3. PHASING AND RECONSTRUCTION

3.1 W. Alzinger's Theories concerning a Hellenistic Bouleuterion

The discovery during post-war excavations of the city's Prytaneion and other buildings of a sacro-political nature along the northern edge of the Upper Agora led to a reinterpretation of this area as "Staatsmarkt", and suggested at the same time that the so-called Odeion might in fact have been, at least in an early phase, a Bouleuterion, an indispensable component of such ensembles in the Roman East.[79] E. Fossel's close study of the building, published in 1967,[80] seemed to support this theory and soon led to a systematic investigation designed to locate the pre-Augustan (i. e. Hellenistic) Council House which, as was assumed, would have underlain the standing high Imperial remains.[81] Important to this end was the discovery in a linear series of sondages of the front wall of a long one-aisled stoa beneath the Augustan Basilica Stoa (pl. 44, 1–2) which could be dated by ceramic finds from the foundations between 220 and 180 B.C.[82] Two trenches revealed "Baufugen" (construction breaks) in its rear wall, 28.80 m apart, which W. Alzinger took to be the front corners of the early Bouleuterion abutted by the back wall of the original basilical hall which incorporated it. This would seem to have represented the first phase of the Ephesian Bouleuterion.[83]

In his article of 1988,[84] Alzinger superimposed on an area plan the square outline of a Hellenistic Council House which he tied to the construction breaks in the rear wall of the early Stoa (pl. 44, 2). As an architectural model, he cited the early phase of the Odeion at Gortyn in Crete (pl. 56, 1)[85] which had almost identical outer dimensions, and emphasized, as Fossel had done, that the apparent spatial relationship between this early assembly hall and Stoa was characteristic for Hellenistic Bouleuteria in other cities.

Alzinger was certainly correct in insisting that a Bouleuterion pre-dating the Roman one was to be found in the Civic Agora, and very likely in the same location as the present one. Ephesos was a Greek city and every Greek city had a *boule* which needed a permanent meeting place for deliberative assemblies. It is unlikely that this city should have gone without a Council House between the time that this civic center was laid out under Augustus and the construction of the high Imperial building at least a century later. We cannot, however, assume, as Alzinger did, that a Bouleuterion dating to the time of Lysimachus remains to be discovered in the "Staatsmarkt", since it has not been proved that this was the civic center of Hellenistic Ephesos.[86] A fragmentary inscription cut in a block found in 1961 built as *spolia* into the north wall of the "Hestiasaal" has been cited quite reasonably as evidence for the existence of an early Bouleuterion. It honored a certain Zopyros, son of Balagros, who had made alterations to a Bouleuterion or provided furnishings. The inscription has been dated on paleographic grounds to the 1st century B.C.[87] and could thus refer to an Augustan building whose remains are yet to be identified.

W. Alzinger's published documentation, however, is not adequate to justify his conclusions. Conspicuously lacking, for example, is a detailed masonry study demonstrating that the two corners actually belonged to the same building. Excavation of the orchestra and the central stretch of the *pulpitum* in 1970 (S 6/1970; pls. 15, 1–2) and again in the orchestra in 1986 (pl. 15, 3) produced three early water channels running in a north-south direction, in addition to some fragmentary walls whose relationship to one another is unclear.

---

79 See above chap. 1 for the history of research on the Bouleuterion.
80 Fossel 1967, 72–81.
81 Alzinger 1988, 21–29.
82 According to amphora handles and lamps from Sondage 8/72, Mitsopoulos-Leon – Lang-Auinger 2007, 6.
83 Alzinger 1988, 23 figs. 4. 5.
84 Alzinger 1988, 21–29.
85 See below chap. 7.4.
86 Scherrer 2001, 61–68.
87 Eichler 1962, 41: Hellenistic; IvE 740B: undated; Alzinger 1988, 23: 1st century B.C.

The west wall of the Hellenistic Bouleuterion, according to Alzinger, can be followed running beneath the eastern stylobate of the Rhodian Peristyle (S 8/1968; pl. 44, 1). The east wall, however, has left no trace. Alzinger's sketch plan of the remains beneath the orchestra (pl. 15, 3) shows a gap about 1.50 m wide, precisely in line with the supposed southeast corner. Nor does it appear to have been picked up in the *pulpitum* sounding of 1970 (S 6/1970; pls. 15, 1–2).[88] The north wall does not take into account the probable steep rise of ground and is, in any case, entirely hypothetical.

The only conclusion to be drawn here is that while the Bouleuterion was built over earlier remains, these display, in their poorly preserved state, no features peculiar to the theater architecture appropriate to a Council House. If a Bouleuterion existed in this part of the city in Hellenistic times, as the Balagros inscription[89] suggests, it remains elusive.[90]

