

Schliemann's Excavations at Troy: The Bronze Age Strata¹

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I. Introduction and Method

Anyone working in Aegean or Anatolian prehistory will be familiar with the frustrations caused by past excavations at Troy: three sets of results from three different excavators,² and no clear guidance as to what goes with what. We need a proper synthesis.³

As a first step towards filling this gap, I have re-examined Schliemann's excavations of 1870-73, the only years from which adequate excavation notebooks are preserved.⁴ I have collated the findings with those of Dörpfeld and Blegen, and have then attempted to reinterpret the Trojan sequence as a whole, and to reappraise its relations with Anatolia and the Aegean in the Bronze Age.

In this paper I should like to give a brief account of the methods I have adopted, and to summarise some of my findings for the Bronze Age strata of the site. I shall concentrate on the architecture, and on the pottery insofar as it tells us something about cultural relations or relative chronology. Finally, I shall offer brief suggestions on absolute chronology. What follows is naturally very selective.

Schliemann's notebooks contain two types of entry:⁵ (1) There are daily entries. These contain sketchy details of the day's work and numerous drawings of the objects. Usually the drawings show the depth in metres at which each item was found. (2) There are periodic résumés. These often record more fully where Schliemann had been digging, what strata he had distinguished, and what architectural features he had found.

When recording the locations of trenches, features or objects, Schliemann measured in from the edge of the mound and down from its surface; but he omitted to give us the crucial contour-plan which would have made all these measurements intelligible.⁶ By piecing together scattered details from Schliemann, Dörpfeld and Blegen, I believe that I have been able to reconstruct the necessary contour-plan (Fig. 1). It will not be 100% accurate; but it must, I think, be a close approximation.⁷ This opens the way to a detailed reinterpretation of Schliemann's records.

Onto the contour-plan we can plot, week by week - sometimes even day by day, where Schliemann was working. Then, knowing the altitude of the mound-

1. This paper is based on the author's PhD thesis, *Schliemann's Excavations at Troy, 1870-1873*, 3 vols, London University 1989 which, in a condensed version, was later published as Easton 2002. I am very grateful to the Genadius Library, Athens, who provided me with microfilm copies of Schliemann's excavation notes; to the Craven Fund, Oxford University, who paid for the microfilming; to the University of Liverpool and to Clare Hall, Cambridge who awarded me Research Fellowships for 1979-82 and 1982-88 respectively, and to the Dr. M. Aylwin Cotton Foundation who granted me a Fellowship Award for 1985-86, all of whom thereby made this work possible. The text published here has been left almost entirely as submitted in 1990. Comments and references to bring it up to date (to October 2008) have been added in the footnotes.

2. The principal reports are: Schliemann 1874a, 1874b, 1880, 1884, 1891; Dörpfeld 1902; Schmidt 1902; Blegen *et al.* 1950-58. There are now the results of the fourth set of excavations to be taken into account as well. Preliminary

reports and studies have been published annually by Korfmann and others in *Studia Troica* from 1990 onwards. Also useful are Korfmann *et al.*, 2001; Korfmann 2006; Wagner, Pernicka and Uerpmann 2003.

3. Blegen 1963 offers a synthesis, but naturally retains the stratigraphic framework adopted in his report. For two other, limited, attempts at synthesis see Mellaart 1959, Schirmer 1971.

4. For the details of the notebooks, see Easton 1982, 103f.

5. *Ibid.* The periodic résumés were first drafts of despatches sent to newspapers, the *Augsburg Allgemeine Zeitung* in particular.

6. The contour-plan in Schliemann 1874b, Taf. 116 is purely impressionistic and does not give genuine contours at all. Dörpfeld 1902, fig. 1 is based on it, the additional "contour" lines being no more than decorative elaboration.

7. The most recent surveyors at the site found themselves able to use it with confidence: Hueber and Riorden 1994, 118.

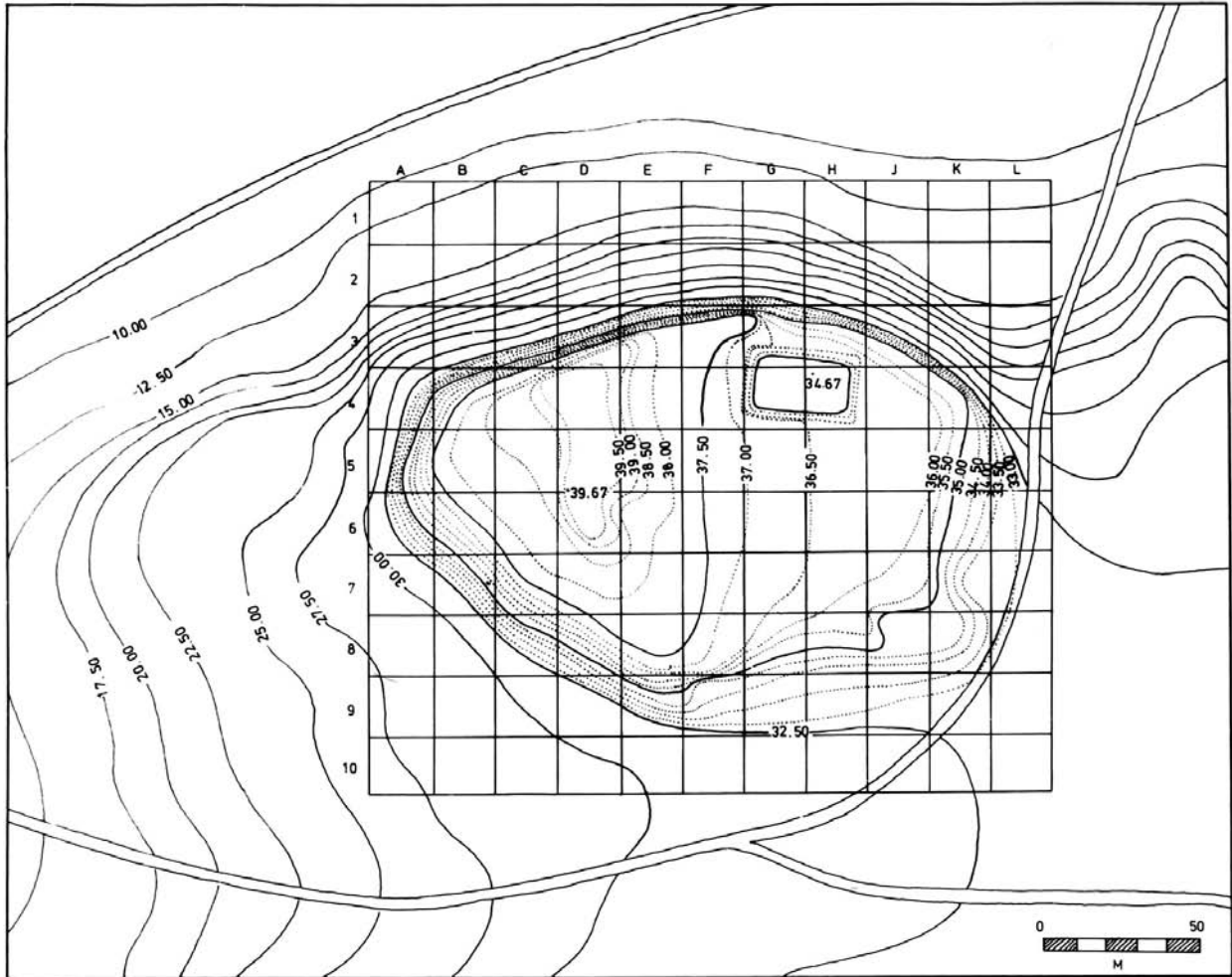


Fig. 1. Reconstructed contour-plan of the site before excavation.

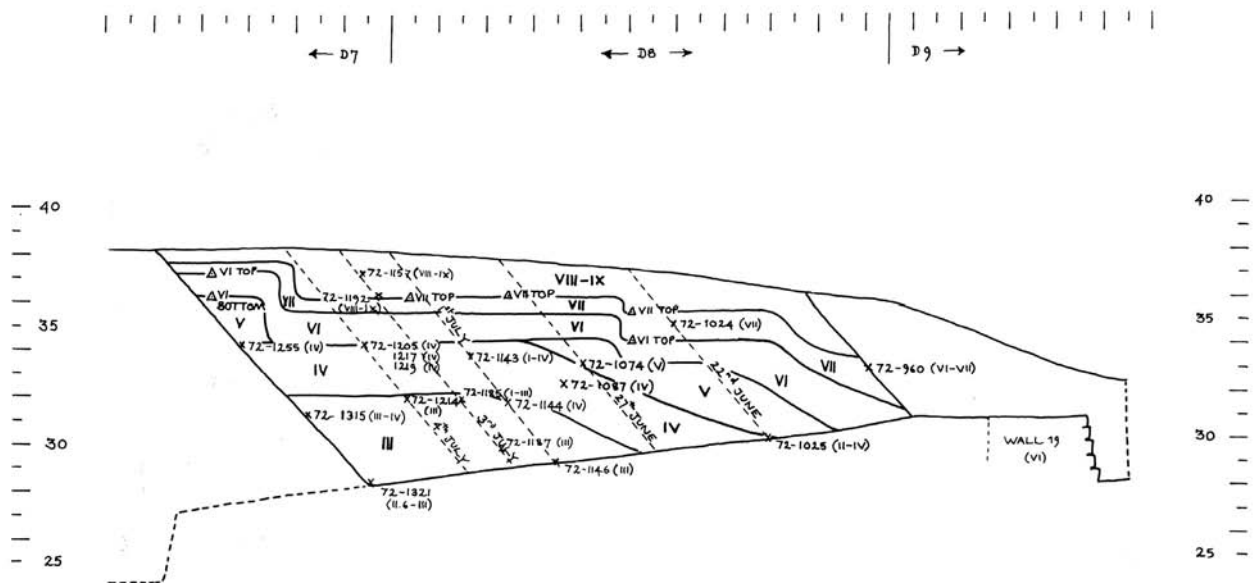


Fig. 2. Basis of reconstructed section-drawing of part of the south end of the North-South trench.

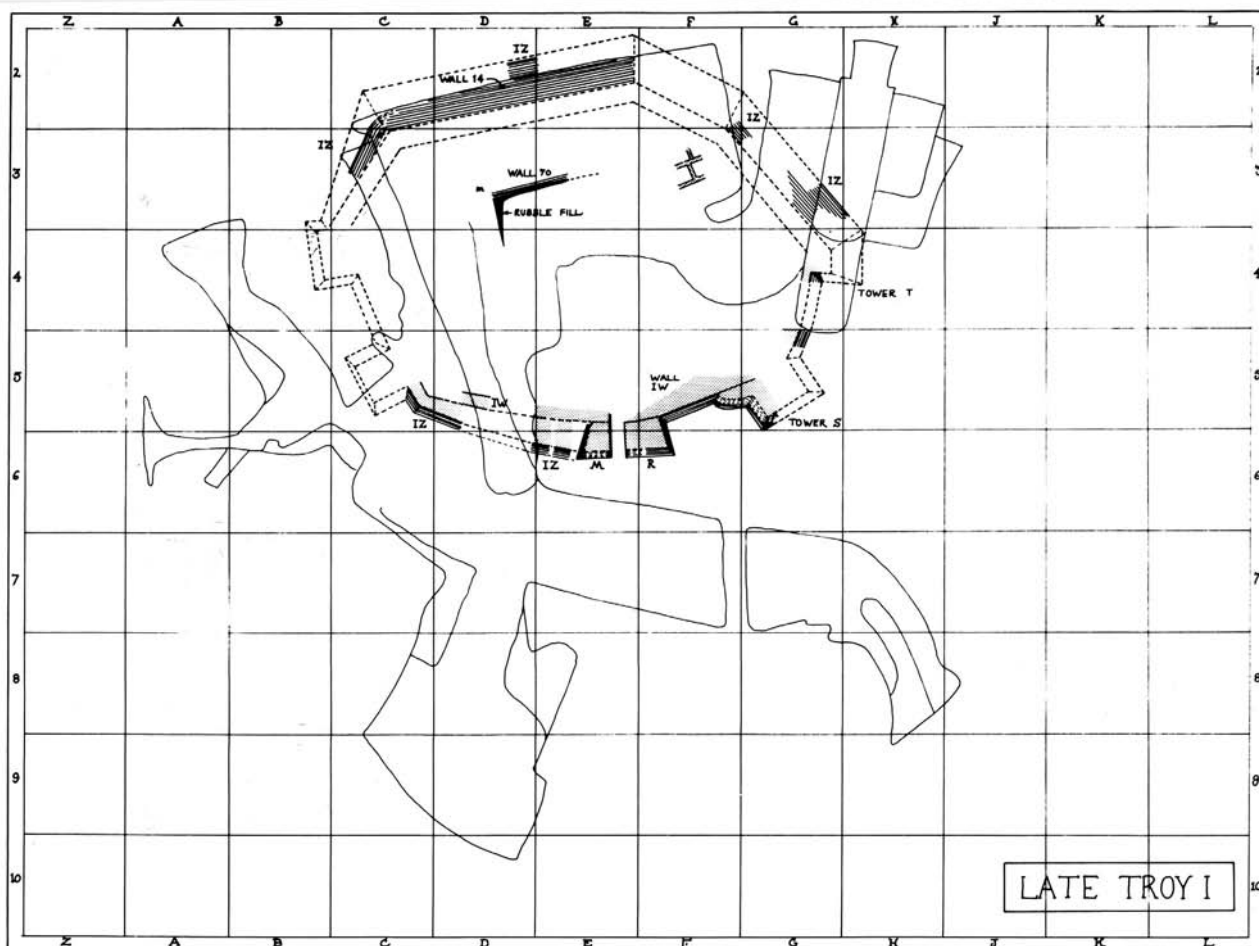


Fig. 3. Reconstructed plan of Late Troy I.

surface in that area, we can roughly determine the findspots of buildings and objects found there. A rough stratigraphy emerges, which can sometimes be checked, interpreted and dated by reference to adjoining areas dug by one of the later excavators. Let me give an example.

