

FINE GRAY-BURNISHED POTTERY OF THE EARLY HELLADIC III PERIOD THE ANCESTRY OF GRAY MINYAN

THE HIGHLY DISTINCTIVE CLASS of gray-burnished Middle Helladic (MH) pottery christened "Gray Minyan" by Schliemann was recognized in the 1950's to have an Early Helladic (EH) III ancestry, largely as a result of the excavations conducted by the American School of Classical Studies at the site of Lerna under the direction of the late J. L. Caskey. Nevertheless, no full study of the history and development of this EH III predecessor has yet appeared.¹ Thus, despite current scholarly consensus that in origin the class of Minyan pottery² was an indigenous central and southern Greek development rather than an intrusive artifactual group necessarily to be associated with an immigrant population

¹ My debts to colleagues, friends, and my wife are as usual numerous, and I should like to express my thanks for their assistance: Sally Rutter executed the drawings; J. L. Davis, O. T. P. K. Dickinson, D. Konsola, J. Maran, H.-J. Weisshaar, M. H. Wiencke, and J. C. Wright read a preliminary version of the manuscript and suggested several necessary changes and useful additions; J. Maran, G. E. Mylonas, and C. K. Williams, II permitted the mention of unpublished materials from the sites of Pefkakia, Nemea, and Gonia, respectively. An earlier version of this article was presented orally at the annual meetings of the Archaeological Institute of America on 29 December, 1982 in Philadelphia under the same title (abstract, see AJA 87, 1983, pp. 256–257).

Works frequently cited will be abbreviated as follows:

- Konsola, 1981 = D. Konsola, *Προμυκηναϊκή Θήβαι*, Athens 1981
 Koumouzelis = M. Koumouzelis, *The Early and Middle Helladic Periods in Elis*, diss. Brandeis University 1980 (= University Microfilms International no. 8024537)
 MacGillivray, 1980 = J. A. MacGillivray, "Mount Kynthos in Delos. The Early Cycladic Settlement," *BCH* 104, 1980, pp. 3–45
 Podzuweit = C. Podzuweit, *Trojanische Gefässformen der Frühbronzezeit in Anatolien, der Ägäis und angrenzenden Gebieten*, Mainz 1979
 Rutter, 1979 = J. B. Rutter, *Ceramic Change in the Aegean Early Bronze Age (UCLA Institute of Archaeology Occasional Paper V)*, Los Angeles 1979
 Rutter, 1982 = J. B. Rutter, "A Group of Distinctive Pattern-decorated Early Helladic III Pottery from Lerna and Its Implications," *Hesperia* 51, 1982, pp. 459–488
 Walter and Felten = H. Walter and F. Felten, *Alt-Ägina, III, i, Die vorgeschichtliche Stadt: Befestigungen, Häuser, Funde*, Mainz 1981
 Weisshaar, 1981 = H.-J. Weisshaar, "Ausgrabungen in Tiryns 1978, 1979. Bericht zur frühhelladischen Keramik," *AA (JdI 96)*, 1981, pp. 220–256
 Weisshaar, 1982 = H.-J. Weisshaar, "Bericht zur frühhelladischen Keramik," *AA (JdI 97)*, 1982, pp. 440–466
 Wünsche = R. Wünsche, *Studien zur äginetischen Keramik der frühen und mittleren Bronzezeit*, Berlin and Munich 1977

² For the naming of "Minyan" pottery, see E. J. Forsdyke, "The Pottery Called Minyan Ware," *JHS* 34, 1914, pp. 126–156, esp. pp. 126–128. For the recognition that "Gray Minyan" was current already in the EH III period, see J. L. Caskey, "The Early Helladic Period in the Argolid," *Hesperia* 29, 1960, pp. 285–303, esp. pp. 296–297. Weisshaar is quite right to observe that "Gray Minyan" had been found in pre-MH contexts at other sites prior to its recognition at Lerna as a normal component of EH III ceramics (Weisshaar, 1981, p. 246 and note 299); but it was Caskey, as Weisshaar once again notes (*ibid.*, note 300), who was the first scholar to express a firm belief in the existence of EH III "Gray Minyan" in print.

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element, it can still be claimed that the specific data to support such a conclusion are insufficient.³ Within the past three years, complete study of the EH III pottery from Lerna IV, together with the publication of contemporary comparanda from sites as widely dispersed as Olympia, Tiryns, and Kolonna on Aigina, now makes it possible to describe the earliest history of "Gray Minyan", or Fine Gray-burnished pottery as it shall be termed here, in considerably greater detail than heretofore.⁴ Thus, an assessment of its origins, its connection with the introduction of the fast wheel into the Peloponnese, and its broader cultural significance may now be undertaken with increased assurance.

THE EVIDENCE FROM LERNA IV (Tables 1 and 2)

Published descriptions of "Gray Minyan" are common, normally differing only in minor details.⁵ Within the classificatory system adopted for the pottery of Lerna IV, the Fine Gray-burnished class is defined by the uniform gray color both of vessel surfaces and of the fracture or cross-section of vessel walls, by the fineness of the fired clay fabric, and by the burnished or wet-smoothed surface treatment.⁶ Among the thousands of sherds and restorable

³ For the indigenous Greek development of "Gray Minyan" in the recent literature, see D. H. French, "Migrations and 'Minyan' Pottery in Western Anatolia and the Aegean," *Bronze Age Migrations in the Aegean*, R. A. Crossland and A. Birchall, edd., London 1973, pp. 51–54; R. J. Howell, "The Origins of Middle Helladic Culture," Crossland and Birchall, *op. cit.*, pp. 73–99, esp. p. 79; Wünsche, p. 31. This view is not to be understood simply as a restatement of the opinion held by a generation of earlier scholars, such as Wace and Thompson (*Prehistoric Thessaly*, Cambridge 1912, pp. 251–252) or Childe ("On The Date and Origin of Minyan Ware," *JHS* 35, 1915, pp. 196–207), based as it is on far more information than was available early in this century.

⁴ My study of the EH III pottery from Lerna was supported by a Research Grant (Number R0-0052-79-1165) from the National Endowment for the Humanities during the period 1979–1981. For recent publications of EH III Fine Gray-burnished pottery, see Koumouzelis, pp. 142, 155, figs. 33:5, 38:7 (Olympia); Weisshaar, 1981, pp. 246, 248, 255–256, figs. 86:11, 13, 88:4, 90:2, 3; Weisshaar, 1982, pp. 443, 456, 458–459, 463–465, figs. 62:5, 7, 71:3 (Tiryns); Walter and Felten, pp. 160, nos. 205–206, 164, no. 278, pls. 94, 103 (Kolonna).

⁵ See, for example, Forsdyke, *op. cit.* (footnote 2 above), pp. 129–131; G. Säfllund, *Excavations at Berbati 1936–1937*, Uppsala 1965, p. 156; J. L. Caskey, "Greece and the Aegean Islands in the Middle Bronze Age," *CAH*³, fasc. 45, 1966, pp. 4–5 = *CAH*³ II, i, Cambridge 1971, 118–119; C. W. Zerner, *The Beginning of the Middle Helladic Period at Lerna*, diss. University of Cincinnati 1978 (= University Microfilms International no. 7904772), pp. 135–137.

⁶ EH III vases classified at Lerna as Fine Gray-burnished normally lack non-plastic inclusions larger than "very coarse", while inclusions larger than "medium" are relatively scarce; an occasional "granule" or even small "pebble" does occur, usually in the form of a bit of white limestone exploded at the surface, but these are rare. (For the terminology used here to describe the sizes of non-plastic inclusions, see A. O. Shepard, *Ceramics for the Archaeologist*, Washington, D.C. 1965, p. 118.) Fine burnished vases whose surfaces or fractures are mottled but may include some gray are classified as Fine Burnished Non-Gray. A few gray-burnished vases whose fabric includes significant numbers of "granule"-sized inclusions are classified as Medium Coarse Burnished. Note that relatively coarse gray-burnished vases have often been included within the "Gray Minyan" class by other scholars (R. Howell in *Excavations at Lefkandi, Euboea, 1964–1966*, M. R. Popham and L. H. Sackett, edd., London 1968, pp. 8–9; Zerner, *op. cit.* [footnote 5 above], p. 137). The term "wet smoothed" is used here to describe a surface treatment applied by the potter to wheelmade vases when still on the wheel by holding a wet hand or cloth against the vessel surface while the vase rotated on the wheel. Vases finished in this fashion lack the tooling marks in the form of short shallow troughs imparted to a burnished surface by the burnishing implement, although the luster of a wet-smoothed surface may rival that of the burnished one. Burnishing is not infrequently applied to a wheelmade vase, in which case the wheelmarks

TABLE 1: Method of Manufacture of EH III Fine Gray-burnished Pottery from Lerna

SHAPE	<i>Tankard</i>	<i>Kantharos</i>	<i>Bass Bowl</i>	<i>Bowl with Horizontal Handles or Lugs</i>	<i>Closed Shapes</i>	<i>Miscellaneous Handles, Bases, and Body Sherds</i>	<i>Totals</i>
TOTAL	34	23	45	4	2	13	121
WHEELMADE	21 + 1 probable	15 + 2 probable	30 + 5 probable	1 probable	–	2	68 + 9 probable
HANDMADE	7 + 1 probable	5	4 + 1 probable	2 + 1 probable	1	2 + 1 probable	21 + 4 probable
PARTIALLY WHEELMADE, PARTIALLY HANDMADE	1 probable	–	2	–	–	–	2 + 1 probable
UNDETER- MINABLE	3	1	3	–	1	8	16
PERCENTAGE OF TOTAL IDENTIFIABLE BY SHAPE (108)	31.5%	21.3%	41.7%	3.7%	1.9%	N/A	100.1%

vases retained by the excavators of Lerna and presently stored in the Argos Museum, a total of 121 whole or fragmentary Fine Gray-burnished vessels have been identified as coming from secure EH III contexts. Of these, some 85 may be assigned relative dates within the EH III period at Lerna in terms of the three-phase ceramic chronology that has been established on the basis of the stratigraphy observed during the excavation of the Fourth Settlement at the site, phase 1 being the earliest.⁷

may in some cases be completely effaced if the burnish has been thoroughly and carefully executed (see below, footnote 18). No fine gray pottery altogether lacking a lustrous surface, whether burnished or wet-smoothed, occurs in EH III contexts at Lerna.

⁷ For the tripartite ceramic chronological scheme within Lerna IV, see Rutter, 1982, p. 461 and note 6. No reliable estimate of the original *total* of Fine Gray-burnished vessels represented by fragments unearthed during the excavations of the EH III levels at Lerna is now possible; large numbers of the massive quantities of pottery recovered during these excavations, in particular of coarse fabrics, were discarded on at least three separate occasions by the excavators in order to reduce the bulk of material eventually to be stored in the Argos Museum.

TABLE 2: Decoration and Relative Chronological Distribution of EH III Fine Gray-burnished Pottery from Lerna

	SHAPE	<i>Tankard</i>	<i>Kantharos</i>	<i>Bass Bowl</i>	<i>Bowl with Horizontal Handles or Lugs</i>	<i>Closed Shapes</i>	<i>Miscellaneous Handles, Bases, and Body Sherds</i>	<i>Totals</i>
CHRONOLOGY	Phase 1	2	2	0	0	0	0	4
	Phase 1 or 2	3	1	0	0	1	1	6
	Phase 2	6	3	7	0	0	2	18
	Phase 2 or 3	1	3	6	0	0	0	10
	Phase 3	11	8	19	3	1	5	47
	Undeterminable	11	6	13	1	0	5	36
DECORATION	Grooves on interior of rim	–	7 ^b	4 ^c	–	–	–	11
	Grooves on both interior and exterior of rim	–	–	3 ^a	–	–	–	3 ^a
	One or two grooves at base of exterior of rim	–	–	2 ^d	–	–	–	2 ^d
	Grooved shoulder	1 ^a	1 ^a	7 ^c	–	–	–	9 ^c
SHAPE FEATURE	Perforated Handles	3 ^a	–	–	–	–	–	3 ^a

^a All of phase 3.

^b One of phase 1, one of phase 2, one of phase 2 or 3, and four of phase 3.

^c All except one of phase 3, the last being of undeterminable phase.

^d All of undeterminable phase.