3.2 The Earliest Identifiable Bouleuterion

An understanding of the Bouleuterion as it appeared in its earliest coherent form is dependent upon a number of observations which have been presented in the description in the previous chapter. Most important is that the present building did not result, as E. Fossel implied – and as I accepted[91] –, from the secondary enlargement of a smaller structure; the vertical seams in the *analemmata* (pls. 25, 2; 26, 2) do not represent a significant lapse of time between the construction of the *ima* and *summa caveae* but probably a change in plans while construction was in progress.[92] Thus the entire *cavea* is essentially of one piece and is contemporary both with the outer retaining wall and the long scene wall with which it was bonded. Also critical for the phasing problem are the capitals inadvertently left in place on the jambs of the lateral stage doorways (SD 2 and 6) which were recut in the course of building the *scaenae frons* (pl. 36, 1). They indicate that the original stage doors had the same austere form as the south doors of the *parodoi* (SD 1 and SD 7; pls. 31, 1–2), and that the *pulpitum*, which rose to within 1.35 m of the lintels these capitals carried, was inserted into the earlier plan along with its rising *parodos* ramps. Finally, a major rebuilding can be seen in the tripartite construction of the four broad, column-bearing pedestals of the *scaenae frons*, in which are embedded the piers of an original, more severe *scaenae frons* (plan 4; pls. 36, 3; 45).

The first identifiable Bouleuterion, then, was defined by the massive retaining wall which incorporated an auditorium with a maximum seating capacity of over 1600. *Ima* and *summa caveae* were separated by a *diazoma* accessible by vaulted staircases from the outer ends of the *parodoi* below. The seating rose from the orchestra floor, and was defined by *analemmata* which must certainly have terminated in tall, molded statue bases at their inner ends.

---

88 The sondage is described in Alzinger's Fieldbook for spring, 1970, May 1–31. A box in the archive of the Austrian Archaeological Institute marked "Alzinger Unterlagen" contains a letter addressed to H. Vetters dated 27 May 1970 suggesting that excavations beneath the seating might eventually provide the only possibility of locating the Hellenistic Bouleuterion: "Im Odeion öffneten wir auch das Logeion, unter dem wir gleich zwei weitere hellenistische Fundamente entdeckten, die mit den seinerzeit freigelegten Resten zusammengehen, nicht aber mit unserer Baufuge. Ich hoffe da noch auf die Planaufnahme, unter dem Koilon sind m.E. die Möglichkeiten zu beschränkt." – The strata contained ten fragments of mold-made bowls, four fragments of so-called Ephesos-lamps, and two Roman coins: for the mold-made bowls, cf. Mitsopoulos-Leon 1991, 70–74, no. D2. D3. D10. D20. D27. D28. D37. D39. D48. D57; for the lamps, cf. Mitsopoulos-Leon, in: Mitsopoulos-Leon – Lang-Auinger 2007, 96-97 no. L75. L83. L84; 103–104 no. L156; for the coins, cf. S. Karwiese, in: Mitsopoulos-Leon – Lang-Auinger 2007, 193 no. 70/022 (Trebonianus Gallus) and no. 70/023 (Claudius II.). According to Ch. Rogl (via personal communication) the bowls were manufactured by the so-called PAR-monogram workshop and were produced no later than the last quarter of the 2nd century B.C. For this workshop, cf. Rogl 2001. The fragments of the so-called Ephesos-lamps are of an early type whose manufacturing started, according to A. Giuliani (via personal communication), in the last quarter of the 2nd century B.C.

89 IvE 740B; Alzinger 1988, 23–25 fig. 6.

90 The great wall uncovered by W. Alzinger at the east side of the orchestra may have belonged to an earlier Bouleuterion. Cf. pls. 14, 2; 15, 3.

91 Bier 1999, 16.

92 The addition of rows of seats is documented archaeologically for a number of theaters. Balty 1991, 459. 520. 536 note 517 discusses this type of enlargement for Anemurium, Cibyra, Dura Europos, and Apollonia. Gerasa (Balty 1991, 543) was enlarged from diameter of 42.30 m in its first phase to 58.60 m in the second phase. Balty follows J. D. Stewart in: Clarke et al. 1986, 229 that the *cavea* had six rows of seats in the original phase, for 800 people, which was doubled to fourteen rows.

The *ima cavea* (plan 2) had 15 rows of seats and was divided by radial stairways into five *cunei*. The *summa cavea* (plan 1) contained 10 rows and was subdivided in the usual manner by additional stairways into 10 segments of seating. At some later time, all of the stairways penetrated the curved podium wall providing multiple access points from the *diazoma*, but in this first phase the barrier was less permeable. The existence of dowel holes cut in the podium footing in line with the seventh stairway (U 7) proves that a dado slab was removed in order to extend this stairway down (pl. 24, 2), and we must assume that this was the case at other points as well. It is unlikely that the central stairway, which appears to be original, offered a sole means of access for several hundred persons, and one should expect at least two more, perhaps at the *analemmata*, but this cannot be proved, as the upper *cavea*, at these points, has fallen away.[93] Circulation was also impeded at the top of the *cavea* where the pilaster bases fronting the rear wall encroached on the narrow space above the seats (pl. 17), although this would not have been sufficient to preclude a practicable *diazoma* at this level.

