# THE TEMPLE OF ARES AT ATHENS

The little that we knew about the temple of Ares,[1] before the Agora excavations, has been summarized by Judeich:[2] the topographical description by Pausanias (I, 8, 4), and a few inscriptions referring to the cult (*I.G.*, II², 948, 1072, 2953), formed the total sum of our knowledge. Sacrifices to Ares are mentioned in an honorary decree of 166/5 B.C. (*I.G.*, II², 948). A sculptured votive monument, of which a part of the inscribed base (*I.G.*, II², 2953) is reported to have been found at Menidi but may have been transported thither from Athens, was dedicated to Augustus and Ares apparently during the reign of Augustus. The archon of 116/7 A.D. was at the same time priest of Ares, according to a decree of this year (*I.G.*, II², 1072).[3] Pausanias, toward 165 A.D., saw the temple, containing its cult statue by Alcamenes, an Athena by Lokros of Paros,[4] and such later works as Enyo by the sons of Praxiteles (I, 8, 4), adjacent to the statues of Demosthenes, Pindar, and the Tyrannicides, of which the first is otherwise known as having been near the Altar of the Twelve Gods ([Plutarch], *X Orat. Vit.*, p. 847 A), the second as having been in front of the Stoa Basileios ([Aeschines], *Epis.* 4, 3), and the third as having been opposite the Metroon (Arrian, *Anab.* III, 16, 8). In modern times no temple remained visible in this section of the city apart from that building of many appellations, the " Theseum "; and so this in turn was assigned to Ares by Cyriac of Ancona in 1436 and by Ross in 1838.[5]

During the first campaign in the Agora, in 1931, a single Doric marble triglyph (Inv. No. A 64)[6] was uncovered in this region (Fig. 1). It comes from the corner

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[1] For permission to study these remains I am indebted to T. L. Shear, whose generosity greatly facilitated my effort during the summer of 1937 to assimilate the new architectural data of the Periclean age. I have also to thank Homer Thompson and John Travlos of the excavation staff for pointing out to me the various scattered portions of the temple, and Miss Lucy Talcott and Miss Alison Frantz for helping me with the Agora inventories.

[2] Judeich, *Topographie*², p. 349.

[3] Graindor, *Album d'inscriptions attiques d'époque impériale* (*Rec. Trav. Univ. Gand*, LIII-LIV, 1924), p. 28, no. 36, pl. XXVIII.

[4] The upper part of a Pentelic marble torso of excellent workmanship (Inv. No. S 654, illustrated in *A.J.A.*, XL, 1936, p. 199, fig. 14), was discovered in 1936 only 16 m. S. E. of the S. E. corner of the temple of Ares, 26 m. N. of the middle of the Odeion, in a Byzantine wall. Homer Thompson suggests to me that this may well be the actual statue by Lokros seen by Pausanias, and hence that it furnishes another clue to the identity of the foundations.

[5] Ross, *Das Theseion und der Tempel des Ares* (1852; Greek edition, 1838).

[6] A 64 (Agora inventory of architecture), found July 27, 1931, in late Roman level near northwest corner of marble altar, at a point which later proved to be 30 m. south of southwest corner of temple of Ares.

of a building; and if, following Cuvier's example, we were to attempt to restore the whole from this single part, we should infer that we were dealing with a temple of six by thirteen columns, measuring about 14.51 × 34.04 m. on the frieze,[7] erected in the age of Pericles (as indicated by the workmanship), but reconstructed four centuries later (as shown by the Roman dowel hole and the Augustan letters AO



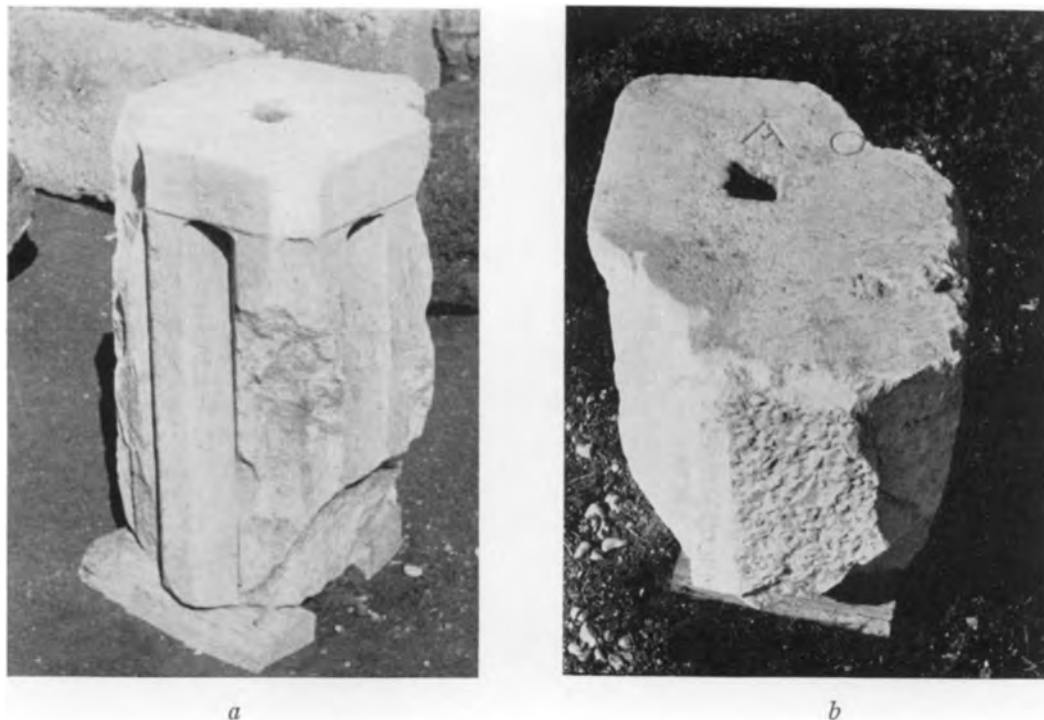*a*                                                    *b*

Fig. 1. Corner Triglyph (Inv. No. A 64)

on the top). As yet, however, there could be no suspicion that we were concerned with the temple of Ares.

In later years, even before the discovery of the temple foundations, several other scattered fragments of Pentelic marble (now known to have belonged to the temple) were turned up in the course of the excavations. Profiles from some of these were

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[7] The width of the triglyph is 0.372 m. across two glyphs and so presumably 0.558 m. across all three. Assuming normal proportions (triglyph two thirds of a metope width and so two fifths of a triglyph spacing, two tenths of a column spacing), the fronts would be 0.558 + (5 × 2.790) = 14.508 m., the flanks 0.558 + (12 × 2.790) = 34.038 m.; but these dimensions are subject to slight variation of proportions.

published in 1936 by Miss Shoe,[8] who noted the close similarity of the cornice mouldings to those of the " Theseum " and assigned them to the early part of the second half of the fifth century, though assigning the ceiling beam to the late fifth century. She conjecturally attributed the cornice and sima to the Stoa Poikile, at a moment when no such structure as the temple of Ares was expected.[9]

Finally, in the campaign of 1937, there appeared below Byzantine structures in the northwest quarter of the Agora, where the Metroon, the Altar of the Twelve Gods, and the approximate position of the Stoa Basileios have been located by the excavations, the east end of a large temple foundation which was immediately identified by means of the topographical description by Pausanias as the temple of Ares.[10] Its relation to the three reference points mentioned by Pausanias, and the size, shape, and easterly orientation, left no doubt as to its identity.[11] The outline of the foundation is indicated in the Agora plan of May, 1937.[12] Brief descriptions of the founda-

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[8] Shoe, *Greek Mouldings* (1936), p. 35, pl. LXXVI 2 (sima) ; p. 44, pl. XXI 10 (coffer) ; p. 45, pl. XXI 28 (ceiling beam) ; pp. 108, 158, pl. LIII 23, LXXIII 16 (cornice).

[9] At this point the provenances of the scattered fragments hereafter to be discussed may be classified according to the levels or strata in which they were discovered, and the directions or distances from the temple foundation. It will be seen that they occur in all levels beginning with late Roman (significant for the assumed date of destruction about 277 A.D.), and also in all directions immediately surrounding the temple foundation (significant for the identification). *Late Roman* levels, south of temple: Inv. No. A 64 (triglyph, 30 m. S. of S. W. corner), Inv. No. A 394 (sima, 45 m. S. of S. W. corner), Inv. No. A 698 (cornice, 28 m. S. of middle of flank, as curbing of late wall), Inv. No. A 699 (wall block, same place), Inv. No. A 701 (acroterion base, 20 m. S. W. of temple), Inv. No. A 704 (orthostate, 10 m. S. of middle of flank), Inv. No. I 2517 (wall block, 55 m. S. E. of temple). Late Roman levels, north of temple: Inv. Nos. A 238, 238a (cornice, 17 m. N. of middle of flank), Inv. Nos. A 239a, b (cornice, 19 m. N. of middle of flank), Inv. No. A 600 (capital, 25 m. N. of middle of flank), Inv. No. A 601 (anta cap, same place), Inv. No. A 602 (cornice, same place), Inv. No. I 690 (wall block, just N. of N. E. corner). " Wall of Valerian," south of Stoa of Attalos: Inv. Nos. A 387, 388 (ceiling beams and numerous coffer fragments not separately numbered) ; also a great number of coffer fragments, bits of ceiling beams, and parts of interbeam blocks extracted in 1939 and not separately numbered; also Inv. No. A 169 (epistyle fragment, from modern house wall just S. of Stoa of Attalos) and Inv. No. A 747 (triglyph fragment, from modern cellar E. of " wall of Valerian " and 150 m. S. of Stoa of Attalos) both undoubtedly come at second hand from the " wall of Valerian." *Byzantine* levels or foundations: Inv. Nos. A 238b, c (wall blocks, 20 m. N. of temple), Inv. No. A 238e (wall block, 100 m. N. W. of temple), Inv. No. A 700 (lion head, filling of cistern 130 m. S. W. of temple). *Turkish* foundations: Inv. No. A 248 (bottom step, 35 m. N. W. of temple), Inv. No. A 249 (euthynteria, same place). *Modern* levels and foundations: Inv. No. A 146 (euthynteria, 20 m. W. of temple), Inv. No. A 215 (euthynteria, 22 m. W. of temple), Inv. No. A 238f (wall block, at middle of N. flank), Inv. No. A 238d (wall block, reused as column base in latest 19th century stage of church of Vlasarou, 50 m. S. of temple), Inv. No. A 272 (lion head, in backfill of railroad wall 25 m. N. of N. W. corner), Inv. No. A 439 (sima, 70 m. S. E. of temple), Inv. No. I 315 (wall block, middle of N. flank). *Uncertain* contexts: Inv. No. A 263 (wall block, left by Dörpfeld in area of new Bouleuterion), Inv. No. A 702 (anta cap, 15 m. S. of middle of flank), Inv. No. A 896 (epistyle fragment, in marble dump 90 m. S. of temple).