SHAPES

As is immediately apparent from Tables 1 and 2, the range of shapes and decoration within the Fine Gray-burnished class of Lerna IV is extremely narrow. Over 90% of the fragments which can be attributed to a particular shape form belong to one of three: tankards, kantharoi (= rim-handled bowls), and Bass bowls (= shoulder-handled bowls).⁸

⁸ The term “kantharos” has been widely used for a long time to describe the small rim-handled “Minyan” bowl (e.g. Forsdyke, *op. cit.* [footnote 2 above], p. 131). The shoulder-handled bowl has frequently been described by those who are familiar with or who actually participated in the Lerna excavations as the “Bass bowl” in recognition of the fact that its typology through the EH III and early MH periods was first studied in detail by G. F. Bass, a member of the Lerna excavation staff in the 1950’s. For a brief discussion of the princi-

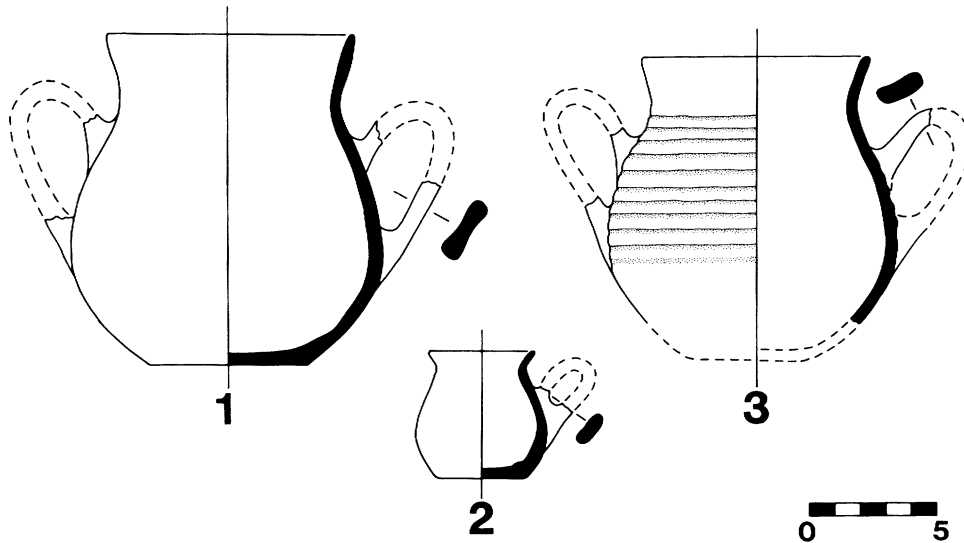


FIG. 1. Fine Gray-burnished tankards from Lerna IV:
1. L.90 (Phase 2). 2. L.63 (Phase 2 or 3). 3. L.861 (Phase 3).

Tankards (Fig. 1): In all cases where it can be ascertained, the type represented is the shoulder-handled version of this common EH III form (15 examples). To judge from the preserved fragments, two distinct sizes are attested: the larger (Fig. 1:1, 3) has a height between 0.10 and 0.14 m., a rim diameter between 0.08 and 0.10 m., a maximum diameter between 0.11 and 0.13 m., and a base diameter between 0.04 and 0.07 m.;⁹ the smaller (Fig. 1:2) has a height between 0.05 and 0.06 m., both a rim and a maximum diameter between 0.04 and 0.06 m., and a base diameter between 0.025 and 0.04 m.¹⁰ It is possible, although not demonstrable, that the smaller size normally had a single handle. Fine Gray-burnished tankards occur in every phase of Lerna IV and from phase 1 onwards may be either wheel-made or handmade. The minor shape variant with a circular perforation through both apex and base of the handle belongs to phase 3, as does the only relief-decorated example of the shape (Fig. 1:3). A single example which may have been partially wheelmade (above the level of the maximum diameter) and partially handmade (base and lower body) likewise dates from phase 3.

Kantharoi (Fig. 2): In 17 out of 18 examples where the upper handle attachment is preserved, the handle is attached to the exterior face of the rim (Fig. 2:4, 5), while in only one instance datable to phase 3 does it actually join the apex of the rim. With the exception of a single small and relatively deep-bodied, handmade example datable to phase 1 (Fig. 2:4),¹¹ the pieces for which measurable dimensions are preserved conform to a single, shallow-bodied size (Fig. 2:5) with a height between 0.06 and 0.07 m., rim and maximum body

pal vase shapes in the finer ceramic classes of Lerna IV, see Rutter, 1979, pp. 9–10.

⁹ H. 0.1135 and 0.1305 m. (2 examples); rim diam. 0.088, 0.09, 0.093, 0.099, and 0.10 m. (5 examples); max. diam. 0.116, 0.125, and 0.125 m. (3 examples); base diam. 0.045, 0.048, 0.053, 0.055, 0.056, 0.062, 0.067, and 0.067 m. (8 examples).

¹⁰ H. 0.051 m. (1 example); rim diam. 0.041, 0.048, and 0.055 m. (3 examples); max. diam. 0.052 m. (1 example); base diam. 0.0265, 0.028, 0.035, 0.0355, 0.036, and 0.039 m. (6 examples).

¹¹ H. 0.054, rim diam. 0.065, max. diam. 0.068, base diam. 0.029 m.

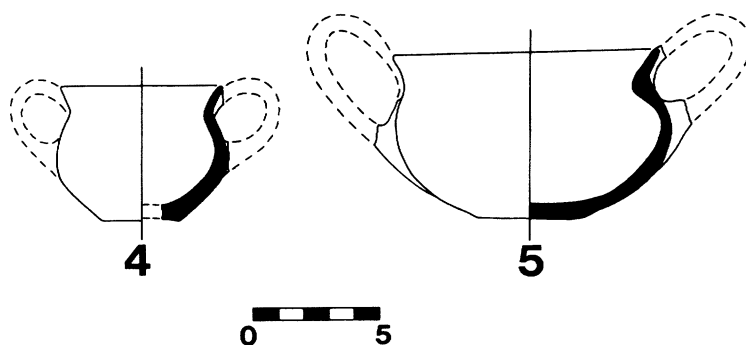


FIG. 2. Fine Gray-burnished kantharoi from Lerna IV:
4. Uninventoried fragment (Phase 1). 5. L.1168 (Phase 3)

0.13 m., and a base diameter between 0.035 and 0.05 m.¹² As was true of the tankards, Fine Gray-burnished kantharoi occur throughout the EH III sequence at Lerna in both wheelmade and handmade versions. Also as in the case of the tankards, relief decoration on the shoulder is rare and is restricted to phase 3. On the other hand, kantharoi, unlike tankards, may also be grooved on the interior of the rim, a practice in evidence from phase 1 onwards.

Bass Bowls (Fig. 3): Fine Gray-burnished Bass bowls do not definitely appear at Lerna before phase 2, although the shape is common during phase 1 in other ceramic classes. No significant shape variants exist, nor do distinct sizes appear to have been produced. Heights vary from 0.115 to 0.15 m., rim diameters from 0.125 to 0.20 m. with a pronounced majority (80%) in the 0.16–0.20 m. range, maximum body diameters from 0.115 to 0.20 m. again with a pronounced majority (over 90%) in the 0.16–0.20 m. range, and base diameters from 0.054 to 0.075 m.¹³

Bowls with Horizontal Handles or Lugs (Fig. 4:9–11): The four preserved examples of this form differ somewhat in terms of their rim profiles but all have the common feature of horizontally placed handles, in marked contrast to the preceding three forms.¹⁴ All datable examples belong to phase 3. Three of the four pieces appear to be handmade, again in contrast to the previous three forms which are for the most part wheelmade. No bowls with horizontal handles are decorated. Two have rim diameters slightly over 0.20 m., while two

¹² H. 0.064 m. (1 example); rim diam. 0.08, 0.1055, 0.11, 0.115, 0.12, and 0.13 m. (6 examples); max. body diam. 0.103 and 0.11 m. (2 examples); base diam. 0.039, 0.039, 0.0475, and 0.048 m. (4 examples).

¹³ H. 0.117, 0.1185, 0.119, 0.121, 0.125, 0.130, and 0.147 m. (7 examples); rim diam. 0.125, 0.14, 0.14, 0.15, 0.16, 0.16, 0.162, 0.165, 0.165, 0.168, 0.17, 0.17, 0.175, 0.178, 0.18, 0.18, 0.18, 0.190, 0.20, and 0.20 m. (20 examples); max. body diam. 0.118, 0.162, 0.162, 0.163, 0.170, 0.172, 0.173, 0.180, 0.180, 0.181, 0.186, and 0.196 m. (12 examples); base diam. 0.054, 0.0615, 0.062, 0.063, 0.064, 0.065, 0.065, 0.0685, 0.069, and 0.0735 m. (10 examples).

¹⁴ In three cases a handle is actually preserved; in the case of the fourth piece (Fig. 4:9), the rim profile is that of a form of bowl having horizontal handles which is well attested in other ceramic classes current in Lerna IV.

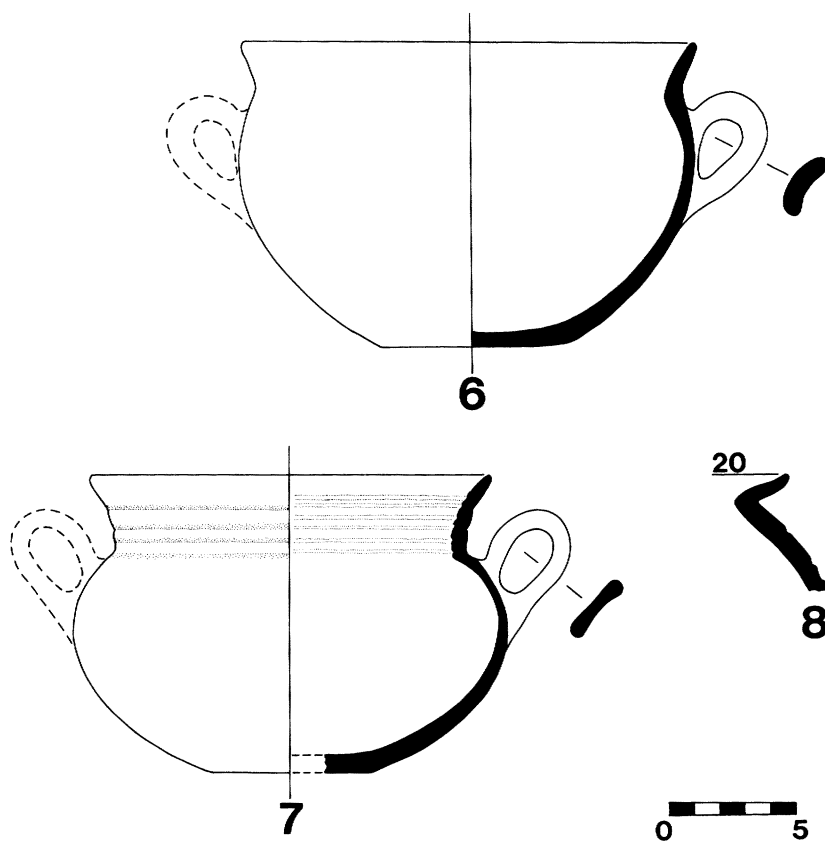


FIG. 3. Fine Gray-burnished Bass bowls from Lerna IV:
6. L.213 (Phase 2). 7. L.523 (Phase 3). 8. Uninventoried fragment (Phase 3)

have rim diameters between 0.10 and 0.15 m.; no other dimensions are preserved except for the maximum body diameter, which in two instances is close to that of the rim diameter.

Closed Shapes (Fig. 4:12): Only two fragments can be attributed with certainty to closed shapes, one a rim with a rim diameter of 0.105 m., probably from a jar or jug, and one a neck fragment (Fig. 4:12) with a maximum diameter of 0.075, likely to belong to a similar vessel. Little more can be said of this shape category except that it exhibits no evidence of relief decoration and was evidently very rare.

All the miscellaneous fragments listed in Tables 1 and 2 probably belong to either tankards, kantharoi, or Bass bowls.

DECORATION

All decoration appearing on Fine Gray-burnished pottery of Lerna IV takes the form of horizontal grooves, shallow when on the interior or exterior of the rim but considerably more pronounced and broader when on the exterior shoulder. Such grooving is similar in concept to, but quite different in realization from, the much narrower horizontal combing which decorates some tankards, kantharoi, and Bass bowls at Lerna and, to judge from

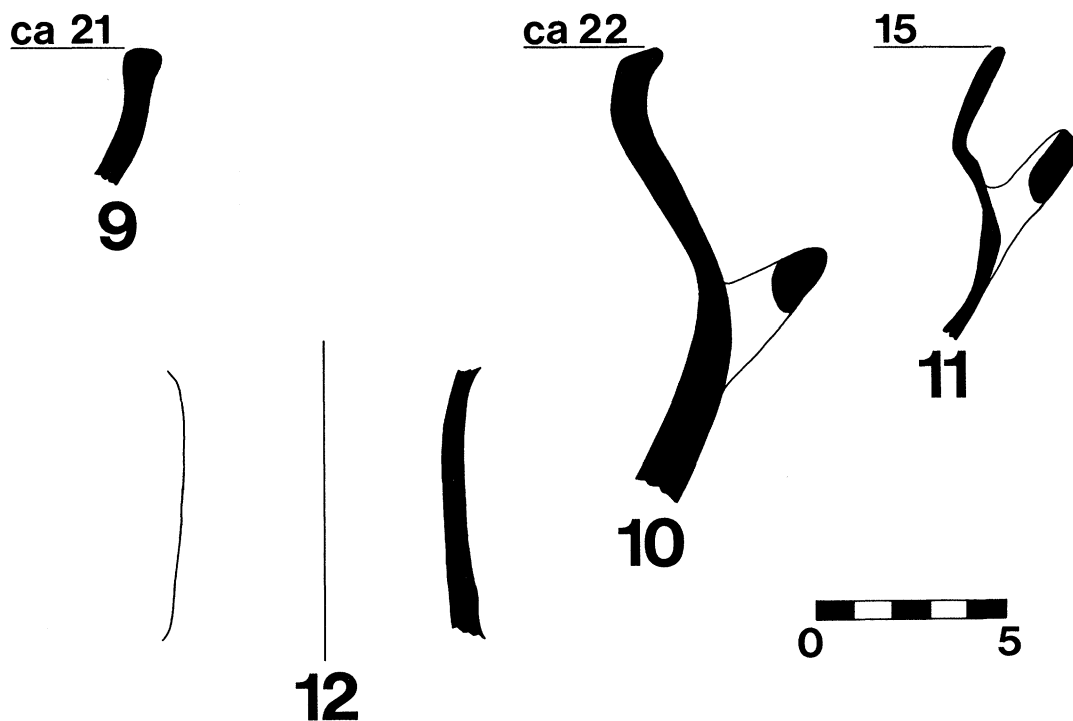


FIG. 4. Fine Gray-burnished bowls, with horizontal handles or lugs, and closed shapes from Lerna IV: 9–12. Uninventoried fragments (Phase 3)

published examples, near-by Tiryns and Berbati as well.¹⁵ The combing technique at Lerna is restricted to the shoulders of Solidly Painted and Burnished vases; with the exception of a pair of tankard fragments assignable to phase 1 or 2, it occurs only on pottery of phase 3.¹⁶ In contrast, the grooving of Fine Gray-burnished vases begins as early as phase 1 in the form of a few unobtrusive grooves on the interior rims of kantharoi and is at least as common on the rim (e.g. Fig. 3:7) as on the shoulder. In the latter position, it is definitely attested only in phase 3 (e.g. Fig. 1:3) and thus becomes popular in its pronounced form contemporarily with the practice of combing. Also in contrast to the combing technique,

¹⁵ P. and W. Gercke and G. Hiesel, "Tiryns-Stadt 1971: Graben H," *Tiryns VIII*, Mainz 1975, pp. 7–36, esp. p. 35, no. 97, fig. 11:2, pl. 38:2; Weisshaar 1982, p. 464, figs. 62:3, 63; Säflund, *op. cit.* (footnote 5 above), p. 121, figs. 95:a, 122:5a, b. One of the pieces from Berbati is said to be wheelmade.