In May, June and July 1872 Schliemann was digging at the south end of his North-South trench.⁸ The contour-plan tells us the lie of the surface, and from other information we know the angle at which the floor of the trench was cut.⁹ So we already have the framework for a reconstructed section-drawing (Fig. 2). Now we also know, from the daily entries, that Schliemann was advancing into the mound by taking out vertical chunks of soil, and he tells us the depths

to which excavation reached on a number of days. So onto the drawing we can place several lines representing the daily limits of excavation: these are diagonal because Schliemann was keeping the trench face at an angle of 50° to the horizontal for reasons of safety.¹⁰ This, then, gives us a chronological framework. From the notebook we can now select a number of diagnostic finds and plot them onto the section by depth and by date of discovery: they are shown in the diagram by means of crosses and serial numbers. From the immediately adjoining area we have benchmarks for buildings of Troy VI and VII, excavated by Dörpfeld.¹¹ These too can be extrapolated onto our section: they are indicated by triangles. Taking all these points together, we can sketch in some rough

8. Schliemann 1874a, 82, 86, 96; Schliemann 1874b, Taf. 116.

9. Schliemann 1872, 336, 425; Schliemann 1874a, 82.

10. Schliemann 1872, 360.

11. Dörpfeld 1902, Taf. III.

stratigraphic divisions using Blegen's drawing of the stratification in squares F8-9 as a broad guide.¹² Having done this, we can return to the notebooks, place the remaining 250 non-diagnostic objects on the "section", and read off the dates of the strata from which they are likely to have come. In some respects this case is a unique one;¹³ but altogether there are 52 areas of work in all of which something at least roughly like this procedure can be followed.

There are, of course, many uncertainties. It is not always certain to which trench a given object should be allocated; we do not know how accurately the foremen reported their findings to Schliemann; it is difficult to allow for pits and other stratigraphic irregularities; and all the time interpretation and guesswork play an uncomfortably large role. Nonetheless we have the basics with which to make some advance: plenty of information in the notebooks, a contour-plan making much of it usable, and Dörpfeld and Blegen to provide some controls. So we can take at least a faltering step towards producing the sort of report we should now like Schliemann to have written. And, when we bring together his new stratigraphic data, new architectural features and over 3,000 additional objects, with the data gathered by Dörpfeld and Blegen, then we have the beginnings of the sort of synthesis I suggest the site requires. Let me then summarise some of the findings.

II. Summary of findings

In 1870-73 Schliemann touched only the latest strata of Troy I (Fig. 3). Around the north side of the site there is good evidence for more of the stone-faced glacis of which Dörpfeld and Blegen found fragments.¹⁴ The citadel at this date can tentatively be reconstructed as an elliptical, or polygonal, fortress with four corner-towers and a central gateway on the south side. In the pottery (Fig. 4) there are one or two local peculiarities such as the face-pots, but the pre-

dominant character is northwest Anatolian. To a lesser degree the site shares in the wider culture of west Anatolia too. From Late Troy I comes a sherd of what must be Early Cycladic II black-on-white ware.¹⁵ Two similar pieces found by Blegen also come from Late Troy I.¹⁶

Troy II is difficult to unravel. Dörpfeld distinguished three architectural phases,¹⁷ Blegen eight;¹⁸ and it is impossible to disperse Dörpfeld's buildings into Blegen's framework without at some point going against the stratigraphic record.¹⁹ New findings from Schliemann's work just aggravate the situation. What

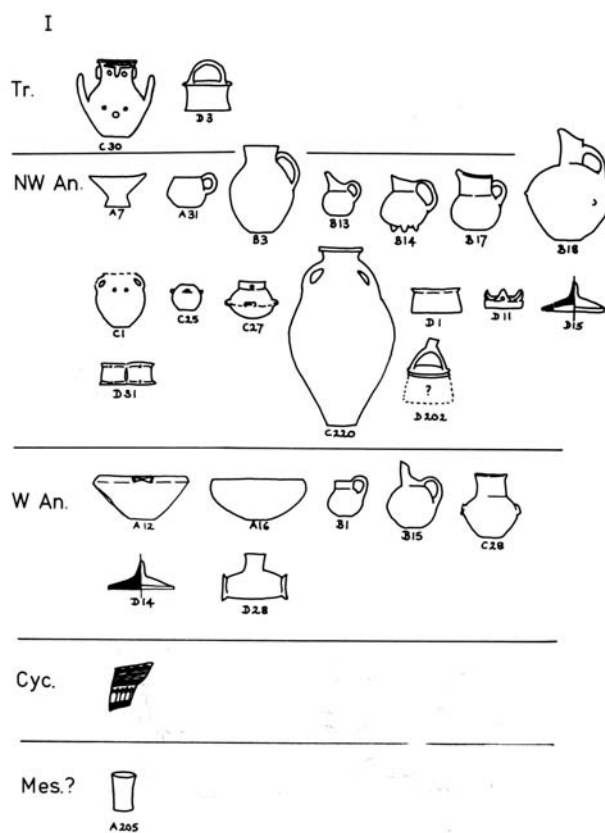


Fig. 4. Pottery of Late Troy I, showing types that are purely Trojan, northwest Anatolian, Cycladic and Mesopotamian.

12. Blegen *et al.* 1950, fig. 470.

13. It is also an unfortunate one, because the stratigraphy proposed here for this particular area differs significantly from that deduced for the immediately adjoining area by the new excavations, see Sazci 2005. The solution to this contradiction is unclear. The area is a complex one and the problem requires further study.

14. Dörpfeld 1902, Taf. III; Blegen *et al.* 1950, 194-196.

15. Schliemann 1874b, 27-722, Schliemann 1875 no. 1, Schlie-

mann 1880 no. 1433; cf. Caskey 1972, 363, pl. 77: B4, 5, 7; Evans and Renfrew 1984, 65, fig. 1b.

16. Blegen *et al.* 1950, 184-185: EH 566, 567; fig. 252: 1-2.

17. Dörpfeld 1902, 49-98.

18. Blegen *et al.* 1950, 204-208.

19. E.g. Blegen wants to place Megaron IIR in phase IIc, more or less contemporary with Megara IIA, IIB, Building IIIH, Propylon IIC and the attached colonnade: Blegen 1950, 206. This goes against Dörpfeld's reading of the stratigra-

we have to do, therefore, is to discard the overall frameworks – of three phases, or seven – which are themselves deduced, not observed; and go back to the original stratigraphic data in each trench. This gives us the opportunity to include the Schliemann material on, as it were, equal terms. We can then build up a new framework, a new way of relating the individual sequences one to another, incorporating all the information now available but without violating the stratigraphy. There may be various possible solutions to this jigsaw-puzzle; but the best and most economical I have been able to find requires for Troy II a sequence of twelve building-phases. These fall naturally into six “bands”, and so I have adopted a numbering of 1-6, with sub-phases, for the periods of Troy II.²⁰

This re-distribution of strata has consequences for the objects. Blegen's finds have to be re-allocated to the new phases, with the result that, for instance, we have to revise our ideas about when some ceramic types were introduced.²¹ Schliemann's material, being more crudely stratified, is harder to deal with. Sometimes he allows us to assign a piece fairly firmly to the earliest, or to the latest, phases of Troy II; but at other times an origin sometime within Troy II is all that can be deduced.

phy, who distinguished two building-phases overlying IIR, but underlying IIA, B etc.: Dörpfeld 1902, Taf. III; Mellaart 1959, 146 did not resolve this difficulty. See further note 20.

20. Korfmann's excavations have shown that at least three new building-phases have to be allowed for in a transitional period falling between the end of Troy I and the beginning of Troy II as defined by Blegen: Korfmann 1996, 19, Figs.14, 18; 1999, 9. As regards the sequence for Troy II, the solution proposed here has formed the basis for that proposed in Easton 2002, 307-9, Figs.196-8. The latter work incorporates a number of new discoveries from the Korfmann excavations. Taken together with the new discoveries, the redesigned stratigraphy results in a sequence of eleven building phases within Troy II, some of which however may overlap when structures survived in one part of the citadel while new ones were erected in another. In three crucial respects the Korfmann excavations have corrected misapprehensions of Blegen's and confirmed the analysis put forward here: (1) Megaron IIR belongs in one of the earliest phases of Troy II, and Megaron IIK in Blegen's Troy IIc, not later as Blegen had them (Korfmann 1999 Fig.6 – no.18 is Megaron IIR and belongs to phase IIb or "Iq" which is the same); (2) Megaron IIA did not survive into phases IIc and IIg (Easton 2000, 79; Mansfeld 2001, 118-20, 195, Fig.12:13); (3) There is a further set of structures, perhaps defensive and probably of Late Troy II, outside those shown by Dörpfeld

The first seven building-phases are contained within Troy II.1-4. The main architectural gain here, as throughout Troy II, is the recovery of a large part of the northern course of the circuit wall – ten metres further south than Dörpfeld estimated. It rises from the top of the stone glacis of Troy I, and may have followed the line of a previous Troy I wall.

In Troy II.1 (Fig. 5) our reconstituted architectural sequence has Gate FL as the principal gate, leading up to the large megaron in square F4. After two phases a severe burning destroyed the megaron and other buildings, and the site was levelled, filling in Gate FL and covering over the buildings on the north side with a deep stratum of rubble.²² This stratum was then faced on the north side by Wall 17 – a newly identified retaining wall of substantial proportions²³ – and a platform was created in the centre of the citadel.²⁴ This is the basis of Troy II.2 (Fig. 6), when Gate FN, a development from MR in Troy I,²⁵ becomes the main gate, leading up to Megaron IIR and related buildings in the northern half of the citadel. The one phase of Troy II.3 is poorly attested (Fig. 7) but suggests a principal entry via the massive south-eastern gate FO to an equally massive building on the west side.²⁶ In Troy II.4 (Fig. 8) the gateway is re-designed

in his plans of Troy II (Korfmann 1992, 18, Figs. 17, 18; 1996, 21. The Late II date is suggested by the structures' position in relation to the strata in E6.). At the time of going to press it appears that further study of these questions by the Troy team and in particular by Sinan Ünlüsoy has resulted in a similar overall solution (Ünlüsoy, personal communication 26.ix.08).

21. Blegen *et al.* 1950, 225, Table 12 can therefore no longer be used. See Easton 2002, 321 for a revised synopsis of pottery shapes in Troy II.
22. Visible in the sections in Schliemann 1880, Plan III (at 'V'), and Blegen *et al.* 1950, fig. 422; attested in Dörpfeld 1902, 63, 68; Blegen *et al.* 1950, 248, 258.
23. Schliemann 1872, 310, 313; Schliemann 1874a, 61f.
24. Somewhat as in Troy I: Blegen *et al.* 1950, 163.
25. Blegen's view (Blegen 1950, 182) that MR fell out of use before the end of Troy I seems to be contradicted by the stratigraphy. The deposits immediately overlying MR's original ground level are best compared with those over Ramp IX (not Wall IW); and MR and IZ are covered by the same destruction deposits: *ibid.* 155, fig. 446 strata II, 12; 182, fig. 437 strata 15, 16; 190, fig. 437 stratum 18, fig. 444 stratum 1?; 196, fig. 446 stratum 8.
26. Within Troy II. 1-4 must also be included a newly discovered predecessor or predecessors of Megaron IIA: Korfmann 1992, 15-16, Figs. 10, 15; 1996, Fig. 18. The fragmentary building in C4 may be related to one of these.

