

# EMULATION OF AEGINETAN POTTERY IN THE MIDDLE BRONZE AGE OF COASTAL THESSALY: REGIONAL CONTEXT AND SOCIAL MEANING\*

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It may seem unusual to start an article dealing with Middle Helladic (MH) pottery by referring to the Mycenaean period. Nevertheless, I do this, because in my opinion certain aspects of MH pottery can only be set in proper perspective if we take the later development into consideration. One of the remarkable characteristics of the Late Helladic (LH) period is the process of the homogenization of the production of fine decorated and undecorated pottery throughout the Greek mainland. What we call Mycenaean pottery originated somewhere in the Peloponnese and spread in different stages to other areas of mainland Greece.<sup>1</sup> Until the beginning of LH IIIB, at the latest, even the northern border regions of Greece had integrated into their pottery repertoire, in varying degrees, morphological and stylistic elements of southern Greek derivation. The factors underlying this homogenization of pottery are insufficiently understood, but one point is certain: the homogenization was embedded in a many-faceted process of the “Mycenaeanization” of Greece. Since there are no indications that this “Mycenaeanization” occurred as the result of an occupation or a political federation spanning the whole of Greece, any attempt to explain it must necessarily turn to the prospect of a voluntary adaptation of customs and values originating in southern Greece.<sup>2</sup> The reasons why Mycenaean cultural traits were regarded as exemplary by other societies must be sought in the political upheaval triggered during the shaft-grave period by the emergence of centers of power in regions such as the Argolid and in the ensuing transformation of inter-societal relations in Greece. We will return to this linkage between material culture and social structure at the end of this paper.

When we look at the pronounced ceramic region-

alism of the MH period, the phenomenon of the “Mycenaeanization” of the fine pottery seems at first sight to represent a completely new quality of ceramic uniformity. However, by using Thessaly as an example, I will argue that the reorientation of the production and use of pottery toward southern Greek prototypes had been already foreshadowed long before the actual “Mycenaeanization” got underway.

It is characteristic of the diversity of MH pottery production that apart from a few widely distributed types of pottery, such as fine Gray Minyan and Aeginetan wares, we are confronted with a bewildering variety of pottery classes reaching only a rather limited distribution. This characterization applies especially to matt-painted pottery, with its conspicuous regional differentiation. When we concentrate on Thessaly we see that within the seemingly confusing variety of matt-painted pottery types, certain basic patterns emerge, pointing to a complex interplay between producers and consumers in different parts of Greece. During the entire Thessalian Middle Bronze Age (MBA) we are confronted with a marked dichotomy in the use of pottery between the coastal regions and the Thessalian plains. While fine Gray Minyan and matt-painted pottery abound in the Magnesia peninsula, in Phthiotis, and in the Spercheios Valley, they only rarely appear in most parts of the Thessalian plains.<sup>3</sup>

Among the MBA pottery of Pefkakia-Magula, I was able to differentiate no fewer than 17 different kinds of matt-painted pottery. Of these, however, only two stood out for reason of high frequency of occurrence. The first is the pottery identified by Wace and Thompson in Lianokladi in the Spercheios Valley and called by them the Δ1β class.<sup>4</sup> This pottery

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\* Special thanks go to Prof. H. Mommsen who through his analyses and statistical groupings provides invaluable insights into the provenance of Middle Helladic pottery. Tables 1–4 as well as figure 2 are also his. I would like to thank Drs. A. BATZIOU-EFSTATHIOU (Volos), PH. DAKORONIA (Lamia) and D. SKORDA (Delphi) for taking part in our NAA project and for allowing our group to sample the vessels.

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<sup>1</sup> MOUNTJOY 1999, 19–38.

<sup>2</sup> FEUER 1983, 202–7; DAVIS and BENNET 1999, 111–4; WRIGHT 2004b, 13–7.

<sup>3</sup> MARAN 1992, 285–9.

<sup>4</sup> WACE and THOMPSON 1912, 20; MARAN 1992, 151–6.

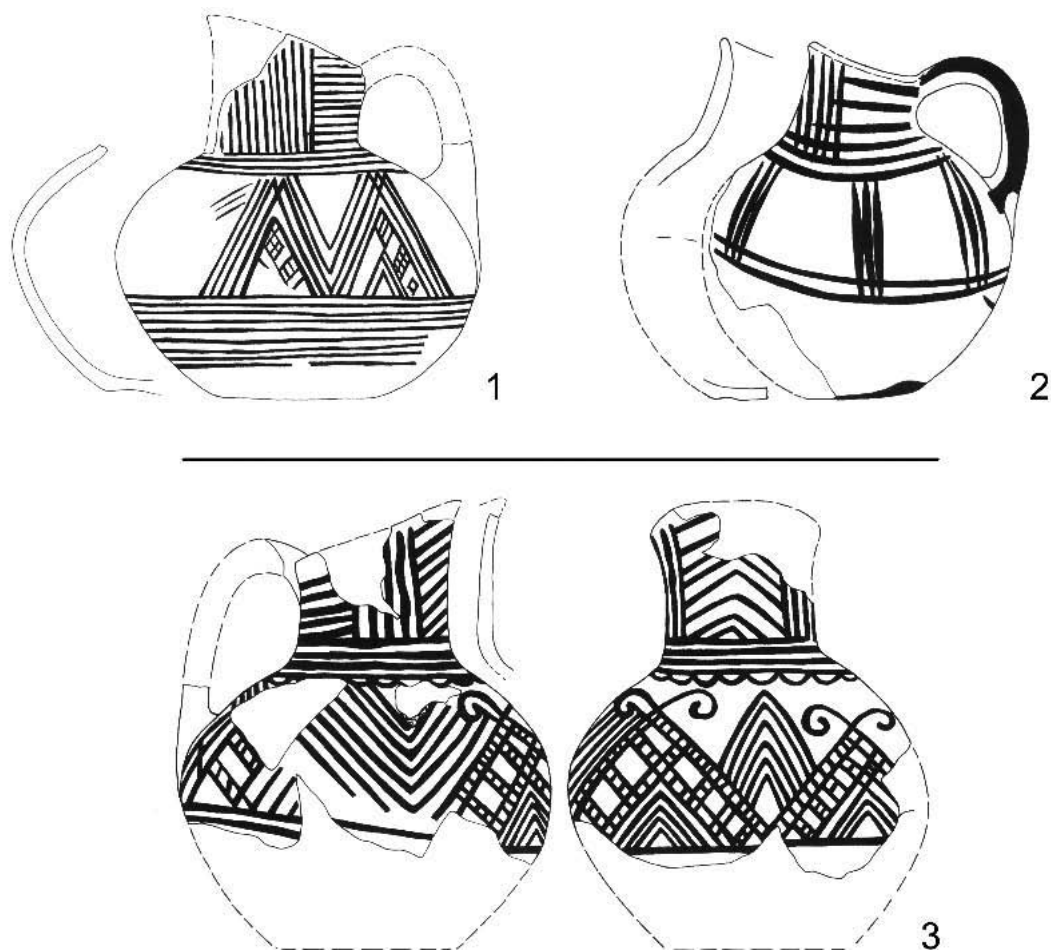


Fig. 1 Matt-painted jugs of the  $\Delta 1\beta$ -class from Pefkakia-Magula sampled for NAA. 1-2 Group phtk; 3 Single. Different scales. **1**) Sample-No. Pefk 7 (MARAN 1992, pl. 122:7); **2**) Sample-No. Pefk 9 (MARAN 1992, pl. 110:1); **3**) Sample-No. Pefk 8 (MARAN 1992, pl. 50:9) (graphics by S. Matskevich, Seminar für Ur- und Frühgeschichte, Universität Heidelberg; drawings by J. Maran)

is distinguished by a decoration applied very densely on a burnished reddish surface, usually with a fine or very fine brush. While at the type site Lianokladi this pottery is represented by a wide range of open and closed shapes, in Pefkakia-Magula a specific kind of vessel, namely the beaked jug, clearly predominates (Fig. 1:1-3).<sup>5</sup> The chronological distribution of the  $\Delta 1\beta$  class has hitherto been determined only at Pefkakia. There it first appears at the time of Early Helladic (EH) III in central and southern Greece, and reaches its climax contemporary with MH I. Although afterwards a slight decline in frequency can

be noted, it continues to belong to the main matt-painted categories until the end of MH II. Only thereafter, during the time of MH III, does its frequency significantly decline.<sup>6</sup>

The  $\Delta 1\beta$  class shows a strange distribution. It is frequently found around the Gulf of Volos, in the region of Pharsala, in the Othrys Mountains, in Phthiotis, and especially in the Spercheios Valley.<sup>7</sup> But in nearby Boeotia and Euboea the number of pieces that can be attributed to this class diminishes significantly.<sup>8</sup> Thus, a seemingly clear picture emerges, suggesting that this variety of matt-paint-

<sup>5</sup> WACE and THOMPSON 1912, 180-185, figs. 125-6, 128, 131-3; MARAN 1992, 152-3.

<sup>6</sup> MARAN 1992, 151-2.

<sup>7</sup> MARAN 1992, 286, fig. 24.

<sup>8</sup> For Boeotia see GOLDMAN 1931, 158, pl. 11:4; SARRI 1998,

89, pl. 66:1-10; MARAN 1992, 305 with footnote 912. In the unpublished MH sherd material from Lefkandi on Euboea, I saw one sherd of this class. In the Argolid this ware is extremely rare: see ZERNER 1978, 178-9, fig. 2:D604/2; MARAN 1992, 343 with footnote 1237.

