

THE FORM OF THE ORCHESTRA IN THE EARLY GREEK THEATER

(PLATE 89)

THE “orchestra” was essentially a dancing place as the name implies.¹ The word is generally used of the space between the seats and the scene-building in the ancient theater. In a few theaters of a developed, monumental type, such as at Epidauros (built no earlier than 300 B.C.), the orchestra is defined by a white marble curb which forms a complete circle.² It is from this beautiful theater, known since 1881, and from the idea of a chorus dancing in a circle around an altar, that the notion of the orchestra as a *circular* dancing place grew.³ It is not surprising then that W. Dörpfeld expected to find an original orchestra circle when he conducted excavations in the theater of Dionysos at Athens in 1886. The remains on which he based his conclusions were published ten years later in his great work on the Greek theater, which included plans and descriptions of eleven other theaters. On the plan of every theater an orchestra circle is restored, although only at Epidauros does it actually exist.

The last ninety years have produced a long bibliography about the form of the theater of Dionysos in its various periods and about the dates of those periods, and much work has been done in the field to uncover other theaters.⁴ But in all the exam-

¹ ὀρχεῖσθαι, to dance. Nouns ending in -στροα signify a place in which some specific activity takes place. See C. D. Buck and W. Petersen, *A Reverse Index of Greek Nouns and Adjectives*, Chicago, 1945, p. 347.

² For the date see A. von Gerkan and W. Müller-Wiener, *Das Theater von Epidauros*, Stuttgart, 1961, pp. 79-80. In the large theaters at Corinth (ca. 338-250 B.C.), Argos (late 4th century), Oiniadai (3rd century), and perhaps Ephesos (ca. 250 B.C.) the orchestra area also contained a curb which outlined a circle. At Corinth it was combined with trapezoidal wings, and at Argos with straight curbs at right angles to the skene and tangent to the circle at each side.

³ For an early statement see U. Wilamowitz-Möllendorff, “Die Bühne des Aischylos,” *Hermes*, XXI, 1886, p. 603; more recently N. G. L. Hammond, “The Conditions of Dramatic Production to the Death of Aeschylus,” *Greek, Roman and Byzantine Studies*, XIII, 1972, pp. 396-397, “All the Chorus needed was a flat, soil-covered space, circular in shape to fit the ‘circular’ form of dance. . . .”

⁴ The best survey of the controversies surrounding the early remains in the theater of Dionysos is given by W. B. Dinsmoor, “The Athenian Theater of the Fifth Century,” *Studies Presented to David Moore Robinson*, I, St. Louis, 1951, pp. 309-314. He returns to Dörpfeld’s early orchestra circle for the period from 500-421 B.C., solely on the basis of the material remains. For the seating in other theaters, see O. A. W. Dilke, “The Greek Theatre Cavea,” *B.S.A.*, XLIII, 1948, pp. 125 ff.; *idem*, “Details and Chronology of Greek Theatre Caveas,” *B.S.A.*, XLV, 1950, pp. 21 ff. C. Anti and L. Polacco, *Nuove Ricerche sui Teatri Greci Arcaici*, Padova, 1969 enforce the premise first argued by Anti (*Teatri Greci Arcaici*, Padova, 1947) that the original form of the theater was

ples of early date or simple form it has become clear that there are no remains, including the controversial material in the theater of Dionysos, which indicate that the orchestra was circular. Oscar Broneer was one of the first to make this clear in his review of Fiechter's study of the theater of Dionysos (*A.J.A.*, XLII, 1938, 596 ff.). He prompted my original investigation of the question some years ago.

In most early theaters no distinct structural device was used to define the orchestra as such. Usually the proedria row of the cavea bounds the area of the orchestra on one side, while a terrace wall limits it on the other. (In one theater there was a sunken orchestra with a wooden porch on the side opposite the cavea.) The level space between cavea and terrace wall was used as the surface for performing whatever dance or dramatic action took place. In the theaters where a gutter was constructed at the edge of the orchestra it limits the orchestra space on that side, but follows the line of the seats and was planned in relation to whatever form had been chosen for the cavea.

The conclusion from this might well be that an "orchestra circle" was not the original and primary element of the Greek theater around and out of which its later forms developed. However, it would be worthwhile to re-examine the remains of the early theaters that are preserved so that we may have a clear idea what the evidence is for the original form of the orchestra.

The earliest theater, or the earliest for whose date we have reliable evidence, is at Thorikos. T. Hackens has uncovered ceramic material of 525-480 B.C. in the same context as the wall supporting the first orchestra terrace, A-A on the plan, Figure 1.⁵ This is almost contemporary with the first theater of Dionysos at Athens.⁶ Pottery of the same date was found close to the cavea in the last layer of earth over the rock which had been leveled to make the orchestra terrace. The first stone seats are later because pottery from 480-400 B.C. was found in a test trench beneath the lower section of the seats. Hackens suggests a few rows of wooden seats for the first cavea.

