotiri. So it is possible that Minoans were impressed in a way by this type of Cycladic libation jug and involved it, even very rarely, in their own rites. I remind that Nikolaos Platon once remarked that Thera played a role in the religion of the Minoan world in many different ways, because of the volcano.

Macdonald

This is not a matter of definition or character. I wanted to raise the question of why there was interest in certain places that were discussed during the conference and to get on with the matter of raw material and in particular metals. I just had a thought speaking diachronically briefly whether in the Old Palace period some of the interest may be specifically targeted interest, whereas in the New Palace period there may be partly, what Peter Warren was talking about, expansion, whatever precisely that means. I don't mean that population was overflowing at the edges of Crete, but something connected with expansion of population in Crete and expansion of interests abroad, partly in the New Palace period plugging into ever increasingly active networks of maritime activity, which would have involved of course the ferrying of raw materials with or without a Minoan fleet.

A Minoan fleet doesn't have to be an organized form of fleet, a Knossian fleet or something like that, but I do believe that there were many Minoan boats. Just before I come to the origins of the raw materials themselves it is of interest that just as in the ninth century BC with the foundation of the Greek colony at Pithekoussai on Ischia, not in metal-rich Etruria, but opposite Etruria, so Kythera is not on top of any raw material whatsoever, nor is Rhodes, and nor is Miletus. Perhaps all are spring boards or gateways to areas where raw materials could be accessed.

With regard to metal sources, quite rightly the geographic location of Samothrace has been noted as being close to the Mt. Pangeion region; Samothrace is again off

shore and not on the mainland itself. There are the other regions that have been mentioned, there are the Taurus mountains, but also I was interested in what Professor Erkanal and Dr Keskin were saying about copper, silver and lead resources immediately inland from Çeşme. I was wondering if there is any lead isotope data on the metal ores from this area.

- Erkanal** A tin mine has been found at Uludağ, not far from Bursa. This is new. But in the region of Bakla Tepe south of Izmir, we have gold, silver, tin and copper.
- Warren** Is there any evidence that these sources were exploited in antiquity?
- Erkanal** I don't know. We have some samples from our excavation, which were sent for analysis in Oxford; we await the results.
- Warren** This would be extremely important because these sources are even nearer than the Tarsus and north Aegean sources.
- Niemeier** I just wanted to respond briefly to Marisa Marthari and Toula Marketou. Marisa, why shouldn't the Minoans import or adopt Cycladic shapes that please them, because this is not a one-way relationship? Of course there is input, and in the earlier days, the input from the Cyclades is much greater, as Christos Doumas has shown. But here it's the other way around with some input from the Cyclades, which you can see in pottery, but the influence on material culture is undoubtedly much stronger in the other direction.
- And Toula: We believe that the Cretans who went to Miletus didn't do any ethnic cleansing in that area, or in Rhodes – this is a horrible invention of the twentieth century – but rather were interacting with the local people; they married women there – this we know from later Cretan colonization – for they had no women when they arrived. We also know this from Plutarch, and it may be one reason why the local material culture is mostly taken care of by women. Ivonne Kaiser showed examples of hybrid shapes from Miletus, the Minoan cooking pot with the Anatolian basket handles. Of course there is interaction. And if you have Cypriot pottery on Rhodes, Toula, and you have local imitations of Cypriot pottery, why not? The Late Bronze Age was a cosmopolitan world, and we can see that in the Ulu Burun shipwreck. I think that this was not very different at the beginning, if we speak in Cretan terms, so I don't say that Neopalatial means the whole period, but if you use Cretan terms, the New Palatial period of LB I was not very different. There was a long discussion over the nationality of this Ulu Burun ship – is it Mycenaean, Levantine, Cypriot? All this discussion was nonsense because it was a cosmopolitan world and ships were coming from the Levant and Minoan ships went there. And Rhodes, of course, is the first island you reach when coming from Cyprus, and why shouldn't Cypriot merchants have lived on Rhodes? They brought their pottery, and the pot broke, and they said: "my wife's fine milk bowl broke, could we make another one that looks similar?"
- Melas** As we all know there are different levels of acculturation, and they can be traced in material culture. Some societies, however, resist change and acculturation, and the more private and secluded the sphere of life, the more it is likely to preserve local cultural traditions and ethnicities. An example of processes of Minoan acculturation