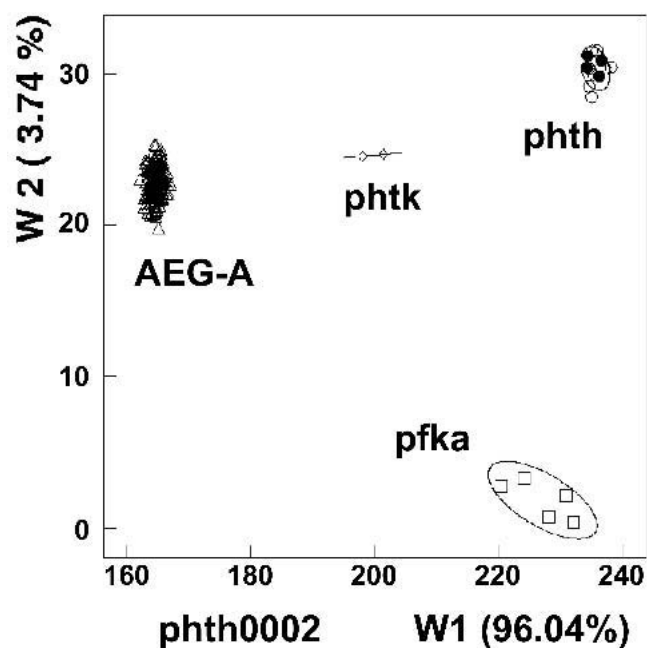


Fig. 2 Discriminant analysis of 193 samples, mostly belonging to Middle Helladic matt-painted pottery, using concentrations of 27 elements (see Table 1, not As, Ba and Na) and assuming 4 groups: pht (12 samples, the 4 samples from Kirra are marked with black circles), phtk (2 samples from Pefkakia, according to the statistical analysis not very different from group pht), pfka (5 samples from Pefkakia), AEG-A (174 samples, local pattern of Aegina with 100 samples from that island and 74 samples of imported Aeginetan pottery in Lerna). Plotted are the discriminant functions W1 and W2 which cover 96% and 4% respectively of the between group variance. The ellipses drawn are the  $2\sigma$ -boundaries of the groups (diagram by H. Mommsen, Institut für Strahlen und Kernphysik, Universität Bonn)

ed pottery did not significantly spread southward beyond the Spercheios Valley. That things are not that simple is proven by the astonishing fact that many examples of beaked jugs as well as other closed and open shapes of this pottery were found beyond the high central Greek mountain ranges at Kirra.<sup>9</sup> While studying the unpublished pottery from this site, I was surprised to find that the  $\Delta 1\beta$  class seems to be the predominant kind of matt-painted pottery.<sup>10</sup>

Since the matt-painted jugs from Kirra are archaeologically indistinguishable from those at Pefkakia and many other sites in the border regions between northern and central Greece, the question of the origin of such vessels immediately arose. In order to pursue the inquiry, vessels from Kirra,<sup>11</sup> from Perivoli in the Spercheios Valley,<sup>12</sup> from Achinos at the Pthiothian coast,<sup>13</sup> from Neo Monastiri in southwest Thessaly<sup>14</sup> as well as from Pefkakia-Magula (Fig. 1:1–3) were included in a project of provenance determination by NAA undertaken between 1994 and 1997 under the direction of H. Mommsen and myself.<sup>15</sup> With the exception of an amphora from Perivoli, all other vessels were beaked jugs. According to Mommsen's analyses, all of the sampled vessels from the widely dispersed sites of Kirra, Neo Monastiri, Perivoli and Achinos belong to a narrowly defined chemical pattern (group pht; Tables 1–2; Fig. 2).<sup>16</sup> On the other hand, contrary to my expectations none of the three sampled vessels from Pefkakia showed this chemical pattern.

<sup>9</sup> For published examples of such matt-painted beaked jugs from Kirra see DOR *et al.* 1969, pl. 42:27–9; NIKOPOULOU 1968, 145, fig. 2; TSIPOPOULOU 1980, 259, pl. 110:β.

<sup>10</sup> MARAN 1992, 315 with footnotes 998–9, 317 with footnote 1020.

<sup>11</sup> The sampled matt-painted jugs from Kirra, which are stored in the Museum of Delphi, derive from the Greek excavations and are still unpublished. They resemble the vessels cited in footnote 9 above. For the recent excavations at the site see CHATZIMICHAIL-SKORDA 1989, 205–10; SKORDA 1992, 215–8. *Sample no. Kirr 54*: Fragment of a beaked jug. *Sample no. Kirr 63*: Beaked jug (Delphi Museum inv. no. 17870). *Sample no. Kirr 64*: Beaked jug (Delphi Museum inv. no. 17929). *Sample no. Kirr 65*: Beaked jug (Delphi Museum inv. no. 17931).

<sup>12</sup> The two sampled matt-painted vessels from Perivoli are stored in the Museum of Lamia. For this site see DAKORONIA 1994, 240–1. *Sample no. Peri 1*: Amphora (Lamia Museum inv. no. K3639; published in DAKORONIA 1994, 240, fig. 23). *Sample no. Peri 2*: Beaked jug (Lamia Museum inv. no. K2638).

<sup>13</sup> The two sampled unpublished matt-painted vessels from Achinos are stored in the Museum of Lamia. For the site

see DAKORONIA 1997, 211–4; 1999, 181–5. *Sample no. Achi 1*: Beaked jug (Lamia Museum inv. no. K8006). *Sample no. Achi 2*: Beaked jug (Lamia Museum inv. no. K8034).

<sup>14</sup> For the site see DAKORONIA 1985, 178–9; 1997, 214–20; 1999, 183–5. *Sample no. NeoM 1*: Beaked jug (Lamia Museum inv. no. K8280).

<sup>15</sup> For the initial results see MOMMSEN *et al.* 2001, 347.

<sup>16</sup> In addition to the  $\Delta 1\beta$  vessels three examples of other pottery classes proved to be members of group pht. Two of them derive from Bounarbashi in northeast Thessaly, and the third comes from Bikiorema in eastern Lokris. *Sample no. Biki 17*: Undecorated small one-handled jug (Lamia Museum inv. no. K927) with highly burnished reddish yellow surface. *Sample no. BuBa 7*: Handle, Thessalian undecorated handmade plain ware. *Sample no. BuBa 8*: Fragment of the neck of a closed vessel; Thessalian undecorated handmade plain ware. The jug from Bikiorema again points to the Spercheios Valley as a likely source of the  $\Delta 1\beta$  class because the vessel is related to the  $\Gamma 3\beta$  class, another kind of pottery typical of Lianokladi, which is the undecorated version of the  $\Delta 1\gamma$  class of that site; see WACE and THOMPSON 1912, 19, 21, 185.