The early terrace wall, A-A running east-west, is preserved for 14.00 m. but it was originally perhaps 7.50 to 9.50 m. longer.⁷ It has an average thickness of

rectilinear. New drawings and descriptions are given for the rectilinear caveas at Chaironeia, Oropos, and Argos; for Athens and Corinth the focus is primarily on problems of the skene. A good description and bibliography for early theaters and related monuments are provided by R. Ginouvès, *Le Théâtre à Gradins Droits et l'Odéon d'Argos*, Paris, 1972, pp. 59-76. He concentrates on rectilinear caveas and only mentions the form of the orchestra at the end, "the *choros* implies . . . the circular orchestra, to which a rectilinear cavea is poorly adapted." (p. 74).

⁵ T. Hackens, "Le Théâtre," *Thorikos 1965*, III, 1967, pp. 75 ff. The excellent actual state plan at 1:100 is reproduced in simplified form in Figure 1. The description and suggested reconstructions discussed below are based on this plan and Mr. Hackens' reports; cf. "Thorikos 1963: Le Théâtre," *L'Antiquité Classique*, XXXIV, 1965, pp. 39 ff.

⁶ Dinsmoor, *op. cit.* (note 4), p. 314.

⁷ Blocks fallen from the wall were found in a trench which extended 7.50 m. east of the pre-

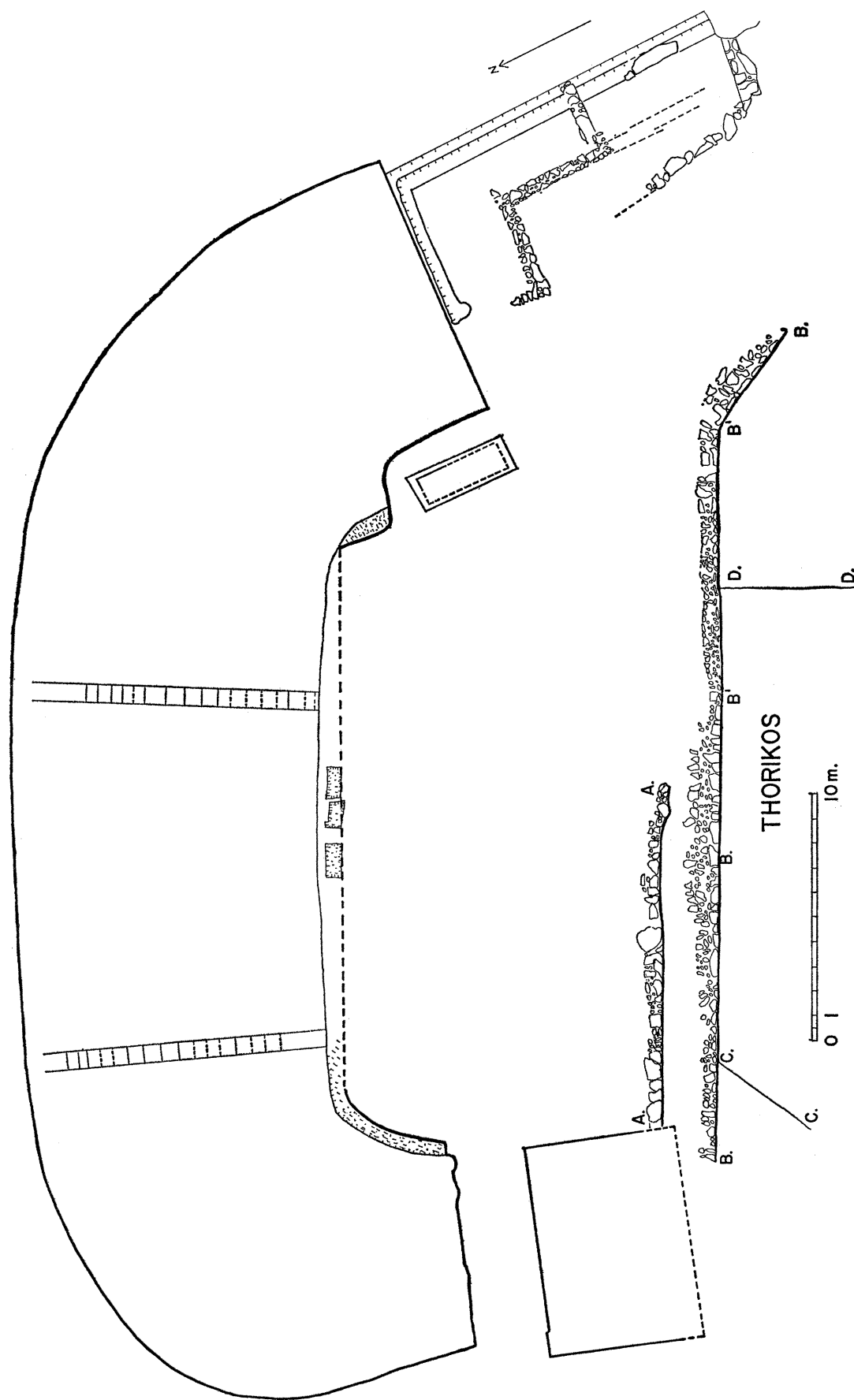


FIG. 1. Plan of the Theater at Thorikos, from Hackens.