The pilasters, which were applied to the rear wall at the top of the *cavea* in this building phase, are of some interest (plan 1; pl. 17). Not only do they comprise a major element of design, but they offer some clue to the approximate height of the rear wall and thus for the height of the *scaenae frons* and the building's roof. The precise positions of ten contiguous pilasters are known from cuttings in the upper *diazoma* which is preserved in the eastern half of the building. Their center distances were not entirely consistent, varying between 4.70 and 5.00 m with no evident pattern to indicate intentional augmentation or diminution. Towards the rear of the *cavea*, each pilaster was paired with an external buttress which occupied the same radial axis, but pilasters and buttresses diverged gradually as they approached the *analemma* wall. The series of pilasters seems to have terminated in front of the great lateral buttresses. On the east side, where a portion of the *diazoma* is preserved,[94] two dowel holes and their pour channels indicate that the wall footing projecting here was at least 0.25 m wide (pl. 17). The terminal elements it supported must have been either plain tongue walls or paired pilasters.

The series of re-used slabs fronting pilasters 7 through 12 (pl. 17) must have served, at one point in the building's history, as support blocks for column bases or wooden posts. All are partially embedded in concrete laid down in the course of the museum's restoration, but a drawing by W. Wilberg (pl. 7, 2) shows that they were shifted little if at all during this process. None bear cuttings to indicate the precise position of the supporting elements they carried, but the distance between columns and pilaster bases must have been between 0.25 and 0.35 m – too close to have allowed passage. That these free-standing supports were not part of the original plan but later intrusions is clear; some staircases were blocked by their erection while the upper *cavea*, already poor in access and circulation, was deprived of a practicable *diazoma*. The wall entablature of the original scheme, instead of extending into the auditorium as ressauts, would then have projected only slightly over each pilaster capital.

The single preserved pilaster base (pls. 20, 1–2) had a plinth 0.62 m wide and a bearing surface of 0.516 m. Allowing for a flare, the pilaster shaft would have been about 0.50 m wide at the bottom giving a shaft height of 4.00 m and a pilaster height of 4.80 m.

The addition of a full entablature with architrave, frieze and cornice would have added approximately 1.20 m, giving a minimum height for the ceiling of ca. 6.00 m above the upper *diazoma*.[95] On analogy with well-preserved theaters at Aspendos and Perge, the walls between the pilasters would certainly have been pierced by tall arched windows for the lighting and ventilation of the interior.[96]

The long scene wall, in its original phase (pl. 45), was pierced by five doorways of which the two end ones (SD 1 and 7; plan 6; pls. 31, 1–2) gave access to the outer ends of the *parodoi*, and the other three (SD 2, SD 4 and SD 6; plan 4) to the orchestra. Their jambs were surmounted by capitals with simple moldings (pl. 36, 1) on which rested either flat arches or normal lintels. All the doorways were 1.85 m high and had squat proportions (especially the central one which was almost square). The wall was built up in courses of marble, dressed only on the stage side. This masonry was interrupted at intervals by heavy piers of rough finish, each 1.10 m

93 See also above chap. 2.1.3.

94 It is located on the spot of pilaster 14, i. e. the inner side of Buttress 14.

95 Similar proportions are shown by the second story of the Celsus Library, where the lower diameter of the column measures 0.50 m. Cf. Wilberg 1943, 24 fig. 49.

96 See Meinel 1980, 124. Cf. also the theaters of Aspendos and Perge. For Perge s. Öztürk 2009, 58 pl. 13, 1. See also İnan et al. 2000, 285–340; De Bernardi Ferrero 1970, 147–157, esp. 152 fig. 162 pl. 30 a. For Aspendos see also De Bernardi Ferrero 1970, 161–174, esp. 163 fig. 174 pl. 32 a.

wide, which projected 1.25 m into the *parodoi* and stage. The wall was capped at a height of 1.75 m (above the *pulpitum*) by a continuous string course which projected forward over the piers. On it rested a column display of which only small portions of the corner elements remain (plan 5; pl. 45); molded pedestals, 1.585 m high, supported corner pillars that were 0.64 m wide and 0.40 m deep. The four heavy pillars in the *parodoi* were surmounted by similar pedestals which must have had free-standing columns set towards their front edges with pilasters behind, an arrangement that continued across the stage.

As the great pillars and the buttresses behind them on the corridor side were aligned with the buttresses in the curved rear wall, we can assume that the columnar façade had an upper story in this initial phase, and that its primary purpose was to support the southern end of the roof. The top surfaces of the surviving pedestals cannot be examined, as they are covered by later masonry. The column bases they carried must have been about 0.90 m (plinth) wide, supporting shafts with a lower diameter of ca. 0.70 m. A hypothetical projection of these dimensions based on Vitruvian principles and the architectural remains[97] gives an approximate height of 17.20 m for this façade, roughly equal to the projected height of the curved rear wall.

It is unlikely that this columnar architecture was entirely structural to the exclusion of sculptural decoration. There were, as yet, no projecting *aediculae*, but statues might have occupied niches in the stretches of wall between the piers. The recent discovery that at least a portion of the dressed wall surface bore inscriptions[98] proves that this surface was initially exposed. Holes for metal pins were cut into these inscribed surfaces, indicating that they were later concealed behind a revetment of marble sheets. The coarse piers bear numerous anchor holes for these pins in addition to patches of pink hydraulic mortar, and were probably covered from the beginning.

An important feature of this initial building phase are the open *parodoi* which can be reconstructed with certainty from shallow grooves high up in the large blocks of the outer retaining wall which were made to anchor the ends of the *analemmata*.