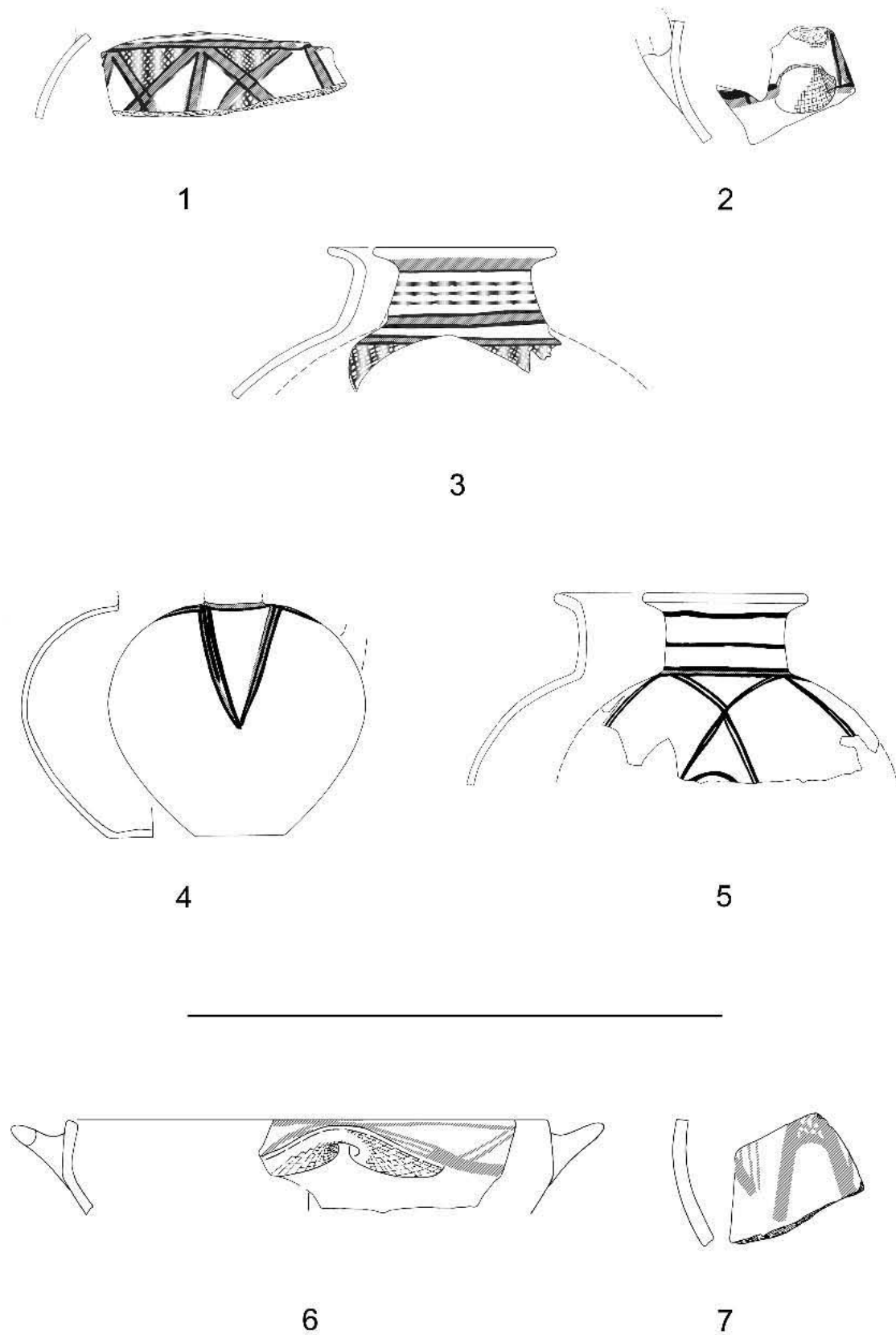


Fig. 3 Matt-painted vessels of the Magnesia polychrome class from Pefkakia-Magula sampled for NAA. 1-5 Group pfka; 6-7 Singles. Different scales. **1**) Sample-No. Pefk 1 (MARAN 1992, pl. 78:4); **2**) Sample-No. Pefk 4 (MARAN 1992, pl. 78:3); **3**) Sample-No. Pefk 5 (MARAN 1992, pl. 110:5); **4**) Sample-No. Pefk 10 (MARAN 1992, pl. 78:9); **5**) Sample-No. Pefk 11 (MARAN 1992, pl. 80:2); **6**) Sample-No. Pefk 2 (MARAN 1992, pl. 78:1); **7**) Sample-No. Pefk 6 (MARAN 1992, pl. 87:2) (graphics by S. Matskevich, Seminar für Ur- und Frühgeschichte, Universität Heidelberg; drawings by J. Maran)



Instead, two of them form a group (group phtk; Tables 1, 3; Fig. 1:1–2), and the third one is a singleton (Fig. 1:3).<sup>17</sup>

Therefore, in spite of its homogenous appearance the  $\Delta 1\beta$  class was probably manufactured in different workshops. One of these workshops seems to have had supraregional significance, and I assume that it was located in the Spercheios Valley or its immediate vicinity, since in this area of its distribution the  $\Delta 1\beta$  class appears most frequently and exhibits the widest range of products. From there these matt-painted vessels were transported over the mountain ranges to the region of Delphi, a fact clearly underlining the importance of the routes of communication cutting through the high mountain regions.<sup>18</sup>

In view of the variety of MBA matt-painted pottery in Thessaly it is striking that Aeginetan matt-painted vessels are almost unknown in this region. Moreover, the few examples likely to belong to such pottery show a conspicuously uneven distribution. While the very large ceramic assemblage from Pefkakia has not yielded a single piece of Aeginetan matt-painted pottery, the relatively small MBA pottery corpus from the site of Velestino in the southernmost part of the east Thessalian plain includes fragments of at least two probably Aeginetan matt-painted vessels.<sup>19</sup> To my knowledge, these are the only known examples in Thessaly likely to belong to this class of Aeginetan pottery. At first sight, the obvious explanation for the rarity of Aeginetan matt-painted pottery in Thessaly seems to be that the island was too far away and the transport infrastructure not capable of moving Aeginetan vessels that far north. But in my opinion, this explanation does not stand up under close scrutiny. In Boeotia, for instance, huge matt-painted Aeginetan pithoi

were moved overland seemingly without difficulties and reached inland sites such as Orchomenos.<sup>20</sup> Moreover, S. Günel was able to ascertain the presence of fragments of Aeginetan matt-painted vessels in the coastal site of Liman Tepe in the Izmir region of western Anatolia, thus emphasizing the wide radius of distribution of such vessels.<sup>21</sup>

For an adequate assessment of the factors involved in the distribution of Aeginetan vessels in the area to the north of the Spercheios Valley we have to turn to the second main category of matt-painted pottery in Pefkakia. During phase 5 of the local MBA sequence, contemporary with the beginning of MH II, the first examples appear of a kind of pottery that, at the start of phase 6, suddenly rises in quantity to become the dominating matt-painted class.<sup>22</sup> This second category, for which I propose the term “Magnesia polychrome class”,<sup>23</sup> is distinguished by a decoration in different colors applied with brushes of varying thickness on a light-colored, burnished clay surface or thin coating. Among the mostly large open and closed shapes, three appear most frequently, namely amphoras (e.g., Fig. 3:3.5), beaked jugs of different types (e.g., Fig. 3:4) and basins with upturned rim (e.g., Fig. 3:6). Rather uncommon are barrel jars, which are all of small size.<sup>24</sup> Small and medium-sized open shapes, on the other hand, were only very rarely produced in this category, probably because this sector of fine table ware was already taken by Gray Minyan vessels. Typically enough, the few open vessels of the Magnesia polychrome class are all based on Gray Minyan prototypes.<sup>25</sup>

The Magnesia polychrome class differs from the  $\Delta 1\beta$  class not only in the colors of its surface and paint, but also fundamentally in the syntax of decoration. Stylistically the decoration of the latter is

<sup>17</sup> Although five of the nine members of group phtk (sample nos. Achi 1, Achi 2, NeoM 1, Kirr 63, Kirr 64, Kirr 65) have a painted cross on their base, this feature is not restricted to this specific group since one of the sampled jugs from Pefkakia belonging to a different chemical group also exhibits this feature (fig. 1:2). For this base decoration of the  $\Delta 1\beta$  class, see WACE and THOMPSON 1912, 20; MARAN 1992, 155.

<sup>18</sup> MARAN 1988, 350–1; E.W. KASE in KASE *et al.* 1991, 21–45, figs. 3–1 to 3–6.

<sup>19</sup> It must be stressed that the Aeginetan origin of the fragments from Velestino has not yet been confirmed by NAA or petrography. An Aeginetan origin was already assumed in MARAN 1992, 247 with footnote 505, for the neck fragment of an amphora or hydria (KAKAVOJIANNIS 1977, fig. 6: lower row, right). MARAN identified other sherds belonging

to a closed vessel with a ribbed yellowish green surface and a matt decoration (KAKAVOJIANNIS 1977, fig. 6: lower row, left and center) as imports, citing comparisons from other sites in central and southern Greece (MARAN 1992, 246 with footnote 502). Until now, however, it was not possible to assign such matt-painted vessels to a specific region. During the Salzburg conference, Dr. W. GAUSS pointed out that an Aeginetan origin is very likely.

<sup>20</sup> SARRI 1998, 87, 92.

<sup>21</sup> GÜNEL 1999, 56–7, figs. 17–8, pls. 12:9–10, 13:4.

<sup>22</sup> MARAN 1992, 162–6, figs. 13–4.

<sup>23</sup> The term “Magnesia polychrome class” is here introduced as a substitute for the names proposed in MARAN 1992, 163, 166.

<sup>24</sup> MARAN 1992, pls. 81:1, 102:21.

<sup>25</sup> Cf. MARAN 1992, pls. 92:15, 102:19.

characterized by the dense filling of broad horizontal zones bordered by multiple parallel lines, while the former exhibits a sparse and much more openly arranged decoration that emphasizes the proportions of the vessels.<sup>26</sup>

Concerning the use of the vessels of this class of pottery, House 311B of early phase 6, uncovered in 1970 in the excavation of V. Milojčić, provides important clues because it was suddenly destroyed, leaving the equipment inside the destruction level.<sup>27</sup> Both rooms of the house were densely packed with vessels and evidently had served as a separate storage space for one or more households in its vicinity (Fig. 4). In the eastern room three huge coarseware pithoi with heights of 1.30, 1.35 and 2.0 m, respectively, were found with their lower parts dug into the floor. Next to the pithos in front of the south wall two ceramic funnels, one of the Black Polished class and the other Gray Minyan, were discovered, and a third funnel, again in Gray Minyan, came to light in the western room.<sup>28</sup> In the eastern room, fragments of numerous examples of the Magnesia polychrome class were found, including at least five amphoras, two beaked jugs, one of them with an original height of about 0.5 m, and basins with upturned rim.<sup>29</sup> In addition, this deposit also comprised open and closed vessels of other ceramic categories with or without painted decoration, among them fine Gray Minyan goblets, bowls and kantharoi. In contrast only a few small sherds and no whole vessel of the  $\Delta 1\beta$  class appeared, and this in spite of this pottery figuring very prominently in deposits of the preceding phase 5 and still being well represented even in contexts of the following middle subphase of phase 6.

Remarkably, the one completely preserved amphora with polychrome decoration and most other fragments of this pottery class were not found on the floor of House 311B, but rather in the fill above it.<sup>30</sup>

The marked vertical dispersal of the pottery suggests that at the moment of the catastrophe some objects, and especially all large vessels of the Magnesia polychrome class, were situated above the floor, probably standing on shelves.<sup>31</sup> Undoubtedly still in situ were the three huge pithoi, of which at least one must have been used for the storage of wine or oil. By the use of smaller vessels the fluid was scooped out of the pithos and poured through a funnel into the matt-painted and plainware amphoras or jugs, which then were transported to the households of the owner or the owners of the storage space.