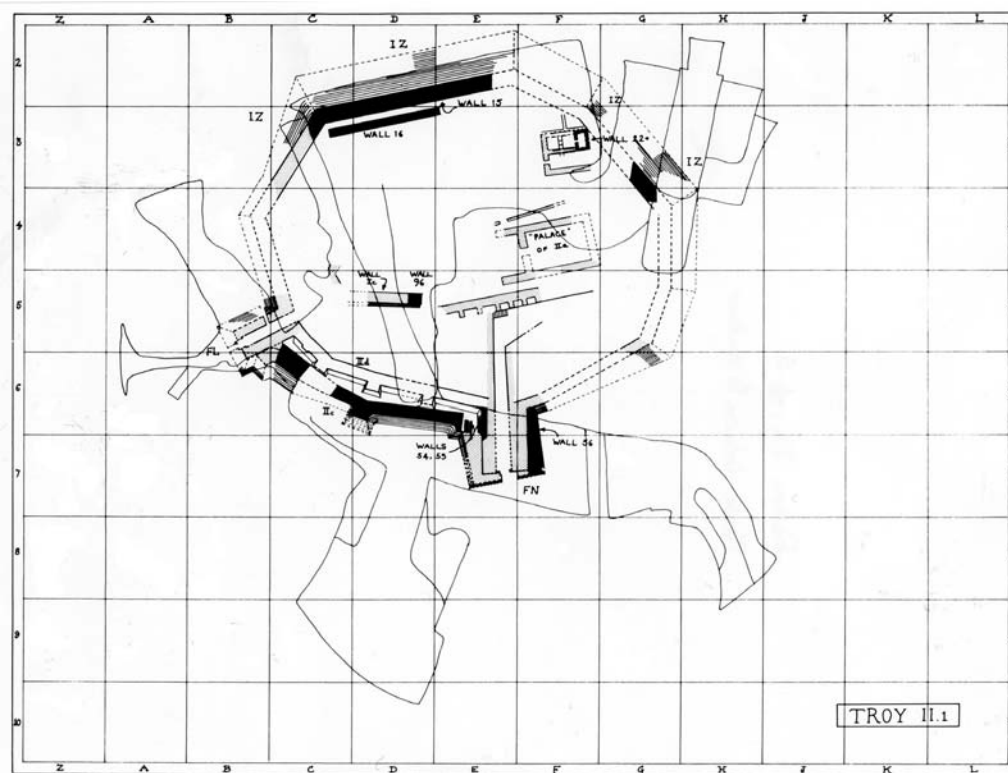


Fig. 5. Reconstructed plan of Troy II.1.

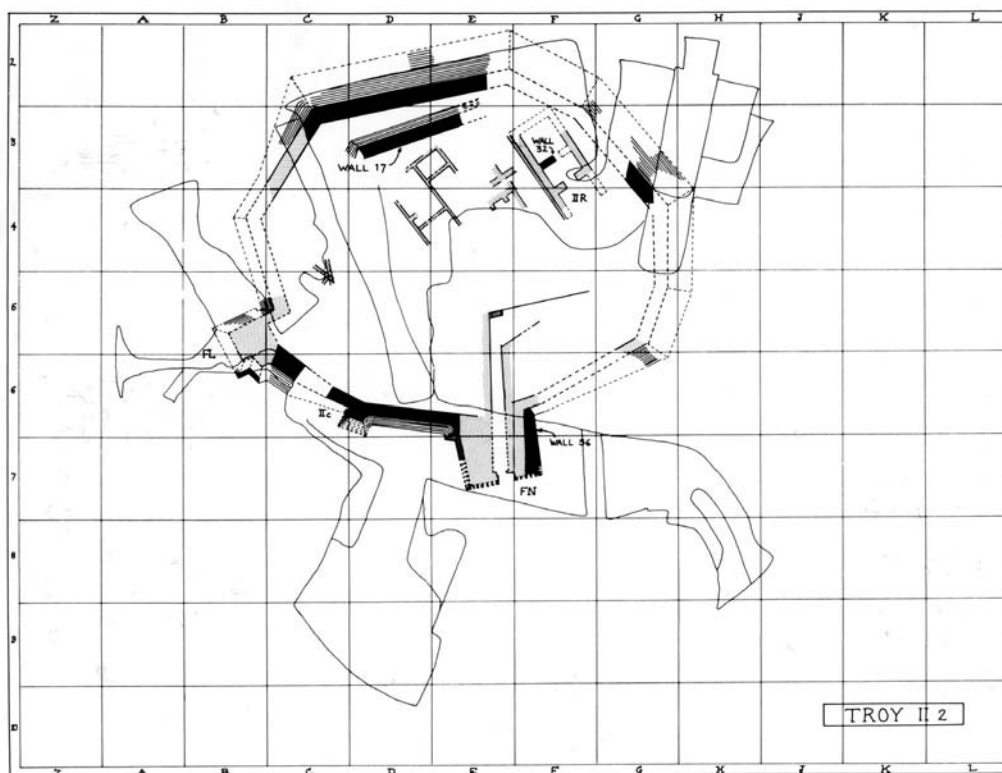


Fig. 6. Reconstructed plan of Troy II.2.

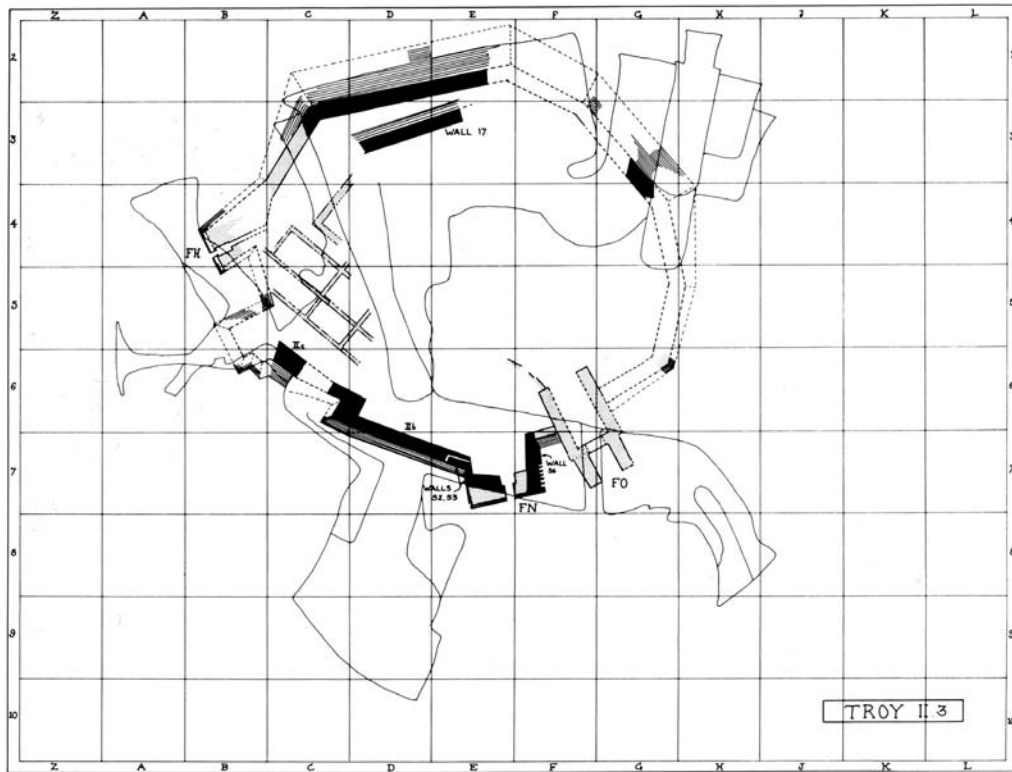


Fig. 7. Reconstructed plan of Troy II.3.

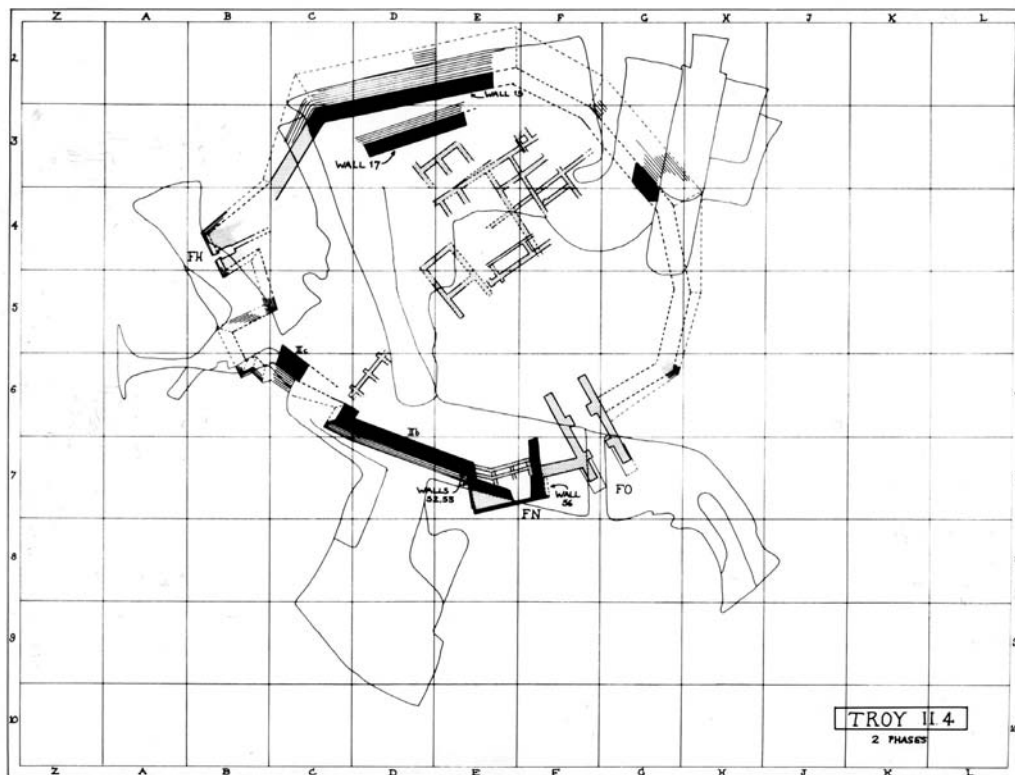


Fig. 8. Reconstructed plan of Troy II.4.

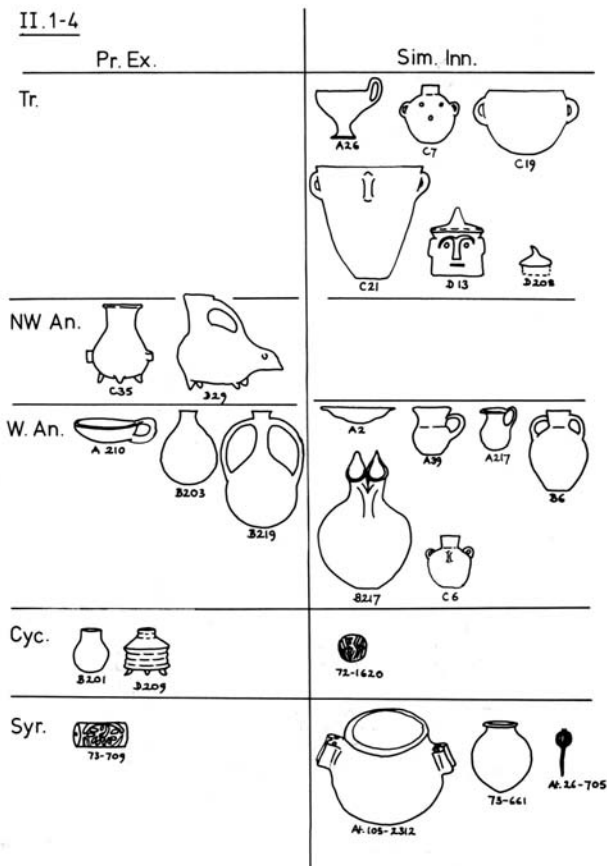


Fig. 9. Pottery types first appearing at Troy in Troy II.1-4. The left-hand column shows types that had existed previously in other regions (northwest Anatolia, west Anatolia, the Cyclades, Syria); the right-hand column shows types that first appeared in other regions at the same time as they first appeared at Troy.

with two sets of doors,²⁷ and now leads to a central complex one of whose two superposed plans is loosely in the spirit of the House of Tiles at Lerna.²⁸

Ceramic innovations of Troy II.1-4 (Fig. 9) are mainly of widespread west Anatolian types and indicate a widening of horizons beyond the northwest. Drawings in the left-hand column are of types with a previous history elsewhere; those on the right are of types introduced simultaneously at Troy and in the

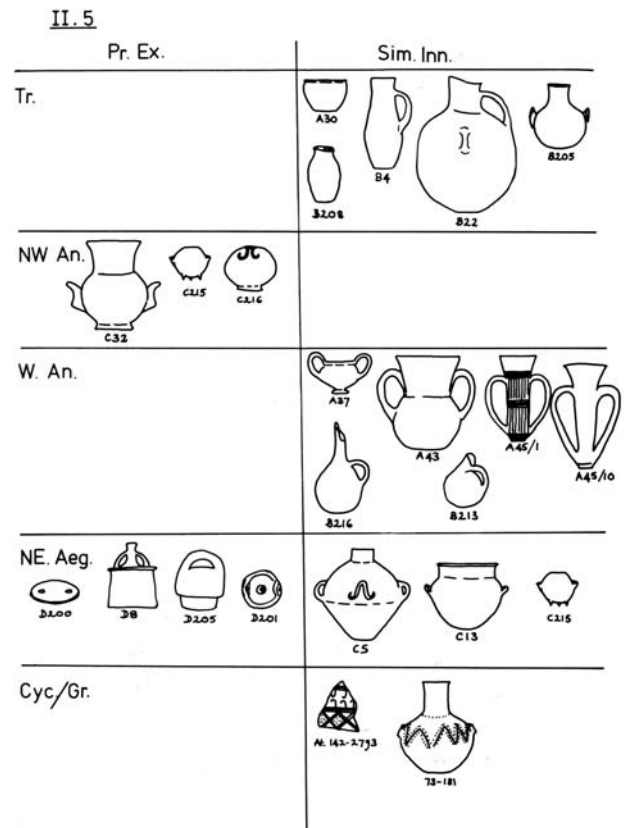


Fig. 10. Pottery types first appearing at Troy in Troy II.5. The left-hand column shows types that had existed previously in other regions (northwest Anatolia, west Anatolia, the northeast Aegean, the Cyclades, Greece); the right-hand column shows types that first appeared in other regions at the same time as they first appeared at Troy.

other regions concerned. Two significant introductions in Troy II.1 are the wheelmade plates (A2), first appearing in small numbers and in larger quantities only in II.4; and the one-handed tankards (A39). Ovoid and globular jars of Tell Chuera type²⁹ occur in Early Troy II;³⁰ elsewhere in Anatolia they first appear in late EB II contexts.³¹ A cylinder-seal is a Syrian type, of Early Dynastic I-II date³² and a silver pin with fluted head is an Early Dynastic IIIa type.³³

27. Dörpfeld 1902, 73.

28. Caskey 1957, plate 45b.

29. Cf. Kühne 1976, Abb. 37, 250-252.

30. Certainly Schliemann 1874b, 105-2312 (=Schliemann 1880 no. 23, Schmidt 1902, no. 2081); possibly 73-661 (=Schliemann 1874b, 152-3034). Unstratified: Schmidt 1902, nos 432, 2082, 2155. Other examples in Schliemann and Blegen all come from II.5 and II.6, apparently.