0.70 m. and a maximum preserved height of 1.40 m. It would have been at least 1 m. higher to reach the level of the rock surface to the north, which drops off abruptly in front of the terrace wall. The earth next to the cavea has been too badly disturbed by earlier excavations to provide evidence for the line of the original cavea. It may have coincided with the center portion of the stone seats, which is about 19 m. long. This section is in rough alignment with the terrace wall as restored at its east end to a length of 21.50 to 23.50 m. The orchestra would thus have been about 13 m. deep (north-south) and 19.00-23.50 m. wide, limited by wooden seats on the north and the terrace wall (A-A) on the south. It is not possible to draw any conclusions about the sides or *parodoi* on the basis of present evidence.

At some time between 480 and 425 B.C. (Hackens suggests about 450) the theater was extensively remodeled. The orchestra was enlarged 2.25 m. to the south with the construction of a new terrace wall B-B which is about 29.80 m. long and has an average thickness of 0.80 m. at the ends and 1.50 m. in the center. Two short extensions at the ends helped to withstand the thrust of the terrace above. The stone seats of the lower cavea, the altar at the east, and the temple at the west belong to this period.

The irregular shape of the cavea is striking, especially its east wing. The lower edge begins with a step, curved at the west end and straight at the east, about 0.23 m. above the rock bed of the orchestra at the west. It would have risen even less above the surface of the orchestra if a layer of earth had been spread over the rock, as was most likely the case. Its function would have been to provide a footrest for the first row of seats, where several spaces around 0.70 m. wide are marked off in the center section and identified by the letters I, H, Θ, and K Θ. This was probably the *proedria*.⁸ In the east wing the step and the first two rows are interrupted to allow for a passage between the cavea and the altar. The step is cut in a straight line to the north of the altar, perhaps to harmonize with it. Thus, the north edge of the orchestra, as defined by the step, is irregular; the west side is curved, about 4.60 m. long (measured on the chord), diverging slightly toward the southwest; the center section is straight, about 22 m. long; the east side makes an angle at the northeast corner and is straight, 7.60 m. long, running southeast. The east end of the step and the west face of the altar formed the northeast side of the orchestra, although they are not exactly in the same line.

The cavea is divided by two stairways which converge slightly as they approach the orchestra. They are not placed equidistant from the center axis of wall B-B but rather from the center of the earlier wall A-A as restored. Although this may be a coincidence, it may also be that the position of the stairs was influenced by the plan

served east end, but they were not found in another trench which began 2 m. farther east; trenches S. 14 and S. 15 respectively on Plan V, Hackens, *Thorikos* 1965, p. 90.

⁸ Hackens, *Thorikos* 1965, pp. 76-77.

of the earlier seats. The irregularity of the eastern extension of the cavea could then have resulted from the desire to incorporate into the cavea an altar whose location was already fixed. The structure of the present altar seems to be contemporary with the seats,⁹ but its location could have been fixed by earlier religious practice. Thus, the builders seem to have had no particular interest in symmetry. The temple too, also built at this time, is not laid out in a line with the west wing of the cavea, but faces more to the northeast. The orchestra area defined by the elements described was 15.00 m. deep (north-south) and 22.00-27.70 m. wide (measured from the northeast corner of the temple foundation to the southwest corner of the altar base).

The theater of Dionysos presents even more difficult problems because the evidence for the first period is slight and confusing and there is little agreement on its interpretation. It seems to me that it would be most useful here to describe and illustrate (Pl. 89, a, b) the short stretch of terrace wall, on the basis of which all reconstructions of the early theater are made.¹⁰ It consists at present of six irregular stones running north-south, which lie about 8 m. east of platform T and just north of the breccia footing-wall of the later skene. It is designated R on Dörpfeld's plan, SM 1 on Fiechter's. The total length measured on the chord is 4.235 m. The stones are uneven in height and thickness; the largest stone, fifth from the south, is 0.46 m. thick and now is exposed to a height of 0.73 m. Dörpfeld shows it with a total height of about 0.85 m. The stone to the north of it is 0.67 m. thick, but its outside face is over half broken away, a fact which is not shown in the drawings of the wall nor in Bulle's photograph. The three stones at the south end, with a total length of 1.67 m., are smaller. They are clearly set so that their outside faces form a gentle curve. The next two to the north are placed in a straight line 1.89 m. long, as can be seen in Plate 89, a where a white line parallel to them has been given for comparison. The final stone at the north is 0.72 m. long but too little of the original surface is preserved to determine its relation to the other stones. Thus, the wall is composed of two segments, a straight one to the north 1.89 m. long and a curved one to the south 1.67 m. long.

The two other elements of Dörpfeld's orchestra circle, a short stretch of wall to the west, Q = J3, and a rock cutting in the east parodos, V, have been discredited

⁹ Hackens, *Thorikos* 1965, p. 93.