It is also significant that the building lacked a proper façade; the narrow corridor behind the stage (pls. 30, 2; 40, 1) served at this period merely as a catchment for rain water from the building's roof and that of the Basilica Stoa immediately to its south. Those entering the Bouleuterion through the five doors in the Basilica's north wall would have passed between short walls forming narrow passages of which traces have survived[99]. These would have been covered to provide protection from the torrents of water pouring down during periods of rain. Indeed, it is unlikely that the corridor's rough walls could be seen at all.

The doorways BD 1 and BD 5 in the rear wall of the Basilica Stoa contained no more than one step which actually comprised the footing for its wall (pl. 39, 2). The difference in floor level between the two buildings was only 0.50–0.60 m. There are no traces of the original doorways which would have been obliterated by the construction of the doorways of the subsequent phase.

The Bouleuterion in its original, pre-Vedius form, was large and austere. Its front wall was articulated by a series of tall pillars extending the width of the building, on which rested single columns in two stories whose main function was to help support the south end of the roof. The piers encroached both on the *parodoi* and on a vaguely defined stage area on the same level as the orchestra. The walls above the piers were not concealed by revetment paneling. They were made of marble and had a finely finished surface which bore at least one inscription from the time of Hadrian. It is likely that there were niches containing statuary as well.

(*L. Bier*)

3.3 The Conversion of the Scaenae Frons from Phase 1 to Phase 2

Remains of the first phase of the stage can still be distinguished among the remnants. On both sides of the stage doors SD 1 and SD 7 the piers supporting the columns of phase 1 are still left in place (plan 5; pl. 45). They are preserved up to the top where the column base would have been. Pedestals 1 and 6 in the area of the stage are lower (plan 4), but still show surface treatment and dowel holes for the course above. The four central piers

97 See appendix 2 for comparative measurements.

98 See below chap. 8 and the reconstruction drawing (plan 6).

99 See above chap. 2.3.6.

had to be truncated during the conversion. Nonetheless, some of their original components were left in place and can be seen in the later pedestals, which are now void of their marble revetment.
Only one column base (cat. 1-1; pl. 72) has been preserved from the Bouleuterion.[100] Its origin in the first building phase might well be possible. The same is true for the columns made from red granite (pl. 73), that have been ascribed to the *scaenae frons*: the general height of both stories remained unchanged (as did the overall height of the building), and therefore the proportions stayed the same. Also the capitals (pls. 74; 83, 3; 84) might originate from the older stage building. Nonetheless, the use of this particular capital type is also testified in the third quarter of the second century, which makes both options plausible[101].
The architraves of both stories bear the building inscription and certainly belong to the "Vedius-phase" of the stage (pls. 60; 61). This is not only suggested by the scarce remains of the building ornamentation,[102] but also by the new arrangement of the architraves in the second phase: the alternation of freestanding pieces with wall blocks did not allow the re-use of architraves from the first phase. The reworking of a fascia on some of the fragments from level 10 therefore cannot be explained by their re-utilization[103]. Maybe, it was executed as an afterthought, to provide more space for the letters of the inscription.
The question whether the roof over the whole building itself had to be removed during the course of the conversion has to remain unanswered.

(U. Quatember)

3.4 Renovations by Vedius in the Mid-Second Century

The overall effect of the original *scaenae frons* must have been decidedly old-fashioned by the mid-2nd century. Its architecture was flat. The series of identical columnar units was rhythmical but repetitive and without focus, producing an effect like that of the Hellenistic Council Houses, although on a larger scale. Vedius replaced this scheme with a more modern one that was already being used in Roman theaters in Asia Minor[104] (plan 6). His motive for this project was essentially to create an ensemble of inscriptions and statuary at the very center of the city's political life that would focus public attention on the close relationship which had developed between himself and the Antonine imperial family. Primary to his goal was the creation of an aediculated façade which would render his sculptural program more visible and emphatic by projecting it out towards those seated in the auditorium. Even the extension of the *summa cavea* to the scene wall contributed to this end (pl. 30, 3), as it made possible the inclusion of *tribunalia*, highly visible seats of honor traditionally reserved for prominent individuals, which Vedius himself may have occupied on occasion.

The renovation began with the construction of a *pulpitum*. A *proscaenium* wall (pls. 22, 1; 29, 2) of large, re-used blocks was built across the orchestra in line with the *analemmata*, displacing their terminal statue bases. An earth fill containing potsherds and other debris was dumped in behind, creating a platform which was worked around the wall segments, their piers and buttresses, and brought to the rear wall of the Stoa. Sloping ramps built in the *parodoi* (plan 5; pl. 25, 2) gave access from the lateral doorways. The three central doorways in the rear wall of the Stoa (BD 2, 3 and 4; pls. 38, 3; 39, 1) must date, in their present form, from this time, as the heights of their thresholds were clearly determined by the new rise in level of the stage and the corridor behind it (pls. 30, 2; 40, 1). Furthermore, it was probably during this phase that the deep drain received its present form, as the unshaped stones revetting its sides continue in a uniform technique to the newly raised surface.

The *proscaenium* was masked by a dado which rested on a low, molded base and supported a molded crown course (pl. 29, 2). The base molding (pl. 30, 1) extended around either the lowest row of seats of the original orchestra, or a continuous footing that fronted it. The orchestra had a diameter of only 7.80 m.