31. Kühne 1976, 46-51; Özgüç 1986b, 37.

32. Schliemann 1874b, 162-3131; Schliemann 1875, no. 226; Schliemann 1880, nos 502-503; Schmidt 1902, no. 8868; Collon 1987, 22f, no. 49.

33. Schliemann 1874b, 26-705 (=Schliemann 1875, no. 87; Schliemann 1880, no. 121; Schmidt 1902, no. 6424); cf. Parrot 1968, 31f, no. 30, pl. XVII. 2; Woolley 1934, pl. 231: U. 8162.

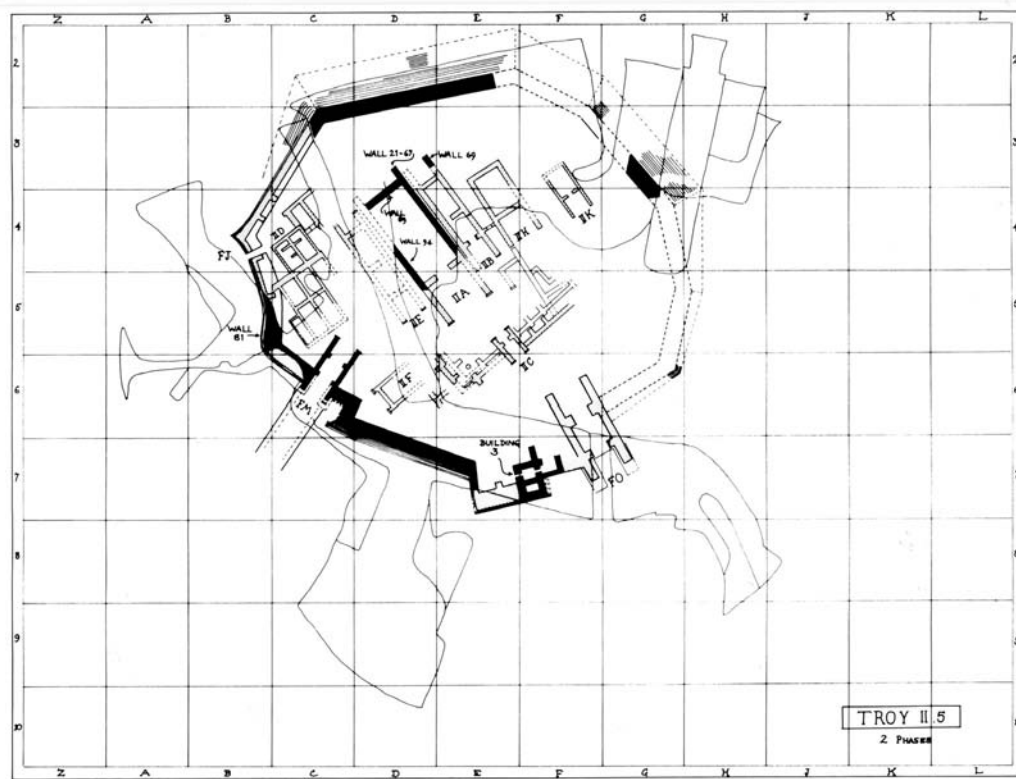


Fig. 11. Reconstructed plan of Troy II.5.

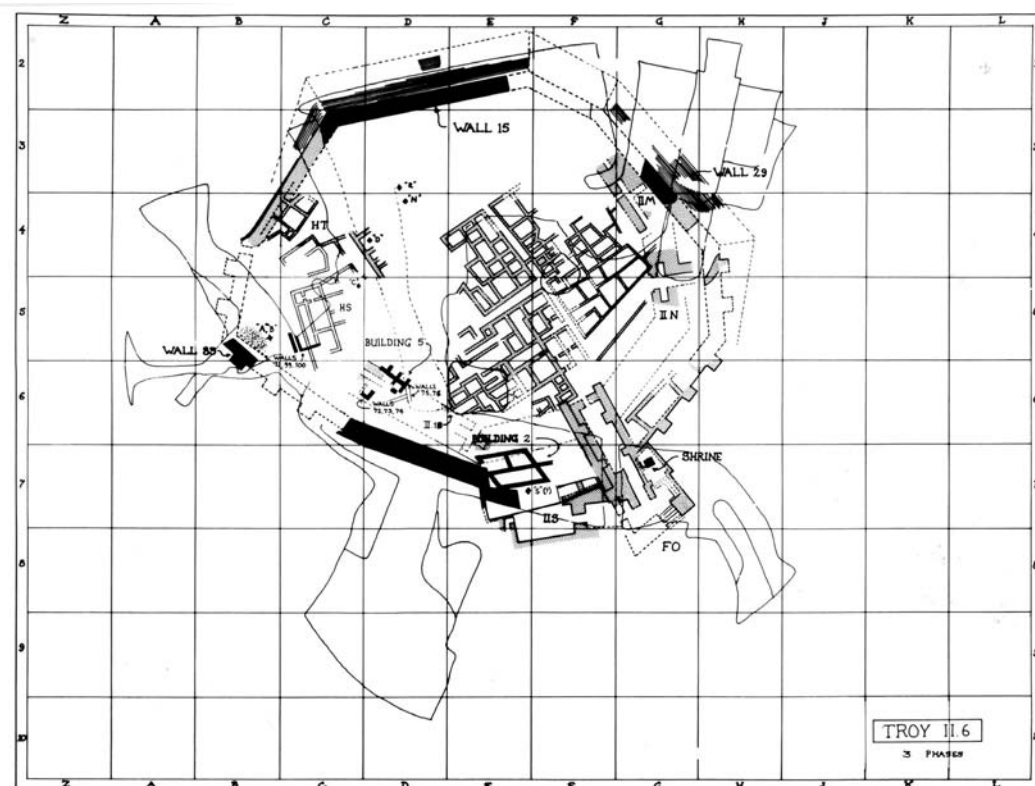


Fig. 12. Reconstructed plan of Troy II.6.

In terms of relative chronology Late Troy I and Troy II.1-4 fall entirely within the Anatolian EBII period, contemporary with Yortan Class A,³⁴ Demircihüyük G-P,³⁵ Beycesultan XVI-XIII,³⁶ Aphrodisias BA 2-3³⁷ and Karataş mound.³⁸ They are contemporary, too, with Early Cycladic II and Early Dynastic II-IIIa.

But now comes a change. From Blegen's sherdcunts we can see that in II.4 Plain Wares have already supplanted the previously dominant Grey and Black Polished Wares. Now, in Troy II.5, the overall proportion of fine wares to coarse suddenly rises from 44% to 73%. The whole complexion of the pottery assemblage has changed. New shapes appear (Fig. 10), notably the two-handled cups, tankards and goblets that mark the beginning of the EB III period throughout this region. Clearly this is the beginning of the Trojan EB III; and the ribbed depas, A45/l, confirms it, for stratified examples of this short-lived type are otherwise attested only in Kültepe I3, Tarsus EB IIIa-b, Bozüyük, and Aphrodisias BA4.³⁹ Possibly to this phase, but uncertainly stratified within Troy II, belong a sherd of incised Early Cycladic III ware and a jar with decoration characteristic of very early EH III.⁴¹ There appear to be active links with the islands of the Northeast Aegean.

Architecturally, too, there is a change (Fig. 11). Gate FM, with its paved ramp, is built into the southwestern circuit wall. And in the citadel interior there is an entirely new layout with ceremonial gateway, colonnaded courtyard, and five parallel megara.

After two or more phases the site was again burnt. The succeeding period, Troy II.6 (Fig. 12), sees the southeast gate heavily re-built with a structure on its east side into which Schliemann's horned altar must be placed:⁴² evidently this was a gatehouse shrine,

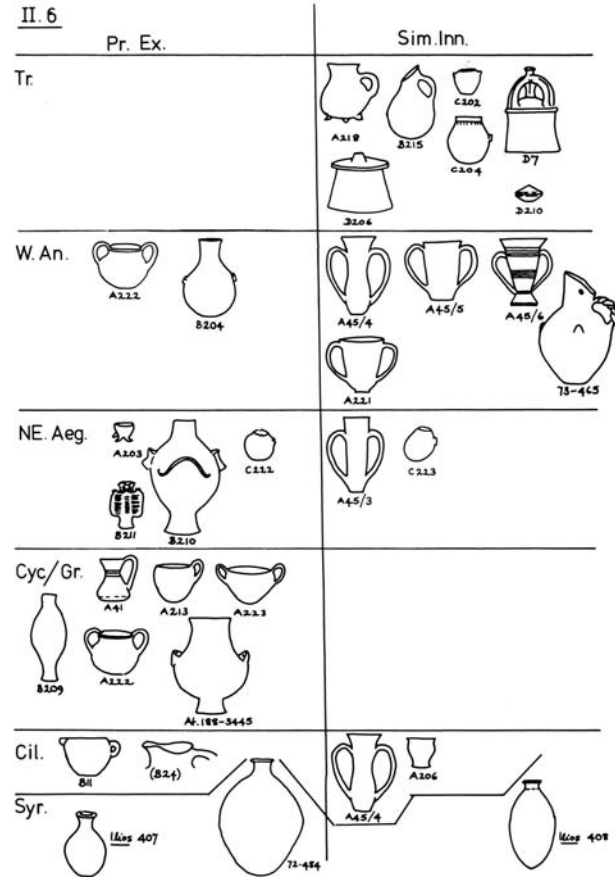


Fig. 13. Pottery types first appearing at Troy in Troy II.6. The left-hand column shows types that had existed previously in other regions (west Anatolia, the northeast Aegean, the Cyclades, Greece, Cilicia, Syria); the right-hand column shows types that first appeared in other regions at the same time as they first appeared at Troy.

reminiscent of the stelae of Troy I and Tower i of Troy VI.⁴³ A short section of buttressed wall found by Sch-

34. As defined by Kâmil 1982, esp. p. 56 for the synchronism.
35. Efe 1988, 95-103.

36. Kâmil and Efe, loc. cit. Seeher (1987, 159f) believes that Yortan Class A is contemporary with Demircihüyük phases DEF, but the similarities are vague and can be set aside. Yortan Class A's resemblances to Middle Troy I - Early Troy II and Beycesultan EB II on the one hand, and those of Demircihüyük DEF to Beycesultan EB I on the other, seem to be decisive.

37. Joukowsky 1986, 404-406: a pithos-burial dug into BA3 levels on Pekmez mound has material clearly of Yortan A, Troy I-II, Beycesultan EB II type. Aphrodisias BA2 is probably contemporary with Beycesultan XVI; Joukowsky 1986, 370: 10; 407: 17; cf. Lloyd and Mellaart 1962, figs.

P23: 11, 14; P22: 6-8, 10, 13-15; P25: 14, 19.

38. Mellink 1968, 259; Mellink 1986, 145f.

39. Öktü 1973, Taf. 54: 1-c/05; Goldman 1956, fig. 285: 722, 735; Joukowsky 1986, fig. 426: 10; Efe 1988, Taf. 64, 1, 6.

40. Schliemann 1874b, 142-2793; cf. Atkinson *et al.* 1904, pl. V. 9, II, 12B; Evans and Renfrew 1984, 66-67.

41. Schliemann 1874b, 123-2461; Schliemann 1880, no. 1016; Schmidt 1902, no. 2345; cf. Rutter 1982, pl. 99: 28; 100: 35, 37.

42. Schliemann 1874a, 244f; Schliemann 1875, fig. 188.

43. Blegen *et al.* 1950, 155-158; Blegen *et al.* 1953, 99, figs. 55, 452. Tower VII is now attributed to Troy VIIa: Korfmann 2004, 14. Other stelae have come to light in the closed-up Gate VIU and in a VIIb2 deposit in Square E9: Klinkott 2004, 64; Korfmann 1995, 25.