¹⁰ The photographs were taken by me in July 1974. The other photograph most commonly reproduced was taken by H. Bulle in 1923 and shows only the inside face of the wall, e.g. E. Fiechter, *Antike Griechische Theaterbauten*, V, Stuttgart, 1935, Abb. 27 (cited below as Fiechter, *Ant. Gr. Th.*). Dörpfeld made rather schematic drawings, W. Dörpfeld and E. Reisch, *Das Griechische Theater*, Athens, 1896, fig. 6; a later one is given by Fiechter, *Ant. Gr. Th.*, V, Abb. 28. Dörpfeld and his followers have considered this wall the primary evidence for the first orchestra circle. Fiechter believed that it was curved more at one end than the other and suggested that it was part of an irregularly curved retaining wall, *Ant. Gr. Th.*, V, p. 39, VII, Abb. 29, Taf. 16. On the terrace he restored a circular orchestra which he later omitted although only for the first period, *Ant. Gr. Th.*, IX, Abb. 6, 7. I owe the dimensions for the terrace wall to W. B. Dinsmoor, Jr., who very kindly measured the stones.

by Fiechter¹¹ but reinstated as part of the orchestra by Dinsmoor and Hammond.¹² Travlos omits them altogether.¹³ On recent examination J3, which is now composed of three stones with a total length of 1.85 m., appeared to me to be straight (Pl. 89, c). If it belonged to the old orchestra terrace wall, it was comparable to the northern segment of R = SM 1 and did not form part of a circle. The rock cutting, V, was not visible.

The other construction which can be associated with the early orchestra terrace is a slightly longer and better made straight stretch of polygonal masonry outside the west end of the later skene. It is marked D by Dörpfeld, SM 3 by Fiechter. Perhaps because it is obviously straight, there is almost universal agreement about this segment that it supported an approach to the orchestra terrace, constituting the western parodos. On the other hand it may also represent the west end of the irregular terrace wall, R = SM 1, which supported the orchestra on the east.

When Dörpfeld investigated the fill beneath the seats above the first diazoma he found that two layers of earth had been heaped up to increase the steepness of the auditorium. The first (lower) layer contained some sherds not much later than 500 B.C. and more which were earlier. The earliest cavea, then, if there were seats, was not much later than 500 B.C.¹⁴ No blocks have been identified that could belong to it and it is probable that the seats were made of wood. They would very likely have been straight and may have been arranged like the stone seats in the center section at Thorikos, which replaced the wooden cavea there. Thus the edge of the seats would have limited the orchestra area on the north; at the south it was bounded by the irregular retaining wall represented by SM 1 and perhaps SM 3. The whole may have looked somewhat as Travlos restores it in his figure 677, I, except for the continuous curve for the terrace wall, which we have seen is not warranted by the remains, and the seats which he places in an abbreviated semicircle.¹⁵

In the final years of the fifth century part of the cavea, at least, seems to have been rebuilt in stone. There are eleven blocks which were re-used in the Lycurgan theater and which are clearly seats belonging to a rectilinear cavea (Plate 89, d). Some bear inscriptions which have been dated, on the basis of Ionic letter forms, to 425-403 B.C.¹⁶ Dinsmoor makes the plausible suggestion that the two types of

¹¹ *Ant. Gr. Th.*, V, pp. 38-40; VII, pp. 58, 67.

¹² Dinsmoor, *op. cit.* (note 4), pp. 312-314; Hammond, *op. cit.* (note 3), pp. 405-410.

¹³ *Pictorial Dictionary of Ancient Athens*, London, 1971, pp. 537, 540.

¹⁴ Dörpfeld, *op. cit.*, pp. 30-31, fig. 7. See A. W. Pickard-Cambridge, *The Theatre of Dionysus in Athens*, Oxford, 1946, pp. 10-14 for a discussion of the evidence for wooden *ikria* which may have been set up in the Agora before dramatic performances were held in the sanctuary of Dionysos. See also R. Wycherley, *The Athenian Agora*, III, *Testimonia*, Princeton, 1957, pp. 220-221, nos. 721-728.

¹⁵ *Op. cit.* (note 13). See also Fiechter, *Ant. Gr. Th.*, IX, Abb. 6.

¹⁶ Dilke, *B.S.A.*, XLIII, 1948, p. 182. For drawings and a discussion by K. Lehman-Hartleben, see H. Bulle, *Untersuchungen an Griechische Theatern*, Munich, 1928, pp. 60-63, Taf. 6, 7.

blocks were used in two forms of seating, as he shows in his figure 3. However, in his plan in figure 2 he bends the straight seats around the edge of a circle by restoring a polygonal cavea. Moreover, on the plan he completes the polygon with the kind of basic circle which is described by Vitruvius for a later type of Greek cavea. Nothing in the remains appears to require such an arrangement, and it would perhaps be simpler to suggest that the original wooden seats, arranged in straight parallel rows, were partly replaced in stone without changing their alignment.