¹⁶ For such decorative combing at Lerna, see also Rutter, 1982, pp. 460–461, note 5 under (3). The treatment normally occurs by itself (i.e. without additional modes of decoration) on the shoulders of Bass bowls, but it also appears on at least one neck-handled jug and two kantharoi, as well as on the two tankards cited, of which one bears additional fine incised and impressed ornament (*ibid.*, fig. 1:2, pl. 98:2). Although one or two of the Bass bowls so decorated may have been partially wheelmade, the vast majority of such combed vases are handmade, and the decoration, to judge from the waviness and irregularity of the combed lines, was not applied while the vase was rotating on a wheel. The vase from the Tirynthian *Unterburg* cited in the previous note is identified by Weisshaar as a "*grauminyischer Topf*", but its virtual identity in both shape and decoration with vases which at Lerna belong exclusively to the Solidly Painted and Burnished class, as well as the appearance of what looks very much like paint in the published photograph of the piece (Weisshaar, 1982, fig. 63), suggests that this bowl should not be assigned to the class here termed Fine Gray-burnished.

such grooving is attested only on Fine Gray-burnished vases that are wheelmade. It is therefore quite likely that these grooves were originally nothing more than exaggerated wheel-ridges and constituted a mode of decoration invariably effected while the vase was spinning on the potter's wheel.¹⁷

METHOD OF MANUFACTURE

Almost two thirds (63.6%) of the total of 121 Fine Gray-burnished vessels from Lerna IV are certainly or probably wheelmade.¹⁸ With regard to individual shapes, the

¹⁷ Roughly contemporary is the grooved decoration of wheelmade, red-slipped and burnished kantharoi and *depa* from Beycesultan XII-IX (S. Lloyd and J. Mellaart, *Beycesultan I*, London 1962, figs. P.47:23, 24, 62; P.50: 41, 46, 47; P.52: 14, 17, 20, 21, 23). As does EH III Lerna, Beycesultan in the EB 3a period witnesses the first use of the wheel for the local manufacture of pottery (attested earlier only in rare imports of level XIIIa: *ibid.*, p. 179, fig. P.46:6) as part and parcel of a dramatic change in the over-all ceramic repertoire. This parallelism is unlikely to be wholly coincidental. A further connection between EB 3a Beycesultan and the EH III Argolid is provided by the pattern-painted dark-on-light imitation from Tiryns of the grooved Beycesultan form of *depas* (K. Müller, *Tiryns*, IV, *Die Urfrñiskeramik*, Munich 1938, pl. XXXII:5; Podzuweit, p. 155, type 3D III). For the frequency of grooved decoration on the class of EB 3 pottery which he has variously called "red washed" or "West Anatolian red slipped", see D. H. French, "Prehistoric Sites in Northwest Anatolia I. The Iznik Area," *AnatSt* 17, 1967, pp. 49-100, esp. p. 61; "Prehistoric Sites in Northwest Anatolia II. The Balıkesir and Akhisar/Manisa Areas," *AnatSt* 19, 1969, pp. 41-98, esp. pp. 65-67. Grooved ornament of the sort common in Beycesultan XII-IX on red-slipped and burnished pottery also occurs on a number of western Anatolian gray-burnished *depa* of Podzuweit's form 3A (*op. cit.*, pp. 151-153): a fully preserved example on display in the Uşak Museum in May 1983, a fragment from Troy IId (C. W. Blegen *et al.*, *Troy I*, Princeton 1950, pp. 220, 242, 292, fig. 407 II-143), and two fragments from the sites of Çakırca and İlicapınar at either end of Lake Iznik (French, *AnatSt* 17, 1967, pp. 66, 84, 89, figs. 6:7, 12:46). The fragment from Troy is manufactured in a distinctive fabric paralleled by two other vessels of Troy II bearing grooved decoration, a pilgrim flask of shape B8 and a small jar of shape C28 or C32 (Blegen *et al.*, *op. cit.*, pp. 292, 314, fig. 386, no. 36.665). It is unclear to me whether any of these pieces of grooved gray pottery are to be identified as "İnegöl Grey Ware" (for which, see below, footnote 67).

¹⁸ It is often difficult to distinguish wheelmade from handmade products, especially in the case of sherd material which for the most part belongs to open vessel forms with burnished surfaces. The primary criterion here for wheelmade manufacture will be the presence on the vessel body of a series of fine horizontal ridges, perfectly parallel, which are usually somewhat more noticeable on vessel interiors than on exteriors. In the case of body sherds and base fragments from tankards, whose interiors were not burnished below the neck after the vessel was formed, such wheelridges are easy to detect and certainly attributable to the method of manufacture. In the case of kantharoi and Bass bowls, however, whose surfaces were burnished on both interior and exterior after the vessels' shaping, wheelridges may have been entirely obliterated, and in such cases the method of manufacture is uncertain. Vessels which have been wet smoothed (footnote 6 above) in such a fashion as to have surfaces characterized by high luster, an absence of tooling marks, and a continuous series of fine horizontal striations effected in the wet-smoothing process itself are considered here to be wheelmade, although they could conceivably have been manufactured by hand and received only their final surface treatment on the wheel; as in the case of burnishing, the surface treatment often eradicates the principal evidence for method of manufacture. An even wall thickness at any given elevation around the entire vessel circumference is suggestive of wheelmade manufacture, but it is a feature less easily detectable than wheel-ridging and ultimately far less conclusive since it is often to be found in handmade pottery. Somewhat more indicative of wheelmade manufacture is the presence of a fine detail in the vessel profile which is carried consistently around the entire circumference of the vase, a groove in the body, for example, or a hollow in the lip. In a few cases where wheelridging appears to characterize part of a vase but not all of it and the portion lacking wheelridging is rather irregular in terms of wall thickness or surface smoothness, vases appear to have been partially wheelmade and partially handmade. Despite the inherent improbability of such a phenomenon, it is a fact that the bodies of most of the EH III vessel forms at Lerna are pieced, that is, put together from a series of discrete elements (e.g. lower body to point of maximum diameter, upper body, neck or rim, etc.); the

corresponding percentages for tankards, kantharoi, and Bass bowls are 64.7%, 73.9%, and 77.8%, respectively. Only the relatively common and chronologically later (at least in this class) bowl with horizontal handles or lugs is more often handmade than wheelmade. Of the four vases from contexts securely dated to phase 1, two are wheelmade and two are handmade. It may therefore be concluded that wheelmade manufacture appears at Lerna together with the first occurrence of Fine Gray-burnished pottery.¹⁹ Although this technique of production is by no means restricted to the Fine Gray-burnished class within Lerna IV, it is certainly more commonly represented among such pottery than in any other class of EH III ceramics at the site.²⁰ Just as Fine Gray-burnished pottery seems to become more popular with time through the EH III period at Lerna, so too the practice of throwing vessels on a fast wheel increases in frequency as time passes, both in the Fine Gray-burnished class and in other classes of pottery. Finally, the apparent impact of the method of manufacture on the decoration of Fine Gray-burnished pottery discussed above also reaches a high point in phase 3.

EVIDENCE FROM OTHER SITES²¹ (Table 3)

The picture of EH III Fine Gray-burnished pottery sketched above on the basis of the finds from Lerna IV may be amplified by a survey of other central and southern Greek sites where such pottery occurs.

apparent mixtures of modes of production seem to combine the handmade manufacture of one or two of these elements with the wheelmade manufacture of the remainder. In the case of the pottery from Lerna IV described here, vases have been identified as handmade unless there is convincing evidence for partial or complete wheelmade manufacture in the form of clear wheelridging or wet smoothing.

¹⁹ It must be emphasized that neither this mode of production nor this class of ceramics occurs at Lerna in contexts preceding the beginning of Lerna IV, although wheelmade pottery is now well attested at a number of central Greek sites at the end of the preceding EH II period in the form of tankards, cups, and plates characteristic of the "Lefkandi I" ceramic assemblage.

²⁰ In phase 1, wheelmade examples of several shapes also occur in the Light-on-Dark Pattern-painted and Fine Burnished Non-Gray classes. During phase 3, Bass bowls are sometimes partially wheelmade (footnote 18 above) in the Solidly Painted and Burnished and the Solidly Painted and Unburnished classes, while a few vases of several different shapes continue to be wholly wheelmade in the Fine Burnished Non-Gray class.

²¹ Specifically omitted from consideration in the discussion that follows are the sites of Aghia Marina, Asea, Asine, Kirrha, Korakou, and Orchomenos (see Wünsche, pp. 101–102, notes 90, 92, 94; Weissshaar, 1981, p. 246, note 299). No published Fine Gray-burnished pottery from these six sites need be as early as EH III, although there may of course exist unpublished pieces of this class which are to be so dated. In the case of Korakou, however, I am able to state on the basis of personal examination that no such pottery securely attributable to an EH III context exists among the material from that site presently stored in the Corinth Museum (see below, footnote 24). Also expressly omitted from what follows is the small basket-handled jar from Manika (G. A. Papavasileiou, *Περὶ τῶν ἐν Ἐυβοίᾳ ἀρχαίων τάφων*, Athens 1910, p. 15, pl. H', top row, left) which is typologically MH and appears to be a later intrusion in this context; I cannot agree with Jacobsen (Sackett *et al.*, "Prehistoric Euboea," *BSA* 61, 1966, p. 89 and note 151) that this piece is to be dated by the rest of the pottery with which it was found; note that its shape is *not* the same as that of the fragmentary basket-handled vessel from Pefkakia mentioned in the text and note 38.

The published EH "Grey Ware" from Pelikata (W. A. Heurtley, "Excavations in Ithaca, II," *BSA* 35, 1934/35, pp. 1–44, esp. p. 26 and figs. 20, 21) is coarse in fabric and often mottled in color; it therefore does not conform to the definition of Fine Gray-burnished pottery adopted here although a date for it within the EH III period may be considered secure. On the other hand, some pottery from the site published as Middle Helladic "Minyan" is typologically so similar to EH III Fine Gray-burnished pottery from Olympia that it must be considered contemporary (*ibid.*, p. 31, nos. 106–111, figs. 24, 26; see also below, footnote 40).

TABLE 3: EH III Fine Gray-Burnished Pottery from Sites other than Lerna

Site	Shape Publication	Tankard	Kantharos	Bass Bowl	Bowl with Horizontal Handles	Closed Shapes	Miscellaneous
Berbati	Säflund (fn. 5)		figs. 94:c; 123:13, 14, 17	figs. 97:b; 123:12, 15, 16			figs. 123:1-11; 124:1-12
Gonia	(unpublished)		2	4			ca. 20 including 1 pedestal foot
Kolonna	Walter and Felten (fn. 1)	pls. 94: 205-206; 103:278					
Lefkandi	Popham and Sackett (fn. 6)		p. 9	fig. 8	fig. 9		
Nemea	(unpublished)	2	5	100 +			100 +
Olympia	Weege (fn. 33)		figs. 5-7; 18, lower left	fig. 18, upper left			
	Dörpfeld (fn. 33)		fig. 12:1-3; pl. 22:14				
	Koumouzelis (fn. 1)		fig. 38:7				fig. 33:5
	(unpublished)		5 +	1			1 pedestal foot
Pefkakia	(unpublished)		1 +	2 +	2 + (?)	1 basket- handled vessel	ca. 15
Pelikata	Heurtley (fn. 21)		figs. 24: 107-111; 26:106-107, 110				
Tiryns	Gercke, Gercke and Hiesel (fn. 15)		fig. 11:5, pl. 36:2b	fig. 11:7, pl. 35:2b			
	Weisshaar, 1981 (fn. 1)		fig. 86:13	figs. 88:4, 90:3		flask: fig. 90:2	pedestal foot: fig. 86:11
	Weisshaar, 1982 (fn. 1)		fig. 62:5	figs. 62:7; 71:3			

Berbati: The class of pottery described by Säflund as "Grey Minyan I" is equivalent in nature and date to the Fine Gray-burnished class of Lerna IV.²² The published pieces may all be assigned to either kantharoi or Bass bowls and include both handmade and wheel-made examples of each. Grooved decoration occurs on both rims and shoulders. To judge from the other EH III pottery published from the site, the vast majority of the Fine Gray-burnished pieces from Berbati are to be dated to phases 2–3 in terms of the relative chronology of Lerna IV. The apparent absence of Fine Gray-burnished tankards is somewhat odd but is paralleled at several other sites.