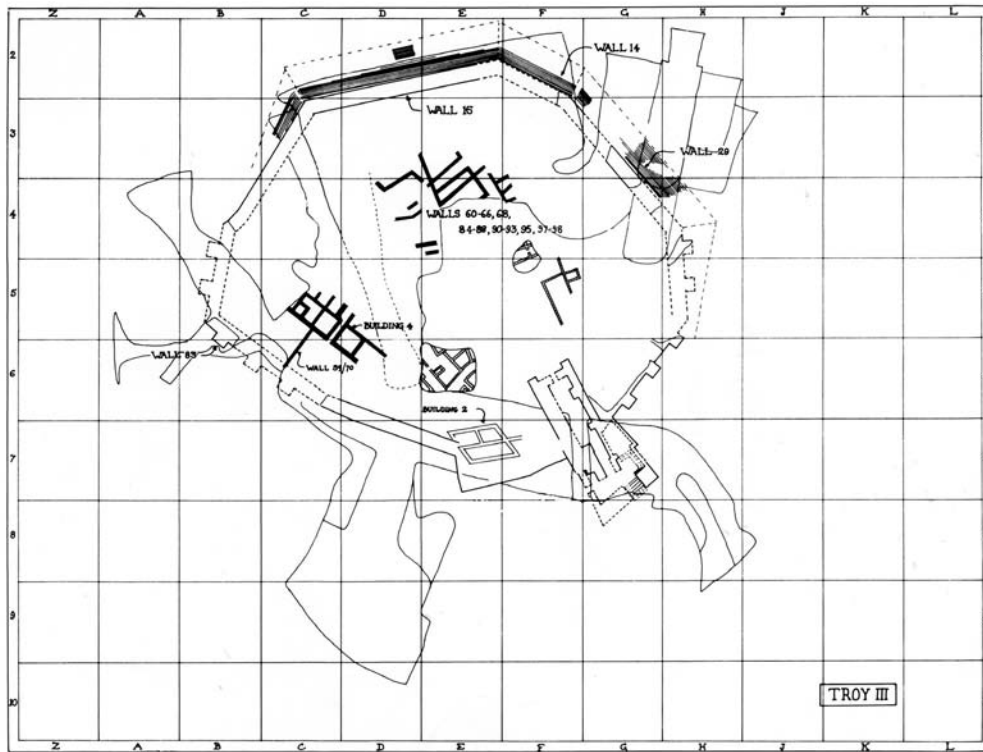


Fig. 14. Reconstructed plan of Troy III.

liemann in square B5-6⁴⁴ suggests that on the southwest side the citadel wall was now rebuilt further out.⁴⁵ In the interior, blocks of houses like those of Poliochni Yellow are bounded to the South by an 8 metre thick mudbrick wall with internal passages;⁴⁶ this strange feature seems not to have lasted beyond the earliest of the three phases of II.6.⁴⁷

In pottery (Fig. 13) the northwest Anatolian tradition has now ceased to make any new contributions, and the Trojan repertoire seems more open to previously existing types from the Northeast Aegean, the

Cyclades and Greece. It continues to share, however, in the innovative trends of West Anatolia as a whole. Four more short-lived depas types link this phase not only with Poliochni Yellow, Polatli IB, Aphrodisias BA4, Tarsus EB III, Amuq J and the EB III deposits at Kastri, Pefkakia, Tiryns, Lerna and Aegina VI;⁴⁸ but more specifically with Kültepe 12 and Beycesultan IX.⁴⁹ We thus clearly find ourselves here in a second phase of the EB III period - a phase in which, as at Tarsus EB IIIb, Chuera-type alabastron-shaped bottles appear.⁵⁰

44. Schliemann 1873, 271f; Schliemann 1874a, 288f.

45. Further evidence of these Late II structures has been found in the Korfmann excavations, see note 20 above.

46. Cf. Mellaart 1959, 149-162. The blocks of houses shown in Fig.12 are taken largely from Schliemann, *Ilios* Plan I. This reconstruction follows Mellaart 1959 in assuming that they joined the buildings of the IIg phase of Blegen's pinnacles. Mansfeld (2001, 197 Abb.12:10 and p.200) has since shown that the *Ilios* buildings belong instead with the earliest phase of Blegen's III. They must, however, have been preceded by buildings that were similar. An important new feature which should probably be placed in Late II is a series of three megarons found in square G6: Sazcı 2007, 86-95.

47. Buildings of Blegen's II f and II g are stratified over Wall II-18 which belongs to the mudbrick structure: Blegen *et al.* 1950, 302.

48. A45/3: cf. Brea 1976, Tav. CXCII c, d; A45/4: Bossert 1967, fig. 5: 7; Podzuweit 1979, 150 fig. 5: 6; Joukowsky 1986, fig. 426: 9; Goldman 1956, fig. 356: 484; Lloyd and Gökçe 1951, 42 fig. 10, gr. 25: 24. A45/5: Joukowsky 1986, fig. 426: 11; Barnett 1963/4, 79. A45/ 6: Caskey 1955, pl. 21, i; Müller 1938, pl. XXXII. 5; Walter and Felten 1981, fig. 107; Braidwood 1960, 450, fig. 349.

49. A45/4: Öktü 1973, Taf. 16: I-C/06. A45/6: Lloyd and Mellaart 1962, fig. P52: 21 and perhaps 17, 20.

50. Goldman 1956, 154; cf. Kühne 1976, 46-47; the type does appear in EB IIIa, however, at Kültepe: Özgüç 1986, 34-36.

To the architecture of Troy III (Fig. 14) there is little to add⁵¹ except some uncertainly-stratified walls in the northern half of the interior and a formal-looking structure, Building 4, on the west side.⁵² The pottery, however, is rather interesting (Fig. 15). Two short-lived *depas* forms, the introduction of volutes, and the greatly increased popularity of shape A16 (among other factors) link this phase to Beycesultan VIII-VIa and to the final EB III levels at Tarsus.⁵³ Thus on the Anatolian side we are in the final stages of EB III. On the Aegean side, however, three of the most characteristic shapes of Troy III - A16, A22 and C14 - have direct parallels among those of early Middle Helladic matt-painted ware;⁵⁴ and individual pieces such as the two-handled tankard (A225) and the askos (72-1562) have parallels in early MH strata.⁵⁵ The true shape B20 - the jug with deeply grooved spout, an innovation of this period - is also characteristic of Early Cycladic IIIb "geometric" ware,⁵⁶ contemporary with early Middle Helladic.⁵⁷ And we need not stop there. A schematic comparison of the sections drawn by Dörpfeld and Blegen of the upstanding pillars of Troy III-V shows that the deposits of Schliemann's and Dörpfeld's Fourth City must be equated with those of Blegen's Third. A glance through the material of Schliemann's "Fourth City" in *Ilios* shows: incised vessels with designs like those of matt-painted ware;⁵⁸ jars with huge, spreading rims as found in MH Lerna;⁵⁹ jugs with swollen neck, as known on pieces from MH Eutresis;⁶⁰ and many cups in almost-pure Minyan shapes.⁶¹ Thus, while still EB III on the Anatolian side, Troy III seems to be contemporary with early Middle Helladic on the Aegean side.

Architecturally Troy IV again shows little new, although Schliemann does seem to have struck the

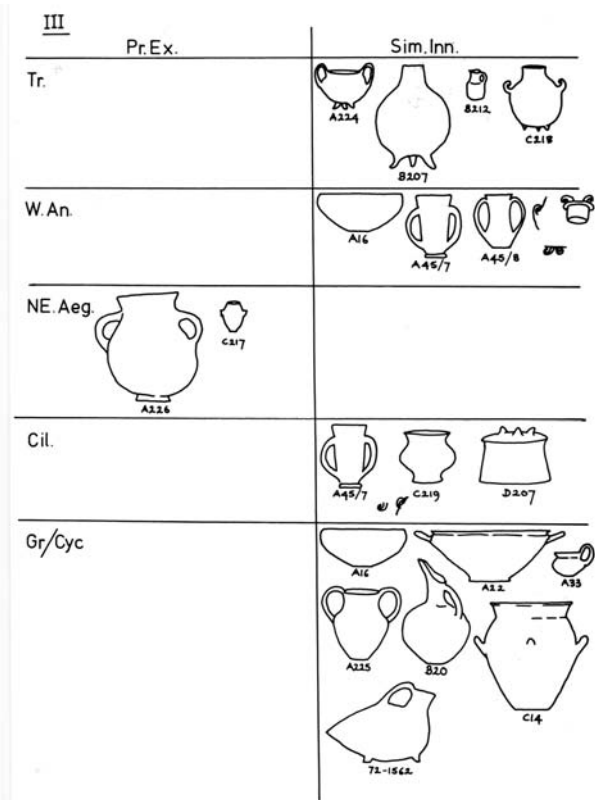


Fig. 15. Pottery types first appearing at Troy in Troy III. The left-hand column shows types that had existed previously in other regions (the northeast Aegean); the right-hand column shows types that first appeared in other regions (west Anatolia, Cilicia, Greece, the Cyclades) at the same time as they first appeared at Troy.

citadel wall at two new points on the south side.⁶² In the citadel interior the known architectural remains are meagre, but the avoidance of right-angles in the plans suggests a Middle Bronze Age character. This is confirmed by the pottery (Fig. 16). Once again there

51. There are, of course, further additions from the Korfmann excavations. In particular the pinnacle in E4-5 has been excavated and published in detail: Mansfeld 2001; Frirdich 1997. It requires the buildings shown in *Ilios* Plan I to be added to Early III (see above, n. 46). We must also add new findings from G6 and D7-8: Sazcı 2005, 56-65; 2007, 95-108.
 52. Schliemann 1874b, Taf. 214, in the darker shading.
 53. A45/7: Lloyd and Mellaart 1962, fig. 55: 46; Joukowsky 1986, fig. 426: 1; Goldman 1956, nos 508-513; A45/8: Lloyd and Mellaart 1962, fig. 67:2. A16: Lloyd and Mellaart 1962, 213 shape 6; Introduction of volutes as curled feet, curled wings, curled knobs on lids, curled handles on jars - but not yet as handles on bowls: Lloyd and Mellaart 1962, 225, fig. P56: 4, P61: 1, 2, 4, 6, P70: 6-8, 11, 13; Goldman 1956, fig. 273: 445; 275: 596. The comparanda cited here for Troy III, IV and V stand as written in 1990 but are all in need

of re-examination.

54. A16=MH shape A1; A22=MH shapes A4, 5; C14=MH shape C2 - as defined by Buck 1964.
 55. Wace and Thomspon 1912, 182 fig. 126d; Goldman 1931, 160 fig. 223.
 56. Barber 1984, 91; e.g. Zervos 1957, pl. 119.
 57. Caskey 1960, 303; MacGillivray 1984, 73-75.
 58. Schliemann 1880, nos 1015, 1017, 1020, 1024.
 59. *Ibid.* nos 1135, 1136; cf. Caskey 1955, pl. 14a. There is another at Schmidt 1902, no. 2522.
 60. Schliemann 1880, no. 1170; cf. Goldman 1931, fig. 203, pl. XIII; fig. 242: 1.
 61. Schliemann 1880, nos 1095-1100.
 62. Schliemann 1872, 425; Schliemann 1873, 86; Schliemann 1874a, 213f, 258.

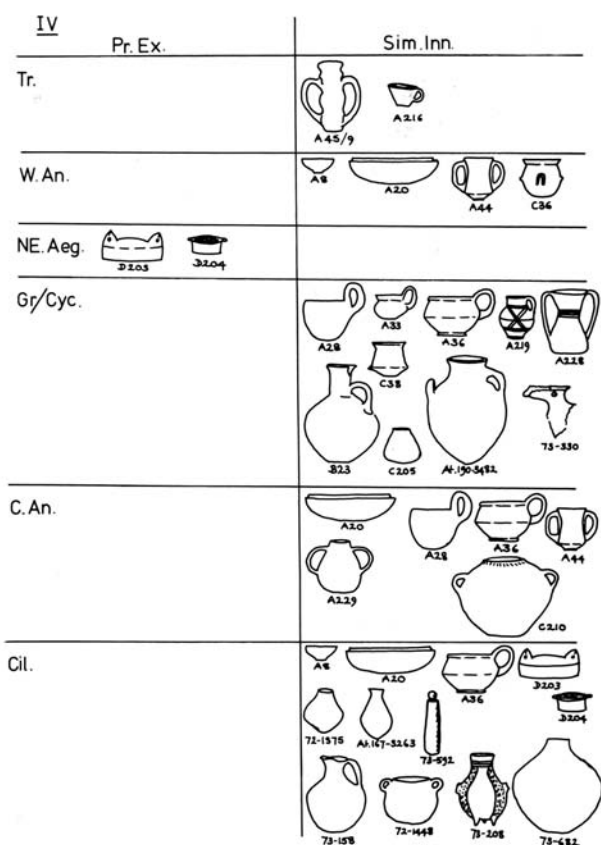


Fig. 16. Pottery types first appearing at Troy in Troy IV. The left-hand column shows types that had existed previously in other regions (the northeast Aegean); the right-hand column shows types that first appeared in other regions (west Anatolia, Greece, the Cyclades, central Anatolia, Cilicia) at the same time as they first appeared at Troy.

is a change in the overall complexion. Fine wares suddenly decline in frequency, from 57% (typical of EB III) to 35%; and Red-Coated Ware suddenly becomes predominant. The new shapes, especially the small dishes (A8), the bowls with vertical rim (A20) and the A44 tankards link Troy III unmistakably with Beycesultan V, MB Aphrodisias, MB Tarsus, Acemhöyük

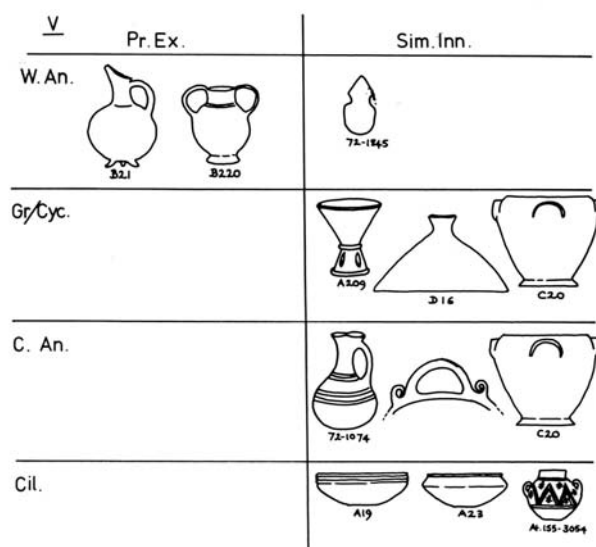


Fig. 17. Pottery types first appearing at Troy in Troy V. The left-hand column shows types that had existed previously in other regions (west Anatolia); the right-hand column shows types that first appeared in other regions (west Anatolia, Greece, the Cyclades, central Anatolia, Cilicia) at the same time as they first appeared at Troy.