The foundation (C = aA) of an early retaining wall for the west side of the cavea is preserved a little to the south of the Lycurgan analemma. It is comparable to the west analemma at Thorikos and may be an indication that in the second period the cavea was extended at the sides by means of wings. The polygonal retaining wall

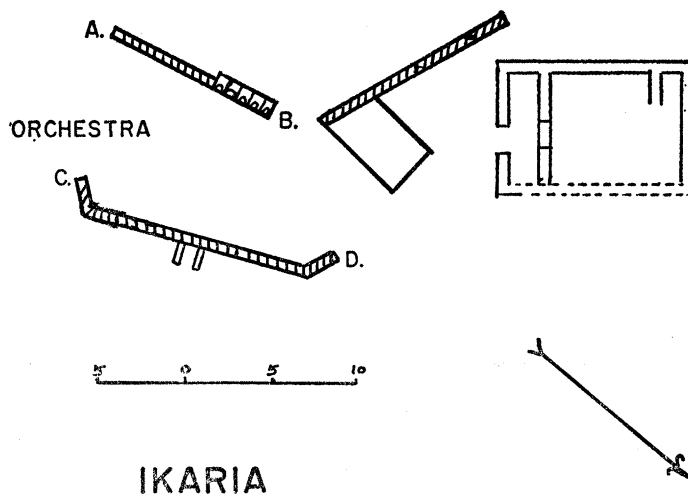


FIG. 2. Plan of the Theater at Ikaria, from Buck.

continued to support the orchestra terrace. The stoa, the breccia footing-wall, and platform T, often assigned to this period or earlier,¹⁷ appear now to belong to the middle of the fourth century B.C. on the basis of pottery found under the foundations of the New Temple of Dionysos.¹⁸

Contemporary with the second phase at Athens are the two small theaters at Rhamnous and Ikaria (Figs. 2, 3), which were excavated at the end of the nineteenth century. The remains in both places are slight and consist principally of a single row of proedria seats. At Ikaria there is a base 3.55 m. long, on which Buck found

¹⁷ Dinsmoor, *op. cit.* (note 4), pp. 309-310, 323-324.

¹⁸ P. Kalligas, *Ἀρχαιολογικὸν Δελτίον*, XVIII, 1963, *Χρονικά*, pp. 14-15; *Travlos, op. cit.* (note 13), p. 537 suggests that all the construction in the theater, which uses breccia (conglomerate stone), belongs to the same period. It would be helpful if more material could be found to give an archaeological basis for the date of these walls.

a pair of seats cut from a single block 1.30 m. long and a single seat of the same type.¹⁹ Another double seat of the same dimension completed the series. The line of this proedria was continued to the south by a foundation, perhaps for stelai bases as at Rhamnous. The entire front line of the cavea thus represented by the seats and stelai was about 10 m. long, and delimited the orchestra area on the west side. Opposite

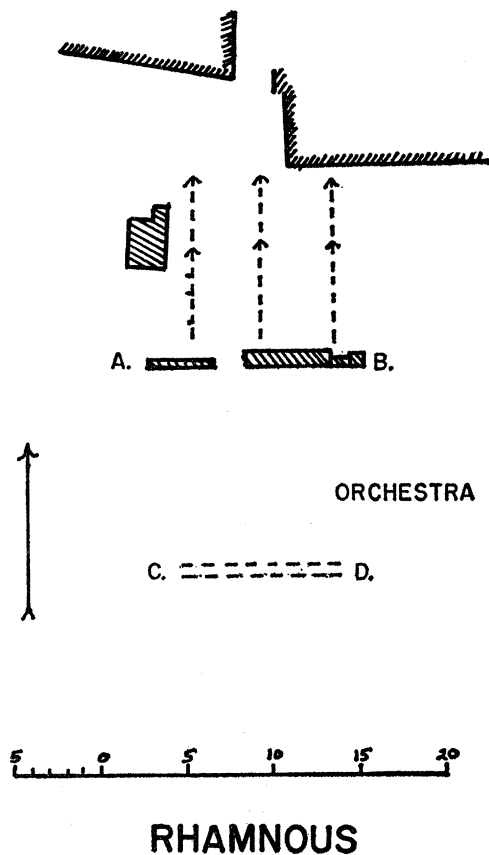


FIG. 3. Plan of the Theater at Rhamnous, after Bulle.

the cavea but not precisely parallel to it, nor on the same V axis, a retaining wall, about 13.30 m. long, supported the orchestra terrace.²⁰ As at Thorikos and Athens, regularity and symmetry do not appear to have been important to the builders. The orchestra would have been around 8 m. deep (east-west) and perhaps as much as 20 m. long (north-south).

¹⁹ C. D. Buck, "Discoveries in the Attic Deme of Ikaria," *A.J.A.*, V, 1889, pp. 176-178. Plan I shows the whole site and is the basis for our Figure 2. See also Dilke, *B.S.A.*, XLIII, 1948, p. 177; *idem*, *B.S.A.*, XLV, 1950, pp. 30-31.

²⁰ Dilke, *B.S.A.*, XLV, 1950, p. 30. The wall is marked C-D in Fig. 2.