[10] Communication by T. L. Shear of June 12, 1937.

[11] See below, p. 43.                     [12] Shear, *Hesperia*, VI, 1937, p. 360, pl. IX.
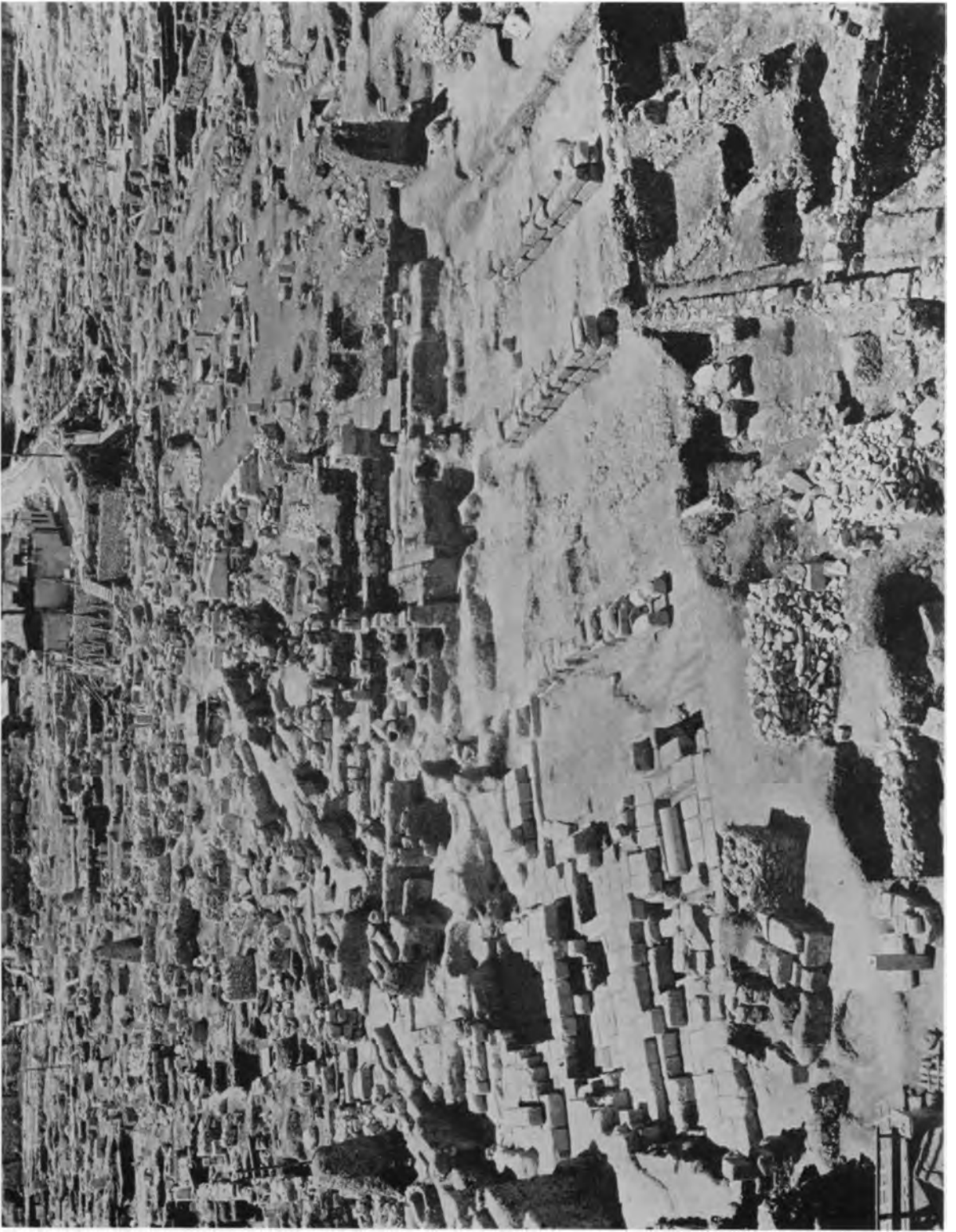
Fig. 2. View of Foundations from North

tions and of some of the scattered remains have appeared in the annual reports of the 1937 campaign.[13] For the following more detailed description of the foundations (Figs. 2-4) we are indebted to Homer A. Thompson.

## THE FOUNDATIONS

" The place of the temple is marked by a great rectangular pit, the bottom of which lies as much as 2.60 m. below the contemporary level of the market square. Blocks, a good many of them, remain in place in the east half of the depression; near the middle of its east end three blocks of the topmost course of poros lie undisturbed. Toward the west the blocks have been stripped away down to a packing of rough stones in the bottom of the pit. But in this part the edges of the scar are sharply defined and permit of fairly accurate measurements. Scores of poros blocks, obviously from this building, were recovered along with a few of the marbles from its super-structure in the mediaeval foundations which overlay and surrounded the site of the temple. The foundation cutting has an overall east to west length of 37.25 m., and a width of 17.30 m.

" In preparing his foundation, the architect exposed bedrock throughout the whole rectangle. In the mid-part of the area he encountered a ridge of rock running north to south and sloping down toward the north. This he cut away to a maximum depth of ca. 1.50 m. along the south side, leaving only irregular islands where he found the rock firmer and more trustworthy. Over most of the area he next laid a packing of broken stone: irregular masses of Acropolis limestone, of the size of a man's head on the average, bedded in gray clay. The mean thickness of the layer is 0.30 m. On top of this packing, and more rarely on the dressed bedrock itself, were set the blocks of the first regular course.

" Between the broken-stone packing and the marble euthynteria were five courses of squared poros blocks. This foundation would seem to have been uniformly massive; i. e., no special underpinning can be distinguished for walls or columns. Each successive course was spread like a blanket over the entire area; its top was then levelled and the next course laid. The courses are alternately high and low, the top and bottom series both being low. This alternation was effected by laying the blocks flat in one course, on their edge in the next. The heights of the courses from the bottom upward as measured at the east end are 0.40 m., 0.50 m., 0.39 m., 0.585 m., and 0.43 m. Within each course little regularity was observed in the placing of the blocks; i. e., their long axes lie almost indiscriminately north and south or east and west, this because of the variety in the dimensions of the material employed.

" The foundation blocks that remain were all used at second hand in their present

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[13] Shear, *A.J.A.*, XLI, 1937, pp. 177-178; XLII, 1938, pp. 1-4; *Classical Weekly*, XXXI, 1938, p. 76; Riemann, *Arch. Anz.*, 1937, pp. 102-103.

position. This is clear from the indiscriminate distribution of hard and soft material and from the lack of correspondence in joint surfaces. Most but not all of the surviving blocks may be supposed to derive from a single earlier building. They comprise chiefly two large groups. The first is of soft gray poros; the joint surfaces of the blocks are but slightly worked and their outer faces are rough. These obviously came from deep down in the original building. The second group is of harder gray poros;



Fig. 3. Temple of Ares: Foundations at East End, from the Northeast

the joint surfaces are finished with careful anathyrosis and the edges of the exposed faces are lightly drafted. We may suppose that these blocks formed the upper and outer parts of the earlier foundation. There are besides a few large blocks of hard gray poros drafted on all four exposed corners: hence from piers or monument bases. I note but a single piece of marble (a broken block of Hymettian), and only three blocks of conglomerate.

" Against the east front of the temple foundation there remain in place two poros blocks from the north side of a supplementary stairway or ramp. Their tops lie 0.035 m. below that of the uppermost poros course of the main foundation; and they project 1.30 m. from the face of that course. This bedding, if centered on the front

of the temple, had a north to south length of *ca.* 5 m. The two surviving blocks are both reused and similar to many in the main foundation.

" To the east of the building have appeared the poros foundation blocks of a substantial bedding, conceivably an altar. For its further exploration it must be freed of a maze of superincumbent mediaeval foundations.

" The foundations of another large monument may be distinguished against the south side of the temple at its east end. The uppermost poros course of the temple foundations was cut back 0.20 m. to admit the north edge of the monument. At ground level the base measured *ca.* 3.08 m. × 4.10 m. Its lower courses and its upper core are of conglomerate, its euthynteria of hard gray poros. Nothing remains above the euthynteria.

" The problem of ground levels around the temple is at present puzzling and cannot be resolved until the area has been more thoroughly exposed. It may be said, however, that the ground level contemporary with the building has been well established along the east front. It is flush with the top of the topmost surviving (fifth) course, which may be supposed with assurance to have carried the marble euthynteria. Along the south side of the building the level slopes gently down westward; along the entire north and west sides the contemporary level would seem to have been *ca.* 1 m. lower than that to the east. No trace of retaining walls has yet been observed.

" The original working of the great majority of the reused foundation blocks is worthy and characteristic of the fifth century. The variety and the distribution of the poros are also typical of that century and may be paralleled in the Periclean buildings on the Acropolis, in the Hephaisteion, and in the Stoa of Zeus. The question of when the blocks reached their present position is another matter. In the hope of securing evidence, a certain amount of the broken-stone packing has been removed. The pottery from among the stones is remarkably consistent and may be placed in the second half of the fourth century. Practically none of it is earlier than this period and probably none of it need be counted later than the end of the century. With it were found eleven silver-plated bronze coins of Athenian type which have been dated in the third quarter of the fourth century (*Hesperia*, IV, 1935, p. 339; V, 1936, p. 123). Of the same period are three fragmentary dikast's name-plates of bronze, which also appeared among the stones of the packing. This material provides a *terminus post quem*, though not necessarily an immediate *terminus*; nor should this evidence be pressed until more of the filling has been examined.

" Other considerations suggest a later date for the laying of the foundation on the present site. The practice of using a *deep* packing of broken stone beneath foundation walls is known for many periods. In the Agora, for example, it has been noted in the first Temple of Apollo of the mid-sixth century before Christ, in the Tholos of *ca.* 470 B.C., in the second Temple of Apollo of the third quarter of the fourth century, in the stoa that borders the ancient road to the north of the Hephai-

steion of the Augustan period. More unusual is the thin layer of small stones beneath the first course of squared blocks. The best parallels thus far available in the Agora are a large monument base beneath the exedra in front of the Stoa of Zeus, and the exedra to the east of the Tholos.[14] Both of these are to be dated in the early Roman period, to about the turn of the era. Apart from the broken-stone packing, the use of a massive, continuous underpinning may be regarded as an indication of a late



Fig. 4. Temple of Ares: Foundations at Middle of North Side, from the Northwest

date. It stands in striking contrast, for instance, with the individual foundations beneath each separate wall and colonnade of the Hephaisteion. The difference is scarcely all due to the less favorable ground conditions of the market square. The relatively high ground level demanded by the foundations of the present temple would also be more appropriate to the early Roman period than to the fourth century before Christ. The balance of the evidence here reviewed thus seems to favor a date in the early Roman period for the laying of the temple foundations in their present position."