is offered by Miletus, although here material culture appears to remain mostly local. Minoan influences, however, bring about gradual changes in various fields, including technology and household material culture, and create new cultural and social identities. This applies to such activities as the way they cook, the way they weave, wine consumption and the use of conical cups. Import or imitation of exotic items belong to another scale of acculturation pertaining to systems of prestige objects associated, as social rather than ethnic markers, with local power strategies. Most of the material culture in Miletus, however, continues to be local. This is especially true of architecture, a fact that is observed elsewhere in the Aegean, including Karpathos. As to why this phenomenon may occur, a later example offered by Kültepe – Karum Kanesh, may be instructive. We are informed from the archives of this important commercial center that foreign merchants married local women, and therefore the entire household material culture is local; the houses are also local because the merchants wanted to incorporate themselves into local society.

Momigliano I think it was Marisa Marthari who said that the driving force of this Minoanisation was Crete, and I think we more or less all agree on that. And this is also shown by the immense variety of evidence from completely different sites, which have this in common: they all try to imitate Minoan pottery. Although I do not want to diminish the role of Crete, I would like to think about emulation. I think there are processes of emulation going on, but are the people from Teichoussa and Iasos imitating the Cretans or are they imitating their neighbours, Miletus or Trianda? And how much of the Minoan material at Troy actually comes from Samothrace or closer neighbours? We shouldn't forget the driving force, but there are also smaller networks at work, which spread Minoanisation.

Warren The thing to ask is “is there some way of investigating that very point”, and I think that it can be done by looking at an assemblage and seeing what could only have come say from Kouphonisi to Samothrace or Çeşme or wherever you like, and look at it in that way. It is open to investigation.

Doumas What I would like to emphasize is that we are talking about evidence, which has a very strong physical appearance. But there were other things, which were traded and of which we have no trace. We would reach the wrong conclusions if we did not bear in mind that we have so little. I will give an example from our recent work at Akrotiri. Our palaeo-entomologist has identified insects that do not belong to the Aegean fauna, but come from the Levant. The botanist has discovered charcoal of Lebanese cedar, of pomegranate, of oak, which does not belong to the Aegean.

Rethemiotakis For all of us who work in Crete and are accustomed to the term, “Minoan”, the word tell us nothing about ethnicity, identity, etc, outside of Crete. We must be a little more specific about identifying fabrics and provenance. For example the material presented by Irene Nikolakopoulou from Santorini is Knossian, not Minoan. Minoan, in this context, means nothing. The same applies to the material from Miletus. So everybody here has to be a little more specific about fabrics, about provenance, and not just use the term Minoan, because it is misleading.