---

[100] See below appendix 1 (U. Quatember).
[101] See below chap. 5.
[102] See below chap. 5.
[103] See below appendix 1, level 10.
[104] On the earliest *scaenae frons* architecture in Asia Minor s. Berns 2002, 159–174; Burrell 2006, 437–469. Also the big theater of Ephesos featured a three-storied aediculated *scaenae frons* in Flavian times, cf. Öztürk 2005.

Virtually all theaters and theater-like buildings at this time had tall statue bases at the inner ends of their *analemma* walls, and it is unlikely that the Bouleuterion lacked them.[105] In buildings like this one, where the seating continued below the stage down to the orchestra, the bases occupied the higher level.

Once the *pulpitum* was completed, the builders could concentrate on the construction of the new *scaenae frons* (plan 6). The four central units of the old columnar architecture were taken down, and the piers on which they rested were shortened, then broadened by the addition of lateral segments built directly upon the raised stage (plan 4; pl. 36, 3). The new pedestals were masked by sheets of marble revetment which were inserted between tall base moldings and the molded crown slabs on which the columnar screen was built (pl. 36, 2). At the same time, two additional pedestals (1 and 6) were added at the ends for single columns. This provided the basis for a columnar screen with projecting *aediculae* surmounted by pediments. A full presentation of the evidence for the appearance of the Vedius *scaenae frons* will appear in the following chapter.

The construction of the lateral pedestals clashed with the design of the existing architecture of the *parodoi* and rendered it obsolete. The spaces between the old piers received walls of *petit appareil* (plan 5) which extended over the molded pedestals they carried to support rising *parodos* vaults for extensions of the summa *cavea* (plan 7). The barrel vaults fronting them probably supported *tribunalia*.

3.5 The Bouleuterion after Vedius

A number of changes, both major and minor, were made to the Bouleuterion subsequent to the alterations carried out by Vedius. They are difficult to date and do not readily resolve themselves into distinct phases.[106]

The most important and visible change to the building's design was the removal of the first two rows of seats and the construction of a curved podium wall to produce a sunken orchestra that was 9 m wide and 5.70 m deep (plan 2). It was now necessary to connect the orchestra with the *pulpitum*, and stairways were built at either end (pl. 27, 1). Direct access to the *cavea* was now cut off, necessitating the alteration of the *analemmata* at these points. It must, therefore, have been at this time that flights of low steps bordered by short parapets on their outer sides were carved in the blocks of the *analemma* walls (pl. 23, 1). That the sunken orchestra was not part of Vedius's project but was a later alteration, is proved by the base molding of the podium, which has a different profile than that of the *pulpitum* (pl. 30, 1). This was no minor difference which might have resulted from a superficial renovation; neither molding is applied, but cut in a course of blocks which supported both the dado and the molded element above it. The radial stairways that penetrate the podium in the north are clearly later additions, possibly afterthoughts, but this is less clear for the steps in the east corner which may be contemporary with the conversion (pl. 27, 1).

The second and fourth stage doorways (SD 3 and SD 5) are somewhat problematic. They were cut through the stage wall after the three principal entrances were built in the Vedius remodeling.[107] As the cornice blocks reused as thresholds rest on an undisturbed course of the original wall (pl. 35, 2), there can be no question of a continued use of these doorways from the first phase. A second indication that these doors are late additions comes from the brick arcades on the corridor side. Hard edges of brickwork show that the arcade did not front these bays but only the ones that held doorways SD 2, SD 4 and SD 6 (pl. 40, 1).[108]

There is no way of knowing whether the two sets of pivot holes operated at the same time or represent different phases in the building's use. In any case, the five-doorway plan becomes a common, if not standard, feature in theaters and theater-like buildings in the course of the later 2nd century.

Excavation photographs show that the arched, western doorway was blocked at one point by a wall built of stone, uncoursed brick, and pieces of *spolia* that was plastered on the inside (pls. 6, 1; 46, 2). Similar walls blocked the eastern arched doorway (pl. 32, 1), and the lower entrance to the western *vomitorium* staircase

---

[105] Remnants may probably be seen in the tall, square blocks abutted by the outer ends of the *pulpitum* stairways (pl. 27, 1). As will be seen below, these were later truncated when the orchestra was broadened in order to facilitate access from the stage to the *cavea*.

[106] See below chap. 4.

[107] There is also the possibility, that SD 3 and SD 5 are part of the Vedius *scaenae frons*. The differences in construction are to be expected, because the thresholds of SD 2, SD 4 and SD 6 were laid on packings in already existing openings, whereas those of SD 3 and SD 5 were laid directly on blocks of existing ashlar masonry in newly cut recesses.

[108] The absence of brick arcades next to SD 3 and SD 5 can also be explained by the fact that there are no corresponding doorways in the north wall of the Basilica. The brick arcades may have served as protective roofs against rain, see also above chap. 2.3.6.