[HOMER A. THOMPSON]

[14] For the base, *Hesperia*, VI, 1937, p. 58; the exedra to the east of the Tholos will be published in a forthcoming supplement of *Hesperia*.

Accurate measurements of the foundations are unobtainable because of the irregularity of the protruding and receding blocks, and also because the west foundation is entirely missing, so that the evidence is limited to the rough bed cutting in hardpan. Thus the dimensions necessarily vary in accordance with the differing locations selected for measurement; the width has been variously obtained as 16.76 m., 16.87 m., and 16.95 m., the length as 36.25 m., 36.28 m., and 36.36 m.[15] Such differences are to be expected, and are immaterial to the ensuing discussion. Even with the minimum dimensions of 16.76 × 36.25 m. it is clear that the temple was slightly larger than the " Theseum," of which the bottom step measured 15.180 × 33.241 m.

It may be assumed from these dimensions that we are concerned with a hexastyle temple; and this assumption is confirmed by a hasty calculation which also determines the number of columns on the flanks and even the approximate column spacing. For the excess of length over width of foundation varies from 19.30 m. (36.25 — 16.95 m.) to 19.60 m. (36.36 — 16.76 m.). From this it appears that, if there were only twelve columns on the flanks (giving six more axial spacings than on the fronts), the axial spacing would have been about ⅙ (19.30/19.60) = 3.22/3.27 m.; but if there were thirteen columns on the flanks, the axial spacing would have been about ⅐ (19.30/19.60) = 2.76/2.80 m. The former calculation is much too great for the front, since 5 × 3.22/3.27 = 16.10/16.35 m. (slightly diminished by angle contraction) would allow little more than 0.205/0.425 m. on either side for the radius of the column and the projections of the steps and foundations. This, of course, is absolutely impossible. The second result is more suitable, since 5 × 2.76/2.80 = 13.80/14.00 m. (slightly diminished by angle contraction) would allow a little more than 1.38/1.525 m. on either side for the column radius and these projections. Thus, from the foundations alone, we are entitled to believe that this was a temple with six by thirteen columns, and with a column spacing of approximately 2.76/2.80 m. (Fig. 5).

The conditions thus derived from the foundations accord too exactly with the inferences drawn from the marble corner triglyph (A 64) to be the results of pure coincidence. The discrepancy between the Periclean design of the triglyph and the Augustan letters parallels the discrepancy between the Periclean date of the cult statue and the early Roman rebuilding of the foundations. This association is confirmed by the dimensions. For, as we have seen, the triglyph would seem to demand a frieze rectangle of about 14.51 × 34.04 m., thus permitting foundation projections of 1.105/1.16 m. on the fronts and 1.125/1.22 m. on the flanks,[16] reasonable in amount

[15] Shear gives 16.76 × 36.36 m. (*A.J.A.*, XLII, 1938, p. 1), correcting his previous dimensions of 17 × 34 m. (*A.J.A.*, XLI, 1937, p. 177), obtained while the west end was still partly obscured by superincumbent foundations. The other measurements here quoted are my own, obtained at different times on the east front and south flank.

[16] I. e., ½ (36.25/36.36 — 34.04) = 1.105/1.16 m., and ½ (16.76/16.95 — 14.51) = 1.125/1.22 m.
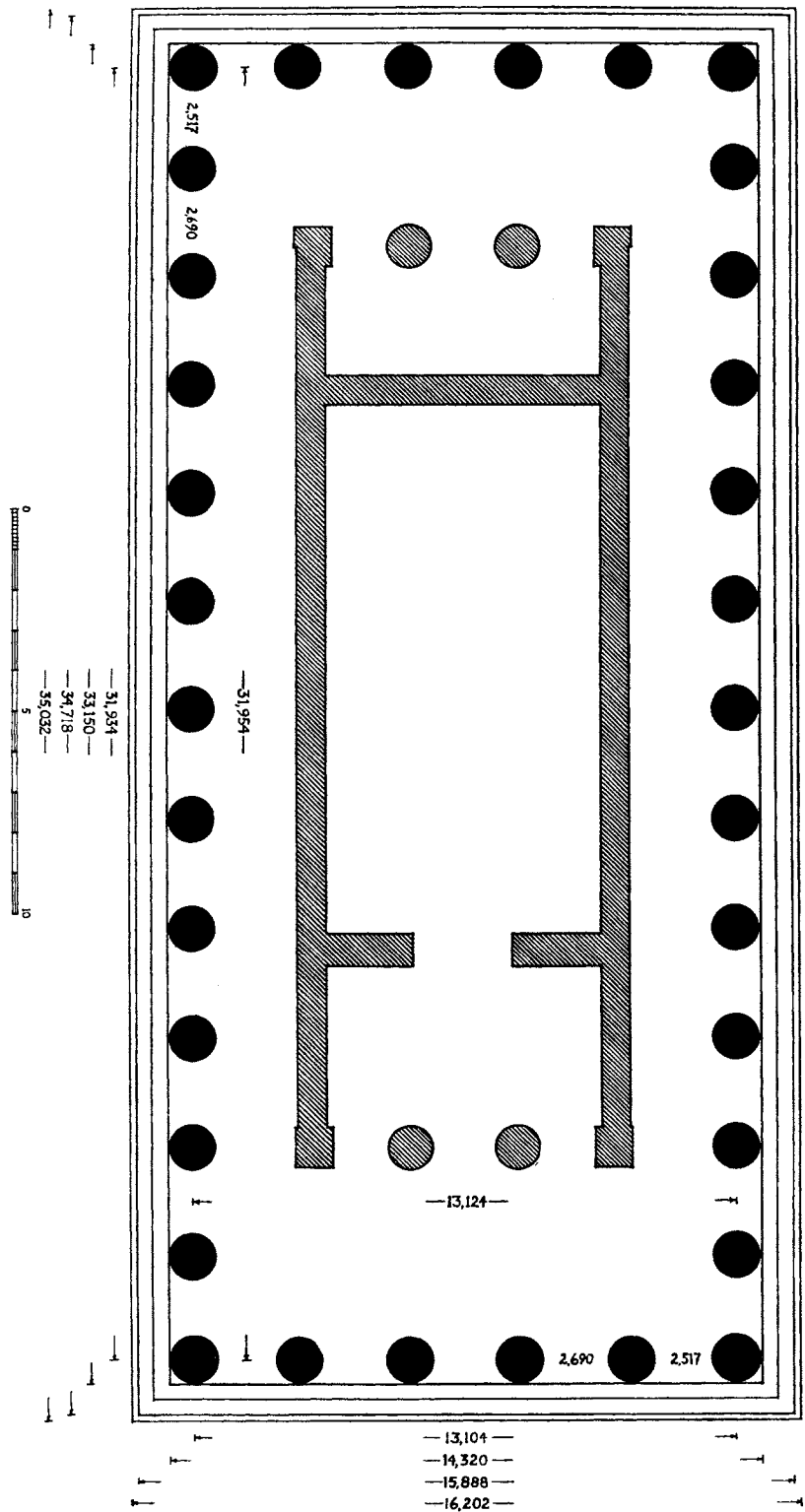
Fig. 5. Restored Plan, Temple of Ares

and logical in their equality. Conversely, the triglyph width required by the axial spacing derived from the foundation, $\frac{1}{5}(2.76/2.80) = 0.55/0.56$ m., agrees exactly with the actual triglyph width 0.558 m.; and this width, furthermore, is slightly greater than the triglyph widths in the "Theseum" (0.519 m.) and at Sunium (0.518 m.), just as the slightly larger foundation dimensions would require.
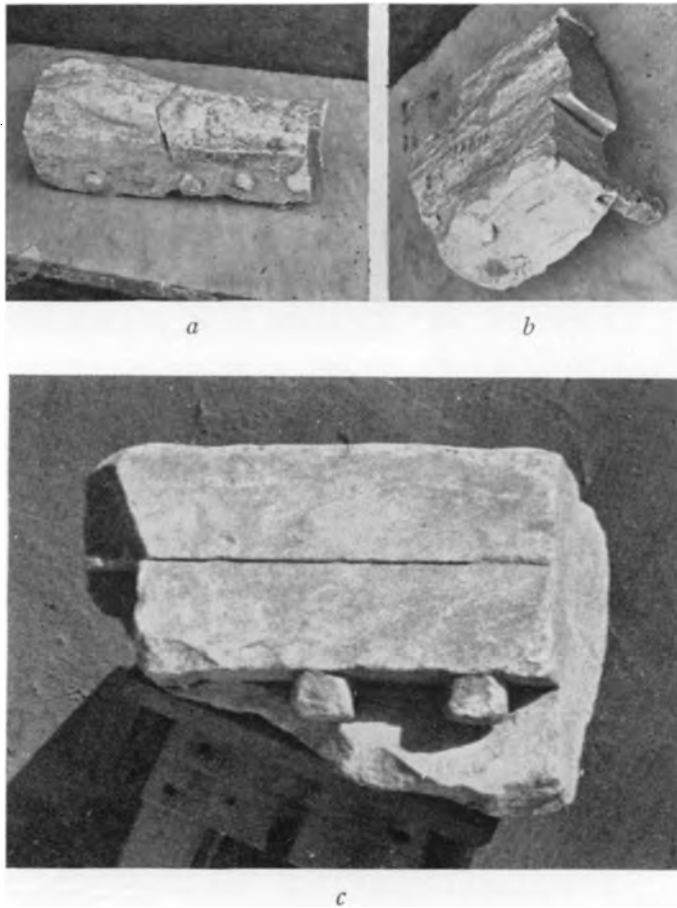


Fig. 6. Epistyle (Inv. No. A 169 [= c]) and Cornice
Fragments (Inv. Nos. A 239a [= a]
and A 238a [= b])