There can be little doubt that the range of shapes as well as the principles of decoration of the Magnesia polychrome class cannot be explained on a purely local basis since they do not conform to the morphological and stylistic traditions of pottery production in the previous phases of the Thessalian MBA. Still, all archaeological indications point to a manufacture somewhere in the region. Not only do the surface treatment and clay particles of this pottery closely resemble those of the contemporary Thessalian plain ware (“Gebrauchskeramik”), but also, and most importantly, this kind of matt-painted pottery is often found at sites around the Gulf of Volos while outside of this area it is extremely rare on the Greek mainland.<sup>32</sup> It is all the more astonishing that, in the excavation of Chr. Boulotis at Koukonisi on Lemnos, large closed vessels very likely to belong to the Magnesia polychrome class,<sup>33</sup> and at least one other possibly also of Thessalian origin,<sup>34</sup> were recently discovered in a destruction deposit of a MBA building.

In order to obtain additional clues about the provenance of the Magnesia polychrome class, we included in our NAA project eight vessels from Pefkakia. Five of them proved to be members of a well-defined chemical group, hitherto known only from Pefkakia (group pfka; Tables 1, 4; Fig. 3:1–5),

<sup>26</sup> MARAN 1992, 155, 168–72.

<sup>27</sup> MARAN 1992, 24–6, pl. VIII:1–2, plan VIIA.

<sup>28</sup> The inventory of the house is listed in MARAN 1992, 25.

<sup>29</sup> MARAN 1992, pls. 78:1–2.4.9, 79:1, 80:1–2.4, 81:2.

<sup>30</sup> MARAN 1992, pl. 81:2.

<sup>31</sup> This view differs from the interpretation given in MARAN 1992, 25–6. There I argued that after the collapse of the house, inhabitants searched the debris in order to recover objects, and that through these activities some of the fragments had moved upward within the fill. After looking again into the linkages of sherds I changed my opinion and now think that the vertical displacement stems from a downward movement of the objects in the course of the collapse of the house.

<sup>32</sup> MARAN 1992, 286, fig. 24. In eastern central Greece, I noticed a few fragments of this class in the unpublished sherd material of Kirrha (MARAN 1992, 317–8 with footnote 1021), Eutresis (MARAN 1992, 305 with footnote 909) and Lefkandi (MARAN 1992, 333 [Lefkandi phase 5]). SARRI (1998, 89, pl. 56:10) has identified one fragment of this class at Orchomenos.

<sup>33</sup> BOULOTIS 1997, 264, fig. 26:2–3. I have not seen this pottery, but Dr. Boulotis was kind enough to show me color photographs.

<sup>34</sup> BOULOTIS 1997, fig. 26:1. The neck decoration, consisting of a net of cross-hatched chevrons, is often found in the  $\Delta 1\beta$  class (cf. WACE and THOMPSON 1912, fig. 126:a–b), while it is unknown in the Magnesia polychrome class.



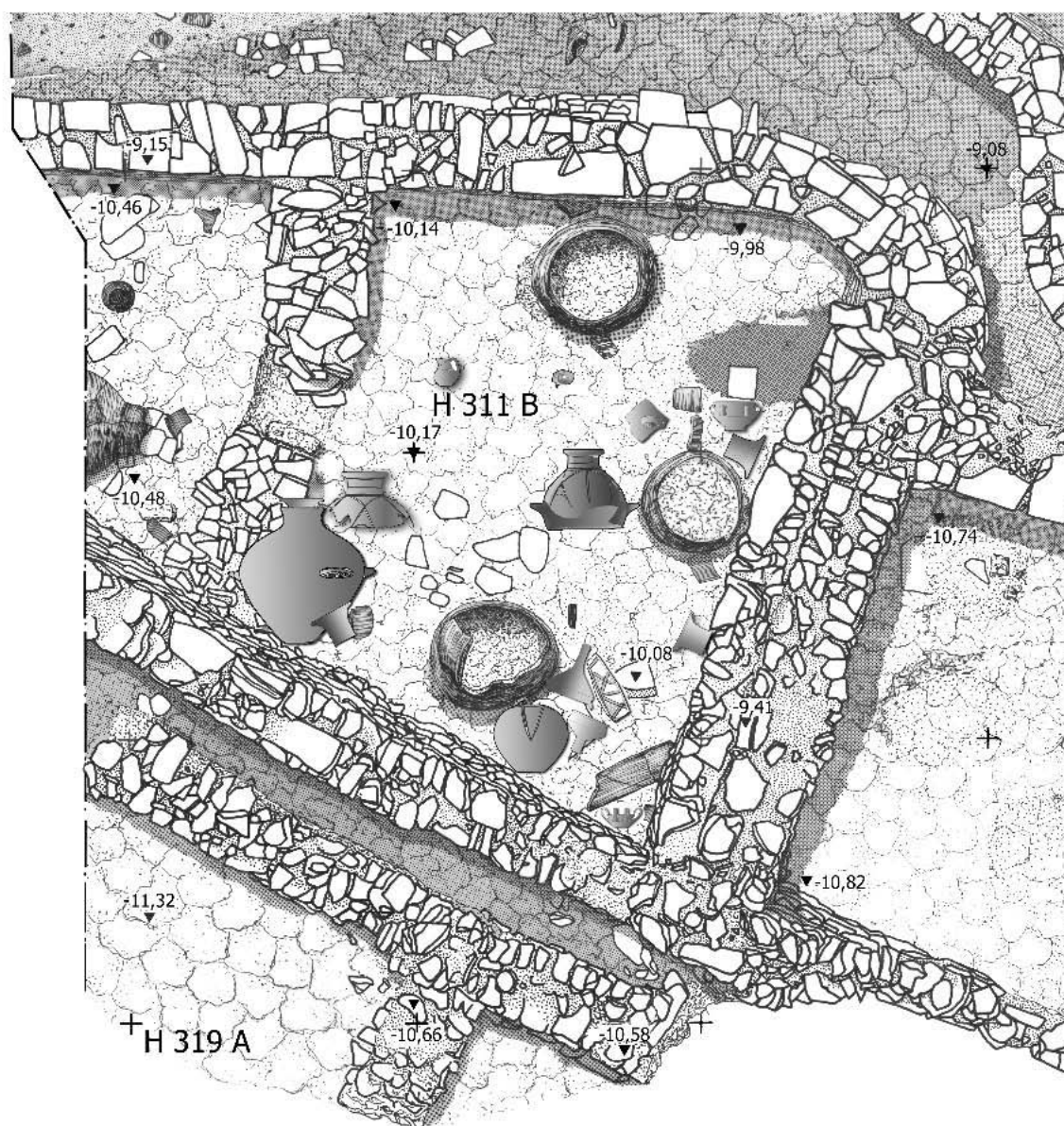


Fig. 4 Pefkakia-Magula. Distribution of finds in House 311B of early Phase 6 of the Middle Bronze Age. After MARAN 1992, plan VIIA with finds added which according to the excavation diary were found on the floor (graphic by S. Matskevich, Seminar für Ur- und Frühgeschichte, Universität Heidelberg)

two of them are singletons (Fig. 3:6–7), and another sherd belongs to a group whose other members derive from Boeotia (group thebM).<sup>35</sup> The scientific analyses certainly do not contradict the notion of a manufacture of this pottery in the area of its highest archaeological concentration. Nevertheless, the question remains of how we should explain its strange distrib-

ution and the quite abrupt change in local traditions heralded by its appearance.

The solution to these problems lies in the investigation of the origin of the shapes and decoration of the Magnesia polychrome class. While they are not rooted in local traditions, they are linked to Aeginetan matt-painted pottery. Forms such as the large ovoid

<sup>35</sup> Sample no. Pefk 3: Fragment of a closed vessel (MARAN 1992, pl. 107:5). It has to be said that the archaeological assignment of this sherd to the “Magnesia polychrome

class” was not well founded. On the other hand, the two sherds analyzed as “singles” (sample nos. Pefk 2, Pefk 6; fig. 3:6–7) showed all traits characteristic for this class.

amphoras, the beaked jugs and the basins with upturned rim are very close to contemporary vessels of Aegina, and the same holds true for syntactical elements of the decoration. The large hatched or cross-hatched hanging triangles on Aeginetan amphoras and jugs are replaced in coastal Thessaly by the hourglass motive, and the paneling of the rim zone is a common feature of basins in both production regions.<sup>36</sup> The major differences between the two varieties of matt-painted pottery lie in the careful burnishing of the surface and the polychrome decoration, both features characteristic of the Magnesia polychrome class but alien to Aeginetan pottery during MH II.

What we observe at Pefkakia at the transition between MH I and II is in my opinion a response to the growing popularity of pottery from Aegina. By emulating the main shapes and schemes of decoration of the matt-painted gold mica fabric, pottery workshops in the area of the Gulf of Volos started picking up a very successful southern trend. The Thessalian workshops thus managed to create an equivalent for the true Aeginetan vessels and were able to meet the growing demand for such vessels.

In Pefkakia at exactly the time of the described change in matt-painted pottery other ceramic elements pointing to Aegina emphasize the far-reaching impact of the widening exchange circles based on that island. In early phase 6 not only are two fragments likely of gold mica red-slipped bowls represented,<sup>37</sup> but also a new type of ovoid cooking pot with one or two vertical handles on the shoulder, similar to gold mica cooking vessels.<sup>38</sup> Since none of the cooking-pot fragments from Pefkakia showed potters' marks and since we were not able to sample them for NAA, we cannot say whether these are genuine imports from Aegina or whether they again stem from a local adaptation of the Aeginetan pottery.