- Papazoglou** I would like to point out that when we speak of the Minoanising process in the Aegean we speak of MM II-III, which is the age of the great expansion of the Minoans, until LM IA. That's what I have understood from the two days of discussion here. And in this discussion, LM IB should be excluded because it is not simply the equivalent of LH IIB, but also LH IIA; it sees the rise of the Mycenaeans, not the expansion of the Minoans who are already counting their last days. They received a blow from Santorini, and within fifty years the Mycenaeans were at Knossos. LM IB is truly cosmopolitan as Toula Marketou has said for Trianda. Of course, there are Mycenaeans, there are Minoans, and there are Cypriots. We know it even from the chamber tombs at Ialysos that there are two or three Cypriot graves with only Cypriot goods inside. I think that what we see as Minoanisation in the Aegean is in the MM II-III and LM IA. It's the first time we see cosmopolitanism. Before that, in the Early Bronze Age, there are distinct cultures, north Aegean culture, Early Helladic, Early Minoan, Early Cycladic – worlds apart, despite some interaction. The Minoans, or Cretans, began this process because they were the stronger and more affluent. After LM IA, the Mycenaeans take their place as witnessed in many places, including Trianda.
- Warren** Certainly in LH IIA, Mycenaean culture is indeed on the rise, but I do not accept that LM IB – and I know Colin and I have disagreed about this matter – was in any way a period of decline in the island of Crete; it was a very great and flourishing period. I believe this is also manifest in Miletus. I am not saying that for this reason Trianda is not cosmopolitan in the LM IB phase and Lena Papazoglou knows this far better than I do.
- Papazoglou** In the Middle East there are more MM imports than LM IA; that must mean something. The beginning of the imperialism is Middle Minoan.
- Warren** Crete itself has a whole series of LM IB destructions, which are full of foreign imported material. At Mochlos there is an Egyptian bronze sistrum in an LM IB destruction level, for example, but there are lots and lots of others. So the picture at that time in Crete is a very rich moment.
- Papazoglou** I'm not saying they are declining; of course they retain all their wealth, but the power no longer stretches across the entire Aegean; it starts to decline.
- Niemeier** Reference has been made to the article by Penelope Mountjoy and her selective clay analysis of the so-called Marine Style pottery, which indicates that this selection is imported from the mainland. But when you see them, you believe they are Cretan; they are like the Lacoste shirts you now buy in Turkey. Imported pottery does not mean political domination. An imitation was possibly cheaper to get from the mainland than from the Knossian master potter. So the appearance of this pottery, as Peter Warren argued at the Knossos conference (2000), is a purely Minoan phenomenon. If you look at a Marine Style sherd, you associate it with 'Minoan'. So this is not proof for Mycenaean domination at that time. I agree with you that the dynamic process of Minoanisation occurred in the MM III-LM IA period. In LM IB, we have more of a state of affairs, combined with the beginning of Mycenaean expan-

sion in the Aegean. As I told you, in the LM IB, in Miletus IVB, we do have more mainland imports than in Miletus IVA (~LM IA). But we must not always see a Minoan-Mycenaean antagonism; they did communicate with each other. In the Shaft Grave period, the Mycenaeans imported luxury items from Crete; I remind you of Peter Warren's article of more than thirty years ago about the Minoan stone vases on the mainland.

Melas Has it not been suggested that probably this period, LM IB, is more of a style than a period, except at Knossos?

Neimeier I don't know who said this, but whoever said it is completely wrong. LM IB is a clearly defined phase; there is not just the Marine Style, but also the so-called Standard Tradition – what Furumark called sub-LM IA. I find Betancourt's Standard Tradition much better, because the great mass of pottery follows standard traditions, while the Marine Style and luxury ceramics form only a small minority of assemblages.

And my last point: I have heard this word “acculturation” several times. In some ways, it's a problematic term. A colleague, not here today, argued that this phenomenon does not mean an actual presence. But what is acculturation and how does it work? You couldn't in the Bronze Age search the Internet to find out how to make a Minoan cooking pot or how to do a Minoan wall-painting. Acculturation means that people come into close contact with each other; they live together and learn from each other how to do fresco painting, for example, which is a very difficult technique. So this means contact, travel, living together; only then is acculturation possible.

Caskey I simply wanted to come back to Keos. When Caskey chose the site it was not a discovery; the site was known, as you all remember. But he was really looking north-east, south, west, and east for the contexts that are beginning to show up now between the north Aegean and the eastern part of the Aegean. So in a sense, he very much viewed Keos as a combination of Minoan and Cycladic, but also as a real Cycladic island in the sense that he viewed the Cycladic sea as Cycladic more than a Minoan sea. As far as cult goes, I might just remind you that there is a very good example in the Keos' temple for a cult that existed in a given building, at a given spot, a good five hundred years before you get any Minoan influence coming in. The pottery, the imported pottery, there is MM II onwards; we also have good mainland connections right from the beginning when this building was constructed.

Warren It is time for me to draw things together. I'm very tempted to spend thirty seconds on my intellectual hero, Fernand Braudel, to say how well his three level model would suit the kind of situation we are describing, because do we not have a whole series of immediate events, *histoire événementielle*, that we can see, like the eruption of Thera, the destruction of Miletus, and many other events? But at the same time, these events were bringing to an end *a moyenne durée* of cultures which had been going for some few hundreds years in networks of economic cycles and trade. And behind all that, we have the *longue durée* of the geological and geomorphological formation of all these backgrounds with all their differential effects on natural resources; this is very much a matter of the *longue durée*.