Eutresis: Two small body sherds of the Fine Gray-burnished class for which neither shape nor mode of manufacture can be specified are reported from EH III contexts at Eutresis.²³

Gonia.²⁴ Among the unpublished EH III pottery from Blegen's excavations at this site are fragments of several Fine Gray-burnished kantharoi and Bass bowls. Some have grooved decoration at the rim, but only one Bass bowl fragment has a grooved shoulder. Both handmade and wheelmade manufacture is attested. A flaring "rim" probably belongs to a pedestal foot like similar fragments from Olympia and Tiryns. The EH III deposits at Gonia containing Fine Gray-burnished pieces include pattern-decorated painted fragments datable to all three phases in terms of the sequence of Lerna IV.

Kolonna: Only three Fine Gray-burnished vases certainly datable to the EH III period have thus far been published from Kolonna on Aigina.²⁵ Two completely restorable examples come from the destruction deposit of House 1 within City V, while fragments of the third were found in a dumped fill overlying the contemporary destruction deposit of House 11, a context best dated to City VI. All three are shoulder-handled tankards, two wheelmade and one handmade.²⁶ Two have perforated handles and one a grooved shoulder, both of which

²² Säflund, *op. cit.* (footnote 5 above), pp. 123, nos. 4 and 6, 156–157.

²³ J. L. and E. G. Caskey, "The Earliest Settlements at Eutresis, Supplementary Excavations, 1958," *Hesperia* 29, 1960, pp. 126–167, esp. p. 158.

²⁴ For Gonia, see O. T. P. K. Dickinson and R. Hope Simpson, *A Gazetteer of Aegean Civilization in the Bronze Age*, Göteborg 1979, p. 63, site A57, with references to existing publications of the site. I am grateful to Dr. C. K. Williams, II for permission to examine the material from both Gonia and Korakou presently stored in the Corinth Museum and to cite unpublished pieces from the former here. Fine Gray-burnished pottery of EH III date was found in the following stratified contexts: β III (Gonia Tray 57: one kantharos rim and handle; two Bass bowl rims); δ IV (Gonia Tray 55: one Bass bowl rim; one possible pedestal-foot fragment; three handles, one base, and three open-body sherds all assignable to either Bass bowls or kantharoi); τ VII (Gonia Tray 47: one large kantharos rim and handle; one handle and two open-body sherds assignable to either Bass bowls or kantharoi); μ Bothros 1 (Gonia Trays 62–63: ca. 20 sherds including one Bass bowl rim with grooved shoulder). The pottery from Bothros 2 in Trench μ (Gonia Tray 42) may be very early MH rather than EH III and is therefore omitted from consideration here.

²⁵ Fine Gray-burnished Bass bowls such as that cited by Wünsche (p. 102, note 99) presumably exist among the EH III pottery of Kolonna, but none from a secure EH III context have yet been published.

²⁶ The example from the dumped fill above House 11 has been identified as a kantharos (Walter and Felten, p. 164, no. 278, pl. 103); its profile and decoration, however, are so similar to a shoulder-handled tankard from phase 3 at Lerna on display in the Argos Museum (Fig. 1:3) that I am inclined to reject this identification. For the date of the dumped fill (= *ibid.*, p. 145, *Fundgruppe* XXII), see also J. B. Rutter, review of Walter and Felten, *AJA* 87, 1983, pp. 106–108.

are features paralleled only among Fine Gray-burnished tankards of phase 3 at Lerna, with which these Aeginetan vases are therefore presumably contemporary.

Lefkandi: Little has yet been published concerning the Fine Gray-burnished pottery of levels 2 and 3 at the site, the Lefkandiot strata which correspond in date to Lerna IV.²⁷ All that can presently be said is that Bass bowls are known in both levels 2 and 3, while kantharoi and bowls with horizontal handles occur in level 3. Both handmade and wheelmade manufacture characterize the Fine Gray-burnished class of both levels, but wheelmade pottery increases in frequency in level 3. Grooving, as well as incised hatched triangles, are mentioned as decorative modes current in level 3.²⁸

Nemea:²⁹ Among the unpublished EH III pottery from the prehistoric site on the Tsoungiza ridge excavated by Blegen and Harland are several hundred fragments of Fine Gray-burnished pottery which probably all belong to tankards, kantharoi, and Bass bowls.³⁰ Of only two certainly identifiable tankard fragments, one is handmade and one is wheelmade. At least five positively identifiable kantharos fragments exist, but the vast majority of this material, including some twenty rims with grooved decoration on the interior of the rim only, belongs to both handmade and wheelmade Bass bowls. To judge from the pattern-painted pottery preserved from the site, all the EH III pottery from Nemea is contemporary with phases 2 and 3 at Lerna.

Olympia:³¹ The EH III Fine Gray-burnished pottery of Olympia is exclusively handmade and, with a few exceptions, consists entirely of kantharoi. The invariably handmade mode of production exemplified among this material is all the more peculiar in that at least some

²⁷ For the contemporaneity of Lefkandi 2 and Lerna IV, see Rutter, 1979, p. 10; for the contemporaneity of the earliest MH levels of Lerna V with Lefkandi 4, see Zerner, *op. cit.* (footnote 5 above), pp. 192–193. More complete study of the pottery of Lerna IV since 1979 now suggests that Lefkandi 2 may be equivalent in date with phases 1 and 2 of Lerna IV, Lefkandi 3 with phase 3 of Lerna IV.

²⁸ Howell, *loc. cit.* (footnote 6 above). Note that both fine and coarse fabrics are included within the ceramic class termed “Gray Minyan”. A few Medium Coarse Burnished bowls having horizontal handles and decorated at the interior rim with lightly incised, hatched triangles occur in phase 3 of Lerna IV. These bowls, although sometimes gray in color, are more often mottled. Owing both to this and to the coarseness of their fabric, they have not been included in the Fine Gray-burnished class of Lerna IV. Nevertheless, they may well correspond precisely to the similarly decorated pieces from Lefkandi 3. At Lerna, such bowls often have, in addition to the incised decoration on the rim, plastic and impressed decoration on the exterior shoulder.

²⁹ I am grateful to Professor G. E. Mylonas for permission both to study the EH III pottery from Nemea and to cite unpublished pieces here. Dr. C. K. Williams, II graciously allowed me access to the storerooms of the Corinth Museum, where the material is now kept, in the spring seasons of 1980 and 1981.

³⁰ For the Tsoungiza site, see Dickinson and Hope Simpson, *op. cit.* (footnote 24 above), p. 67, site A70, with references to publications of the excavations undertaken during the 1920’s. The Fine Gray-burnished pottery is now stored in Nemea Tray 370 in the Corinth Museum.

³¹ I am greatly indebted to Epimeletia G. Chatzi and to Ephor of Antiquities K. Tsakos for facilitating my study of the prehistoric material from Dörpfeld’s excavations within the Altis which, with the exception of one or two Mycenaean sherds, has now been independently dated by Koumouzelis (pp. 136–138, 193, 224, 226–228) and myself (Rutter, 1982) to the EH III period. I am especially grateful to M. Koumouzelis for her permission to examine in 1981 the EH III pottery found under the New Museum that she published in detail in her 1980 dissertation (*op. cit.*, pp. 125–191).

of the contemporary pottery from the Altis area is wheelmade.³² A further peculiarity is that grooved decoration of the sort found to be normal elsewhere on Fine Gray-burnished pottery is unattested at Olympia, whereas fine incised or impressed decoration, usually consisting of incised spiraliform hooks but also of incised horizontal wavy lines, groups of incised horizontal lines, and impressed circles is common.³³ Only two certain Bass bowl fragments exist, both from the Altis.³⁴ Also from the Altis comes an unpublished fragment of a flaring pedestal foot with a base diameter of 0.05 m., decorated with three incised horizontal wavy lines just above its base. In terms of the relative chronology established within Lerna IV, the EH III pottery from the apsidal buildings in the Altis at Olympia is largely, indeed perhaps entirely, contemporary with phase 1 at Lerna.³⁵ At the near-by site located under the New Museum, Fine Gray-burnished pottery is rarer than in the Altis deposits but apparently likewise occurs in early EH III deposits equivalent to phases 1 and 2 at Lerna.³⁶

Pefkakia:³⁷ The earliest "Gray Minyan" at Pefkakia is found in the second phase defined within the local MBA sequence in the main area of excavation on the site (E/F VIII). Relatively rare (fragments of some twenty vessels) and for the most part wheelmade, this "Minyan" occurs together with a pink, reddish yellow, or light-red wheelmade ware which is related in terms of its shapes and method of manufacture to the "Plain Ware" of Lefkandi 3. The shapes of the earliest "Gray Minyan" from Pefkakia include Bass bowls, kantharoi, bowls with thickened T-shaped rims, and a vessel with a basket handle in the form of a double loop;³⁸ tankards are altogether lacking. In terms of fabric and shape range, the "Gray Minyan" at Pefkakia is closely connected with the light-surfaced wheelmade ware, although the latter is usually unburnished, and its most popular shape, a hemispherical bowl, is not represented in the "Minyan". In chronological terms, this Thessalian material is presumably contemporary with Lefkandi 3 and hence with phase 3 of Lerna IV.

Pelikata: A substantial number of "Minyan" sherds were found in Areas IV and VI at the site in levels which, in some cases, contained either purely EH or else mixed EH and late Mycenaean pottery.³⁹ A small sample of these sherds, including both developed MH forms

³² Koumouzelis, p. 164.

³³ F. Weege, "Einzelfunde von Olympia 1907-1909," *AthMitt* 36, 1911, pp. 163-192, esp. pp. 167-168, figs. 5-7, 174-175, fig. 18, left; W. Dörpfeld, *Alt-Olympia*, Berlin 1935, p. 89, fig. 12:1, 3, pl. 22:14; Koumouzelis, fig. 38:7.

³⁴ One of these is published by Weege, *op. cit.* (footnote 33 above), fig. 18, upper left.

³⁵ Rutter, 1982.

³⁶ Koumouzelis, p. 155, where the association of Fine Gray-burnished pottery with ouzo cups, an early EH III form at Lerna and elsewhere, is noted.

³⁷ I am deeply indebted to J. Maran for this as yet unpublished information which will be included in his dissertation for the Institut für Vor- und Frühgeschichte at the University of Heidelberg on the Middle Bronze Age at Pefkakia.

³⁸ For this double-loop handle, said by Maran to be very rare at Pefkakia, note the comparanda, though on different shapes, from Lerna IV (Rutter, 1979, p. 12, fig. 6:3) and Ayia Irini III (J. L. Caskey, "Investigations in Keos II: A Conspectus of the Pottery," *Hesperia* 41, 1972, pp. 357-401, esp. p. 373, pl. 80:C42).

³⁹ Heurtley, *op. cit.* (footnote 21 above), pp. 9 (the lower fill of the central depression containing 36 "Minyan" sherds), 14 (the two upper levels designated VIb and VIc in the inventory entries for the pottery and miscellaneous objects).

and fragments of apparently handmade kantharoi (several of which are decorated with incised spiraliform hooks and indistinguishable from the Fine Gray-burnished kantharoi so common in early EH III levels at Olympia), was published under the heading of "Middle Helladic: 'Minyan'".⁴⁰ In view of the contextual associations of the fragments from Area VI in particular and the typological affinities with the Olympian material, these kantharoi may be confidently dated to EH III.⁴¹

Tiryns: At Tiryns, EH III Fine Gray-burnished vases have been published from both the *Unterstadt* and the *Unterbürg*. From Trench H in the former zone come a wheelmade Bass bowl and an apparently handmade kantharos.⁴² Excavations in the *Unterbürg* during 1978/79 revealed a stratigraphic sequence in which a wheelmade kantharos and a probable pedestal-foot fragment come from the lowest stratum V, a Bass bowl from the succeeding stratum IV, and a Bass bowl and a flask from the uppermost, principally EH, stratum III.⁴³ Further excavations in the *Unterbürg* in 1980 produced a kantharos and a wheelmade Bass bowl from *Grube 2*, a Bass bowl with a perforated base from underneath Room 121, and some fifty other fragments of Fine Gray-burnished pottery.⁴⁴ It is unclear from what has thus far been published what percentage of the Tirynthian Fine Gray-burnished material is handmade, but wheelmade manufacture is certainly attested, as is grooving on the interior rim of the kantharos from *Unterbürg* stratum V of 1978/79. The putative pedestal foot from the same context is paralleled at Gonia and Olympia. The flask from the overlying stratum III is at present unique in the shape repertoire of EH III Fine Gray-burnished pottery but is a form well attested in other EH III ceramic classes.⁴⁵ In Lernaean terms, the

⁴⁰ Heurtley, *op. cit.* (footnote 21 above), pp. 30–31. The MH Minyan (nos. 101–105, 112), in the form of goblets, is easily distinguishable from the EH III Fine Gray-burnished kantharoi (nos. 106–111). On the basis of the pieces published, only the latter came from Area VI, while both are represented in Area IV. Unfortunately, it is not clear from the publication whether both MH and EH III pieces were found in the apparently sealed lower level of the depression in Area IV or only the EH III kantharoi. Heurtley commented on the resemblance between the incised decoration on the kantharoi from Pelikata and Olympia (*ibid.*, p. 41 and note 3) but evidently accepted a MH date for the apsidal buildings within the Olympian Altis and so overlooked the implication of his own discovery of "Minyan" stratified in otherwise pure EH levels.