There is reason to believe that the emulation of Aeginetan pottery is part of a wider process extending

beyond Thessaly and northern central Greece. Indeed, the discovery of large matt-painted closed vessels of probable Thessalian origin on Lemnos and of Aeginetan origin in the İzmir region leads me to suspect that the decision to follow Aeginetan pottery traditions was guided in part by the wish to maintain outside marketing areas for commodities stored in the ceramic containers. Behind the differing distribution of Aeginetan and Thessalian vessels, two MBA networks operating in the Aegean begin to emerge. Through the southern network, Aeginetan vessels that were probably used as containers for certain commodities reached the central part of the coast of Asia Minor, while through the northern network Thessalian products were distributed to the northeastern Aegean.

But this likely economic incentive for introducing new types of containers for commodities only partially accounts for the changes in pottery, described above, at the Gulf of Volos. I say this because the adoption of the new type of cooking vessel and of the large matt-painted basins and jugs provides evidence for an even more profound impact, namely on methods of food preparation and consumption. At the table, the matt-painted basins with diameters between 0.30 and 0.50 m must have replaced or supplemented large undecorated bowls of the local plain ware<sup>39</sup> and, in turn, the jugs of the Magnesia polychrome class offered a functional substitute for the jugs of the Δ1B class. The result of all this was the transformation of the composition of pottery used in households. Until the end of MH I at the Gulf of Volos the table and cooking wares were characterized by a combination of local decorated or undecorated open and closed vessels with open Gray Minyan shapes.<sup>40</sup> In MH II, Gray Minyan pottery maintained its significance, but the addition of the new range of open and closed shapes based on Aeginetan prototypes must have challenged previous traditions.

<sup>36</sup> Compare MARAN 1992, pls. 80:1, 81:2 with SIEDENTOPF 1991, pl. 42; MARAN 1992, pls. 78:1-2, 141:11 with SIEDENTOPF 1991, pls. 82-3; MARAN 1992, pls. 78:9, 79:1 with SIEDENTOPF 1991, pls. 59-60, 64.

<sup>37</sup> MARAN 1992, 105-7, pl. 72:1-2.

<sup>38</sup> MARAN 1992, 145, pl. 73:2-4.6.

<sup>39</sup> Cf. MARAN 1992, pls. 48:1-3, 60:1-3.

<sup>40</sup> The function of the different Gray Minyan shapes would warrant a study of its own. Although the goblet is the precursor of the kylix, it is in my opinion uncertain whether prior to MH III the goblet was already used solely as a drinking vessel. Instead, this shape may have undergone a slight change in function from MH II to the shaft-grave

period. At least the Gray Minyan goblets of MH II date are usually larger than Mycenaean kylikes and even larger than Yellow Minyan goblets of MH III date. Since, as far as I know, kraters only become a regular part of mainland pottery inventories starting with the shaft-grave period, it is possible that the MH II Gray Minyan goblets served as mixing vessels out of which the fluid was scooped with cups and kantharoi. This does not exclude the possibility that the Gray Minyan goblets had a dual function and were also passed around at the table as vessels for communal drinking. An argument in favor of their use as drinking vessels is the elaborate shaping of the lip of Gray Minyan goblets; see MARAN 1992, 85-6.



Evidently, already during MH II in a certain zone of Thessaly a segment of pottery production was adjusted to models of southern Greek derivation. But why were the MH Aeginetan potters' workshops much more successful than their competitors in other regions, and why were their products so attractive? Undoubtedly, factors such as the geographical position of the island, a well-organized infrastructure of transport and distribution by land and sea, the existence of excellent clay sources and finally certain functional and aesthetic properties of the vessels contributed to this success.<sup>41</sup> Still, these advantages alone do not suffice to account for the demand for Aeginetan vessels and for their serving as models for pottery production in distant areas. The one additional factor instrumental in the success of this pottery was the position of Aegina as the outstanding center of political power in MH Greece,<sup>42</sup> an example which the elites in other regions strove to match.

The social meaning of this transformation of table and cooking wares in MH II coastal Thessaly becomes more apparent when we consider the fact that material culture in addition to its often utilitarian function also has the quality of conveying messages related to the position of persons within society. The importance for LBA elites of access to certain material symbols obtained from abroad has been impressively underlined in recent years by S. Sherratt and G.J. van Wijngaarden in their analyses of the background for the spreading of Mycenaean pottery in the eastern Mediterranean and the social construction of its value in different regions.<sup>43</sup> In order to understand the mechanisms linking the choice of certain cultural traits with the social standing of individuals, the

work of P. Bourdieu offers important insights.<sup>44</sup> He has demonstrated how cultural practices, goods and values can be mobilized and employed by social groups in order to emphasize their distinctiveness and hence either to bolster their current position or to compete for a higher position in what he calls the social space typical for a particular society.<sup>45</sup> The significance of pottery in such intrasocietal struggles lies in its integration into communal eating and drinking customs, that is, forms of social interaction through which the ties and relationships between people as well as their norms and values are reproduced and socially negotiated.<sup>46</sup> This interaction offers the opportunity to increase what Bourdieu has called the social and symbolic capital of individuals and their families.<sup>47</sup> In the case of Pefkakia, I would assume that through the possession and use in feasts of new kinds of exquisite wares and possibly also through changes in the ways that food and drinks were prepared and served, the host signaled to the members of his kin group and to his guests that he participated in feasting practices of contemporary elites in other parts of Greece. This activity would correspond to what M. Dietler in his classification of different modes of commensal politics has called "diacritical feasts".<sup>48</sup> Dietler argues that such feasts are based above all upon categories of style and taste and "represent a special kind of boundary-defining practice based upon commensal exclusion".<sup>49</sup> In order for the use of particular wares to function as a sign of distinction the participants of diacritical feasts must have shared similar categories of perception and taste, on the one hand, allowing them to appreciate the relevance of the use of certain kinds of pottery, and on the other

<sup>41</sup> ZERNER 1993, 49–50; LINDBLOM 2001, 131–3.

<sup>42</sup> RUTTER 1993, 776–80; NIEMEIER 1995; KILIAN-DIRLMEIER 1997, 108–11.

<sup>43</sup> SHERRATT 1999; VAN WIJNGARDEN 2002, 23–9, 275–80.

<sup>44</sup> The importance of BOURDIEU's work for archaeological studies dealing with aspects of the communal consumption of food and drink has already been emphasized by DIETLER (2001).

<sup>45</sup> BOURDIEU 1998, 13–27; 1987, 277–311, 378–499. DIETLER (2001, 77) is right to emphasize that such "competition" does not necessarily indicate a wish to aggressively dominate and relentlessly accumulate power. It should be understood instead as the effort to maintain or redefine one's status in comparison to others. This point was also emphasized by BOURDIEU, who observed that his concept of "social space" is *per definitionem* relational, inasmuch as the position of each person in it is not absolutely fixed, but rather defined in relation to the positions of the other members of society; see BOURDIEU 1998, 15–23.

<sup>46</sup> WRIGHT 1996, 287–295; 2004b, 13–25; DIETLER 2001; SHERRATT 2004; HALSTEAD and BARRETT 2004.

<sup>47</sup> BOURDIEU 1998, 108–15, 1987, 204–209, 311–22.

<sup>48</sup> DIETLER 2001, 85–88. DIETLER (2001, 76–85) has called the other two modes of commensal politics "empowering feasts" and "patron-role feasts". Although he stresses that these three modes should not be mistaken for evolutionary stages, he states that diacritical feasts "are generally a feature encountered exclusively among state societies" (DIETLER 2001, 93). He does not elaborate on the reasons for this conclusion, and it is difficult to see why the symbolic logic characteristic of diacritical feasts should not apply also to pre-state societies. In fact, JUNKER (2001) presents a very good example of this kind of feast in the context of chiefdoms of the prehispanic Philippines.

<sup>49</sup> DIETLER 2001, 94.

hand they must have set themselves apart from other groups within society.<sup>50</sup> At Pefkakia we possibly even have an indication that new pottery features were introduced through the competition between different intrasocietal groups. The surprising fact that the inventory of House 311B was filled with a whole array of new kinds of pottery, substituting for earlier forms of cooking and table ware still in use in other households, may indicate that the novelties were initially accepted only by specific “progressive” groups within society.<sup>51</sup> They may have used these novelties to exhibit their distinction from “conservative” families still clinging to the old fashions, and to forge new coalitions with like-minded persons through social interaction.

To understand why certain segments of the society living at Pefkakia-Magula ascribed such a high value to the use of emulated Aeginetan pottery, it is necessary to link this phenomenon with the social dynamics in the wider region and especially with the hierarchy of settlements. The striking difference in the distribution of imported pottery classes in MBA Thessaly was already noted in relation to Velestino, currently the only Thessalian site with true Aeginetan matt-painted pottery. In addition, there is the interesting case of Iolkos, where, in the excavation of D. Theocharis, there appeared groups of imported pottery unknown from Pefkakia-Magula, which is situated just opposite on the other side of the Gulf of Volos.<sup>52</sup> As in the case of Velestino, this occurrence of imported pottery is particularly noteworthy inasmuch as the MBA pottery assemblage from Iolkos is so much smaller than that from Pefkakia. Seemingly, certain goods coming from abroad were destined for specific sites, probably because these were the seats of regional elites.<sup>53</sup> They were the primary recipients of

the novel vessels from faraway centers such as Aegina and Crete, and they set the standards for integrating such vessels into the social strategies of distinction that were subsequently followed by groups in other villages and that ultimately triggered the demand for substitutes for Aeginetan pottery.<sup>54</sup> I would hence identify as the main reason for the hitherto rare finding of Aeginetan matt-painted vessels in Thessaly a highly directional distribution toward the socially dominant sites that have not yet been excavated on a large scale.