A more accurate calculation of the axial spacing may be derived from other fragments of the superstructure. In addition to the corner triglyph of 0.558 m., another fragment of a triglyph, with the mason's letter Θ cut on its top (Inv. No. A 747), measures 0.180 m. across one glyph, suggesting a total width of 0.540 m. A half regula on an epistyle fragment (Inv. No. A 169), likewise with traces of mason's letters on the top, has a length of 0.259 m. (Fig. 6c). A mutule on a

fragment of cornice (Inv. No. A 238) retains its complete width of 0.555 m., while another (Inv. No. A 239a) has its complete width of 0.554 m. (Figs. 6a, 9). The average result from all of these measurements is $\frac{2}{7}$ (1.920)[17] = 0.5485 m. for the triglyph or mutule width. But, since epistyle joints were often slightly off-centered, it is preferable to disregard the epistyle and to calculate the average width as $\frac{1}{3}$ (1.661)[18] = 0.554 m. The only extant complete via, on one of the above-mentioned cornice fragments
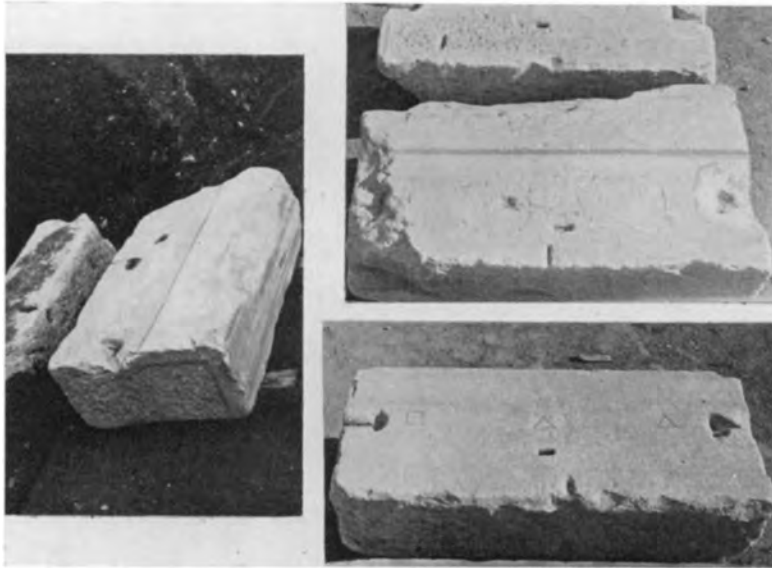


Fig. 7. Bottom Step (Inv. No. A 248) and Euthynteria Block
(Inv. No. A 146)

(A 238), has a width of 0.139 m.[19] Thus the mutule spacing would be 0.554 + 0.139 = 0.693 m., implying a triglyph spacing of 2 × 0.693 = 1.386 m. and so a column spacing of 2 × 1.386 = 2.772 m. (A, Fig. 8), agreeing with the rough calculations from the foundations.

From the stepped platform there survive four marble blocks (two in Fig. 7), one a fragment of the euthynteria (Inv. No. A 249), while the three others are of complete length, two belonging to the euthynteria (Inv. Nos. A 146, and A 215), the other to one of the steps, presumably two, between euthynteria and stylobate (Inv. No. A 248). All four pieces now lie to the west of the temple. The three com-

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[17] I. e., 0.372 + 0.180 + 0.259 + 0.555 + 0.554 = 1.920 m. should be equivalent to 3½ triglyph widths.

[18] I. e., 0.372 + 0.180 + 0.555 + 0.554 = 1.661 m. should be equivalent to 3 triglyph widths.

[19] Another fragment (A 239b) was found with A 238 and retains traces of the back of a via above the lower fascia of the cornice. The via was again 0.139 m. wide, but is probably the same via as that preserved on A 238 (see below, on the reconstruction of this corner cornice block, Fig. 9).

plete blocks retain mason's letters of the same Augustan type as those on the entablature fragments. From these facts, and because of the identity of the workmanship, there can be no doubt that the platform blocks came from the same temple to which we must attribute the triglyph, epistyle, and cornice fragments. The three complete lengths are 1.349 m., 1.343 m., and 1.343 m.; obviously these were intended to be uniform, and we may accept the average result, 1.345 m., for purposes of calculation. The positions of the dowels and pry cuttings on their tops indicate that the blocks above them in every case broke joints exactly at their centres. Consequently we seem to be dealing with a regular jointing system based on units of 1.345 m. and, with blocks of uniform length both under the columns and midway
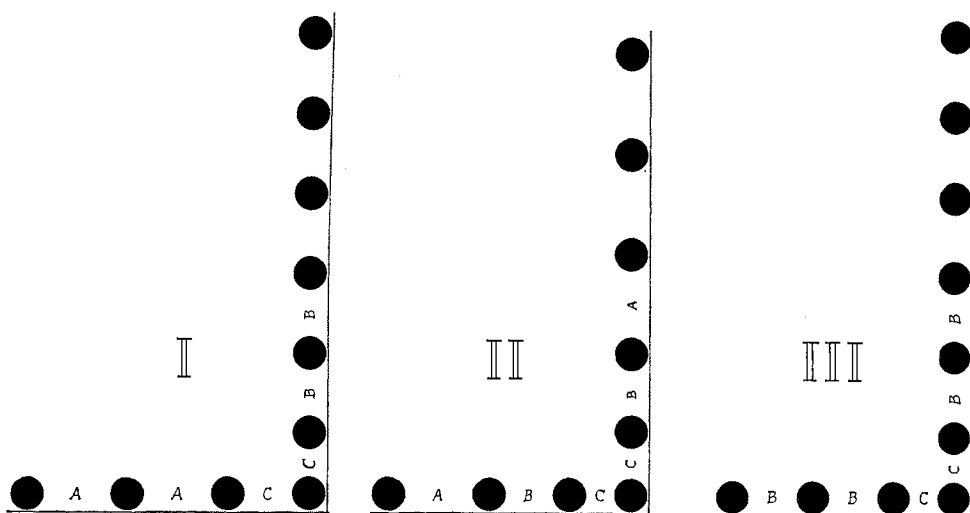


Fig. 8. Three Systems of Column Spacings

between them, to have a column spacing of only 2.690 m. (B, Fig. 8), slightly less than the rough calculations from the foundations.

Minor differences from the approximate result yielded by the rough foundations would be negligible. The real difficulty in the present case is the difference between the two accurate calculations of 2.772 m. and 2.690 m., a difference of 0.082 m. which demands explanation. For such an explanation it would seem that we must choose one of three solutions, herein designated as I, II, and III (Fig. 8).

I. In the first place, it would be possible to assume that there were different spacings on front and flank, 2.772 m. and 2.690 m. respectively. The difference of 0.082 m. would not be unreasonable in such a case. The width of the temple, measured on the entablature, would then be reckoned as $0.554 + (5 \times 2.772) = 14.414$ m., the length as $0.554 + (12 \times 2.690) = 32.834$ m. Thus the rough foundation would project 1.72/1.76 m. from the entablature on either front, but only 1.17/1.27 m. on either

flank.[20] This discrepancy of 0.45/0.59 m. between front and flank foundation projection seems a little too large to be ignored; but even more objectionable is the lack of precedent for unequal spacing on front and flank in any other Attic temple of the Periclean period.[21] Solution I may, nevertheless, be retained for consideration.

II. A second explanation would be that the crepidoma blocks of 1.345 m., and consequently the smaller column spacing of 2.690 m., were exceptional. In other words, these would be shortened blocks, located where they were affected by the contracted column spacing at the corners of the temple. With such an explanation we could assume that the normal spacings were uniformly 2.772 m. as required by the entablature, the contraction being $2.772 - 2.690 = 0.082$ m. Hence the dimensions of the temple, measured between the axes of the opposite colonnades, would be $(2 \times 2.690) + (3 \times 2.772) = 13.596$ m. in width, and $(2 \times 2.690) + (10 \times 2.772) = 33.100$ m. in length. Thus the rough foundation would project 1.08/1.13 m. from the column centres on either front and 1.08/1.18 m. on either flank,[22] with remarkable uniformity.

There come to mind, however, two objections to such an interpretation of the step blocks of 1.345 m. The survival of exceptional blocks alone, and the total disappearance of all normal blocks, might well be regarded as suspicious and indeed as an unacceptable interpretation. Furthermore, the angle contraction in a Periclean hexastyle temple should be very much greater than 0.082 m. $(2.772 - 2.690$ m.). To obtain the angle distortion, according to the formula $\frac{1}{2}(E - T)$,[23] we need both the known T(riglyph) width 0.554 m. and also the unknown E(pistyle) soffit; the latter, however, can be roughly estimated as approximately in the same ratio to the column spacing $(1:2.638)$ as in the "Theseum" and at Sunium, giving about 1.05 m.[24] Thus the angle distortion would be about $\frac{1}{2}(1.05 - 0.554) = 0.248$ m. Of this, a small portion (about 0.04 m.) would be taken up by the inward inclination of the column axes,[25] and perhaps an equal amount by the expansion of the endmost metopes. The angle contraction itself usually amounted in this period to about one-sixth of the column diameter;[26] and since, in a hexastyle temple of this size, the column diameter was about two fifths of the axial spacing,[27] it follows that the con-

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[20] I. e., 36.25/36.36 — 32.834 = 3.416/3.526 m., and 16.76/16.95 — 14.414 = 2.346/2.536 m.

[21] In the only other example of the period, but outside Attica, at Bassae, we find a difference of only 0.041 m. between front and flank spacing.

[22] I. e., 36.25/36.36 — 33.100 = 3.15/3.26 m., and 16.76/16.95 — 13.596 = 3.164/3.354 m.

[23] This is the formula invented by Koldewey and Puchstein (*Gr. Tempel in Unteritalien*, p. 198).

[24] I. e., in "Theseum" 0.980 : 2.581/2.583 = 1 : 2.633; and at Sunium 0.954 : 2.522 = 1 : 2.643. Hence, in the temple of Ares, 2.772 ÷ 2.638 = 1.051 m.

[25] The inward inclination is 0.04 m. in the "Theseum."

[26] E. g., in "Theseum" ⅙ × 1.018 = 0.170 m. (contraction 0.168/0.170 m.) ; at Sunium ⅙ × 1.043 = 0.174 m. (contraction about 0.175 m.).

[27] E. g., in "Theseum" ⅖ × 2.581/2.583 = 1.032/1.033 m. (diameter 1.018 m.) ; at Sunium ⅖ × 2.522 = 1.009 m. (diameter 1.043 m.)

traction should be about one fifteenth of the axial spacing,[28] or $\frac{1}{15} \times 2.772 = 0.185$ m. Thus the available amount 0.082 m. (i. e., 2.772 — 2.690 m.) would be quite inadequate.