An inscription of around 440 B.C. referring to choregic practices was found nearby,²¹ and it seems likely, in view of the similar, though more elaborate, arrangements at Thorikos and Athens, that the theater was built around the same time.

The situation at Rhamnous is much the same although with more highly worked seats. The remains of the proedria *in situ* are located 10.71 m. south of the fortress entrance and include a marble base made of three blocks.²² On a line with these to the east is an inscribed piece of marble and a base for a votive dedication. To the west is a series of bases with cuttings for stelai. The ensemble is about 13.00 m. long and represents the front edge of the cavea which delimited the north side of the orchestra, A-B in Figure 3. Nearby were found three marble thrones with an inscription to Dionysos across the front; and two more were seen in 1879, but have disappeared. A sixth seat of gray limestone was discovered in 1947. On the basis of symmetry Pouilloux suggested that there were seven thrones originally, dated to the fourth century by the inscription on the front.²³ The south side of the orchestra was presumably bounded by the terrace wall which Bulle showed on his plan 11.40 m. south of the proedria, but Pouilloux could find no trace of it. He did locate bases to the east, a foundation to the west, and a line of bases running east-west which he assigned to this area, but without a plan their exact situation and relation to the orchestra is hard to visualize. On the basis of Bulle's plan the orchestra would have been fairly regular, 11.40 m. deep (north-south) and around 13.00 m. wide.

At Tegea the remains appear to be more complete and the theater would seem to be of a more developed design than those just described. Unfortunately the whole site is buried under a public park and only a small segment was uncovered and then filled in during excavations in the 1920's. A plan and section of the trench with remains of the first phase are reproduced in Figure 4.²⁴ The first row, marked A-B, consists of a series of well-cut marble blocks 0.45 m. high and of about the same width. They bear an inscription of Kymbalos to Dionysos. In front of them runs a pebble walk 0.74 m. wide and then a terracotta gutter 0.47 m. wide marked A'-B'. Placed in front of the gutter is a row of thrones with backs, C-D; after a space of

²¹ *I.G.*, I², 186-187. Cf. Buck, "Inscriptions from Ikaria," *A.J.A.*, V, 1889, pp. 307 ff., no. 9. He dates it between 447 and 403 on the basis of letter forms; Dilke makes it "around 440 B.C.," *B.S.A.*, XLV, 1950, p. 31, but dates the theater to the fourth century because of its similarity to the arrangement at Rhamnous.

²² Bulle, *op. cit.* (note 16), Taf. I shows the blocks as he found them in 1928. Recent excavations have revealed additional material which is described and illustrated with photographs by J. Pouilloux, *La Forteresse de Rhamnonte*, Paris, 1954, pp. 73-78, pls. XXXIV-XXXIX. In the absence of a new plan, Bulle's is reproduced here as our Figure 3.

²³ *I.G.*, II², 2849, quoted in Pouilloux, *op. cit.*, p. 141, no. 25. See also Dilke, *B.S.A.*, XLV, 1950, pp. 28-30.

²⁴ R. Vallois, "Le Théâtre de Tégée," *B.C.H.*, L, 1926, pp. 164 ff. Our Figure 4 is drawn from fig. 23 and pl. IX. Pl. V-VII, plan of Hellenistic theater, shows earlier proedria almost parallel to skene.