In making these observations, I wanted to underline the need for focusing our attention on possible interrelations between the outputs of pottery production centers in different regions of MH Greece. The possible significance of the distribution of a pottery class begins to unfold only when we do not look at it in isolation. Evidently, the expansion of marketing areas for the ceramic products of a workshop had repercussions on the range of production and usage of vessels in distant areas. This suggestion holds true especially in the case of the Aeginetan workshops, with their outstanding role in the distribution of pottery. The reasons for the special attraction of Aeginetan vessels in MH II were in my opinion similar to the ones leading to the widespread acceptance of Mycenaean pottery a few centuries later. In both cases, the combination of certain utilitarian qualities and an ascribed social value - stemming from the connection of the pottery to a source of political power - created the incentive for integrating it into the local context. And in both cases the transformation in pottery was intimately linked to social dynamics fueled by a continuous intrasocietal competition that made use of cultural traits to exhibit the distinction of specific groups.

<sup>50</sup> DIETLER 2001, 77 rightly states that feasts “both unite and divide at the same time”.

<sup>51</sup> The occurrence of cooking pots of Aeginetan type (see above) at MBA Pefkakia seems to be chronologically and spatially highly restricted. Besides the examples from House 311B (early phase 6) there are only two such pots from a later context, dating to the late subphase of phase 6 (House 310B; MARAN 1992, 146, pl. 112:4–5). It seems that after the early subphase of phase 6 these vessels were not generally integrated into the pottery assemblage but remained confined to specific contexts. For the social importance of different cooking practices see BORGNA 1997, 200–12; SHERRATT 2004, 194–6.

<sup>52</sup> At Iolkos were found not only a fragment of a Minoan light-on-dark decorated bridge-spouted jar, but also a sherd of a decorated closed vessel of probably Cycladic ori-

gin and also a small pithos with white decoration on a polished red surface, likely to derive from Boeotia; see MARAN 1992, 218–22.

<sup>53</sup> See already MARAN 1992, 246 with footnote 500. Another case illustrating the uneven distribution of imported goods is the citadel of Larisa, where there appear types of true Gray Minyan pottery that are missing in the surrounding settlements of the eastern Thessalian plain. This circumstance was interpreted in MARAN 1992, 286 as a sign of the special importance of this site.

<sup>54</sup> DIETLER (2001, 86) makes the important point that since diacritical feasting is founded on criteria of style and taste, it is often the subject of emulation by groups who want to reach a higher status. A good example of the mechanisms underlying such processes of ceramic emulation is provided by JUNKER (2001, 289–95) for the prehispanic Philippines.

	AEG-A 174 samples factor 1.00 M +/- ()		Phth 12 samples factor 1.00 M +/- ()		phtk 2 samples factor 1.21 M +/- ()		pfka 5 samples factor 1.00 M +/- ()	
As	9.89	46.	7.82	29.	9.60	57.	37.3	36.
Ba	380.	31.	520.	53.	490.	17.	695.	19.
Ca %	10.5	23.	1.04	38.	0.73	62.	6.26	33.
Ce	45.4	4.0	74.7	3/7	73.2	6/6	82.4	8.0
Co	19.9	9/9	23.5	19.	18.6	12.	16.1	7/8
Cr	383.	12.	229.	9/9	231.	24.	143.	13.
Cs	5.50	11.	7.07	7/1	7.95	10.	6.93	2/3
Eu	0.93	3/7	1.38	4/2	1.32	3/5	1.25	11.
Fe %	4.10	3/6	5.57	5/7	5.66	11.	4.54	0.8
Ga	12.8	30.	21.3	25.	38.6	14.	21.8	41.
Hf	3.98	5/5	5.82	8/1	5.81	11.	4.30	9.0
K %	1.85	14.	2.13	10.	2.47	2/9	3.13	4/2
La	21.9	3/6	35.2	3/9	34.8	7/6	39.4	11.
Lu	0.34	8/1	0.59	36.	0.45	5.0	0.41	14.
Na %	0.98	15.	1.09	18.	1.45	3/2	1.63	14.
Nd	19.7	8/4	32.3	6.0	27.3	14.	33.4	11.
Ni	312.	12.	137.	17.	116.	8.0	152.	11.
Rb	74.2	7/1	137.	5/3	150.	1/8	157.	2/5
Sb	0.72	18.	0.67	14.	0.77	8.0	2.83	6/5
Sc	15.9	3/7	22.6	4/6	24.0	8/3	17.1	1/5
Sm	3.78	6.0	6.25	5/2	5.07	0.9	6.07	13.
Ta	0.65	6/4	1.01	6/4	1.01	10.	1.00	4/5
Tb	0.57	7/5	0.88	7.0	0.84	5/7	0.79	11.
Th	7.48	5/6	13.4	4/2	13.8	3.0	16.2	5/2
Ti %	0.37	25.	0.44	5/9	0.54	7/4	0.43	19.
U	2.05	14.	2.76	7/3	2.96	5/2	2.09	20.
W	1.36	14.	2.42	12.	3.09	6/9	2.56	14.
Yb	2.28	4/2	3.40	5/7	3.64	1/6	2.82	6/6
Zn	93.0	13.	104.	5/1	115.	2/2	96.1	9/5
Zr	174.	17.	267.	13.	256.	12.	194.	18.

Table 1 Grouping values, 30 elements. Concentrations of elements: Averages M in g/g (ppm), M, corrected for dilution; the pattern phtk is quit similar to phth, if a dilution factor of 1.21 is applied as shown here and in Figure 1



Sample	factor	As	Ba	Ca %	Ce	Co	Cr	Cs	Eu	Fe %	Ga
Biki 17	1.024	9.55	460.	1.81	75.0	29.2	244.	6.91	1.46	5.75	25.1
Peri 1	1.009	4.93	340.	0.82	78.7	25.1	200.	7.38	1.33	5.52	24.7
Peri 2	1.045	8.03	1381.	0.74	79.1	31.7	234.	6.97	1.28	5.43	23.7
Achi 1	0.986	9.48	418.	1.02	70.7	18.4	217.	7.32	1.31	5.74	26.6
Achi 2	0.975	5.04	449.	0.50	76.1	26.9	227.	7.02	1.33	5.70	23.4
NeoM 1	1.044	7.55	430.	0.96	72.8	22.5	229.	7.47	1.33	6.04	23.2
BUBA 7	0.843	3.53	452.	0.85	75.1	16.6	284.	7.12	1.42	4.79	24.7
BUBA 8	0.912	11.2	542.	1.11	75.6	23.1	228.	5.72	1.42	5.80	16.8
Kirr 54	1.059	7.28	507.	0.85	76.2	25.0	228.	6.76	1.37	5.40	15.6
Kirr 63	1.067	9.05	376.	1.64	71.1	20.1	208.	7.01	1.40	5.76	14.8
Kirr 64	1.059	10.1	416.	1.39	72.2	19.9	242.	7.46	1.41	5.36	10.1
Kirr 65	0.997	8.14	470.	0.76	73.5	24.0	202.	7.68	1.43	5.53	—
av.meas.error		0.11	53.	0.22	0.67	0.13	1.2	0.093	0.027	0.020	2.3
in %		1.4	10.	22.	0.9	0.6	0.5	1.3	1.9	0.4	11.
av.value M		7.8	520.	1.0	75.	24.	229.	7.1	1.4	5.6	21.
spread		2.3	276.	0.39	2.7	4.4	23.	0.50	0.058	0.32	5.2
in %		29.	53.	38.	3.7	19.	9.9	7.1	4.2	5.7	25.

Table 2 continued

Sample	factor	Hf	K %	La	Lu	Na %	Nd	Ni	Rb	Sb	Se
Biki 17	1.024	6.38	1.79	35.1	0.52	1.03	29.6	196.	127.	0.62	22.7
Peri 1	1.009	5.78	2.12	34.1	1.07	1.00	30.8	105.	144.	0.66	22.1
Peri 2	1.045	6.34	2.16	34.5	(9.19)	1.35	30.8	153.	134.	0.60	22.1
Achi 1	0.986	5.73	1.94	35.8	0.54	0.89	29.8	148.	138.	0.54	21.7
Achi 2	0.975	5.71	1.92	33.2	0.50	0.99	30.5	136.	138.	0.58	23.0
NeoM 1	1.044	5.06	2.26	34.0	(1.24)	1.27	28.8	138.	152.	0.75	25.0
BUBA 7	0.843	5.16	2.06	38.1	0.51	0.67	34.4	181.	133.	0.71	23.4
BUBA 8	0.912	5.73	2.53	36.3	0.54	1.28	32.4	118.	127.	0.60	21.2
Kirr 54	1.059	6.63	2.13	33.8	0.46	0.99	30.5	129.	135.	0.66	21.2
Kirr 63	1.067	6.09	1.95	35.2	(2.20)	1.21	33.6	131.	135.	0.88	23.1
Kirr 64	1.059	5.72	2.23	35.3	(0.88)	1.21	29.6	133.	140.	0.77	22.5
Kirr 65	0.997	5.51	2.46	36.6	(1.44)	1.21	29.8	119.	147.	0.70	22.9
av.meas.error		0.074	0.034	0.13	0.017	0.008	1.9	11.	2.5	0.062	0.029
in %		1.3	1.6	0.4	2.9	0.7	6.0	8.1	1.8	9.3	0.1
av.value M		5.8	2.1	35.	0.59	1.1	32.	137.	137.	0.67	23.
spread		0.47	0.22	1.4	0.21	0.20	1.9	23.	7.3	0.093	1.0
in %		8.1	10.	3.9	36.	18.	6.0	17.	5.3	14.	4.6