Both of these objections, however, could be overcome if we permitted the hypothesis that there was duplex contraction, such as we find in some of the western colonial temples of Sicily and South Italy,[29] but of which no example has hitherto been reported from the Greek mainland. In other words, the exceptional blocks of 1.345 m. would be more numerous, extending as far as the third column from the corner; and the aggregate amount of the contraction at each corner would be at least $2 \times 0.082 = 0.164$ m., and presumably more. And, while the application of duplex contraction to a Periclean temple of the Greek mainland may seem to be a startling suggestion, it so happens that all three of the surviving complete blocks could be made to agree with such a restoration, since they can be proved to be the fourth and fifth from the corners, exactly in the positions where such reductions would have occurred.

Each of the three blocks has on its top, on the bed surface which was covered by the superimposed block, a series of three mason's letters of Augustan type, widely spaced, about 0.40 m. on centres.[30] These were obviously intended, like the letters on the triglyph blocks, to permit reconstruction in their proper sequence after dismemberment. All the letters were cut by masons standing inside the temple, so that the heads of the letters are toward the exterior. On the step block we read ΓΓΕ (A 248); on the two euthynteria blocks appear ΕΔΔ (A 146) and ΥΔΔ (A 215). These letters or numbers are presumably to be interpreted as 3:3:5 on the step block, and as 5:4:4 and 23:4:4 on the euthynteria blocks.

Since varying numbers occur on blocks of a single course (the euthynteria), it is manifest that they must form a horizontal series; in other words, they are the serial numbers within the course. From a study of the dowel holes we can ascertain, furthermore, in which direction the series numbers ran. On the step block (A 248) appears, at the middle of the top and toward the back, a dowel hole 0.61 m. behind the face and about 0.05 m. long; its right end is located almost (within 0.015 m.) at the median line of the block; and more to the right, exactly on the median line, is a pry hole showing that the superposed block was doweled at its right end. On the bottom is a dowel hole likewise at the right end, 0.22 m. behind the face. Both dowel holes indicate that this step block and the block above were members of a series laid

[28] E. g., in " Theseum " $\frac{1}{15} \times 2.581/2.583 = 0.172$ m. (contraction 0.168/0.170 m.) ; at Sunium $\frac{1}{15} \times 2.522 = 0.168$ m. (contraction about 0.175 m.).

[29] These are at Acragas (Olympieum and " Concord "), Syracuse (Athena), Himera, Selinus ("A"), Paestum (Poseidon), and Segesta. The measurements by Koldewey and Puchstein require considerable modification.

[30] The other fragment of euthynteria block (A 249) is too worn on the top to show such letters.

inward from a left corner. As for the two complete euthynteria blocks (A 146, A 215), each likewise shows at the middle of the top, toward the back, a dowel hole 0.375-0.465 m. behind the face and about 0.04-0.045 m. long; the left end of the dowel in both cases is located exactly at the median line of the block; and a pry hole is located to the left of the median line, showing that the superposed blocks of the bottom step were doweled at their left ends. The fragment (A 249) gives similar evidence. On the bottom of each of the two complete blocks a dowel hole is located 0.14-0.16 m. from the face at one end only, the right end in one case (A 146), the left in the other (A 215). Hence the two complete euthynteria blocks were laid from opposite directions, that with the bottom dowel at the right (A 146) being part of a series which was laid inward from a left corner, while the other with the bottom dowel at the left (A 215) was part of a series laid inward from a right corner. This evidence shows that the step block $\mathsf{E} = 5$ (A 248) was nearer a left corner and also that, of the two euthynteria blocks, $\mathsf{E} = 5$ (A 146) was nearer a left corner and $\mathsf{Y} = 23$ (A 215) nearer a right corner. We necessarily draw the inference that the blocks were numbered from left to right, as one faced the temple. Furthermore, the step block $\mathsf{E} = 5$ (A 248), being doweled at its right end (0.22 m. behind the face), could not have rested on the euthynteria block $\mathsf{E} = 5$ (A 146), where the upper dowel hole shows that the superposed block was doweled at its left end ($0.395 - 0.159 = 0.236$ m. behind the face).

We now turn to the two other letters on each block. Since the normal Greek temple has three steps, in some cases (as here) resting on a fourth course, the euthynteria, it might seem reasonable to assume that $\Delta\Delta$ appears on the two complete euthynteria blocks for the reason that this was the fourth course down, and hence that $\Gamma\Gamma$ appearing on the only extant step block (either the middle or bottom step, of which the profiles would undoubtedly have been identical) thereby identifies it as coming from the third course down, the bottom step. According to this system, the mason's letters applied during the dismemberment to mark the courses would have been, from top to bottom: ($\mathsf{AA}$) missing stylobate, ($\mathsf{BB}$) missing middle step, ($\Gamma\Gamma$) bottom step, ($\Delta\Delta$) euthynteria.[31] This system, however, appears to be unsatisfactory for two reasons. In the first place, a pair of letters designating the course is redundant; a single letter would have been equally satisfactory. In the second place, it provides no distinction between the different sides of the temple. Since a temple with six by thirteen columns, and with columns centered on alternate stylobate blocks, would require eleven by twenty-five stylobate blocks,[32] twelve by twenty-six blocks in the middle step (and euthynteria),[33] and thirteen by twenty-seven blocks in the bottom

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[31] This seems to be Riemann's opinion (*Arch. Anz.*, 1937, p. 103).

[32] Counting the corner blocks twice.

[33] A less satisfactory mode of construction would be the addition of one block again to the euthynteria, which would then have fourteen by twenty-eight blocks. But the small size of the resulting angle blocks would make this unlikely.

step, the masons had to number sixty-eight blocks in the first course, seventy-two in the second, seventy-six in the third, and seventy-two in the fourth. Thus we should have to assume that, after passing once through the alphabet, at least two additional alphabets were distinguished by special symbols (index strokes, ivy leaves, etc.), and that our three extant blocks all come from the first alphabet. Further consideration suggests an alternative solution.

It seems more reasonable to suppose that the three letters on each block bore some relation to the three elements of position which had to be recorded during the dismemberment, if the blocks were ever to be reassembled in their proper order. The first element was the course: stylobate, middle step, bottom step, and euthynteria, obviously lettered consecutively A, B, Γ, and Δ from top to bottom. The second element was the face of the temple: and we may surmise that the four faces would be lettered A (νατολη),[34] B (ορρας), Γ, and Δ from left to right, beginning with the east and ending with the south. Finally, each block of any face would be lettered consecutively from left to right, beginning always with the left corner block. Under these circumstances the blocks would be numbered as follows:

|  | *east* | *north* | *west* | *south* |
|---|---|---|---|---|
| stylobate | AAA–AAK | ABA–ABΩ | AΓA–AΓK | AΔA–AΔΩ |
| middle step | BAA–BAΛ | BBA–BBA′ | BΓA–BΓΛ | BΔA–BΔΔ′ |
| bottom step | ΓAA–ΓAM | ΓBA–ΓBB′ | ΓΓA–ΓΓM | ΓΔA–ΓΔB′ |
| euthynteria | AAΔ–ΛAΔ | ABΔ–A′BΔ | AΓΔ–ΛΓΔ | AΔΔ–A′ΔΔ |

In the euthynteria it will be noted that the order of the three numbers is reversed, the serial number of the stone being placed first rather than last. This change of order might possibly have been a further distinction between the courses, or even between different sides of the temple; but it would have been such an obvious source of confusion that an intentional distinction of this sort is hardly credible. It seems more reasonable to assume that the transposition of the numbers in the euthynteria was an accidental and perfectly natural error, resulting from the fact that the masons cut the numbers to read from left to right as they stood *inside* the temple, but in a sequence to follow one another from left to right as one stood *outside* the temple. The slight amount of resulting duplication in the numbers [35] would have been counteracted by the distinctive profile and dimensions of the euthynteria blocks. Under these circumstances, ΓΓE (A 248) would have been the third course down (bottom step), the third side (west), the fifth block (from the northwest corner). And EΔΔ (A 146) would have been the fourth course down (euthynteria), the fourth side (south), the fifth block (from the southwest corner). Also YΔΔ (A 215) would

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[34] While this is a mere guess, we may compare the evidence from the triglyph block (A 64) which seems to confirm it (p. 29).

[35] E. g., AAΔ, BAΔ, ΓAΔ, ABΔ, BBΔ, ΓBΔ, AΓΔ, BΓΔ, ΓΓΔ, AΔΔ, BΔΔ, and ΓΔΔ.

have been the fourth course down (euthynteria), the fourth side (south), the twenty-third block (from the southwest corner). Confirmation of this arrangement may be derived from the fact that ΓΓΕ, instead of resting directly on ΕΔΔ as would be the case if both came from the same side of the temple, is now assigned to a different side as required by the non-fitting dowels.

By means of the mason's letters, therefore, we have found that the fifth block of the bottom step, counting from either corner of the façade, was of the 1.345 m. type, and that the fourth and fifth blocks of the euthynteria, counting from either corner of the flank, were likewise of the 1.345 m. type. The shortened fifth block from the corner in the euthynteria would reach as far as the axis of the third column from the corner; the shortened fifth block of the bottom step would come exactly under the interval between the second and third columns. It is evident that the dimensions could be reconciled with the mason's letters, on the assumption that we are here dealing with a very unusual situation, wherein the angle contraction was spread over two intercolumniations. The dimensions of the temple, measured between the axes of the opposite colonnades, might be reckoned as $(4 \times 2.690) + 2.772 = 13.536$ m. (at most), and the length as $(4 \times 2.690) + (8 \times 2.772) = 32.936$ m. (at most). Thus the rough foundations would project about 1.66/1.71 m. from the column centres on either front and about 1.61/1.71 m. on either flank,[36] with remarkable uniformity. This solution, also, must be retained for consideration, in spite of the implication as to the unique employment of duplex contraction on the Greek mainland.

III. Finally, a third explanation would be that the via of 0.139 m. was exceptional and, consequently, the larger column spacing of 2.772 m. (A) fictitious. In other words, the width of the via is obtained from a single complete example, which might conceivably be one of the viae over a metope adjoining a corner triglyph; and, since these endmost metopes were usually widened to help counteract the angle distortion, it follows that the viae above them were correspondingly widened and so, if applied to the general spacing, would yield misleading results. As a matter of fact, the cemented group of fragments (A 238), containing one mutule and the only known via, has the face broken away and presents the same stratified fracture that appears in the group (A 239a) containing the second known mutule, and I am confident that, while the via does not make a direct join with the second mutule, it nevertheless belongs to the same block (Fig. 9).[37] This is proved also by the fact that the top surface, running horizontally for 0.59 m. from the left joint on A 238, then begins to slope downward at a rate of 1:4; the same slope continues on A 239a until, at a distance of 0.83 m. from the left joint (A 238 + 239a being placed in their proper

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[36] I. e., 36.25/36.36 — 32.936 = 3.314/3.424 m., and 16.76/16.95 — 13.536 = 3.224/3.414 m.