(pl. 46, 3). Blocking of the *vomitoria* may have been a measure taken to prevent access to a vaulted structure that had fallen in or was in danger of collapse, but the walling up of the lateral doorways must have had the more intentional function of limiting access to the building from the sides to make a less open plan. The size of these doors points to a ceremonial nature and originally must have emphasized an organic relationship between the Bouleuterion and the monuments flanking it – the bath-gymnasium-complex on the east, and the Prytaneion on the west (pl. 1). The blocking of these doorways must date to a time when these relationships had ceased to exist, which would, in the case of the latter, have been when the Prytaneion was plundered of its building materials.[109]

This western doorway shows evidence of several phases of use even before it was walled up (pl. 43, 3). The first three steps leading up to it from the *parodos* were necessary to compensate for a difference in level of 0.75 m between the Bouleuterion and the Rhodian Peristyle which occupied a terrace 1 m above the level of the Basilica Stoa. At some point, the original threshold was partially covered by a fourth step – presumably in succession – into which were sunk two sets of cuttings for door pivots. To one of these belonged the iron fittings in the jambs which held a wooden door frame (pl. 40, 2).

It was probably also during the late use of the building[110] that the roughly-built buttresses of the scene wall and the wall itself were hidden by brickwork which formed a series of shallow alcoves of which five were pierced by the stage doorways. The Bouleuterion thus seems to have received a proper façade, an addition which indicates that the space between the two buildings no longer served merely as a drain but as a proper corridor (pls. 30, 2; 40, 1). It was probably in this phase that the drainage channel was carefully covered with re-used stone slabs to form a walkway.

The *synthronon* at the top of the *cavea* (pls. 17; 21, 1) clearly belongs to a very late stage in the building's use. Its curved wall extends 1.50 m beyond the outer face of the building's rear wall, and must rest on a ground level that had risen considerably from the original time of construction. The upper portions of the two central buttresses seem to have been moved further towards the center to serve as lateral supports for this apse, which may have been covered by a shallow semi-dome. The building was presumably no longer roofed. The central portion of the rear wall had either fallen down or was broken through. The series of pilasters articulating the rear wall from the original phase no longer existed. One of its supporting blocks was reused at a lower level.

There is no clear evidence for specifically Christian use. A cross carved in the outer face of the lintel above the doorway leading from the corridor to the east end of the east *parodos* (SD 7) merely reflects a practice common at Ephesos and other cities of Roman Asia Minor of neutralizing monuments of pagan origin.

3.6 The Roofing Problem (pl. 30, 3)

The methods used by the builders of the Hellenistic and early Roman periods to roof small, theater-like buildings are fairly well-known and generally agreed upon by those who have written about them, and hypothetical reconstructions have been worked out in some detail for a number of monuments, most notably at Miletus, Athens and Pompeii.[111] The outer walls of these rectangular structures almost certainly supported a series of identical trusses sometimes with the help of interior colonnades. The transformation of the *theatrum tectum* in the 1st century to a new form in which a semicircular auditorium was joined to a rectangular stage complex in imitation of the large open Roman theaters necessitated a complete rethinking of the roofing problem. A series of triangular trusses identical in size and shape no longer sufficed for an irregular plan which often presented great spanning distances towards the center. None of these roofs have survived but their existence can be postulated from several classes of evidence, as R. Meinel has amply demonstrated.[112] Lack of a drainage apparatus in the orchestra, the presence of iron bands used for joining segments of timber, quantities of roof tiles and carbonized wood can all suggest a permanent roof. But a hypothetical reconstruction of the roof's shape depends upon wall thicknesses and the form and deployment of heavy support structures.

---

[109] Alzinger 1970, 1645. For the fate of the Prytaneion in Late Antiquity, see Steskal 2010, 81–83. 197–202.

[110] The brickwork is hard to date. Nonetheless, missing structures in the Vedius renovation phase were filled in with petit appareil. Therefore the brickwork is probably a later addition.

[111] Meinel 1980, 40–42. 51–55. 101–112. 167–169.

[112] Meinel 1980, passim.

The well-preserved remains of the Bouleuterion at Aphrodisias,[113] built in the third quarter of the 2nd century, offer clear evidence for a roof based on eight great beams set about 4.60 m apart, resting on massive parallel buttresses in the curved rear wall and piers in the scene wall that were aligned with them (pl. 46, 1). A similar system should ultimately be restored for Ephesos where, however, the evidence is not quite as unambiguous. Meinel, who has made the most thorough study of the roofing problem for the Roman covered theaters,[114] nowhere suggests radial trussing as a possibility. There is some evidence for it at Patras where several buttresses along the outer wall are radially aligned with an inner series of buttresses lining a corridor wall, making Meinel's solution of parallel trusses here seem forced.[115] A similar system would appear theoretically possible for Ephesos also; one can envision fourteen identical trusses rising from the radial buttresses in the rear wall and meeting above the center of the orchestra to join a pair of slightly longer trusses anchored in the corner piers, producing a frame for a triangular hipped roof at the front. This model would seem to be contradicted, however, by two features. In such a system one would expect the pilasters articulating the rear wall to have been used to better advantage by making a visual link between structure and decoration. As we have seen, however, buttresses and pilasters were aligned only in the central portion of the building falling gradually out of phase towards the *analemmata*. The use of pilasters in connection with a radially trussed roof might also have suggested to the builders fronting columns which could have significantly reduced a formidable span. But the support blocks which W. Wilberg discovered on radial axes with the pilasters were (pl. 7, 1), as mentioned above, certainly later additions and were not connected with the original roof. It is possible that they were inserted in a late phase of the building to help support radial beams of a light roof or canopy that replaced the original roof after a collapse.[116]