⁴¹ So Rutter, 1982, p. 472.

⁴² Gercke *et al.*, *op. cit.* (footnote 15 above), pp. 33, no. 86, fig. 11:5, pl. 36:2b (kantharos); 35, no. 91, fig. 11:7, pl. 35:2b (Bass bowl).

⁴³ Weisshaar, 1981, pp. 255, fig. 86:11, 13 (stratum V); 255, fig. 88:4 (stratum IV); 256, fig. 90: 2, 3 (stratum III).

⁴⁴ Weisshaar, 1982, pp. 464, fig. 62:5, 7 (*Grube 2*); 465, fig. 71:3 (under Room 121); 441, fig. 59, 456, fig. 72, and 458, fig. 74 (counts of 52 "Minyan" vases including the Bass bowl from beneath Room 121 already mentioned). A Bass bowl with combed decoration from *Grube 2* (*ibid.*, figs. 62:3, 63) is not accepted here as Fine Gray-burnished, for the reasons cited in footnote 16 above. Also not accepted is the shoulder of a closed vessel decorated with fine incised and impressed ornament (*ibid.*, p. 465, fig. 69:3); the decoration of this piece suggests that it belongs to a class of EH III pottery distinct from Fine Gray-burnished, probably either Fine Burnished Non-Gray or Medium Coarse Burnished (see Rutter, 1982, for a full discussion of finely incised and impressed EH III pottery).

⁴⁵ For this shape, see H. Schliemann, *Tiryns. The Prehistoric Palace of the Kings of Tiryns. The Results of the Latest Excavations*, New York 1885, p. 59, pl. XXIII:d; E. J. Holmberg, *The Swedish Excavations at Asea in Arcadia*, Göteborg 1944, p. 88, fig. 89:a; Koumouzelis, p. 150, π175, fig. 37:2, pl. 93; C. W. Blegen *et al.*, *Troy II*, Princeton 1951, pp. 109, 138, 214, figs. 170:10, 185. At least three unpublished fragments from examples of this shape were found at Nemea and are presently stored in the Corinth Museum (footnote 29

Tirynthian finds may be dated to all three phases of Lerna IV: the kantharos from the *Unterstadt*, the finds from *Unterbürg* stratum III of 1978/79, and the contents of *Unterbürg Grube 2* correspond chronologically with the pottery of phase 3 at Lerna; the Bass bowls from the *Unterstadt*, from *Unterbürg* stratum IV of 1978/79, and from beneath Room 121 of the *Unterbürg* parallel Lernaean forms of both phases 2 and 3; the kantharos and pedestal foot of *Unterbürg* stratum V of 1978/79 are probably contemporary with phase 1.⁴⁶

SUMMARY

It will have become apparent that the sketch of EH III Fine Gray-burnished pottery, outlined initially on the basis of the finds from Lerna IV, is almost identical to that which may be gleaned from the data collected at other Peloponnesian and central Greek sites. With regard to vessel shapes, only the pedestal feet from Gonia, Olympia, and Tiryns, the flask from Tiryns, and the basket-handled vase and perhaps the T-rim bowls from Pefkakia are unparalleled at Lerna, and all these except for the last are evidently rare.⁴⁷ On the other hand, no other single site exhibits a published range of vessel forms equivalent in scope to that attested at Lerna, although Nemea has produced quantities of EH III Fine Gray-burnished pottery which exceed those now preserved from Lerna itself. With the exceptions of Olympia and Pelikata, and perhaps, although to a far less marked degree, Lefkandi and Pefkakia, the decorative mode characteristic of this class at Lerna, grooving made while the vessel was rotating on the wheel, is repeated at all other sites.⁴⁸ And again with the exceptions of Olympia and Pelikata, the practice of producing Fine Gray-burnished vessels in both handmade and wheelmade versions is the rule at other sites.⁴⁹ The peculiarities noted at Olympia and Pelikata (fine incised or impressed decoration; exclusively handmade production) and perhaps also at Lefkandi and Pefkakia (occasional incised hatched triangles at the former, incision as well as grooving at the latter) are no doubt partially to be explained

above). Some half-dozen examples are known from Lerna, of which one is on display in the Argos Museum (inv. no. L.1221). As H.-J. Weisshaar has kindly reminded me, the context of the Tirynthian Fine Gray-burnished example is in any case mixed, so the piece may well be considerably later than EH III in date.

⁴⁶ See Appendix, pp. 354–355.

⁴⁷ The pedestal feet in fact probably belong to a shape variant of the Bass bowl exemplified by the well-known dark-on-light pattern-painted example from an early phase 2 context of Lerna IV (J. L. Caskey, "Excavations at Lerna, 1955," *Hesperia* 25, 1956, pp. 147–173, pl. 45:a). For the basket-handled vase and flask, see above, pp. 340, 341 with footnotes 38 and 45 above, respectively. T-rim bowls from Pefkakia may in fact have had horizontal handles and thus be the coastal Thessalian equivalent of Lernaean bowls such as Fig. 4:9; if so, however, bowls of this general form would appear to have been more popular in the Fine Gray-burnished class at Pefkakia than at Lerna.

⁴⁸ The incised hatched triangles on some bowls of Lefkandi 3 may be restricted to vessels produced in relatively coarse fabrics, as they are at Lerna (footnote 28 above). At Pefkakia, some pieces appear to be decorated with thin horizontal incisions, others with broader horizontal grooves. Eutresis is exempted from consideration here due to the relative dearth of evidence for the EH III Fine Gray-burnished class available from this site.

⁴⁹ Whether the Fine Gray-burnished kantharoi from Pelikata were handmade or wheelmade is not specified in their publication. It is assumed here on the basis of their close resemblance to the Olympian kantharoi that they are likewise exclusively handmade. Eutresis is again exempted from consideration here for the reason cited in the preceding note.

by the geographical distance which separates them from the remaining sites, otherwise all located in the Argolido-Corinthia and adjacent Saronic Gulf (Kolonna). In the case of Olympia and, by extension, of Pelikata, an additional explanatory factor may be the very early date within EH III of the majority of, perhaps even all, the Fine Gray-burnished pottery from the site. What is remarkable, by contrast, is the general homogeneity of the Fine Gray-burnished class in terms of its shape range, for even in the cases of Olympia and Pelikata, at the first of which EH III pottery in general has a number of apparently local idiosyncrasies early in the period,⁵⁰ the standard vessel forms of this class are among the very few which exist within the repertoire most broadly represented at Lerna. At the same time, it is both surprising and striking that such common EH III open shapes as the rim-handled tankard, the ouzo cup, and the flat-based cup with its upper handle attachment at the rim are unattested in this class.⁵¹ It goes without saying that the origins of EH III Fine Gray-burnished pottery, and by extension those of its MH successor, "Gray Minyan", are best determined by an analysis of the ancestry of the earliest and most commonly represented of these vessel forms (i.e. shoulder-handled tankard, kantharos, and Bass bowl) in concert with an inquiry into the appearance of the technique of wheelmade ceramic manufacture on the Greek Mainland.

THE ORIGINS OF EH III FINE GRAY-BURNISHED POTTERY

The form of shoulder-handled tankard which occurs in Fine Gray-burnished and several other classes of EH III pottery at Lerna and other southern Greek sites cannot be derived from any shape current in the Peloponnesian EH II ceramic assemblage. Like the technique of wheelmade pottery manufacture and the Fine Gray-burnished class of pottery itself, it appears for the first time at the beginning of the EH III period in the northeastern Peloponnese.⁵² It does, however, have a direct ancestor in the latest EH II (in a chronological rather than cultural sense) pottery from both Kolonna and Thebes.⁵³ At both sites, the

⁵⁰ Rutter, 1982.

⁵¹ For these three shapes, see Rutter, 1979, p. 9 and figs. 3:2, 6:1–3, and 5, respectively. See below, footnote 75, for the possible existence of a Fine Gray-burnished rim-handled cup from Raphina.

⁵² Rutter, 1979, p. 9; note that this form is not attested among the earliest EH III pottery from Olympia best represented by the finds from the apsidal buildings within the Altis (Rutter, 1982, p. 484).

⁵³ Walter and Felten, p. 101, figs. 98–100, 156, no. 136, 157, no. 163, 158, no. 167, pl. 88 (all assignable to Kolonna *Stadt* III); Konsola, 1981, pp. 120, fig. 3:ε, ζ, 122. This EH II predecessor may also be represented by finds from Orchomenos (E. Hanschmann and V. Miložčić, *Die deutschen Ausgrabungen auf der Argissa-Magula in Thessalien*, III, *Die frühe und beginnende mittlere Bronzezeit*, Bonn 1976, i, p. 161; ii, Beilage 27:36, 47; E. Kunze, *Orchomenos*, III, *Die Keramik der frühen Bronzezeit*, Munich 1934, p. 35, nos. 21, 22, pl. XI:3a, 4a); Pefkakia (Hanschmann and Miložčić, *op. cit.*, i, p. 132; ii, p. 87, pl. 65A:1), and Tsani (*ibid.*, i, p. 122, ii, p. 80, pl. 58:18, Beilage 24:16; Wace and Thompson, *op. cit.* [footnote 3 above], p. 144, fig. 86:g), in which cases the dating relative to the beginning of the EH III period at Lerna is not as secure as in those of the Aeginetan and Theban examples.

Several fragments from Mt. Kynthos on Delos should perhaps also be assigned to this shape (J. A. MacGillivray, *Early Cycladic Pottery from Mt. Kynthos in Delos*, Edinburgh 1979, pp. 16, fig. 10, no. 123; 36, fig. 10, pl. 3, no. 437 both preserve portions of their handles and are thus clearly tankards rather than pyxides; the fragments *ibid.*, pp. 8, nos. 9–13, 11, nos. 53 and 54, 15, nos. 113–115, 26, no. 297, 27, no. 321, 33, no. 416, figs. 8 and 9 are all assigned to pyxides but seemingly could equally well belong to tankards of the form represented by the first two items). Note that J. A. MacGillivray ("On the Relative Chronologies of

EH II tankard form in question occurs together with tankards of the type characteristic of the "Lefkandi I" assemblage (Fig. 5:13, 14) which must be assumed to have inspired the EH II variant.⁵⁴ The tankards of the "Lefkandi I" assemblage are in turn directly derived

Early Cycladic IIIA and Early Helladic III," *AJA* 87, 1983, pp. 82–83 and notes 12 and 17) argues that such tankards are contemporary with Lerna IV, whereas I am of the opinion that, since Mt. Kynthos was abandoned and the "White House" of Kolonna III was filled in before the occupation of Lerna IV began, these tankards of Mt. Kynthos and Kolonna III predate and are ancestral to the standard Peloponnesian EH III shoulder-handled form of tankard attested at Lerna from the very beginning of the Fourth Settlement. In the context of this debate over relative chronology, note the odd section of the upper handle on MacGillivray's no. 437, which appears to be comparable to that on Kolonna no. 163 and may represent a handle form intermediate between the loop handle characteristic of "Lefkandi I" cups and tankards and the strap handle of virtually all EH III cups, tankards, and kantharoi.

⁵⁴ Walter and Felten, pp. 155, no. 130, pl. 85 (one-handled), 157, no. 162, 185, note 210, pl. 88 (two-handled, wheelmade); Konsola, 1981, pp. 120, fig. 3δ, 122 (at least two wheelmade versions represented among numerous examples). For the "Lefkandi I" tankard in the Cyclades and central Greece, see also Rutter 1982, p. 6 and note 16 and tables 1 and 2 and Rutter, 1979, p. 487, note 50, to which the following examples should now be added: MacGillivray, 1980, pp. 3–45, esp. 19–20 and fig. 5 (Delos); C. Doulas, «Πρωτοκυκλαδική κεραμική από τὰ Χριστιανὰ Θήρας», *Ἀρχ'Εφ*, 1976, pp. 1–11, esp. p. 8, note 2 (of two unpublished examples on display in the Naxos Museum and one more on display in the Apeiranthos Museum, the last is probably the piece from Panormos referred to by Doulas) (Naxos); Kunze, *op. cit.* (footnote 53 above), p. 55, note 5 (Eutresis); K. Demakopoulou, «'Οδὸς Καδμοῦ 58», *Δελτ* 29, 1973–1974, B', [1979], p. 440, pl. 289: (Thebes); P. Mountjoy, "Some Early and Middle Helladic Pottery from Boeotia," *BSA* 75, 1980, p. 141, nos. 6 and 7, fig. 1:6, 7, pl. 12:a (unknown site[s] in Boiotia); Hanschmann and Milošević, *op. cit.* (footnote 53 above), i, p. 131, ii, p. 87, pl. 64B:4 (Pefkakia). A number of unpublished "Lefkandi I" tankards from Pefkakia will be included by Elmar Christmann in his dissertation for the Institut für Vor- und Frühgeschichte at the University of Heidelberg; I am grateful to him for permission to mention them here. Some ten additional fragments from Orchomenos and a pair of pieces from Eutresis exist among the unpublished sherd material from those sites stored in the museums at Chaironeia and Thebes respectively; I am extremely grateful to Ephor A. Andreiomenou for facilitating my study of these materials in the summer of 1981.