[37] Homer Thompson, when consulted on this matter, wrote, " The third fragment (A 238) does not make a direct join with the other two (A 239a + 602), though it probably comes from the same corner block."

relation), it again becomes horizontal after having descended 0.06 m. It is evident that these must be portions of the right corner block from a façade, with the bevel forming the transition from the usual raised step on the pediment floor to the lower plane of the flank cornice. Verification comes from a third group (A 602), containing only the overhang of the cornice but showing on the soffit a bit of the forty-five degree
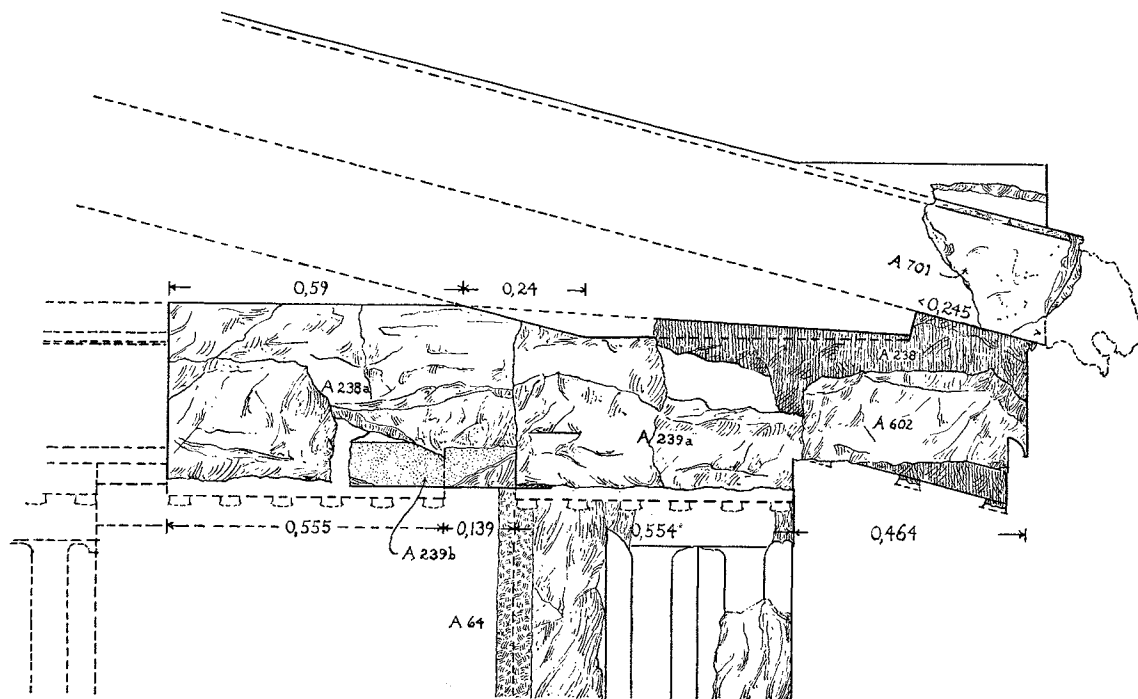


Fig. 9. Reconstruction of Angle Cornice Block (Nos. A 238a and A 238 to be interchanged)

mitre in the corner panel of the cornice. Its fracture joins accurately that of A 239a, and shows that it forms the return of the cornice on the right flank. As thus recomposed, we have the complete length of the right corner block of the façade cornice, with a length of $0.555 + 0.139 + 0.554 + 0.464 = 1.712$ m. from the joint at the left to the face of the return cornice at the right.[38] Thus the only extant complete via just happens to be one which was above the endmost metope, and adjoined the endmost mutule, at the right corner of a façade. Consequently we are justified in assuming that this via might have been wider than usual. Now, if the normal spacing

[38] I may add that the fragment A 239b, found with A 238 + 239a + 602 at a late Roman level north of the middle of the flank, seems to be part of the same corner block, forming the fascia just below the exceptionally wide via. Also the group A 238a, found in the same place, is clearly part of a corner block as shown by the form of its top, and seems to be the right flank return of the same corner block, just behind A 602, from which it is separated by a gap (Fig. 9).

were 2.690 m. as required by the crepidoma blocks, the triglyph spacing would be 1.345 m., the mutule spacing 0.6725 m., and the normal width of the via 0.6725 — 0.554 = 0.1185 m. Thus the extant via would be 0.0205 m. wider than the normal, implying that the endmost metope was widened by 0.041 m. If the angle distortion, $\frac{1}{2}(E - T)$, were reckoned on the assumption that the epistyle soffit was about 1.02 m.,[39] we should obtain a distortion of about $\frac{1}{2}(1.02 - 0.554) = 0.233$ m.; and, if the angle contraction were about one fifteenth of the normal spacing, or 0.18 m., and the inward inclination of the column axis about 0.04 m., it is obvious that the remainder of the distortion would not permit the expansion of more than one metope. Even at this, the dimensions would require a slight readjustment, giving perhaps 0.041 m. ($\frac{1}{8}$ Doric foot)[40] for the expansion of the endmost metope, an equal amount for the inward inclination of the column, and 0.163 m. ($\frac{1}{2}$ Doric foot) for the contraction, so that the distortion would be 0.245 m. ($\frac{3}{4}$ Doric foot), requiring an epistyle soffit of about 1.044 m.[41]

With such dimensions, the width of the temple measured on the entablature would be reckoned as $0.554 + (2 \times 1.386) + (8 \times 1.345) = 14.086$ m., the length as $7 \times 2.690 = 18.830$ m. more or 32.916 m. Thus the rough foundation blocks would project 1.67/1.72 m. from the entablature on either front and 1.34/1.43 m. on either flank.[42] The discrepancy of 0.24/0.38 m. between front and flank foundation projections, while not mathematically as perfect as in solution II, is less discrepant than that obtained in solution I. Hence we retain solution III, like the others, for future consideration.

It is obvious that a decision between those three solutions, in the absence of additional fragments, can be attained only by consideration of the proportions of the Doric order. For this purpose it would be desirable to know the lower diameter of the columns, the height of the columns, and the height of the entablature, to be brought into relation with the spacing of the columns; useful minor comparisons may be made between widths of triglyphs and metopes.

Now the lower diameter of the column is unknown; but there are several methods of estimating it. The diameter, for instance, should be very close to twice the width of the triglyph, giving about $2 \times 0.554 = 1.108$ m.[43] The height of the column must necessarily lie between $5\frac{1}{2}$ and 6 lower diameters; and in three works stylistically most closely related to the temple of Ares the proportions are 5.612 ("Theseum"), 5.776 (Sunium), and 5.743 diameters (Rhamnus). With this minimum and maximum, and

[39] I. e., $2.690 \div 2.638 = 1.020$ m. (see p. 14).

[40] The term "Doric" rather than "Attic" is here employed because of the widespread dissemination of this foot of 0.326-0.327 m. over continental Greece and Sicily. For the exact length of the Doric foot in this temple, see p. 23.

[41] I. e., $\frac{1}{2}(1.044 - 0.554) = 0.245$ m.

[42] I. e., 36.25/36.36 — 32.916 = 3.334/3.444 m., and 16.76/16.95 — 14.086 = 2.674/2.864 m.

[43] E. g., in "Theseum" $2 \times 0.519 = 1.038$ m. (diameter 1.018 m.); at Sunium $2 \times 0.518$ = 1.036 m. (diameter 1.043 m.).

with the estimated diameter of 1.108 m., the limits in height would be 6.218/6.400 m.[44] The height of the entablature should be approximately one third of the height of the column; among the three above-mentioned temples the proportions are 0.350 (" Theseum "), 0.332 (Sunium), and 0.335 times the height of the columns (Rhamnus). With these limits, and the estimated column height, the height of the entablature would be 2.064/2.225 m.[45]

It so happens, however, that we can determine the height of the entablature almost exactly. For the height of the corner triglyph (A 64) is 0.836 m., barely higher than those of the " Theseum " (0.828 m.) and Sunium (0.829 m.), but identical with the epistyle height in both of these temples (0.836 m. in both). Since a curious repetition of dimensions runs through many of the Periclean temples, it seems probable that the unknown epistyle height of the temple of Ares was likewise 0.836 m., in this case being identical with the height of the triglyph, following the system of equality in height observed also in the Parthenon.[46] As for the cornice, we can measure the maximum height from the bottom of the mutule nosing to the top of the little hawksbeak moulding on the face of the flank cornice (A 238a) as 0.323 m. (Figs. 6, 9). The relationship of the nose of the mutule to the bed of the cornice is nowhere preserved. But the soffit of the mutule, which projects 0.425 m., slopes upward at a rate which, if the face be placed in a vertical plane, would be 1:4, thus meeting the rear fascia at a height 0.106 m. above the nosing of the mutule. Two fragments (A 238g, 239b) preserve the rear fascia under the mutules, 0.088 m. high. It is evident, therefore, that the nosing of the mutule dropped 0.018 m. below the cornice bed. Consequently the height to the top of the hawksbeak moulding on the face was 0.323 — 0.018 = 0.305 m. above the bed. This same level was evidently observed along the front edge of the corner block, though on the flank return the top rises in a slight inclination toward the rear edge,[47] an inclined bed which does not concern the question of proportions. On the other hand, we have noted that on A 238 + 239a the top rises 0.06 m. higher to the pediment floor, where the height between the bottom and top beds must have been 0.365 m.; a similar height may be measured on another fragment (A 238h) showing a portion of the pediment floor. In this case the difference is important, since, coming from the façade, it undoubtedly represents the usual raised step in the pediment floor (0.040 m. in the " Theseum," 0.020 m. at Sunium).[48] Here the difference of 0.06 m. indicates that the mean height (the basis of calculation in the other tem-

[44] I. e., 5.612 × 1.108 = 6.218 m., and 5.776 × 1.108 = 6.400 m.

[45] I. e., 0.332 × 6.218/6.400 = 2.064/2.125 m., and 0.350 × 6.218/6.400 = 2.176/2.240 m.

[46] Even if one should disagree with my restoration of the epistyle height, the difference must be less than 0.01 m.

[47] Thompson writes, " Note that the upper bedding surface is not quite at right angles to the face of the cornice, and if it were brought to the horizontal, the face would tilt backwards."