III and Büyükkale IVd.⁶³ Three characteristic flask-shapes confirm the link with MB Tarsus,⁶⁴ and there are some possible parallels with the Karum period at Kültepe.⁶⁵ On the Aegean side, links continue with Middle Helladic and Early Cycladic IIIb types – note particularly the conical pyxides (C205).⁶⁶ A two-handled ovoid pitcher looks like a possible adaptation of the MH hydria.⁶⁷ If the connection is genuine it may be of chronological interest since, according to Buck, the hydria was a development only of Middle Helladic II.⁶⁸

The material from Troy V is very scanty. There is a new section of citadel wall.⁶⁹ In the pottery (Fig. 17), innovations continue to point to contemporaneity with the MB phases of Beycesultan, Aphrodisias, Tarsus and Kültepe Karum II–Ib.⁷⁰ On the Aegean side

63. A8: Lloyd and Mellaart 1965, 83; shape 9; figs. P4: 10; P5: 8, 12; P16: 21; P25: 2; P33: 12, 15, 17, 18; Joukowsky 1986, figs. 454: 13; 457: 2, 6; Goldman 1956, fig. 368: 753.

A20: Lloyd and Mellaart 1965, figs. Pl: 8-10; P24: 25-27; Fischer 1963, no. 878; Goldman 1956, fig. 369B.

A44: Lloyd and Mellaart 1965, figs. P5: 30, P6: 1; Emre 1966, 129 pl. XXXV: 3.

64. Goldman 1956, figs. 294: 913, 916, 917.

65. A28, A36: Özgüç 1950, pl. XLIX: 237, 238, 240; T. and N. Özgüç 1953, pl. XXX: 186; A229: Emre 1963, fig. 10: Kt.m/k 202; C210: Özgüç 1950, pl. LIII: 266.

66. At least three conical pyxides come from Troy IV. Cf. Bar-

ber 1984, 90; Atkinson et al. 1904, pl. IV: 1-3.

67. Cf. Buck 1964, pl. 41: C6.

68. *Ibid.*, 296.

69. Schliemann 1872, 426.

70. A23: Goldman 1956, 168f, 759-761, 769; figs. 286, 367, 368; Joukowsky 1986, fig. 454: 4; 477: 3; Lloyd and Mellaart 1965, figs. Pl, P12-13, P24, P31.

A19: Goldman 1956, figs. 286: 770; 367: A; Atlas 155-3054: cf. decoration on Goldman 1956, 182, fig. 300: 934.

C20: Orthmann 1963, Taf. 34: 356. 72-1074, cf. T. and N. Özgüç 1953, pl. XXIV: 102; von der Osten 1937, fig. 180: e31.

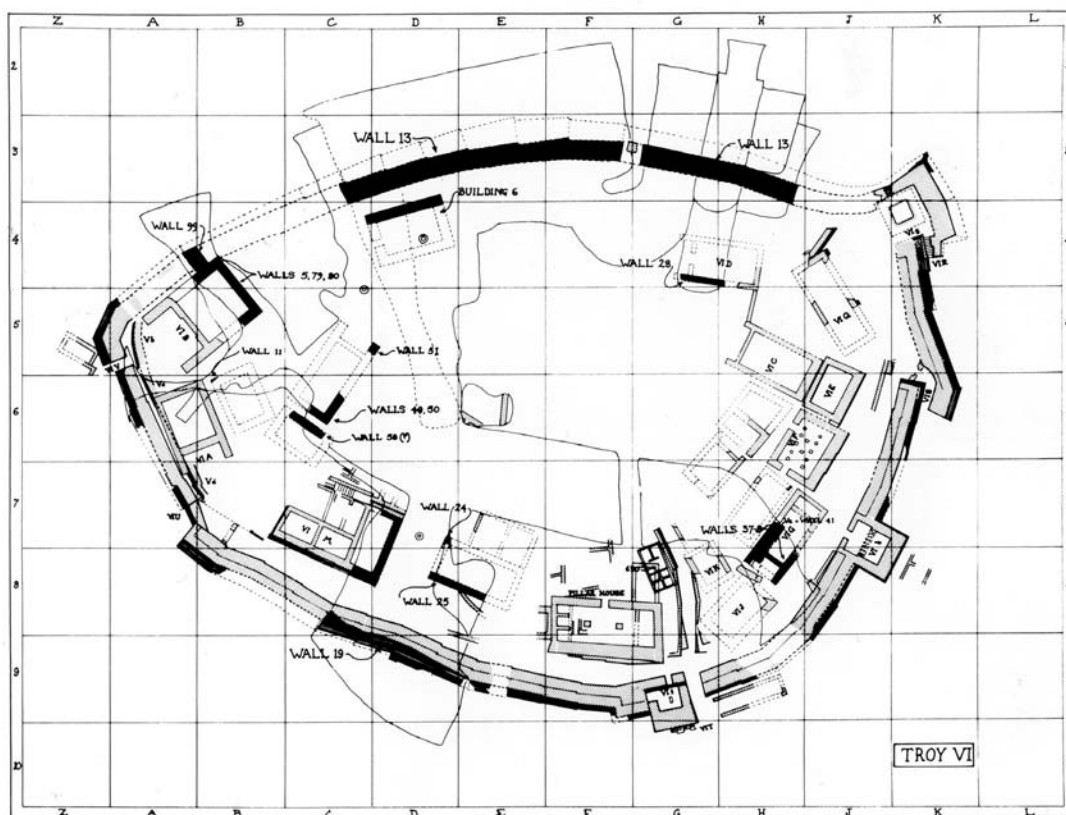


Fig. 18. Reconstructed plan of Troy VI.

the pedestalled goblet (A209) and the domed lid (D16) are paralleled in phases a and b of Ayia Irini IV.⁷¹

In Troy VI (Fig. 18) and VII the principal gain is, once more, evidence for the course of the northern sector of the circuit wall.⁷² The north end of Megaron VIB can be completed with confidence;⁷³ and there are fragments of four or more previously unknown buildings of Troy VI.⁷⁴ In three cases Schliemann detected substantial signs of rebuilding;⁷⁵ probably these derive from Troy VIIa.

Although Schliemann noted fallen masonry at a number of points,⁷⁶ this does not help elucidate the

destruction of Troy VI or VIIa. The problem can, however, be reassessed from Blegen's report.⁷⁷ While it is clear that much fallen masonry characterises the end both of Troy VI and of Troy VIIa, it must be remembered: (1) that signs of earth-movements are restricted to the southeast corner of the site; (2) that these movements were evidently induced by subsidence of the fill behind the citadel wall; and (3) that this subsidence affected not only the buildings of Troy VI but those of VIIa as well, as Blegen's photographs, sections and text all testify.⁷⁸ To me it seems virtually certain that the subsidence occurred not at the end of Troy VI, but in Troy VIIa. Moreover from

71. A209: Caskey 1972, fig. 8: D4; Overbeck 1984, III; D16: Caskey 1972, fig. 10: D59-60; pl. 87: E10; pl. 88: E19; Overbeck 1984, 110.

72. Schliemann 1870, 90; Schliemann 1872, 293, 300, 417; Meyer 1953, 167. This reconstruction of the course of the northern sector of the Troy VI circuit walls has since been shown, in a detailed and perceptive study, to have been ill-founded and incorrect. At its northwesternmost point, where it crosses from E to F, its true course lies about ten metres further to the north: Becks 2005, esp. Fig.16.

73. Walls 5, 79, 80.

74. Building 6, Walls 24, 25; 49, 50, 51; 58.

75. Wall 4 (Megaron VIB); Walls 49, 50, 51; Walls 37, 38, 40 (Megaron VIG).

76. Schliemann 1870, 77; Meyer 1953, 166, 326 n. 225; possibly Schliemann 1872, 485.

77. See Easton 1985, 190f.

78. Blegen *et al.* 1958, 76, 78, 89, 96, 106; figs. 24, 32, 67, 81, 106, 322, 326, 327, 338; see further Easton 1985.

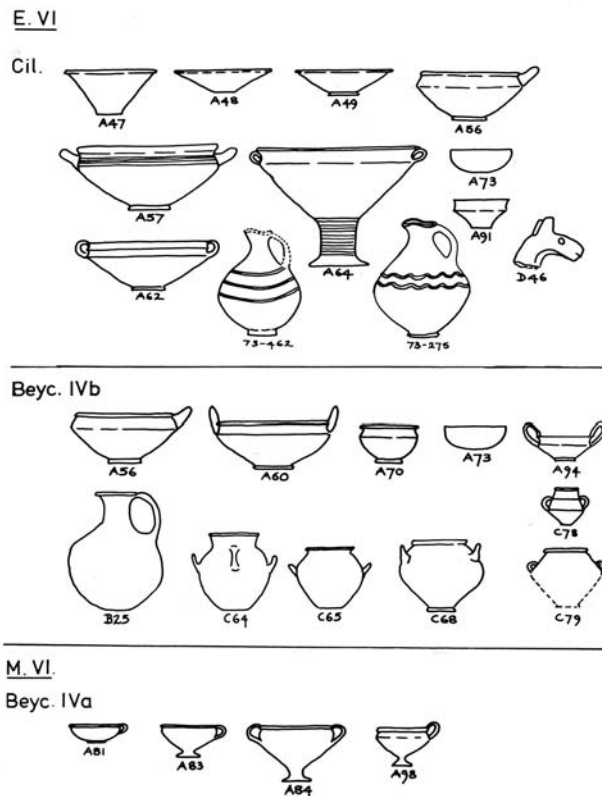


Fig. 19. Ceramic innovations of Early and Middle Troy VI which have parallels in LBA Cilicia and at Beycesultan.

VIIa Blegen recovered several adult skeletons, typical of an earthquake;⁷⁹ none came from Troy VI. In Troy

VI Dörpfeld and Blegen both found signs of fire.⁸⁰ This, together with the fallen masonry, could be consistent with destruction by an enemy.

To the pottery of Troy VI and VII Schliemann has little new to add. Review of Blegen's material (Fig. 19) shows that the ceramic innovations of Early VI are paralleled overwhelmingly in Tarsus LBI⁸¹ and Beycesultan IVb.⁸² Middle Troy VI seems closest to Beycesultan IVa,⁸³ whose beginning should coincide roughly with that of Late Minoan I.⁸⁴ This places Early Troy VI in late Middle Helladic and at the beginning of the Anatolian Late Bronze Age.⁸⁵ The relative chronology of VI and VII is otherwise unaltered: the destruction of VIIa should fall in Late Helladic IIIc, that of VIIh around the end of LH IIIb.⁸⁶

III. Absolute Chronology (Fig. 20)⁸⁷

Calibrated C-14 dates are easily "averaged" using the simple technique suggested by Ottaway.⁸⁸ The dates from each phase of a series are displayed in a dispersion-diagram the central, shaded area of which shows where the statistical weight of the series lies. A cross-bar in the middle indicates the median date, of use when all the samples derive from a single event.

Early Troy I belongs to the last phase of the EB I period and is contemporary with Beşik-Yassitepe,⁸⁹ Ezero VIII-IV⁹⁰ and Sitagroi IV:⁹¹ the dates will be roughly 3000-2900 B.C.

79. Blegen *et al.* 1958, 50, 63, 121, 134, figs. 322, 360.

80. Dörpfeld 1902, 130, 152, 181; Blegen *et al.* 1953, 329.

81. References are to Goldman 1956; for Trojan shape A48, cf. nos 966, 967; A49 cf. no. 963; A64 cf. nos 975, 976; A73 cf. nos 950-960; A91 cf. no. 971; D46 cf. no. 1035?; 73-275, 73-462 cf. nos 1023, 1032, 1033. There are also a few parallels with MB Tarsus, but not so numerous - A47, A56, A57, B35.

82. References are to Lloyd and Mellaart 1965; for Trojan shape A56 cf. P24: 36; A60 cf. P24: 37, 38; P25: 21; A70 cf. P25: 17?; A73 cf. P25: 7-9; A94 cf. P25: 18-20; B25 cf. P28: 13?; C64/65 cf. P30: 1; C68 cf. P26: 4; C78 cf. P28: 11; C79 cf. P30: 2. Parallels with Beycesultan IVc are fewer (A60, A61), likewise with IVa.