Table 2 continued

Sample	factor	Sm	Ta	Tb	Th	Ti %	U	W	Yb	Zn	Zr
Biki 17	1.024	6.35	0.94	0.83	13.0	0.43	2.53	2.25	3.48	95.6	280.
Peri 1	1.009	5.75	1.01	0.84	13.7	0.42	2.68	2.31	3.18	107.	287.
Peri 2	1.045	6.36	1.03	0.83	13.0	0.45	2.69	2.28	3.39	100.	232.
Achi 1	0.986	6.45	1.07	0.87	14.7	0.46	2.89	2.41	3.44	101.	297.
Achi 2	0.975	6.40	0.99	0.95	13.6	0.46	3.03	2.28	3.16	101.	271.
NeoM 1	1.044	5.79	0.92	0.79	13.4	0.42	2.85	2.20	3.19	111.	171.
BUBA 7	0.843	6.64	1.08	0.86	13.9	0.47	2.84	2.89	3.55	112.	—
BUBA 8	0.912	6.78	1.07	1.02	13.5	0.47	2.50	3.03	3.86	112.	—
Kirr 54	1.059	6.29	1.07	0.88	12.6	0.47	2.88	2.18	3.30	103.	282.
Kirr 63	1.067	6.22	1.01	0.89	13.3	0.42	2.49	2.43	3.38	104.	292.
Kirr 64	1.059	5.95	1.05	0.89	13.2	0.40	3.16	2.29	3.39	102.	281.
Kirr 65	0.997	5.97	0.89	0.84	12.8	0.41	2.67	3.13	3.43	101.	245.
av.meas.error		0.11	0.032	0.027	0.047	0.069	0.021	0.10	0.16	0.057	2.3
in %		0.5	2.6	5.3	0.5	4.8	3.6	6.7	1.7	2.2	10.
av.value M		7.8	6.2	1.0	0.88	13.	0.44	2.8	2.4	3.4	104.
spread		0.32	0.065	0.062	0.57	0.026	0.20	0.30	0.19	5.3	34.
in %		5.2	6.4	7.0	4.2	5.9	7.3	12.	5.7	5.1	13.

Table 2 Group phth (12 samples). Concentrations of elements C in g/g (ppm), if not indicated otherwise, average errors, also in percent of C, average values M and spreads, also in percent of M, corrected for dilution (factor, column 2)

Sample	factor	As	Ba	Ca %	Ce	Co	Cr	Cs	Eu	Fe %	Ga
Pefk 7	0.973	11.1	454.	0.39	63.3	16.6	158.	7.04	1.11	4.33	33.5
Pefk 9	1.025	4.76	355.	0.83	57.7	14.1	223.	6.10	1.06	5.02	30.9
av.meas.error		0.11	54.	0.37	0.40	0.096	1.0	0.074	0.023	0.017	4.4
in %		1.4	13.	62.	0.7	0.6	0.5	1.1	2.1	0.4	14.
av.value M		7.9	405.	0.60	60.	15.	191.	6.6	1.1	4.7	32.
spread		4.5	70.	0.37	4.0	1.8	47.	0.66	0.038	0.49	4.4
in %		57.	17.	62.	6.6	12.	24.	10.	3.5	11.	14.

Table 3 continued											
Sample	factor	Hf	K %	La	Lu	Na %	Nd	Ni	Rb	Sb	Sc
Pefk 7	0.973	5.18	2.09	30.3	0.38	1.22	22.0	94.1	124.	0.64	18.7
Pefk 9	1.025	4.43	2.01	27.2	0.36	1.17	23.2	97.7	124.	0.64	21.0
av.meas.error		0.063	0.049	0.079	0.018	0.008	3.2	7.7	2.2	0.052	0.024
in %		1.3	2.1	0.3	5.0	0.7	11.	8.0	1.8	8.0	0.1
av.value M		4.8	2.0	29.	0.37	1.2	23.	96.	124.	0.64	20.
spread		0.53	0.060	2.2	0.018	0.039	3.2	7.7	2.2	0.052	1.6
in %		11.	2.9	7.6	5.0	3.2	11.	8.0	1.8	8.0	8.3

Table 3 continued											
Sample	factor	Sm	Ta	Tb	Th	Ti %	U	W	Yb	Zn	Zr
Pefk 7	0.973	4.19	0.90	0.70	11.6	0.45	2.51	2.61	3.04	94.0	194.
Pefk 9	1.025	4.19	0.78	0.68	11.1	0.44	2.39	2.50	2.98	96.9	230.
av.meas.error		0.036	0.024	0.040	0.056	0.033	0.13	0.18	0.047	2.0	23.
in %		0.9	2.8	5.7	0.5	7.4	5.2	6.9	1.6	2.1	11.
av.value M		4.2	0.84	0.69	11.	0.44	2.4	2.5	3.0	95.	211.
spread		0.036	0.088	0.040	0.34	0.033	0.13	0.18	0.047	2.1	25.
in %		0.86	10.	5.7	3.0	7.4	5.2	6.9	1.6	2.2	12.

Table 3 Group phtk (2 samples). Concentrations of elements C in g/g (ppm), if not indicated otherwise, average errors, also in percent of C, average values M and spreads, also in percent of M, corrected for dilution (factor, column 2)

Sample	factor	As	Ba	Ca %	Ce	Co	Cr	Cs	Eu	Fe %	Ga
Pefk 1	0.985	42.0	613.	5.96	87.6	18.0	124.	6.77	1.35	4.54	25.8
Pefk 4	0.997	--	607.	9.62	88.5	16.3	126.	6.75	1.42	4.48	--
Pefk 5	1.030	--	716.	7.19	82.2	16.0	168.	7.01	1.19	4.56	--
Pefk 10	1.002	47.7	634.	3.69	71.9	14.9	157.	7.09	1.08	4.58	28.9
Pefk 11	0.980	22.3	942.	6.25	81.9	15.1	139.	7.04	1.22	4.56	12.5
av.meas.error		0.14	64.	0.80	0.43	0.098	0.82	0.076	0.024	0.016	3.3
in %		0.4	9.2	13.	0.5	0.6	0.6	1.1	1.9	0.3	15.
av.value M		37.	695.	6.3	82.	16.	143.	6.9	1.3	4.5	22.
spread		13.	134.	2.1	6.6	1.2	19.	0.16	0.14	0.038	8.9
in %		36.	19.	33.	8.0	7.8	13.	2.3	11.	0.84	41.

Table 4 continued

Sample	factor	Hf	K %	La	Lu	Na %	Nd	Ni	Rb	Sb	Sc
Pefk 1	0.985	3.88	3.08	42.9	0.49	1.87	33.3	139.	156.	2.76	17.3
Pefk 4	0.997	3.89	--	41.4	0.42	--	37.2	152.	151.	2.90	16.9
Pefk 5	1.030	4.70	--	36.5	0.43	--	31.6	178.	160.	2.58	16.7
Pefk 10	1.002	4.55	3.28	34.1	0.34	1.44	29.0	157.	161.	2.84	17.2
Pefk 11	0.980	4.48	3.03	39.3	0.38	1.58	36.3	135.	157.	3.08	17.3
av.meas.error		0.057	0.044	0.73	0.014	0.009	3.5	8.0	2.3	0.084	0.021
in %		1.3	1.4	1.9	3.5	0.5	11.	5.3	1.5	3.0	0.1
av.value M		4.3	3.1	39.	0.41	1.6	33.	152.	157.	2.8	17.
spread		0.39	0.13	4.3	0.058	0.22	3.5	17.	4.0	0.18	0.26
in %		9.0	4.2	11.	14.	14.	11.	11.	2.5	6.5	1.5

Table 4 continued

Sample	factor	Sm	Ta	Tb	Th	Ti %	U	W	Yb	Zn	Zr
Pefk 1	0.985	6.52	0.94	0.85	16.9	0.38	2.74	2.81	3.02	90.4	191.
Pefk 4	0.997	6.71	0.98	0.88	17.0	0.63	1.88	--	2.99	99.6	209.
Pefk 5	1.030	5.81	0.98	0.77	16.2	0.50	2.28	--	2.44	84.3	170.
Pefk 10	1.002	4.82	1.03	0.67	14.9	0.46	1.67	2.76	2.75	98.8	244.
Pefk 11	0.980	6.51	1.05	0.79	16.2	0.39	1.92	2.16	2.76	108.	156.
av.meas.error		0.038	0.025	0.040	0.063	0.049	0.12	0.16	0.11	1.9	22.
in %		0.6	2.5	5.0	0.4	11.	6.0	6.1	4.0	2.0	11.
av.value M		6.1	1.00	0.79	16.	0.43	2.1	2.6	2.8	96.	194.
spread		0.78	0.044	0.084	0.84	0.081	0.42	0.37	0.18	9.1	34.
in %		13.	4.5	11.	5.2	19.	20.	14.	6.6	9.5	18.