[48] I. e., in the " Theseum," flank cornice height 0.316 m., façade height 0.356 m.; at Sunium flank height 0.325 m., façade height 0.345 m.

ples) would be about 0.335 m. And the mean total height of the entablature would be about 0.836 + 0.836 + 0.335 = 2.007 m., almost identical with the total mean heights in the "Theseum" and at Sunium (2.000 m. in both).

We may now reverse our calculations, regarding the column height as between 2.856 ("Theseum") and 3.012 (Sunium) times the entablature height, or 5.732/6.045 m. With the diameter contained in the column height between 5.612 ("Theseum") and 5.776 (Sunium) times, the lower diameter would be about 0.992/1.077 m. In view of the fact that the slightly smaller temples, the "Theseum" and that at Sunium, have column diameters of 1.018 m. and 1.043 m., it is probable that a dimension greater than these would have been selected for the temple of Ares, i. e., between 1.043 m. and 1.077 m. In fact, even this maximum may be slightly deficient; for the great width of the triglyph would justify, as we have noted, such a diameter as 1.108 m. And the analogy of the Parthenon would permit a ratio as great as 1:3.169 between entablature and column heights, thus yielding columns as high as 6.360 m. in the temple of Ares, and, with the lowest proportion of 5.612 diameters, a maximum lower diameter of 1.134 m. The last, however, is an improbable extreme; we may definitely assume that the lower diameter was between 1.043 m. and 1.108 m.

Now the greater column spacing of 2.772 m. would contain 2.502/2.658 of these lower diameters. Or the smaller column spacing of 2.690 m. would contain 2.428/2.579 lower diameters. Since our best analogies are 2.535/2.537 diameters in the "Theseum," 2.418 diameters at Sunium, and 2.667 diameters at Rhamnus, it is evident that it would be possible to restore either or both spacings.

The true test of the two spacings, however, is found when we examine them with reference to scale rather than mere proportion. For in the Periclean Doric temples the interval between the columns was always larger than the column diameter by a constant excess, deviating very slightly from 1½ Doric feet or 0.49 m.[49] But if from the spacing of 2.772 m. we subtract twice the minimum diameter of 1.043 m., we obtain an excess of 0.686 m., far too great for any Periclean temple.[50] And even twice the maximum diameter 1.108 m. would leave an excess of 0.556 m., so large as to be without analogy. On the other hand, if from the spacing of 2.690 m. we subtract twice the minimum diameter of 1.043 m., the excess would still be too great,

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[49] For this rule, to be discussed in my *Athenian Architecture*, see temporarily *Architecture*, XLVIII, 1923, p. 242.

[50] The maximum excess is 0.545/0.547 m. in the "Theseum" (2.581/2.583 — [2 × 1.018 m.]); next follow 0.517 m. in the Propylaea Central Building (3.627 — [2 × 1.555 m.]), 0.4775/0.4825 m. in the Parthenon (4.2915/4.2955 — [2 × 1.907 m.]), 0.475 m. at Rhamnus (1.903 — [2 × 0.714 m.]), 0.436 m. at Sunium (2.522 — [2 × 1.043 m.]). We exclude the secondary order of the Propylaea West Wings (excess 0.358 m.) and the provincial temple at Bassae (excess 0.388 m., 0.429 m., and 0.470 m.) as abnormal. Thus the maximum deviations are 0.057 m. more and 0.054 m. less than 0.49 m.

0.604 m. But twice the maximum diameter 1.108 m. would leave an excess of 0.474 m., well within the bounds of possibility. This test suggests that we must employ the smaller spacing of 2.690 m. with a diameter between 1.073 m.[51] and 1.108 m.

In other words, we are now limited to solution III. We are still dealing with a hexastyle temple, with thirteen columns on the flanks. And the three complete step blocks are still to be identified as the fifth block from the northwest corner on the west front, in the bottom step, and the fifth from the southwest and fourth from the southeast on the south flank, in the euthynteria. But these step blocks are now to be considered as of normal length.

The axial spacing of 2.690 m. is equivalent to 8¼ Doric feet, with a unit of 0.32606 m., practically identical with that employed in the " Theseum " (0.32600 m.). The column diameter, between 1.073 m. and 1.108 m., is probably to be restored as 3⅜ Doric feet (1.1005 m.),[52] so that the excess was 1½ Doric feet (0.489 m.). The mean height of the entablature was probably intended to be 6⅛ Doric feet (1.997 m.), as in the " Theseum " and at Sunium. If the column height were three times that of the entablature (as at Sunium), it would be 18⅜ Doric feet (5.991 m.), or only 5.444 lower diameters, considerably lower than the proportions employed in the analogous temples (5.612/5.776 diameters). But we are at liberty to assume that the column height was more than three times the entablature height, as noted above for the Parthenon (likewise for the Propylaea and temple at Bassae). Adopting a column height of 5.612/5.776 diameters, it is to be observed that the average of 5.710 lower diameters (obtained from the " Theseum " and the temples at Sunium and Rhamnus) would yield a height of 19¼ Doric feet (6.277 m., or 3.143 entablature heights).

[51] I. e., ½ (2.690 — 0.490 — 0.054) = 1.073 m.

[52] Among the Pentelic marble column drums found in the Agora, several were employed in mediaeval or modern times as millstones. Of these, two (one lying southwest of the Stoa of the Giants, the other immediately at the north of the Stoa) are now 1.07 m. in diameter, very roughly tooled, and seem never to have been fluted; they are in any case too large for the temple of Ares, even if we admit the improbable assumption that the fluting was entirely hacked off. A third (also north of the Stoa of the Giants) retains its fluting and is now 0.80 m. long; but the trace of a square empolion hole on the bottom indicates that the bottom has been rubbed off to the extent of 0.06 m., giving an original height of about 0.86 m. The diameter at the present bottom is 0.89 m. within the flutes and so, restoring the flutes, would be about 0.94 m. in full diameter, which would be correct at a level about three fifths of the height of the columns in the temple of Ares. A fourth, likewise with its fluting, now lies west of the " Valerian Wall," and measures 1.030 m. in diameter within the flutes across the top, and apparently 1.08 m. in full diameter; the bottom is entirely worn off. On the top is the letter Δ. The dimensions are satisfactory for a bottom drum of the temple of Ares. Two other drums employed as millstones, and formerly lying near the Beulé Gate of the Acropolis and at the west entrance to the Odeion of Herodes Atticus, were brought by Orlandos to the " Theseum " and there rejected as unsatisfactory; they lie at present just south of the " Theseum." These might conceivably have been topmost drums in the temple of Ares, since their upper diameters measure 0.78/0.793 m. within the flutes, and so would have been about 0.83/0.84 m. in full diameter; or possibly they should be assigned to the porches of the temple of Ares. A more injured drum used as a millstone, and now lying on the east stylobate of the " Theseum," measures 0.83 m. in diameter within the flutes or about 0.88 m. in full diameter, and so is likewise a possible candidate.

The factors requisite for the calculation of the total dimensions of the plan, in addition to the normal axial spacing, are the following. The angle column was presumably enlarged by 1 dactyl, as in the "Theseum," increasing the diameter to $3\frac{7}{16}$ Doric feet (1.121 m.). Thus the angle contraction, which according to solution III would be ½ Doric foot (0.163 m.), is in reality enlarged by the displacement of the angle column centre to $\frac{17}{32}$ Doric foot (0.173 m.), so that the true angle axial spacing would be reckoned as $7\frac{23}{32}$ Doric feet (2.517 m.). The face of the stylobate, as in most of the Attic temples of this period (Parthenon, "Theseum," Sunium, Rhamnus), may be assumed to have protruded $\frac{7}{48}$ Doric foot (0.0475 m.) outside the face of the column. On the single extant step block (A 248), at a distance of 0.400 m. behind the protective face (and so of 0.392 m. behind the finished face) is an engraved line defining the position of the next step. This width of 0.392 m. (accurately $1\frac{11}{96}$ Doric feet), was probably intended to be $1\frac{5}{24}$ Doric feet (0.395 m.),[53] and was undoubtedly uniform for both steps and on all sides of the temple. On the top of the euthynteria are engraved lines marking the position of the bottom step, 0.155 m. (A 215) or 0.159 m. (A 146) inside the face of the euthynteria. This width of 0.157 m. ($\frac{23}{48}$ Doric foot) must have been carried uniformly all around the temple. From these figures we should calculate the total dimensions as follows:

| | | |
|---|---|---|
| Front, three normal axial spacings (2.690 m.) | 8.070 m. = | $24\frac{3}{4}$ D. F. |
| two angle axial spacings (2.517 m.) | 5.034 m. = | $15\frac{7}{16}$ D. F. |
| twice displacement angle column centre (0.010 m.) | 0.020 m. = | $\frac{1}{16}$ D. F. |
| twice radius normal column (0.5505 m.) | 1.101 m. = | $3\frac{3}{8}$ D. F. |
| twice projection of stylobate (0.0475 m.) | 0.095 m. = | $\frac{7}{24}$ D. F. |
| four step treads (0.382 m.) | 1.568 m. = | $4\frac{5}{8}$ D. F. |
| Total | 15.888 m. = | $48\frac{3}{4}$ D. F. |
| Flank, add seven normal axial spacings (2.690 m.) | 18.830 m. = | $57\frac{3}{4}$ D. F. |
| Total | 34.718 m. = | $106\frac{1}{2}$ D. F. |

The euthynteria projected 0.157 m. or $\frac{23}{48}$ Doric foot beyond the bottom step on all sides. And the rough foundations, therefore, projected 0.61/0.66 m. beyond the euthynteria on either front and 0.28/0.37 m. beyond on either flank.

The total dimensions of the plan thus became $40\frac{3}{16} \times 97\frac{15}{16}$ Doric feet (13.104 × 31.934 m.) for the axial rectangle, $40\frac{1}{4} \times 98$ Doric feet (13.124 × 31.954 m.) between the axes of opposite colonnades, $43\frac{11}{12} \times 101\frac{2}{3}$ Doric feet (14.320 × 33.150 m.) for the finished stylobate, $48\frac{3}{4} \times 106\frac{1}{2}$ Doric feet (15.888 × 34.718 m.) for the bottom step, and $49\frac{17}{24} \times 107\frac{11}{24}$ Doric feet (16.202 × 35.032 m.) for the euthynteria.

[53] The finished width of the euthynteria, as noted below, varies up to 0.004 m.

Having ascertained the dimensions of the peristyle plan, we may pass in review the other facts to be gleaned from the surviving marble fragments.