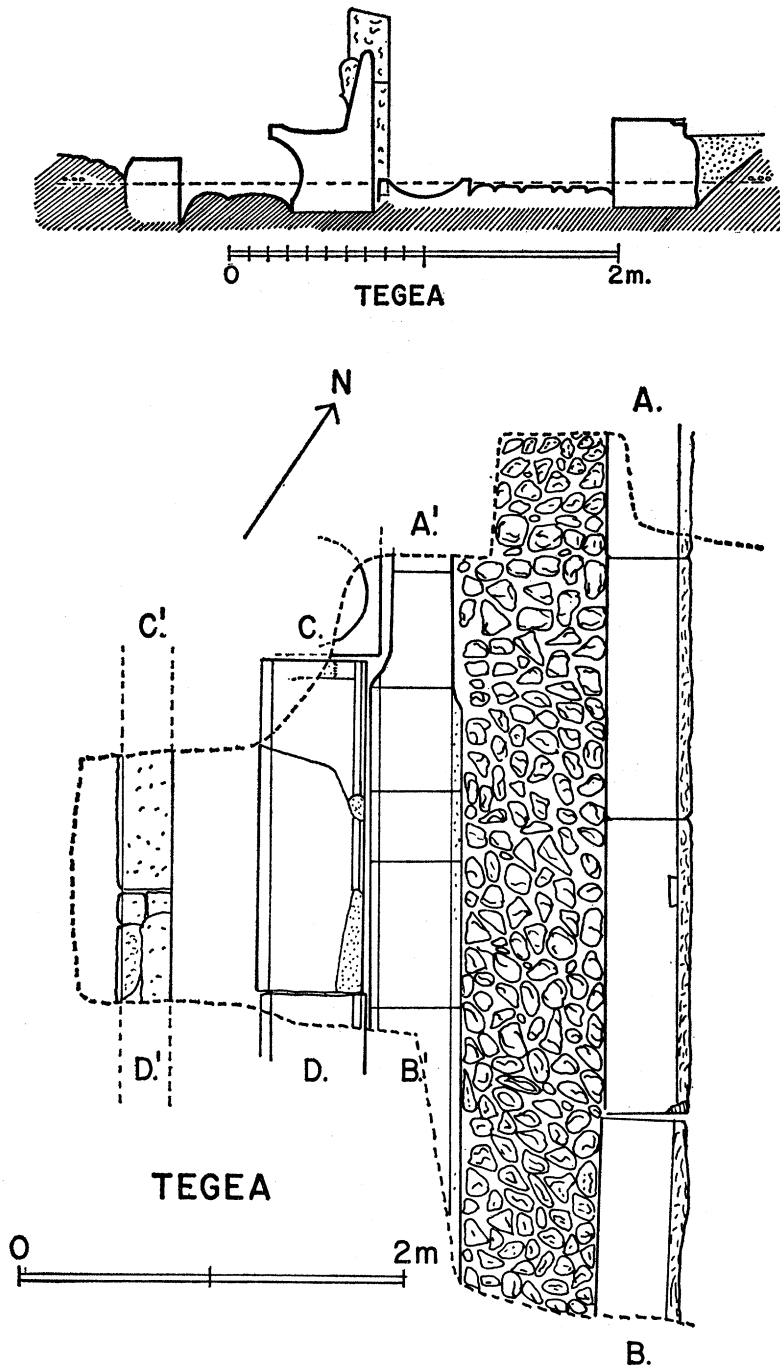


FIG. 4. Plan and Section of the Proedria of the Theater at Tegea, from Vallois.

about 0.45 m. there is a stone curb, finished on the top and east side (toward the seats). This last supported fill on the west side and clearly is part of a curb bordering the orchestra and defining it as a separate entity. The curb would have marked just the straight edge of the orchestra, as the later curbs at Epidauros, Corinth, Argos and Oiniadaï outlined an orchestra circle.

Here we see all the elements, proedria, walk, gutter and curb, which appear in the more developed, curved examples of theater architecture, but retaining the rectilinear form of the early theaters. The dedicatory inscription on the first proedria row seems to date from the fourth century.²⁵ The more elaborate thrones would have been added still later, probably together with the orchestra curb. More about the orchestra cannot be inferred; no scene building was found. However, it is important to note that the gutter and curb both follow the line of seats.

Another example of an early rectilinear theater has been found in the sanctuary of Poseidon at Isthmia. The remains are slight, as they lie beneath three later phases of the theater, but enough is preserved or can be deduced to warrant the tentative reconstruction in Figure 5. Portions of two gutter channels cut in the hard clay of the hill indicate the line of the cavea and the orchestra.²⁶ The channels are 0.40 m. wide and at present 0.10-0.20 m. deep, and the eastern branch slopes in the direction of a manhole at the southeast corner, which leads to an underground drain. The full length of the west side is not preserved but it would very likely have extended southward in the same way as the east side. A center section would have been needed to connect it to the manhole. The orchestra area on the side of the cavea was thus delimited by the gutter. On the opposite side stood a narrow wooden porch. The orchestra enclosed by these elements was 11.00 m. deep (north-south) and had a maximum width of 14.00 m.

Isthmia differs from the other theaters we have seen in that it had a sunken orchestra rather than an orchestra terrace. The orchestra was made lower than the natural slope to create better sight lines for the seats, and it must have been planned with a little more freedom and precision than the others because the builders undertook to shape the whole structure by a thoroughgoing excavation rather than simply by adapting their arrangement to a hillside. Nevertheless, the arrangement is not exactly symmetrical and exhibits the same disregard for regularity as the other examples. The theater seems to have been constructed somewhat before the fire which severely damaged the temple of Poseidon in 390 B.C. No pottery or other material that could serve to date them more precisely was found in connection with the cuttings themselves.

There are also early theaters with rectilinear or very slightly curved seating at Argos (mid-5th century B.C.),²⁷ at Syracuse (early 5th century ?),²⁸ at Chaironea

²⁵ Vallois, *op. cit.*, pp. 166-167, on the basis of letter forms.

²⁶ E. Gebhard, *The Theater at Isthmia*, Chicago, 1973, pp. 9-16, pls. I, III, figs. 6-8.

²⁷ Ginouvès, *op. cit.* (note 4), pp. 17-52.