Several readers of an earlier draft of this article observed that they found the derivation of the late EH II tankard (see footnote 53 above) from the "Lefkandi I" tankard anything but convincing. I must confess that the morphological differences between the two, especially the high offset neck and preference for a single handle in the case of the "Lefkandi I" shape as opposed to the necklessness and two handles typical of the late EH II form, are substantial. Nevertheless, there does seem to be a similarity between the two in terms of their over-all design, best explained in my view in terms of the parallel functions which the two types served. I know of no other EH II shape from which the late EH II tankard could have evolved morphologically; it is certainly drastically different in concept from the two standard EH II open shapes, the saucer and the sauceboat. At Kolonna *Stadt* III, in the same contexts which produced the late EH II and "Lefkandi I" tankards, were found several examples of a bizarre type of sauceboat with short and stubby spout, flat base, and a high-swung strap handle, a version of this vessel form for which I know of no parallel (Walter and Felten, pp. 99, 155, nos. 125–128, pl. 84). By virtue of these morphological oddities, I am inclined to see in this sauceboat a shape variant transitional between the normal sauceboat (pronounced spout, ring or low pedestal foot, small horizontal or vertical handle set below the rim) and the normal EH III tankard which lacks any spout and has a flat base and upswung vertical strap handles. Is it not possible, then, that the EH II tankard whose origins are here at issue is in effect a similar transitional form, but in this case a modified version of a "Lefkandi I" vessel type rather than of a canonical EH II (in cultural rather than chronological terms) shape? That is, do not perhaps both the odd sauceboats and the odd tankards of Kolonna *Stadt* III represent composites intermediate between the standard drinking vessels of the EH II and the "Lefkandi I" assemblages, the first closer to the EH II sauceboat and the second closer to the "Lefkandi I" tankard? Is the short-term production of such composites not precisely what one might expect to find in the process of fusion of the EH II and "Lefkandi I" ceramic traditions which I have elsewhere theorized to lie behind the origin of EH III ceramics (Rutter, 1979,

from Western Anatolian forms.⁵⁵ The EH III shoulder-handled tankard thus appears to be in origin ultimately Western Anatolian but in terms of its immediate predecessor, central Greek.

Like the tankard, the kantharos which appears in Fine Gray-burnished and other EH III ceramic classes has no ancestors in Peloponnesian EH II pottery. Again as in the case of the tankard, the kantharos appears at the very beginning of the EH III period, in this instance both in the northeastern Peloponnese at Lerna and Tiryns and in the northwestern Peloponnese at Olympia. Two variants of the EH III Fine Gray-burnished form are distinguished by differences in the nature of the upper handle attachment: at Olympia and Pelikata the handles join the apex of the rim, while at Tiryns and in almost all cases at Lerna the handles merge with the exterior face of the rim so that the point of upper attachment lies just below the rim proper.⁵⁶ This distinguishing feature of the Tirynthian and most Lernaean examples suggests the derivation of the EH III kantharos form in the northeastern Peloponnese from the two-handled cup of the "Lefkandi I" assemblage (Fig. 5:15), a shape attested at Lefkandi, Eutresis, several sites in the Cycladic islands, and Aigina; in the last instance, the cup in question comes from a late EH context equivalent in date to those which produced the immediate predecessors of the Peloponnesian EH III shoulder-handled tankards cited above (p. 343).⁵⁷ Such an ancestry for the kantharos is further supported by the discovery at Lerna itself of a unique stone example of the "Lefkandi I" cup in a context of Lerna IV phase 1.⁵⁸ The Olympian and Ithacan version of the EH III kantharos is

pp. 10–16; the existence of these Aeginetan composites, both sauceboats and tankards, was unknown to me in 1979)? Note that the well-known gold "double sauceboat" from Schliemann's Treasure A at Troy (H. Schliemann, *Ilios, The City and Country of the Trojans*, New York 1881, pp. 464–466, nos. 772, 773; E. N. Davis, *The Vapheio Cups and Aegean Gold and Silver Ware*, New York 1977, pp. 56–57 and notes 134 and 135) is a similar composite or hybrid, in this case of an EH (or EC) II sauceboat and a "Lefkandi I" two-handled cup. The absence of any comparable hybrid shapes among the pottery of the so-called *Übergangsphase* at Tiryns (see Appendix, pp. 354–355 below) is also noteworthy. If the relative chronological picture presented here is correct, however, the *Übergangsphase* at Tiryns is later in date than Kolonna III, and the two ceramic traditions which co-exist within it are EH II and EH III, not EH II and "Lefkandi I". On account of such differences, and also probably because the fusion process leading to the creation of a full-blown EH III ceramic repertoire is likely to have varied considerably in its details from site to site, the absence of obvious ceramic hybrids in the period transitional between EH II and III at Tiryns should not be used as an argument against the identification as such of the odd sauceboats and tankards of Kolonna III.

⁵⁵ Rutter, 1979, p. 8. For an extended listing of such tankards in Western Anatolia, see Podzuweit, pp. 158–162, types 3H I–II.

⁵⁶ As noted above, p. 330, only one of 18 Fine Gray-burnished examples of the kantharos form from Lerna IV has handles attached at the rim's apex, and this example dates from phase 3. Note that all the EH III Fine Gray-burnished kantharoi from Gonia and Nemea, as well as three of the four examples from Berbati, parallel the more common Lernaean variety of the basic form in this respect.

⁵⁷ Three fragments of such cups exist among the unpublished sherds from Goldman's excavations at Eutresis now stored in the Thebes Museum. For the cup from Aigina, see Walter and Felten, pp. 93, 153, no. 89, pl. 80; for the context of this cup as *Stadt* III rather than *Stadt* II, see the review of Walter and Felten cited in footnote 26 above. For the distribution of such cups within the Cyclades, see Rutter, 1979, pp. 1–8 and tables 1 and 2; MacGillivray, 1980, pp. 20–22, figs. 7, 8; Podzuweit, pp. 142–143, type 2B V.

⁵⁸ Caskey, *op. cit.* (footnote 47 above), p. 164, fig. 5, pl. 45:i; E. C. Banks, *The Early and Middle Helladic Small Objects from Lerna*, diss. University of Cincinnati 1967 (= University Microfilms International no. 67-15948), pp. 227–230; Rutter, 1979, p. 23, note 18. The pottery from Bothros B-Bs, from which the best stratified fragment of this remarkable vessel comes, is unambiguously datable to phase 1 of Lerna IV.

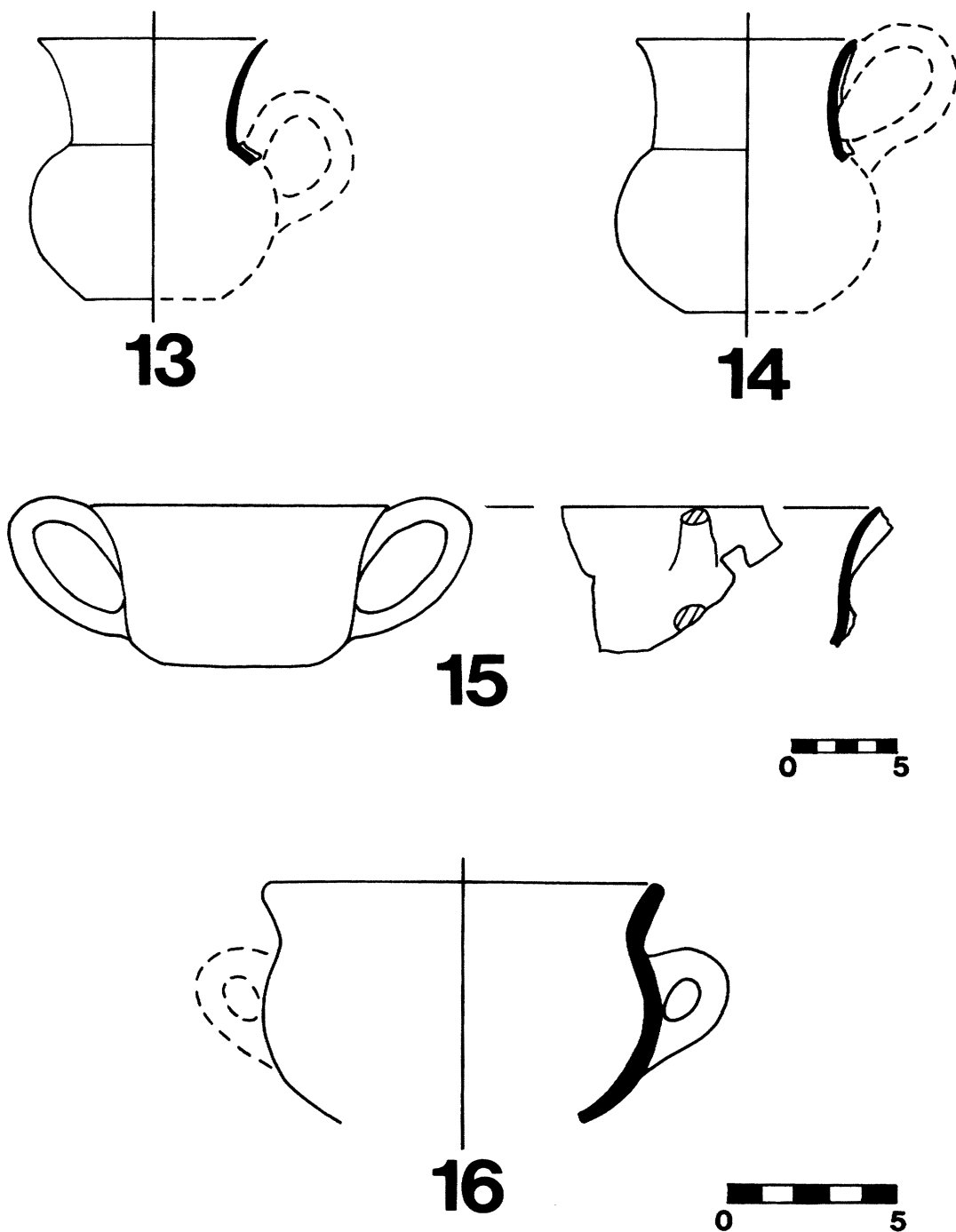


FIG. 5. Prototypes of EH III Fine Gray-burnished shapes:

13–14. “Lefkandi I” tankards. 15. “Lefkandi I” cup. 16. Central Greek EH I–II bowl (after Popham and Sackett [footnote 6 above], fig. 7:6–8; Caskey and Caskey [footnote 23 above], fig 7:V.4)

probably likewise to be derived from the "Lefkandi I" cup but appears to have been somewhat modified, much as the central Greek tankard of the late EH II period was seen to be a modification of the "Lefkandi I" tankard. I have discussed elsewhere some peculiar affinities of the earliest EH III pottery from Olympia with that of central Greece;⁵⁹ it seems to me not improbable that the nature of the upper handle attachment on the Olympian and Ithacan kantharoi may have been affected by some large one-handed cups of late EH II date current in Boiotia.⁶⁰ In this respect, as in several others already noted, the EH III material from Olympia and Pelikata differs slightly from that to be found in the northeastern Peloponnese. It should be noted, in conclusion, that the "Lefkandi I" cup, like the corresponding tankard, is undeniably Western Anatolian in origin.⁶¹

The last of the three earliest shapes attested in the EH III Fine Gray-burnished class is the Bass bowl. As in the case of both the shoulder-handled tankard and the kantharos, it has no prototypes in Peloponnesian EH II pottery. Once again, the immediate predecessor of this most common of EH III vessel forms is to be found in central Greece (Fig. 5:16). In this instance, however, the predecessor has no connection with the Anatolianizing "Lefkandi I" assemblage but rather has a long local history in the areas of Boiotia, Attica, and Euboia, extending back to early phases of the EH II period and perhaps even to EH I.⁶² On the basis of the evidence now available from Lerna and elsewhere, it is possible that the Bass bowl was not produced in the Fine Gray-burnished class until sometime after the beginning of the EH III period (phase 2 in terms of Lerna IV), although the shape is common from phase 1 onwards in other EH III ceramic classes at both Lerna and Olympia. It seems more likely, however, that the absence of Fine Gray-burnished Bass bowls securely datable to phase 1 is merely an accident of the discoveries made to date and that such Bass bowls will soon be forthcoming.

With regard to the appearance of the fast wheel on the Greek Mainland, there now seems to be no doubt but that it arrived together with the intrusive "Lefkandi I" ceramic assemblage which migrated from Western Anatolia across the Aegean by way of the central and northern Cyclades to Euboia, eastern Attica, the interior of Boiotia, Aigina, and coastal Thessaly toward the end of the EH II period.⁶³ Although the technique of wheelmade

⁵⁹ Rutter, 1982, pp. 486–488.

⁶⁰ Kunze, *op. cit.* (footnote 53 above), p. 47, pl. XVIII:1, 2; Hanschmann and Milojević, *op. cit.* (footnote 53 above), ii, Beilage 27:34 (Aghia Marina and Orchomenos).