The most important argument for parallel as opposed to radial trusses at Ephesos comes, however, from the position of the buttresses of the curved wall relative to the "piers" or buttressed segments of the stage. Parallel lines drawn on the plan bisecting six of eight of the broad pedestals and lateral piers and extended out perpendicular to the front wall intersect buttresses opposite (pl. 30, 3). This can hardly have been fortuitous, especially when considering that an average wall thickness between the buttresses of only 0.75 m gave little leeway in positioning the trusses. The two exceptions, buttresses 4 and 7, belong to a portion of the outer wall which collapsed at some later time and had to be rebuilt, and it is unlikely that these are in their original places. The distances between the trusses varied from 4.70–5.15 m with 6.30 m for the central bay. In the original phase, the spanning distance at the center was 28 m decreasing to 21 m at the sides. For actual beam lengths we must add to each an additional meter in the north and 3 m in the south both to provide support and to bring the front edge of the roof out over the corridor and its drain. In the second phase, the columnar architecture was crowned with pediments which did not provide a bearing surface (plan 6), with the result that the span increased to 29.0–29.2 m at the center and 22.0–22.2 m at the sides, but the roof would not have had to be rebuilt, as the shortened bearing surface would have sufficed.

Such lengths would not have been beyond the resources of builders and their patrons at Ephesos, especially during the prosperous time of Trajan's reign. Colossal timbers of 100 Roman feet (33 m) and more are known from inscriptions and literary sources.[117] In his account of exceptionally large trees, Pliny mentions a log of larchwood 120 Roman feet long with a uniform thickness of 2 feet that was exhibited as a marvel (*propter miraculum*) by Tiberius in Rome in a structure built for naval games where it lay until A.D. 59 when Nero used it for a temporary wooden amphitheater.[118] He also mentions a second beam, 100 feet long and 1.5 feet thick, that was displayed by Marcus Agrippa in a portico of the *Septae* in the *Campus Martius*.[119] This had been left over from his *diribitorium*, which Dio Cassius, writing in the early 3rd century, claimed was the largest building

[113] Meinel 1980, 323; Bier 2008, 144–168.

[114] Meinel 1980, 342–352.

[115] Cf. Miller 1988, 134–139; Meinel 1980, 269. 273–278.

[116] Riorden 1996, 104 assumes that the Odeion in Troy was unroofed because fragments of columns and cornices have been found in the north, suggesting that the building had a colonnade at the top of the *cavea*. The situation is similar in the theater of the Hadrianic Asklepieion at Pergamon. See Radt 1999, 233 fig. 176. Riorden says that this type of roofed gallery only occurs in roofless structures.

[117] See Meiggs 1982, esp. 225–255, and appendix 8, 472–477.

[118] Plin. nat. 16, 76, 200–201.

[119] Plin. nat. 16, 76, 201.

ever constructed under a single roof. Severely damaged by fire in A.D. 80,[120] it remained "open to the sky" in Dio's time "since it [the roof] could not be put together again,"[121] so we must not imagine that such technical feats were a commonplace during the Empire, even in Rome itself. But enormous timbers of larch, fir and pine did exist which clearly inspired awe and might well have been procured for an important civic building in this wealthy capital of Asia by a patron eager to demonstrate his generosity towards his city. Even if such long beams were not available, shorter lengths could be joined together using carpentry techniques well known to ancient builders.

The triangulated tie-beam trusses used by Roman builders were placed at intervals determined by specific support conditions such as the location of columns, piers or buttressing. As each open frame had to support tiles or other cladding in addition to its own weight, it depended on internal bracing consisting of smaller timbers joined, strapped or doweled together to neutralize the various forces inherent in the system such as compression, flexion (bending) and tension (pulling). In a typical truss the tie-beams, each made either from a single timber or from two timbers joined and strapped together, were secured to profiled corbels set in the tops of opposite walls. The feet of the sloping principal rafters were rabbeted into the ends of this beam and tied together at the top. A vertical "kingpost" hung from the apex, was doweled to the tie-beam preventing it from sagging. Drawings made of the great late-antique trusses of S. Paolo fuori le mura in Rome before they burned in 1823 show the king-post clasped between doubled tie-beams,[122] a system which Vitruvius describes for the roof covering his own basilica at Fanum.[123] Additional internal bracing timbers including horizontal, vertical and diagonal beams were used in various combinations. A very old roof in the monastery of St. Catherine in the Sinai,[124] dating from the 6th century, uses "scissor braces," in which diagonal struts connected at the bottom to the tie-beam and king-post join the principal rafters at right angles near the top, a technique most suitable for roofs of steep pitch. In the shallower roof hypothetically restored for the Bouleuterion at Aphrodisias, the maximum span of 27 m is divided into four equal parts by a king-post and two queen-posts.[125] The truss thus formed is made more rigid by joining the tops of the queen-posts with a collar beam.