Table 4 Group pfka (5 samples). Concentrations of elements C in g/g (ppm), if not indicated otherwise, average errors, also in percent of C, average values M and spreads, also in percent of M, corrected for dilution (factor, column 2)



## Bibliography

- BORGNA, E.  
1997 "Kitchen-Ware from LM IIC Phaistos. Cooking Traditions and Ritual Activities in LBA Cretan Societies". *Studi Micenei ed Egeo-Anatolici* 39:189–217.
- BOULOTIS, CHR.  
1997 "Κουκονήσι Λήμνου. Τέσσερα χρόνια ανασκαφικής έρευνας: θέσεις και υποθέσεις". In: *Poliochni e l'antica età del Bronzo nell'Egeo settentrionale*. Convegno Internazionale, Atene, 22–5 Aprile 1996, edited by CHR.G. DOUMAS and V. LA ROSA, 230–72. Athens.
- BOURDIEU, P.  
1987 *Die feinen Unterschiede. Kritik der gesellschaftlichen Urteilskraft*. Suhrkamp Taschenbuch Wissenschaft Band 658. Frankfurt am Main.  
1998 *Praktische Vernunft. Zur Theorie des Handelns*. Edition Suhrkamp Neue Folge Band 985. Frankfurt am Main.
- CHATZIMICHAIL-SKORDA, D.  
1995 "Κίρρα. Έφορεία Προϊστορικών Αρχαιοτήτων." *ArchDelt* 44B' *Chron.*, 1989:205–10.
- DAVIS, J.L., and BENNET, J.  
1999 "Making Mycenaean: Warfare, Territorial Expansion, and Representations of the Other in the Pylian Kingdom." In: *Polemos. Le contexte guerrier en Égée à l'âge du Bronze*. Actes de la 7<sup>e</sup> Rencontre égéenne internationale, Université de Liège, 14–17 avril 1998, 105–20. *Aegaeum* 19.
- DAKORONIA, PH.  
1990 "Νέο Μοναστήρι. ΙΔ' Έφορεία Προϊστορικών και Κλασικών Αρχαιοτήτων." *ArchDelt* 40B' *Chron.*, 1985:178–9.  
1994 "Spercheios Valley and the Adjacent Area in Late Bronze Age and Early Iron Age." In: *La Thessalie. Quinze années de recherches archéologiques, 1975–1990. Bilans et perspectives*. Actes du Colloque international, Lyon, 17–22 avril 1990, Volume A, 233–42. Athens.  
1997 "Μυκηναϊκά ευρήματα από την Αχαΐα Φθιώτιδα". In: *Αχαΐοφθιωτικά Β'*. Πρακτικά του Β' Συνεδρίου Αλμυριώτικων Σπουδών, Αλμυρός, 3–4 Ιουνίου 1995, 209–24. Almyros.  
1999 "Νομός Φθιώτιδας: Μέρος του μυκηναϊκού κόσμου ή της περιφέρειάς του." In: *Η Περιφέρεια του Μυκηναϊκού Κόσμου*. Α' Διεθνές Διεπιστημονικό Συμπόσιο, Λαμία, 25–29 Σεπτεμβρίου 1994, 181–6. Lamia.
- DIETLER, M.  
2001 "Theorizing the Feast: Rituals of Consumption, Commensal Politics, and Power in African Contexts". In: DIETLER and HAYDEN (eds.) 2001, 65–114.
- DIETLER, M., and B. HAYDEN (eds.)  
2001 *Feasts: Archaeological and Ethnographic Perspectives on Food, Politics, and Power*. Washington - London.
- DOR, L. *et al.*  
1969 *Kirra. Étude de préhistoire Phocidienne*. Paris.
- FEUER, B.  
1983 *The Northern Mycenaean Border in Thessaly*. BAR International Series 176. Oxford.
- GÜNEL, S.  
1999 "Vorbericht über die mittel- und spätbronzezeitliche Keramik vom Liman Tepe." *IstMitt* 49:41–82.
- GOLDMAN, H.  
1931 *Excavations at Eutresis in Boeotia*. Cambridge.
- HALSTEAD, P., and J.C. BARRETT  
2004 "Introduction: Food, Drink and Society in Prehistoric Greece." In: *Food, Cuisine and Society in Prehistoric Greece*, edited by P. HALSTEAD and J.C. BARRETT, 1–15. Oxford.
- JUNKER, L.L.  
2001 "The Evolution of Ritual Feasting Systems in Prehispanic Philippine Chiefdoms." In: DIETLER and HAYDEN 2001, 267–310.
- KAKAVOJIANNIS, E.  
1977 "Ανασκαφικές έρευνες στις Φερές της Θεσσαλίας το 1977." *AAA* 10:174–87.
- KASE, E.W. *et al.* (eds.)  
1991 *The Great Isthmus Corridor Route. Explorations of the Phokis-Doris Expedition, Volume 1*. Dubuque.
- KILIAN-DIRLMEIER, I.  
1997 *Das mittelbronzezeitliche Schachtgrab von Ägina. Alt-Ägina IV,3*. Mainz.
- LINDBLOM, M.  
2001 *Marks and Makers. Appearance, Distribution and Function of Middle and Late Helladic Manufacturers' Marks on Aeginetan Pottery*. Studies in Mediterranean Archaeology 128. Jonsered.
- MARAN, J.  
1988 "Zur Zeitstellung der Grabhügel von Marmara (Mittelgriechenland)." *ArchKorrBl* 18:341–55.  
1992 *Die deutschen Ausgrabungen auf der Pevkakia-Magula in Thessalien III. Die Mittlere Bronzezeit*. Beiträge zur ur- und frühgeschichtlichen Archäologie des Mittelmeer-Kulturräumens 30–1. Bonn.
- MOMMSEN, H. *et al.*  
2001 "New Mycenaean Pottery Production Centers from Eastern Central Greece Obtained by Neutron Activation Analysis." In: *Archaeometry Issues in Greek Prehistory and Antiquity*, edited by Y. BASSIAKOS *et al.* 343–54. Athens.
- NIEMEIER, W.-D.  
1995 "Aegina – First Aegean 'State' Outside of Crete?" In: *Politeia. Society and State in the Aegean Bronze Age. Proceedings of the 5<sup>th</sup> International Aegean Conference, University of Heidelberg, Archäologisches Institut, 10–3 April 1994*, 73–80. *Aegaeum* 12.

- ΝΙΚΟΠΟΥΛΟΥ, Υ.  
1969 “Ανασκαφή προϊστορικής Κίρρας.” *ΑΑΑ* 1:144–6.
- ΜΟΥΝΤΖΟΥ, Ρ.Α.  
1999 *Regional Mycenaean Decorated Pottery*. Rahden.
- ΡΥΤΤΕΡ, Τ.Β.  
1993 “Review of Aegean Prehistory II: The Prepalatial Bronze Age of the Southern and Central Greek Mainland.” *AJA* 97:745–97.
- ΣΑΡΡΙ, Κ.  
1998 “Orchomenos in der mittleren Bronzezeit.” Ph.D.diss., Heidelberg University.
- ΣΕΡΡΑΤΤ, Σ.  
1999 “E pur si muove: Pots, Markets and Values in the Second Millennium Mediterranean”. In: *The Complex Past of Pottery. Production, Circulation and Consumption of Mycenaean and Greek Pottery (Sixteenth to Early Fifth Centuries BC)*. Proceedings of the ARCHON International Conference, Held in Amsterdam, 8–9 November 1996, edited by J.P. CRIELAARD *et al.*, 163–211. Amsterdam.
- 2004 “Feasting in Homeric Epic.” In: WRIGHT 2004a, 181–217.
- ΣΙΕΔΕΝΤΟΠΦ, Η.Β.  
1991 *Mattbemalte Keramik der Mittleren Bronzezeit. Alt-Ägina IV,2*. Mainz.
- ΣΚΟΡΔΑ, Δ.  
1997 “Κίρρα. Γ΄ Εφορεία α Προϊστορικών και Κλασικών Αρχαιοτήτων”. *ArchDelt* 47B’ *Chron.*, 1992:215–8.
- ΤΣΙΠΟΠΟΥΛΟΥ, Μ.  
1988 “Κίρρα. Γ΄ Εφορεία α Προϊστορικών και Κλασικών Αρχαιοτήτων.” *ArchDelt*. 35B’ *Chron.*, 1980:255–60.
- ΒΑΝ ΒΛΙΝΓΑΡΔΕΝ, Γ.Τ.  
2002 *Use and Appreciation of Mycenaean Pottery in the Levant, Cyprus and Italy (1600–1200 BC)*. Amsterdam.
- ΒΑΤΣ, Α.Τ.Β. and Μ.Σ. ΘΟΜΠΣΟΝ.  
1912 *Prehistoric Thessaly*. Cambridge.
- ΒΡΑΥΤ, Τ.Τ.  
1996 “Empty Cups and Empty Jugs: The Social Role of Wine in Minoan and Mycenaean Societies.” In: *The Origins and Ancient History of Wine*, edited by *et al.*, 287–309. Philadelphia.
- ΒΡΑΥΤ, Τ.Τ., (ed.)  
2004a *The Mycenaean Feast*. Princeton.
- ΒΡΑΥΤ, Τ.Τ.  
2004b “A Survey of Evidence for Feasting in Mycenaean Society.” In: WRIGHT 2004a, 13–58.
- ΖΕΡΝΕΡ, Τ.Β.  
1978 *The Beginning of the Middle Helladic Period at Lerna*. Ph.D. diss., University of Cincinnati.
- 1993 “New Perspectives on Trade in the Middle and Early Late Helladic Periods on the Mainland.” In: *Wace and Blegen: Pottery as Evidence for Trade in the Aegean Bronze Age, 1939–1989*. Held at the American School of Classical Studies at Athens, Athens, 2–3 Dec. 1989, edited by C.W. ZERNER *et al.*, 39–56. Amsterdam.