⁶¹ Rutter, 1979, p. 8 and note 18; Podzuweit, pp. 55 and notes 331–335, 103 and notes 984 and 986. MacGillivray (1980, p. 22) notes that the "Lefkandi I" cups of Delos occur in two discrete sizes, the smaller having rim diameters of 0.10–0.13 m. and heights of 0.06–0.08 m., the larger having rim diameters of 0.16–0.18 m. and heights of 0.085–0.10 m. The Fine Gray-burnished kantharoi of Lerna IV conform closely to the smaller of these two sizes (cf. footnote 12 above), while the equivalent Bass bowls, though uniformly higher, have rim diameters comparable to those of the larger size of Delian cups (cf. footnote 13 above). Is this coincidence or an indication that the functional role of the larger "Lefkandi I" cups was in fact usurped by the central Greek Bass bowl in the process during which the EH II and "Lefkandi I" ceramic repertoires were melded into a new Peloponnesian EH III tradition?

⁶² Rutter, 1982, p. 487 and notes 51, 52.

⁶³ D. H. French in Popham and Sackett, *op. cit.* (footnote 6 above), p. 8; French, *op. cit.* (footnote 3 above), p. 52; Rutter, 1979; MacGillivray, 1980, pp. 16–25, 45; Konsola, 1981, pp. 119–123. For "Lefkandi I" pottery at Pefkakia in Thessaly, see V. Milojević, "Bericht über die deutschen Ausgrabungen in Thessalien," *Δελτα* 28, 1973, B', [1977], pp. 339–347, pl. 304:a, c, d; *idem*, "Bericht über die deutschen archäologischen

ceramic manufacture is relatively widespread in these areas before the end of EH II, it is only at the beginning of the EH III period that this practice first appears in the Peloponnese, both in the northeast in the Argolido-Corinthia and in the northwest at Olympia. Just as the technique had first appeared in central Greece exclusively in the form of vessel shapes characteristic of the intrusive "Lefkandi I" assemblage and foreign to those of the indigenous EH II culture, so too in the Peloponnese the wheel in the EH III period is attested only in the cases of vessel shapes which are altogether new to the area in the EH III period and alien to the ceramic repertoire of Peloponnesian culture during the preceding EH II period. The shapes in question, however, no longer consist exclusively, or indeed at all, of true "Lefkandi I" types but rather are composed on the one hand of a form with a solid central Greek Helladic ancestry (the Bass bowl) and on the other of modified versions of "Lefkandi I" types which for the most part differ significantly from their Anatolianizing models (especially the shoulder-handled tankard and the Olympian variant of the kantharos.)⁶⁴

The conclusion seems inescapable that both the new ceramic forms as well as some items of a new ceramic technology reached the Peloponnese from central Greece. Moreover, the differences observed between the EH III pottery from Olympia and Pelikata on the one hand and that from Lerna and other sites in the Argolido-Corinthia on the other strongly suggest that this migration of ceramic forms and technology from central Greece to the Peloponnese moved southward by two separate routes: to Olympia and Pelikata, probably by sea down the Corinthian Gulf from a point in southwestern Boiotia or further west, and to the Argolido-Corinthia more probably by land across the Isthmus.

Aside from a change in the shapes themselves, there is one additional feature of EH III Fine Gray-burnished pottery which separates it markedly from the pottery typical of the "Lefkandi I" assemblage. This is, of course, its gray color which is quite different from the red, black, brown, and buff surfaces that characterize "Lefkandi I" ceramics.⁶⁵ The uniformly gray fracture and surfaces of the EH III fabric surely reflect a carefully controlled reducing atmosphere during the later stages of the firing and therefore represent a technological capability as distinctive and significant as that evidenced by the use of the fast wheel.

Ausgrabungen in Thessalien, 1973," *AAA* 7, 1974, pp. 43–75. The notion of a migrating ceramic assemblage troubled some readers of an earlier draft of this article since, to quote one, "it conjures up a picture of travelling pots without any human mechanism being involved!" My rationale for employing the concept of a ceramic migration rather than, for example, simply speaking of migrant potters is due to my uncertainty about what the ceramic migration in question means in human terms. Does it reflect a movement of potters alone or of a more diverse population element? How large a number of human beings did, indeed, move? Did *any* people in fact move, or could the migration of a ceramic repertoire in this case be due purely to ideological diffusion? Any attempt to answer these questions goes far beyond the bounds of this article; hence I have here restricted myself conceptually to the movement of a ceramic corpus at the expense of the question of which people produced it.

⁶⁴ The closer resemblance of the typical Argive EH III kantharos to its "Lefkandi I" prototype than of the shoulder-handled tankard to its "Lefkandi I" precursor is perhaps to be explained by the presence at Lerna of the stone model of the "Lefkandi I" form (see p. 345 and footnote 58 above). Even the Argive EH III kantharos differs appreciably from the "Lefkandi I" model, however, notably in having strap rather than loop handles.

⁶⁵ French, *op. cit.* (footnote 63 above), p. 8; Rutter, 1979, pp. 15–16.

At the moment, there is no evidence that this particular ability was exercised by, or even in the possession of, either the producers of the "Lefkandi I" assemblage or the inhabitants of late EH II central or southern Greece. To be sure, the preference for monochrome burnished surfaces is abundantly attested in "Lefkandi I" ceramics, but neither the desire nor the capacity to produce a uniformly gray version of such a surface is in evidence. That the interest in gray surfaces and perhaps the ability to effect them may be an EH II legacy, on the score that the fine Yellow-mottled pottery commonly found in EH II ceramic deposits is often partially, and occasionally almost entirely, bluish gray in color, seems highly unlikely.⁶⁶ For the time being, the problem of the color of EH III Fine Gray-burnished must be considered to be unresolved.⁶⁷

CONCLUSION

The Fine Gray-burnished pottery of the EH III period now is universally recognized to be the direct ancestor of MH Gray Minyan. The preceding analysis has shown this EH III pottery to be a formal and technological synthesis of Anatolianizing and central Greek elements which occurred in central Greece; it was transmitted thence at the beginning of the EH III period, by two separate routes, to sites in the northern Peloponnese as well as back to Euboia where the Anatolianizing component had perhaps made its first Mainland Greek landfall in the preceding phase.⁶⁸ What does acceptance of such a sequence of events mean in human as opposed to "ceramic-historical" terms?

In the Peloponnese, it seems increasingly less likely that the drastic changes to be observed in the ceramics, settlement architecture, settlement pattern, and no doubt other aspects of material culture at the transition from EH II to EH III can be accounted for by any other means than by invoking an immigration on a fairly large scale of a new population element into the northern Peloponnese. The source of such an immigrant population, it is

⁶⁶ M. H. Wiencke kindly informs me that the finest Yellow-mottled pottery is characteristic of very early Lerna III and that by the time of the destruction of the House of the Tiles this class of ceramic is practically out of use.

⁶⁷ There are, of course, contemporary classes of Western Anatolian gray-burnished pottery of which perhaps the best known is French's "Inegöl Grey" (*AnatSt* 17, 1967, pp. 61–64; *AnatSt* 19, 1969, p. 67). The problem in connecting either this, French's "Plain Grey" or "Grooved/Incised Grey" categories, or one or more of the gray-surfaced groups described as "handmade", "wheelmade" or "fine" at Troy (Blegen, *op. cit.* [footnote 17 above], p. 220 [II]; Blegen, *op. cit.* [footnote 45 above], pp. 19 [III], 118–119 [IV], 235 [V] with EH III Fine Gray-burnished as here defined is, as French long ago observed, the lack of any correspondence between the Greek material and that from Western Anatolia in terms of the shapes produced. This problem becomes even more pronounced when it is recognized that two of the three principal shapes in the Greek material do in fact have a Western Anatolian ancestry which in neither case coincides with a shape produced in one of the Western Anatolian gray "wares". The apparent absence of any significant amount of gray-burnished pottery in the "Lefkandi I" ceramic repertoire would seem to be the final piece of evidence which excludes any but a very indirect connection between the roughly contemporary appearance in significant quantities of gray-burnished wares on either side of the Aegean in the second half of the third millennium B.C.

⁶⁸ The conflicting views of Forsdyke and Childe, and more recently of Mellaart and French, with regard to the place of origin of "Gray Minyan" would therefore in each case contain partially "correct" answers to the problem. For recent reviews of the debate over this place of origin, see Wünsche, pp. 31–32, Howell, *op. cit.* (footnote 3 above), pp. 73–74; French, *loc. cit.* (footnote 3 above). Note that, in his latest work on the problem, French (*ibid.*, p. 52) expressed as a likely possibility precisely the point of view adopted here.

now becoming clear, must have been central Greece in general and probably Boiotia in particular. The appearance of the Fine Gray-burnished class in the Peloponnese is thus perhaps best viewed as part and parcel of a wholesale series of sudden cultural changes often accompanied by destruction and probably caused by a major population movement from central Greece. On the other hand, the appearance of this same class of ceramics in central Greece need not be connected with so convulsive a historical event; rather, it is likely to be one of the products of a more gradual and still very poorly understood process of cultural fusion between an indigenous EH II culture and an intrusive, predominantly Western Anatolian culture which I have elsewhere termed "Lefkandi I".⁶⁹

Aside from the uniform color, paste texture, and surface treatments which define the class, EH III Fine Gray-burnished pottery exhibits the following peculiarities:

- 1) a narrow shape range (three common open shapes, one reasonably frequent but somewhat later open shape, and two or three rare closed shapes) within which the three standard forms are all new to the Peloponnese;
- 2) some degree of size standardization, at least at Lerna (two sizes for tankards, one each for kantharoi and Bass bowls, but no standard dimensions for bowls with horizontal handles);
- 3) a high percentage of wheelmade production in the eastern Peloponnese and in central Greece (including Pefkakia), contrasting with a total absence of wheelmade examples in the west (Olympia, Pelikata), a phenomenon suggesting the possible existence of at least two regional schools of ceramic production;
- 4) a rather narrow decorative range: simple horizontal grooving linked with wheelmade manufacture in the eastern Peloponnese, once again contrasting with incised and impressed ornament in the west, there closely associated with the ornament commonly appearing on the contemporary local dark burnished pottery;
- 5) presence in only small quantities (probably never more than 1–2% by either weight or sherd count) at all known EH III sites;
- 6) and finally, novelty as a class in the EH III period at all known sites, although shapes and mode of manufacture are novel only in the Peloponnese and not in central Greece.

The wide dispersal of this class (at least to Gonia, Lefkandi, Lerna, Olympia, and Tiryns) within an apparently short space of time at the beginning of the EH III period (25 years?) is a remarkable fact. If population movements on a significant scale from central Greece to the Peloponnese are accepted, then the rapid dissemination and over-all typological homogeneity of some of this material becomes intelligible. The recognition of distinct regional styles in the northwestern and northeastern Peloponnese early in the EH III period may be explained in terms of population groups, originally in relatively close contact in central Greece, moving south by different routes and for some time losing touch with each other. But such an invasionist model does not apply well at present to the rapid spread of the

⁶⁹ Rutter, 1979. For recent comprehensive but as yet unpublished papers on the evidence for population movements into central and southern Greece during the Early Bronze Age, see S. Hiller, "Zur archäologischen Evidenz der Indoeuropäisierung Griechenlands," *11th International Symposium on the Late Neolithic Period and the Bronze Age*, Xanthi 1981; *idem*, "Zur Ethnogenese der Griechen," *Symposium on European Ethnogenesis*, Mainz 1982.

Fine Gray-burnished class in other directions, first to Euboia and apparently somewhat later to coastal Thessaly. What other possible scenarios exist to explain the speed with which this distinctive pottery became so widely distributed?

It seems hardly conceivable that for every known site at which it has been found, except for Olympia and Pelikata, all the material could have been produced at and distributed from a single center, although the uniformity of the pottery and the relatively small quantities in which it occurs make this a possibility, however remote. Only a large-scale program of provenience analyses by physicochemical methods can definitively exclude such a hypothesis.⁷⁰

It is somewhat more likely that production was in the hands of a relatively small group of specialized potters, resident at a number of sites, who had a monopoly on such technological innovations as the fast wheel and the ability to achieve the controlled reducing conditions necessary to fire this ceramic.⁷¹ But how such specialists would have acquired these capabilities in the first instance and why they should have chosen to locate themselves singly or in very small numbers at a variety of locales would remain as important questions to be addressed if such a hypothesis were to be adopted. Moreover, the example of Olympia shows that Fine Gray-burnished pottery was, at least at one site, produced altogether without the use of the wheel, although wheelmade pottery in another contemporary ceramic class was locally manufactured. Furthermore, wheelmade pottery was produced at several sites in a number of classes other than in Fine Gray-burnished and in shapes other than those within the Fine Gray-burnished repertoire. The willingness and ability to use the wheel may therefore not have been restricted to those who knew the secrets of controlled reduction firing.⁷² Even more problematic for the view that Fine Gray-burnished pottery was made by one or two specialists at each site is the discovery side by side, except at the western sites of Olympia and Pelikata, of both wheelmade and handmade examples of this class. Would specialized potters vary their mode of production in this way? Or are the handmade vases to be viewed as imitations by a few adventurous neophytes of some but not all features of the specialists' work?⁷³

⁷⁰ A wheelmade Fine Gray-burnished Bass bowl from a phase 2 or 3 context of Lerna IV has been subjected to neutron activation analysis and shown to be a local product rather than an import: M. Attas, *Analyse par activation neutronique de la céramique de Lerne (Grèce) à l'âge du bronze ancien* (Thèse de III Cycle, Université de Paris-Sud, Centre d'Orsay 1980), pp. 49: LER 41, 69, 72.