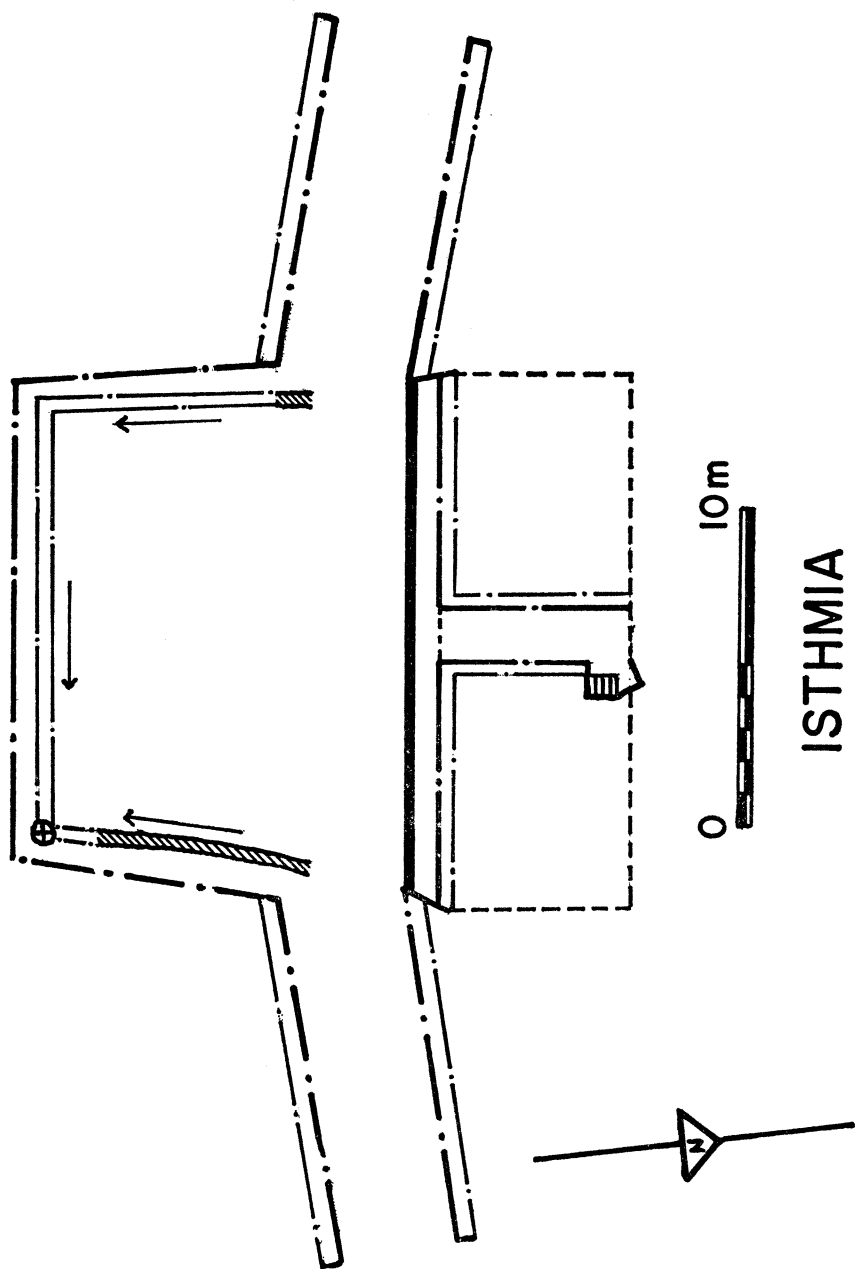


FIG. 5. Restored Plan of the Theater at Isthmia, first Greek Period.

(5th century),²⁹ at Morgantina (around 325 B.C.),³⁰ at Phlius (?),³¹ and perhaps at Cyrene.³² The orchestra area in these examples is bounded by the seats or a gutter (Phlius) following the line of the seats. On the opposite side the defining element (terrace wall or skene) is missing except at Phlius. In no case is there evidence that the orchestra existed as a separate entity with a distinct form within this space.

In conclusion, we see that there appears to have been no fixed shape for the orchestra in the early Greek theater. In no case is there evidence that the orchestra had a form different from that of the space defined by seats and terrace. This is most often a space with a slightly irregular rectilinear outline. In one example (Tegea) a curb was apparently added to make the edge of the orchestra more precise, and the form indicated is rectilinear. There is no incontrovertible evidence for an orchestra *circle* before the theater at Epidauros was built at the end of the fourth century B.C.

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²⁸ G. Gentili, "Nuovo esempio di 'theatron' con gradinata rettilinea a Siracusa," *Dioniso*, XV, 1952, pp. 122-130, Tav. I.

²⁹ Anti and Polacco, *op. cit.* (note 4), pp. 19-44.

³⁰ H. Allen, "Excavations at Morgantina, 1967-1969, Preliminary Report X," *A.J.A.*, LXXIV, 1970, pp. 363-364. The rectilinear cavea has not been found at orchestra level.

³¹ W. Biers, "Excavations at Phlius, 1972," *Hesperia*, XLII, 1973, pp. 114-120, figs. 5, 7.

³² G. Caputo, "Note sugli edifici teatrali della Cirenaica," *Anthemon*, Florence, 1955, p. 282, Tav. XXV; Anti, *op. cit.* (note 4), pp. 122-125, figs. 32, 33. They suggest a date in the fifth century B.C.



a. Looking north



b. Looking southwest

Polygonal retaining wall for the early orchestra terrace



c. Wall Q=J3, southwest face



d. Seat block re-used in west analemma. Front face to right

Theater of Dionysos, Athens

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