Trussed roofs utilized a system of secondary timbers which permitted the actual covering of the area over which they were erected. A series of purlins, equally spaced, spanned the distance between the primary rafters, supporting in turn common rafters of smaller cross-section set at right angles to them. The cladding rested either on thin batons or on a "plating" made of boards. The type of cladding used played a part in determining a roof's design. Steep roofs, capable of bearing heavier weights, could be covered with metal sheeting which was fixed to the timbers. Roof tiles depended on gravity and friction and could be used only on relatively shallow roofs with a pitch of less than about 20%. The great quantities of roof tiles found during excavation of the Bouleuterion at Ephesos suggest that its roof belonged to the latter category.

The roofs of Basilical halls, the only type of large ancient roof we have real information about, consisted of identical units which were multiplied along an axis as required. Trusses for such buildings were isosceles triangles of uniform size composed of bracing members of standard arrangement and scantling. The class of buildings to which our Bouleuterion belongs added a further design factor in that it required trusses of different lengths. Furthermore, if all the trusses in a roof took the form of isosceles triangles, the ridge would have curved both in plan and elevation, presenting a decidedly awkward appearance. R. Meinel has assumed that only the longest central trusses had sides of equal length and that their apex determined the position of the ridge which bisected the plan parallel to the building's façade.[126] This is not the only possibility, however, and at Ephesos there is some evidence that another solution was employed.

A series of trusses would have had to be tied together at the top with short beams spanning the distances between them to provide lateral stability, and then anchored in the walls at both sides by diagonal struts in the same vertical plane. Assuming central trusses of isosceles pattern, such a roof ridge at Ephesos would have been aligned not with buttresses but with sections of screen wall only 0.75 m thick, which would appear too

120 Dio 66, 24, 2.
121 Dio 55, 8, 4.
122 Meinel 1980, 343 fig. 144,4.
123 Vitr. 5, 1, 6–10.
124 Galey 2003, 44–47. 94–95.
125 Cf. the design of the Aphrodisias roof, in: Meinel 1980, 323–326 fig. 137.
126 Meinel 1980, 349.

thin for such critical points. It is much more likely that the ridge was positioned over the center of the orchestra, about 0.75 m further south where it would have terminated in the two oversized buttresses near the *parodos* entrances. This solution seems all the more credible when we consider the projecting terminal elements[127] which have left traces in the upper surface of the *diazoma* (pl. 17). Whether paired pilasters or short tongue walls, these would have marked critical junctures between the roof and its supporting structures providing some extra support while producing a greater visual impression of stability. Struts connecting the apexes of the two lateral trusses with the massive corner piers would then have produced a broad hipped roof in the south.

Since our roof is an entirely hypothetical construct, there is no need for a lengthy discourse over whether or not there was a ceiling. Many Greek temples had coffered ceilings and the technique was used by the Romans as well. Vitruvius describes his basilica at Fanum,[128] however, as having an open beam ceiling and the great trusses of the Roman basilical churches were exposed as well. Seneca, writing in the mid-1st century, says "great timbers would not have been obscured by paneled ceilings".[129] The impressive structure of our Bouleuterion's roof, one of the largest in antiquity, must have strained both technical and financial resources and it seems unlikely that its builders would have chosen to hide it behind a paneled ceiling. Lacking any evidence to the contrary, an open timber roof is proposed here as well.

While the vast interior space of the Bouleuterion at this major phase of its building history, emphasized and augmented by an enormous open beam roof, was singularly impressive, the exterior was not. Its walls rose to a height of about 17 m with an additional 3–4 m added by the roof. The long Basilica Stoa fronting it, as restored by E. Fossel had a total height to the ridge of 47 ½ Roman feet (approx. 14 m) [130], so the Bouleuterion would have been largely invisible from the Agora and its surrounding buildings. Standing on the hills to the north and south, one could have looked down on its great expanse of tiled roofing without being able to fully comprehend its great size or visually appreciate the extraordinary feat of its construction. The great arched doorway leading in from the west (pl. 16, 1) would seem to suggest a monumental approach but, in fact, a visitor approaching from the *clivus sacer* along the rear wall of the Basilica would have found his angle of view narrowly limited first by the retaining walls of the Prytaneion's forecourt and by the Rhodian Peristyle. On the east, the Bouleuterion was hemmed in by the massive walls of the bath-gymnasium-complex, and, as the tall arched doorway on that side appears never to have been finished, it is possible that there was never access from this direction.

The single surviving terracotta pipe first noted by E. Fossel in the late brickwork constructed to produce a regular façade may have been part of a system which continued across the front carrying off rainwater from the main roof.[131] But this is the only pipe. None of the other piers show pipes and this piece must have been a fragment thrown in. The existence of a shed roof over the corridor would have required the incorporation of similar pipes in the rear wall of the Stoa, but as none appear, we must assume that the area remained open, and that rainwater from the Basilica Stoa flowed into the large drain through manholes in the late paving.

(L. Bier)

[127] See above chap. 3.2.
[128] Vitr. 5, 1, 6–10.
[129] Sen. epist. 90, 9 (transl. R. Gummere, Loeb Classical Library 2); Packer 1997, 443.
[130] Fossel 1982, 50. The total height from the stylobate was 12.73 m, from the level of the "Staatsmarkt" it was 14.06 m.
[131] Fossel 1967, 75.