⁷¹ For suggestions on how to recognize ceramic craft specialization in the archaeological record, see P. M. Rice, "Evolution of Specialized Pottery Production: A Trial Model," *Current Anthropology* 22, 1981, pp. 219–240.

⁷² See above, p. 336 and footnote 20 (Lerna); Konsola, 1981, p. 124 (Thebes); Koumouzelis, p. 164 (Olympia). Sherds of a wheelmade EH III light-on-dark, pattern-painted cup or Bass bowl from the site of Pagai in the Megarid are presently stored in the sherd collection of the American School of Classical Studies at Athens. There is, of course, no reason why wheelmade vessels, although assigned by archaeologists to several different classificatory groups on the basis of decoration, surface treatment, and paste texture, could not have been made by a single potter; that is, there are no grounds for assuming that the individual producers of Fine Gray-burnished pottery manufactured pots assignable to that ceramic class alone.

⁷³ The possible combination of wheelmade and handmade manufacture on one and the same vase (see above, footnote 18) suggests that individual potters might indeed have varied their mode of production, not just from vase to vase but from portion to portion of the same vase.

More basic information is unquestionably needed. For example, does Fine gray-burnished pottery exist in significant quantities in EH III Boiotia, and if not, why not?⁷⁴ What is the evidence for such pottery from contemporary Attica, Megaris, and Achaia?⁷⁵ How much of this pottery, as a percentage of total numbers of vases or of the total weight of all pottery, is to be found in the multiplicity of spatial and temporal coordinates within central and southern Greece of the EH III period and how do these percentages vary both spatially and temporally?

Furthermore, alternative hypotheses need to be generated and tested as explanatory models for the genesis, distribution, and striking formal similarity of this ceramic class. In this connection, full cognizance should be taken of the important distinction drawn by Renfrew between invention on the one hand and innovation on the other, in order to explore alternatives to such standard diffusionist and invasionist models as those briefly outlined above.⁷⁶ As Renfrew observes, the discovery by a society of the technological capabilities requisite for a novel process or form (*invention*) may precede by lengthy periods of time the widespread adoption by that society of the process or form in question (*innovation*). In the case of Fine Gray-burnished pottery, the fundamental technological capability or invention required is control over a partially reducing atmosphere in the firing of ceramics. Neither the shapes in which Fine Gray-burnished pottery is produced nor the use of the fast wheel in the production of a variable proportion of this ceramic class are inventions of the EH III period. Both are attested in the later EH II (in a chronological sense) ceramic repertoire of Aigina, Euboia, eastern Attica, coastal Thessaly, and Boiotia, although on the basis of the evidence presently available they are not found in combination on two of the principal direct antecedents of EH III Fine Gray-burnished vases, namely the shoulder-handled tankards of Kolonna *Stadt* III and Thebes and the central Greek prototypes of the EH III Bass bowl. The combination of shape inventions of the later EH II period in central Greece with the capability to control partial reduction firing, apparently an invention of the EH III period

⁷⁴ Except for the two small sherds from Eutresis (p. 338 and footnote 23 above) the only other EH III Fine Gray-burnished vase known to me from Boiotia is a shoulder-handled tankard with no precise provenience (Mountjoy, *op. cit.* [footnote 54 above], p. 142, fig. 1:11, pl. 12:d). Some Fine Gray-burnished sherds from Thebes may come from EH III contexts, but the stratigraphy is unfortunately not sufficiently certain to exclude the possibility that these pieces are in fact Middle Helladic Gray Minyan (K. Demakopoulou and D. Konsola, «Λειψάνα πρωτοελλαδικού, μεσοελλαδικού και ύστεροελλαδικού οίκισμou στῇ Θῆβαι», *Δελτ* 30, 1975, A' [1978], pp. 44–89, esp. p. 86). D. Konsola notifies me that EH III Fine Gray-burnished pottery may possibly exist in appreciable quantities at Thebes but that sizeable pure deposits of EH III pottery have yet to be either identified or analyzed in detail. The dearth of EH III Fine Gray-burnished material from Boiotia may thus be more apparent than real. In view of the remaining evidence it seems difficult to imagine the development of such pottery taking place elsewhere than in Boiotia.

⁷⁵ Some of the vases from two bothroi above House B at Raphina may be classifiable as EH III Fine Gray-burnished (D. R. Theochares, *Πρακτικά*, 1953, pp. 105–118, esp. pp. 116–117 and figs. 12, 13; Rutter, 1979, p. 17). All this pottery, however, is said to be handmade, while the single illustrated piece identified as gray surfaced is a rim-handled cup; both these features render the identification of this material as EH III Fine Gray-burnished questionable, hence its omission from the text of this article.

⁷⁶ C. Renfrew, "The Anatomy of Innovation," *Social Organization and Settlement: Contributions from Anthropology, Archaeology and Geography*, *BAR International Series* 47, fasc. 1, D. Green, C. Haselgrove, and M. Spriggs, edd., Oxford 1978, pp. 89–117.

in EBA Mainland Greece,⁷⁷ lies behind the production of EH III Fine Gray-burnished pottery. At many, although significantly not all, sites where this combination is first attested, yet a third component invention plays a role, namely the production of such pottery on the fast wheel. When was the Fine Gray-burnished class widely adopted, that is, when did it achieve the status of what Renfrew would term an innovation? The requisite information, particularly the data from Boiotia, must be collected before a satisfactory answer can be forthcoming. At present one can only observe that there exists no well documented EH III ceramic assemblage in which Fine Gray-burnished pottery is *not* represented, and hence it would appear that the innovation followed directly on the heels of the invention. It is largely on the basis of this circumstance that the diffusionist models proposed here were considered preferable, at least for the time being, to more complex models in which considerations of the social matrix into which the invention is introduced play a highly significant role.

⁷⁷ I would prefer to disregard earlier gray fabrics such as the Fine Incised Gray ware of EM IIA Crete and the Gray-on-gray Painted ware of the Mainland Greek Neolithic in the context of the invention on the Mainland of controlled partial reduction firing in the EH III period. Nevertheless, it is possible that the capability to employ the requisite firing techniques, once discovered in Greece, was never lost but only occasionally exercised.

APPENDIX

Weisshaar has suggested that the recent excavations in the Tirynthian *Unterburg* have produced evidence for a transitional EH II/III phase, termed the "*Übergangsphase*", which is not represented at the site of Lerna just to the west.⁷⁸ His grounds for doing so after the 1978 and 1979 seasons of excavation seem to have been the following: 1) Most of the pottery of stratum V was assignable to canonical EH II types but some, in the form of ouzo cups, the Fine Gray-burnished pottery under discussion here, and light-on-dark, pattern-painted pottery, consisted of shapes, classes, and decorative modes normally identified as EH III. 2) The absence of standard Peloponnesian EH III dark-on-light, pattern-painted pottery from stratum V suggested that a normal EH III ceramic assemblage was not represented in the finds from that level. 3) The fact that stratum V consisted of a living surface and associated architecture stratified above an EH II destruction horizon⁷⁹ rather than, for example, of a dumped fill, indicated that the pottery of stratum V could not easily be interpreted as casually mixed EH II and III material. Rather it was better viewed as a discrete assemblage in use at one and the same time, at least with regard to the whole or largely restorable vessels which, it must be emphasized, included pieces normally identified exclusively as EH II (e.g. sauceboats and ring-based saucers). One peculiar aspect of the earliest true EH III stratum (IV) was that the amount of pottery from it identifiable typologically as EH II was remarkably high. The 1980 campaign produced a good deal of additional evidence both for the *Übergangsphase*⁸⁰ and for the high percentage of EH II ceramic types in EH III levels postdating the *Übergangsphase*.⁸¹

On the basis of the evidence so far presented by the German excavators at Tiryns, I cannot accept the existence of an EH II/III *Übergangsphase* having more than purely local (i.e. Tirynthian) significance for the following reasons: 1) The EH III ceramic types which occur in small quantities in the levels assigned to the *Übergangsphase* are all to be found in the early levels of Lerna IV. In other words, they do not define a distinct ceramic sub-assemblage typologically intermediate between the assemblages of Lerna III and Lerna IV but in fact represent the Tirynthian equivalent, both typologically and chronologically, to the ceramic output of Lerna IV phase 1. 2) The EH III ceramic assemblage which characterizes the first true EH III levels at Tiryns is typologically equivalent to later phase 1 or early phase 2 of Lerna IV,⁸² to phase 3,⁸³ or to more than one of the three phases identified within Lerna IV.⁸⁴ In other words, the earliest EH III levels so far identified at Tiryns postdate the beginning of Lerna IV, and therefore the Tirynthian *Übergangsphase* is likely to be contemporary with what is called early phase 1 of Lerna IV, the same period which appears to be represented by most of the apsidal buildings within the Altis at Olympia. At that time and place, as apparently also at Tiryns, typical Peloponnesian EH III dark-on-light, pattern-painted pottery was virtually non-existent.⁸⁵ Note also that the light-on-dark, pattern-painted pottery from stratum

⁷⁸ Weisshaar, 1981, p. 237; *ibid.*, "Ein tirynther Gefäß mit frühbronzezeitlicher Tierdarstellung," *AthMitt* 96, 1981, pp. 1–5, esp. note 11; Weisshaar, 1982, pp. 462–463.

⁷⁹ Stratum VI; Weisshaar, 1981, pp. 186–191.

⁸⁰ Weisshaar, 1982, pp. 448–451 (under Apsidal Building 168), pp. 458–462 (Room 108).

⁸¹ *Ibid.*, pp. 441, fig. 59, 456, fig. 72.

⁸² E.g. Weisshaar, 1981, pp. 440–443, figs. 58; 59 (Apsidal Building 168).

⁸³ *Ibid.*, pp. 443–448, figs. 62, 63 (*Grube* 2).

⁸⁴ *Ibid.*, pp. 456–462, figs. 71–74 (under Room 121, above Room 108).

⁸⁵ See Rutter, 1982, p. 480–488; of the numerous vases from the floor deposits of the Altis houses, only one was dark-on-light, pattern-painted and this was for a long time mistakenly identified as matt-painted.

V of 1978/79 in the Tirynthian *Unterburg*⁸⁶ is typologically EH II, not EH III, just as in the case of the few dark-on-light painted pieces from the same level.⁸⁷

If the *Übergangsphase* is contemporary with the beginning of Lerna IV, the question then becomes how to explain the overwhelming preponderance of EH II ceramic types at Tiryns in what, chronologically speaking, are early EH III levels. At this point, it is important to remember that these EH II types not only are dominant in the levels of the *Übergangsphase* but continue to occur in large quantities in the subsequent EH III strata. Initially, I was convinced that a good deal of the more fragmentary EH II material could have been churned up by the EH III inhabitants of the Tirynthian *Unterburg* as they dug the pits (or “bothroi”) which are such a ubiquitous feature of the EH III levels at Lerna and which are now evidently paralleled at Tiryns by *Grube* 2 of 1980. But would such hole-digging have cast up quantities of EH II material constituting as much as 80–85% of the total pottery in EH III levels and including wholly restorable vases? The unlikelihood of cast-ups on such a scale has forced me to conclude that the EH III inhabitants of Tiryns, like the late EH II inhabitants of Kolonna *Stadt* III on Aigina and Raphina House A in eastern Attica and the late EH/EC II inhabitants of Ayia Irini III on Keos, possessed a “bicameral” ceramic assemblage: at Tiryns one composed of the EH II and EH III traditions, at Kolonna and Raphina one consisting of EH II and “Lefkandi I” traditions, and at Ayia Irini one consisting of EH/EC II (or Keros-Syros) and “Lefkandi I” traditions. The question of whether, because one constituent component of all three of these mixtures of ceramic traditions is that which we label EH II, it therefore follows that the other components (EH III and “Lefkandi I”) are necessarily contemporary is one which has provoked some recent debate.⁸⁸ My answer to this question would be, “No”: both at Lefkandi itself and at Kolonna, as well as at various sites in Boiotia, the “Lefkandi I” component is stratified below standard EH III assemblages which at both Lefkandi (level II) and Kolonna (*Stadt* IV) have claims to a date *early* within EH III, that is, chronologically equivalent to phase 1 of Lerna IV. I would therefore argue that the mixture of two distinct ceramic traditions is a phenomenon common to *some* EH III sites in the Argolid (e.g. Tiryns, but not Lerna apparently, at least not to judge from the pottery of Lerna IV recorded and saved by the American excavators of the 1950’s) and to *some* late EH II (used here in the purely *chronological* sense) sites in the Saronic Gulf and Central Greece (i.e. Kolonna and Raphina, but not Lefkandi [level 1] and perhaps not Thebes or Orchomenos either). From such evidence one could perhaps go on to argue that at sites like Ayia Irini (III), Raphina (House A), Kolonna (III), and Tiryns, two population elements having distinct ceramic traditions co-existed, whereas at other sites like Lefkandi (I) and Lerna (IV) a single, more homogeneous (at least in terms of its ceramics) population resided.

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⁸⁶ Weisshaar, 1981, p. 246, fig. 86:2, 7.

⁸⁷ *Ibid.*, fig. 86:8, 10; see W. P. Donovan, *A Study of Early Helladic Pottery with Painted Decoration*, diss. University of Cincinnati 1961 (= University Microfilms International no. 61-5219).

⁸⁸ J. B. Rutter, “Some Observations on the Cyclades in the Later Third and Early Second Millennia,” and J. A. MacGillivray (*AJA* 87, 1983 [see footnote 53]), pp. 69–76 and 81–83, respectively.