83. Lloyd and Mellaart 1962, figs. P31: 11; P32.

84. *Ibid.* 74f; Mellaart 1970, 61.

85. This relative date for the beginning of Troy VI has been confirmed by the finding of an MMIIIa jug in a burial dug into the top of the Troy V deposits: Korfmann 1997, 32. See further the comments in Pavuk 2007a, 474; 2007b, 305-6.

86. Cf. Mee 1978, 146f; Mee 1985, 48f; Nylander 1963, 7; E.B. French 1977. This was the situation in 1990. Since then,

however, Mountjoy has completely re-appraised the Mycenaean pottery from VI and VII, and has reverted to the dates accepted by Blegen. The destruction of VIIh is now placed at the end of LHIIIa2, and the destruction of VIIa around the end of LHIIIb: Mountjoy 1999a, 1999b.

87. Many C-14 dates have now been added by the Korfmann excavations, see especially Korfmann and Kromer 1993, Mansfeld 2001, 201-3. Kromer, Korfmann, Jablonka 2003, and the discussions in Manning 1995, 27f, 154-60, Weninger 1995. They are not all easy to evaluate. It may be that some of those from Troy II are from older, re-used timbers, and some stratigraphic re-ordering may also be needed. In the author's opinion they are capable of being understood to be consistent with the scheme proposed here. Korfmann, Kromer and Mansfeld, however, conclude in favour of other datings.

88. Ottaway 1973.

89. Korfmann 1986, 310; Korfmann 1987, xviii, fig. 4.

90. Georgiev *et al.* 1979, 513.

91. Renfrew *et al.* 1986, 173.

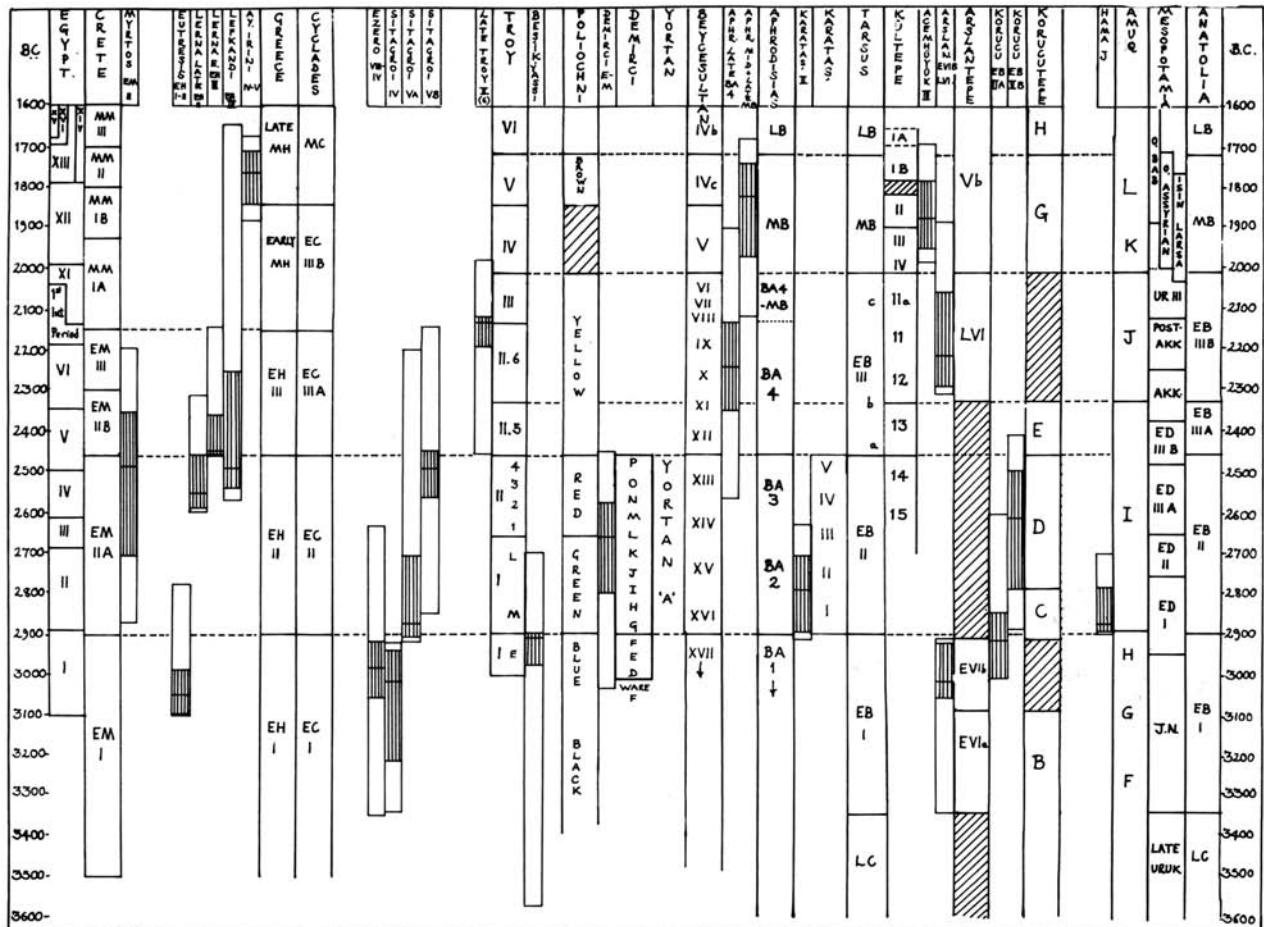


Fig. 20. Chronological Table.

Middle Troy I – Troy II.4 is the EB II phase of the site, II.4 being contemporary with the final phase of Early Helladic II. This, according to a very neat division in the Lerna radiocarbon dates, ended at c. 2465 B.C. 2900-2465 B.C. will therefore be the dates of our Trojan EB II period.⁹² The C¹⁴ dates from the contemporary and related phases of Karataş mound,⁹³ Demircihüyük G-P⁹⁴ and Sitagroi VA-B⁹⁵ are all consistent with this.

The EB III phase, which includes Troy II.5, II.6

and Troy III, should end around 2000 B.C. This adequately brackets all the C¹⁴ dates from related deposits at Lerna,⁹⁶ Lefkandi,⁹⁷ and Aphrodisias.⁹⁸ During this period comes the destruction of Troy II.6, for which Virchow's seed samples provide a median date of ca. 2135 B.C.⁹⁹ – quite satisfactory. If the Middle Bronze strata of Troy IV and V end ca. 1700 B.C., this will comfortably accommodate the C¹⁴ dates from related levels of Ayia Irini IV - V,¹⁰⁰ MB Aphrodisias¹⁰¹ and Acemhüyük III;¹⁰² it also fits with the accepted his-

92. *Radiocarbon* 4 (1962), 149f. Dates for the Early and Middle Helladic sequence remain highly disputed. See Coleman in Ehrich 1992, 275 and Rutter 1993.

93. *Radiocarbon* 8 (1966), 352f.

94. Weninger, in Korfmann 1987, 4-13; see also p. xi.

95. Renfrew et al. 1986, 173.

96. See fn. 84.

97. *Radiocarbon* 19 (1977), 27f.

98. Joukowsky 1986, 163.

99. Quitta 1981, 21-29. Re-examination of the dates from Virchow's samples suggests that they may fall into two main groups, one from the end of IIg and the other from early III. Median dates are 2190 and 2130 BC respectively.

100. *Radiocarbon* 20 (1978), 217.

101. See fn. 90.

102. *Radiocarbon* 13 (1971), 371f; 17 (1975), 204.

torical synchronisms dating Kültepe Karum II-Ib.¹⁰³

So far as I can see, this chronology effects a satisfactory reconciliation between relative stratigraphy, calibrated radiocarbon dates, and the network of historical synchronisms linking the Aegean sequence to Egypt and the Anatolian sequence to Mesopotamia. It fits quite happily with the chronology of the *Cam-*

bridge Ancient History. There is, of course, much concern at present about inter-laboratory variation in C14 dating, and it would be wise to take all radiocarbon-based chronologies with a pinch of salt. But the results here do seem so very satisfactory that perhaps the pinch need only be a small one.

103. Balkan 1955, 58-63; N. Özgüç 1968, 319; N. Özgüç 1969, 59-61; T. Özgüç 1986a, xxi; Karum II ca. 1900-1815; Ib ca.

1785-1739 or later.

BIBLIOGRAPHY

- Atkinson, T.D., Bosanquet, R.C., Edgar, C.C., Evans, A.J., Hogarth, D.G., Mackenzie, D., Smith, C. and Welch, F.B., 1904. *Excavations at Phylakopi in Melos Conducted by the British School at Athens*, London: Macmillan and Co.
- Balkan, K., 1955. *Observations on the Chronological Problems of the Karum Kaniš*, Ankara: Türk Tarih Kurumu Basimevi.
- Barber, R.L.N., 1984. 'The pottery of Phylakopi First City, phase ii (I-II)', in MacGillivray and Barber (eds): 88-94.
- Barnett, R.D., 1963. 'A review of acquisitions 1955-62 of western Asiatic antiquities, II', *British Museum Quarterly* 27: 79-88.
- Becks, R., 2005. 'Die nördliche Burgmauer von Troia VI', *Studia Troica* 15: 99-120.
- Blegen, C.W., 1963. *Troy and the Trojans*. London: Thames and Hudson.
- Blegen, C.W., Caskey, J.L. and Rawson, M., 1950. *Troy: Excavations conducted by the University of Cincinnati 1932-1938, I: The First and Second Settlements*, Princeton: Princeton University Press.
- Blegen, C.W., Caskey, J.L. and Rawson, M., 1951. *Troy: Excavations conducted by the University of Cincinnati 1932-1938, II: The Third, Fourth and Fifth Settlements*, Princeton: Princeton University Press.
- Blegen, C.W., Caskey, J.L. and Rawson, M., 1953. *Troy: Excavations conducted by the University of Cincinnati 1932-1938, III: The Sixth Settlement*, Princeton: Princeton University Press.
- Blegen, C.W., Caskey, J.L. and Rawson, M., 1958. *Troy: Excavations conducted by the University of Cincinnati 1932-1938, IV: The Seventh Settlement*, Princeton: Princeton University Press.
- Bossert, E.M., 1967. 'Kastri auf Syros: Vorbericht über eine Untersuchung der prähistorischen Siedlung', *AD* 22A: 53-76.
- Braidwood, R.J. and L.S., 1960. *Excavations in the Plain of Antioch, I: The Earlier Assemblages, Phases A-J*. (Oriental Institute Publication 61), Chicago: University of Chicago Press.
- Buck, R.J., 1964. 'Middle Helladic matt-painted pottery', *Hesperia* 33: 231-313.
- Caskey, J.L., 1955. 'Excavations at Lerna, 1954', *Hesperia* 24: 25-49.
- Caskey, J.L., 1957. 'Excavations at Lerna, 1956', *Hesperia* 26: 142-162.
- Caskey, J.L., 1960. 'The Early Helladic period in the Argolid', *Hesperia* 29: 285-303.
- Caskey, J.L., 1972. 'Investigations in Keos, Part II: a conspectus of the pottery', *Hesperia* 41: 357-401.
- Collon, D., 1987. *First Impressions: Cylinder Seals in the Ancient Near East*, London: British Museum Publications.
- Dörpfeld, W., 1902. *Troja und Ilion: Ergebnisse der Ausgrabungen in den vorhistorischen und historischen Schichten von Ilion 1870-1894* (2 vols), Athen: Beck & Barth.
- Easton, D. F., 1982. 'The Schliemann papers', *BSA* 77: 93-110.
- Easton, D. F., 1985. 'Has the Trojan war been found?', *Antiquity* 59: 188-196.
- Easton, D.F., 2000. 'Schliemann's 'Burnt City'', *Studia Troica* 10: 73-83.
- Easton, D.F., 2002. *Schliemann's Excavations at Troia, 1870-1873*. (Studia Troica Monograph 2), Mainz: von Zabern.
- Efe, T., 1988. *Demircihüyük III. 2: Die Keramik 2C: Die frühbronzezeitliche Keramik der jüngeren Phasen (ab Phase H)*, Mainz am Rhein: P. von Zabern.
- Ehrich, R.W., 1992 (ed.). *Chronologies in Old World Archaeology*³, Chicago: University of Chicago.
- Emre, K., 1963. 'The pottery of the Assyrian colony period according to the building levels of the Kaniš Karum', *Anatolia* 7: 87-99.
- Emre, K., 1966. 'The Pottery from Acemhöyük', *Anadolu* 10:

- 99-153.
- Evans, R.K and Renfrew, C., 1984. 'The Earlier Bronze Age at Phylakopi', in MacGillivray and Barber (eds): 63-69.
- Fischer, F., 1963. *Die Hethitische Keramik von Boğazköy*, (WVDOG 75, Boğazköy-Hattusa: Ergebnisse der Ausgrabungen IV), Berlin: Gebr. Mann.
- French, E.B., 1977. 'Ceramic relations between Troy and Mycenae', in *IVth International Colloquium on Aegean Prehistory at Sheffield, 12-16 April, 1977*. The proceedings await publication.
- Friedrich, C., 1997. 'Pinnacle E4/5 – Die Keramik der Periode II im Vergleich', *Studia Troica* 7: 111-258.
- Georgiev, G.I., Merpert, N.J., Katincarov, R. and Dimitrov, D.G., 1979. *Ezero: eine Siedlung aus der Frühbronzezeit*, Sofia.
- Goldman, H., 1931. *Excavations at Eutresis in Boeotia*, Cambridge, Mass.: Harvard University Press.
- Goldman, H., 1956. *Excavations at Gözli Kule, Tarsus, II*, Princeton: Princeton University Press.
- Hueber, F. and E. Riorden, 1994. 'Plan von Troia; und Troia – Freiliegende Ruinen und Besucherwege 1994', *Studia Troica* 4: 115-20.
- Joukowsky, M.S., 1986. *Prehistoric Aphrodisias* (2 vols) (Archaeologica Transatlantica III), Providence and Louvain-la-Neuve: Institut Supérieur d'Archeologie et d'Histoire de l'Art, Collège Erasme.
- Kâmil, T., 1982. *Yortan Cemetery in the Early Bronze Age of Western Anatolia* (BAR; International Series no. 145), Oxford.
- Klinkott, M., 2004. 'Die Wehrmauern von Troia VI - Bauaufnahme und Auswertung', *Studia Troica* 14: 33-86.
- Korfmann, M., 1986. 'Beşik-Tepe. Vorbericht über die Ergebnisse der Grabungen von 1984', *AA* 1986: 303-329.
- Korfmann, M. (ed.), 1987. *Demircihüyük: Die Ergebnisse der Ausgrabungen 1975-1978, II: Naturwissenschaftliche Untersuchungen*, Mainz: von Zabern.
- Korfmann, M., 1992. 'Troia – Ausgrabungen 1990 und 1991', *Studia Troica* 2: 1-41.
- Korfmann, M., 1995. 'Troia – Ausgrabungen 1994', *Studia Troica* 5: 1-38.
- Korfmann, M., 1996. 'Troia – Ausgrabungen 1995', *Studia Troica* 6: 1-64.
- Korfmann, M., 1999. 'Troia – Ausgrabungen 1998', *Studia Troica* 9: 1-34.
- Korfmann, M., 2004. 'Die Arbeiten in Troia/Wilusa 2003 – Work at Troia/Wilusa in 2003', *Studia Troica* 14: 3-31.
- Korfmann, M. (ed.), 2006. *Troia: Archäologie eines Siedlungshügels und seiner Landschaft*, Mainz: von Zabern.
- Korfmann, M. and Kromer, B., 1993. 'Demircihüyük, Beşik-Tepe, Troia – eine Zwischenbilanz zur Chronologie dreier Orte in Westanatolien', *Studia Troica* 3: 133-71.
- Korfmann, M. et al., 2001. *Troia: Traum und Wirklichkeit. Begleitband zur Ausstellung*, Stuttgart: Archäologisches Landesmuseum.
- Kromer, B., Korfmann, M., Jablonka, P., 2003. 'Heidelberg radiocarbon dates for Troia I to VIII and Kumtepe,' in Wagner et al. 2003, 43-54.
- Kühne, H., 1976. *Die Keramik vom Tell Chuera*, Berlin: Gebr. Mann Verlag.
- Lloyd, S. and Gökçe, N., 1951. 'Excavations at Polatlı', *AnatSt* 1: 21-75.
- Lloyd, S. and Mellaart, J., 1962. *Beycesultan I: the Chalcolithic and Early Bronze Age Levels*, London: British Institute of Archaeology at Ankara.
- Lloyd, S. and Mellaart, J., 1965. *Beycesultan II: Middle Bronze Age Architecture and Pottery*, London: British Institute of Archaeology at Ankara.
- MacGillivray, J.A., 1984. 'The Relative Chronology of Early Cycladic III', in MacGillivray and Barber (eds): 70-77.
- MacGillivray, J.A. and Barber, R.L.N., 1984. *The Prehistoric Cyclades: Contributions to a Workshop on Cycladic Chronology*, Edinburgh: Dept. of Classical Archaeology, University of Edinburgh.
- Manning, S.W., 1995. *The Absolute Chronology of the Aegean Early Bronze Age*. Sheffield Archaeological Monographs 8. Sheffield: Sheffield Academic Press.
- Mansfeld, G., 2001. 'Die Kontroll-Ausgrabungen des 'Pinnacle E4/5' im Zentrum des Bergs', *Studia Troica* 11: 51-308.
- Mee, C.B., 1978. 'Aegean trade and settlement in Anatolia in the Second Millennium B.C.', *AnatSt* 28: 121-156.
- Mee, C.B., 1978. 'The Mycenaeans and Troy', in L. Foxhall and J.K. Davies (eds), *The Trojan War: Its Historicity and Context* (Bristol: Bristol Classical Press): 45-56.
- Mellaart, J., 1959. 'Notes on the architectural remains of Troy I and II', *AnatSt* 9: 131-162.
- Mellaart, J., 1970. 'The second millennium chronology of Beycesultan', *AnatSt* 20: 55-67.
- Mellink, M.J., 1968. 'Excavations at Karataş-Semayük in Lycia', *AJA* 72: 243-259.
- Mellink, M.J., 1986. 'The Early Bronze Age in West Anatolia: Aegean and Asiatic Correlations' in G. Gadogan (ed.), *The End of the Early Bronze Age*, Leiden: E.J. Brill.
- Meyer, E., 1953. *Heinrich Schliemann: Briefwechsel. I. Band, von 1842 bis 1875*, Berlin: Gebr. Mann.
- Mountjoy, P.A., 1999a. 'The Destruction of Troia VIIh', *Studia Troica* 9: 253-93.
- Mountjoy, P.A., 1999b. 'Troia VIIa Reconsidered', *Studia Troica* 9: 295-346.
- Müller, K., 1938. *Tiryns IV: Die Urfirniskeramik*, Munich: F. Bruckmann.
- Nylander, C., 1963. 'The Fall of Troy', *Antiquity* 37: 6-11.
- Öktü, A., 1963. *Die Intermediate Keramik in Kleinasien*, Munich: W. u. J. M. Salzer.
- Orthmann, B. S., 1973. *Frühe Keramik von Boğazköy* (WVDOG 74; Boğazköy -Hattusa: Ergebnisse der Aus-

- grabungen III), Berlin: Gebr. Mann.
- Ottaway, B.S., 1973. 'Dispersion diagrams: a new approach to the display of Carbon-14 dates', *Archaeometry* 15: 5-12.
- Overbeck, J.C., 1984. 'Stratigraphy and ceramic sequence in Middle Cycladic Ayia Irini, Kea', in MacGillivray and Barber (eds): 108-113.
- Özgüç, N., 1968. 'New light on the dating of the levels of the Karum of Kanish and of Acemhöyük near Aksaray', *AJA* 72: 318-320.
- Özgüç, N., 1969. *Seals and Seal Impressions of Level IB from Karum Kanish*, Ankara: Türk Tarih Kurumu Basimevi.
- Özgüç, T., 1950. *Ausgrabungen in Kültepe, 1948*, Ankara: Türk Tarih Kurumu Basimevi.
- Özgüç, T., 1986a. *Kültepe-Kaniš II: New Researches at the Trading Center of the Ancient Near East*, Ankara: Türk Tarih Kurumu Basimevi.
- Özgüç, T., 1986b. 'New observations on the relationship of Kültepe with southeast Anatolia and north Syria during the third millennium B.C.', in J.V. Canby, E. Porada, B.S. Ridgway and T. Stech (eds), *Ancient Anatolia: Aspects of Change and Cultural Development: Essays in Honor of Machteld J. Mellink* (Madison, Wis.: University of Wisconsin Press): 31-47.
- Özgüç, T. and N., 1953. *Ausgrabungen in Kültepe, 1949*, Ankara: Türk Tarih Kurumu Basimevi.
- Parrot, A., 1968. *Mission archéologique de Mari IV: Le 'Tresor' d'Ur*, Paris: P. Geuthner.
- Pavuk, P., 2007a. 'New perspectives on Troia VI chronology,' in Bietak, M. and Czerny, E. (eds.), *The Synchronisation of Civilisations in the Eastern Mediterranean in the Second Millennium BC*. III. Proceedings of SCIEEM 2000 EuroConference, Vienna 2003. Vienna: Österreichische Akademie der Wissenschaften, 473-478.
- Pavuk, P., 2007b. 'What can Troia tell us about the Middle Helladic period in the southern Aegean?' in Felten, F., Gauss, W., Smetana, R. (eds.), *Middle Helladic Pottery and Synchronisms: Contributions to the Chronology of the Eastern Mediterranean XIV*, ed. Bietak, M. and Hunger, H.. Vienna: Österreichische Akademie der Wissenschaften, 295-308.
- Podzuweit, C., 1979. 'Neuere frühtrojanische Funde in Nordwestanatolien und Griechenland', *JRGZM* 26: 131-153.
- Rutter, J.B., 1993. 'Review of Aegean prehistory II: the prepalatial Bronze Age of the southern and central Greek mainland,' *AJA* 97, 745-797.
- Quitta, H., 1981. 'Zur Chronologie der Frühbronzezeitlichen Trojaschichten', in E. Hühns, (ed.), *Troja und Thrakien: Katalog zur Ausstellung* (Berlin-Sofia).
- Rutter, J. B., 1982. 'A group of distinctive pattern-decorated Early Helladic III pottery from Lerna and its implications', *Hesperia* 51: 459-488.
- Sazcı, G., 2005. 'Troia I-III, die maritime Troia-Kultur und Troia IV-V, die anatolische Troia-Kultur: eine Untersuchung der Funde und Befunde im mittleren Schliemanngraben (D07, D08),' *Studia Troica* 15, 35-98.
- Sazcı, G., 2007. *The Treasures of Troia*. Transl. J.D.C. Efe. Istanbul: Aygaz.
- Schirmer, W., 1971. 'Überlegungen zu einigen Baufragen der Schichten I und II in Troja', *Istanbuler Mitteilungen* 21: 1-43.
- Schliemann, H., 1870. *Unpublished Troy Excavation Notebook for 1870*, in Schliemann Archive, Gennadius Library, Athens.
- Schliemann, H., 1872. *Unpublished Troy Excavation Notebook for 1872*, in Schliemann Archive, Gennadius Library, Athens.
- Schliemann, H., 1873. *Unpublished Troy Excavation Notebook for 1873*, in Schliemann Archive, Gennadius Library, Athens.
- Schliemann, H., 1874a. *Trojanische Alterthümer: Bericht über die Ausgrabungen in Troja*, Leipzig: F.A. Brockhaus.
- Schliemann, H., 1874b. *Atlas trojanischer Alterthümer. Photographische Abbildungen zu dem Bericht über die Ausgrabungen in Troja*, Leipzig: F.A. Brockhaus.
- Schliemann, H., 1875. *Troy and Its Remains: a Narrative of Researches and Discoveries on the Site of Ilium, and in the Trojan Plain* (edited by P. Smith and translated by L.D. Schmitz), London: J. Murray.
- Schliemann, H., 1880. *Ilios: The City and Country of the Trojans. The Results of Researches and Discoveries on the Site of Troy and throughout the Troad in the Years 1871, 72, 73, 78, 79*, London: J. Murray.
- Schliemann, H., 1884. *Troja: Results of the Latest Researches and Discoveries on the Site of Homer's Troy and in the Heroic Tumuli and Other Sites, made in the Year 1882*, London: J. Murray.
- Schliemann, H., 1891. *Bericht über die Ausgrabungen in Troja im Jahre 1890*, Leipzig: F. A. Brockhaus.
- Schmidt, H., 1902. *Heinrich Schliemann's Sammlung Trojanischer Altertümer*, Berlin: G. Reimer.
- Seeher, J., 1987. *Demircihüyük: die Ergebnisse der Ausgrabungen 1975-1978, III, 1, Die Keramik 1*, Mainz am Rhein: P. von Zabern.
- Von der Osten, H.H., 1937. *The Alishar Hüyük: Seasons of 1930-1932* (Univ. of Chicago Orient. Inst. Publ., XXVIII-XXX: Researches in Anatolia, VII-IX), Chicago: University of Chicago Press.
- Wace, A.J.B. and Thompson, M.S., 1912. *Prehistoric Thesaly*, Cambridge: Cambridge University Press.
- Wagner, G.A., Pernicka, E., Uerpmann, H.P. (eds.), 2003. *Troia and the Troad: Scientific Approaches*, Berlin/Heidelberg/New York: Springer.
- Walter, H. and Felten, E., 1981. *Alt-Ägina III. 1: Die vorgeschichtliche Stadt*, Mainz: Verlag P. von Zabern.

Weninger, B., 1995. 'Stratified ^{14}C dates and ceramic chronologies: case studies for the Early Bronze Age at Troy (Turkey) and Ezero (Bulgaria),' in Cook, G.T., Harkness, D.D., Miller, B.F., Scott, E.M., 'Proceedings of the 15th International ^{14}C Conference', *Radiocarbon* 37/2, 443-456.

Wooley, C.L., 1934. *Ur Excavations II: The Royal Cemetery*, London/Philadelphia.

Zervos, C., 1957. *L'art des Cyclades du début à la fin de l'âge de bronze, 2500-1100 avant notre ère*, Paris: Editions 'Cahiers d'art'.