The euthynteria is 0.302 m. high ($^{15}/_{16}$ Doric foot). The bottom step has a finished height of 0.357 m. (1$^{3}/_{32}$ Doric feet),[54] besides the increase of 0.016 m. caused by the protective surface on the tread. The middle step may be restored as identical with the bottom step.[55] The missing stylobate would presumably have been higher than the other steps, by approximately 1 dactyl;[56] the dimension may have been 0.374 m. (1$^{7}/_{48}$ Doric feet). Thus the aggregate height of the three steps would be 1.088 m. (3$^{1}/_{3}$ Doric feet), and the total height of the four marble courses 1.390 m. (4$^{1}/_{4}$ Doric feet).

The marble euthynteria was doweled to the poros foundation, the location of the dowels showing that, on the south flank, the two south corner blocks were laid before the intervening blocks, and that the last laid block was one of the central seventeen. Of the bottom step, as shown by dowels on the top of the south euthynteria, the southeast corner block was laid first, and work proceeded thence westward, at least as far as the fourth block from the west; if the southwest corner block was laid before its neighbors, the last laid block on the south must have been the second, third, or fourth from the west. The northwest corner block of the bottom step, in any case, was laid before its neighbors and work proceeded southward from this point, at least as far as the sixth block. And in the middle step on the west front, as shown by the dowel on the top of the bottom step (A 248), the northwest corner block was likewise laid first and work proceeded thence southwest at least as far as the fifth block. Thus we have two possible alternatives: either the two diagonally opposite corner blocks, southeast and northwest, were laid first in each course, with the last laid blocks somewhere near the southwest and northeast corners; or all four corner blocks were laid first, with the last laid block in the bottom step on the south flank coming abnormally close to the southwest corner.

The euthynteria,[57] more formal than that in the " Theseum," has its lower part protruding about 0.04 m. in the form of a rusticated panel, though at the vertical joints are dressed margins 0.03 m. wide continuing the plane of the finished upper portion. This upper portion, 0.135 m. high, has a smoothed margin 0.035-0.04 m. wide surrounding a panel of picked or stippled surface, recalling the euthynteria treatments in the Parthenon and the temple of Poseidon at Sunium. The width of the blocks is 0.59-0.61 m. (measured on the top), so that they run back under the

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[54] In the " Theseum " 0.349 m., at Sunium 0.353 m.

[55] The gradation in height which occurs at Bassae, for instance, is unusual and contrary to Athenian analogies.

[56] In the " Theseum " by 0.015 m. (giving 0.364 m.), at Sunium by 0.028 m. (giving 0.381 m.).

[57] Three extant pieces, Inv. Nos. A 146, 215, 249, of which A 146 and A 215 are complete blocks, while A 249 is merely a fragment 0.70 m. long.

bottom step to the extent of 0.435-0.455 m.; the backs are roughly tooled (Fig. 7).
At each end is a single T-clamp cutting, 0.115-0.145 m. long, with the head 0.065 m.
wide, centered 0.255-0.27 m. behind the face of the euthynteria; the head of the clamp
cutting has been widened in some cases to permit extraction of the clamp.

The bottom step has a finished sunken band 0.083 m. high at the lower edge of
the face, beyond which the drafted margins of the protective surface project by
0.008 m. (Fig. 7).[58] The protective surface is bordered by drafted margins 0.035-
0.045 m. wide, enclosing a slightly projecting rusticated panel. Presumably the faces
of the middle step and stylobate would have been similarly treated; and it is evident
that if the steps had been finished they would have been perfectly smooth, as in most
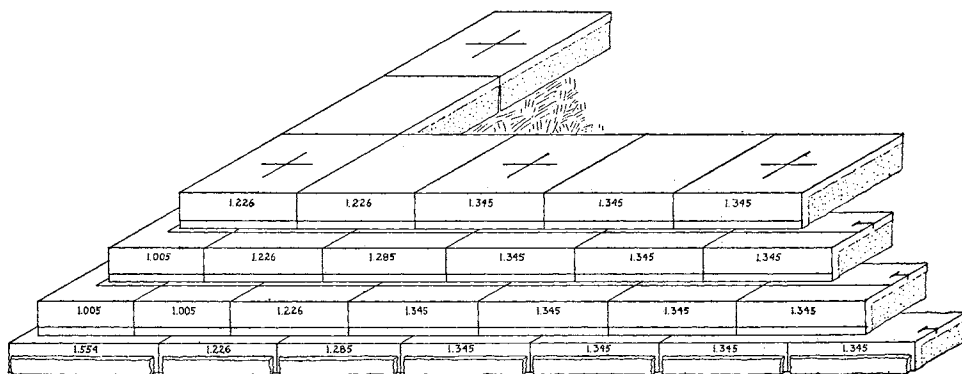


Fig. 10. Jointing System of Crepidoma

Periclean examples, without the decorative sunken margins that occur in the temple
of Athena Nike or at Bassae. The protective surface of the tread of the bottom step
has a width of 0.331 m., including the bevel 0.013 m. wide at the rear edge; beyond
this bevel the surface drops to the finished height of 0.357 m. The width of the block
is 0.745 m., thus running back 0.345 m. under the step next above; the back is roughly
tooled. At each end is a single T-clamp cutting, centered 0.49-0.51 m. behind the face.

Though the blocks of the middle step and stylobate are missing, it is possible to
work out the probable system of jointing the platform (Fig. 10), and also the adjust-
ments toward the corners. The column centres being $0.0475 + 0.5505 = 0.598$ m.
inside the face of the stylobate, the width of the stylobate might have been double
this amount, 1.196 m.; or more probably, as in other temples, the inner projection
may have been slightly greater. It so happens that such a dimension (1.226 m.) would
leave an equal amount for the intermediate stylobate block in the endmost inter-
columniation;[59] and the blocks of the lower courses would break joints accordingly,
with corner blocks of 1.005 m. and 1.554 m.

[58] One extant block, A 248, of complete length.
[59] On the stylobate, distance from axis of second column to corner $2.517 + 0.5605 + 0.0475$

It is possible that some of the column drums have been preserved; these are discussed above, p. 23, note 52. There are no other identifiable fragments of the columns, with the possible exception of a fragment of a Doric capital (Inv. No. A 600). The fragment is 0.20 m. high and 0.25 m. wide, and consists of about 0.09 m. of the height of the echinus, with the core of the abacus above; the face of the abacus, however, is entirely broken away and the identification cannot be regarded as certain.

Of the epistyle, there are only two small fragments of the upper part of the face with the regulae and guttae (Inv. Nos. A 169 and 896). One of these (A 169) is from the right end of an epistyle block (Fig. 6c), containing the left half of a regula; as a matter of fact, the half regula is a little deficient, 0.259 m. instead of 0.272 m., the joint being for some reason off-centered by 0.013 m.[60] There are traces of a mason's letter on the top, merely two parallel strokes which cannot be deciphered. Thus we have no clue to its position in the temple. The other fragment (A 896) is the left end of a block, with the end of a complete regula, which terminates 0.001 m. from the joint;[61] the only position in which such a block could appear would be at the southeast or the northwest corner, forming the flank return of the corner epistyle block. The top of the fragment is broken away, together with the mason's letters, so that we cannot decide which of the two corners is in question. In any case, we are assured that the first joint on the flank was 0.554 + 0.001 = 0.555 m. from the corner; and, since the epistyle soffit would not have been twice as wide as this (1.11 m.), it is probable that the corner block of the outer face of the epistyle was L-shaped, as in the Propylaea. The total width of the soffit can only be estimated as 1.044 m.,[62] or, more probably, as 3⅜₆ Doric feet (1.039 m.), ³⁄₁₆ foot less than the lower diameter. The height, as we have seen, was undoubtedly 0.836 m. (2⁹⁄₁₆ Doric feet), identical with that in the " Theseum " and at Sunium (0.836 m. in both).

The epistyle has a crowning taenia 0.076 m. high and 0.045 m. in projection; the height is exactly one eleventh of the total height of the epistyle. The regulae are 0.065/0.070 m. high, and 0.042/0.043 m. in projection; the guttae are 0.025 m. high and 0.040 m. in diameter. The three heights are proportioned as 9 : 8 : 3; hence it would seem that the taenia was first determined as one eleventh of the total height

= 3.125 m. Since half of normal stylobate block (under second column) is 0.6725 m., remainder of 2.4525 m. would be divided into two blocks of 1.226 m.

[60] It is probable that this was a mere inaccuracy of workmanship, the epistyle block falling short of reaching the column centre by 0.013 m. The alternative explanation, that the epistyle joint was accurately located on the column with the triglyph off-centered by 0.013 m., would imply a systematic displacement of all the triglyphs such as exists in the Parthenon façades, and a few other examples, for harmonic reasons; but this interpretation seems to be contradicted by the widened endmost metope. For the only purpose of off-centering the triglyphs would be to avoid such widening at the corners.

[61] Thus it is clearly not a joint in the middle of the regula itself.

[62] See p. 20.

and the other members proportioned therefrom geometrically, without use of the foot rule. The guttae have the flaring concave curved sides, with a rather sharply protruding lower lip, that characterize the Stoa of Zeus Eleutherios.[63] The surface of the regula is roughened with the toothed chisel for the adherence of color (necessarily blue). The top bed surface is also roughened to within 0.035 m. of the front edge of the taenia. The joints have anathyrosis bands 0.095 m. wide across the top and 0.065 m. wide down the edge of the exposed face. A clamp on one piece, 0.16 m. long, is centered 0.25 m. from the front edge of the taenia.

The height of the triglyphs, 0. 836 m. (2%6 Doric feet), is barely greater than the height employed in the " Theseum " (0.827 m.) and at Sunium (0.829 m.), but is identical with the epistyle height below. The triglyph width of 0.554 m. was apparently intended to be $1^{11}/_{16}$ Doric feet. Thus the proportions of width to height are 27:41 or 1:1.519 in the temple of Ares, as contrasted with 1:1.599 both in the " Theseum " and at Sunium. In other words, the triglyph proportions in the temple of Ares seem unduly heavy (Fig. 17). Since the triglyph spacing was 4⅛ Doric feet (half of the column spacing), the width of the metopes must have been 2⅞6 Doric feet (0.791 m.), or ⅛ foot less than the height. Thus the proportions of width to height were 39:41 or 1:1.051, as compared with 1:1.066 in the " Theseum " and 1:1.115 at Sunium. In other words, the metope proportions harmonize with those of the triglyphs in being wide and heavy. The ratio of triglyph to metope widths was 9:13 or 1:1.445 in the temple of Ares, as compared with 1:1.500 in the " Theseum " and 1:1.434 at Sunium. The endmost metope, adjoining each corner triglyph, was widened by ⅛ Doric foot and so was exactly square. The resulting total dimensions of the frieze (and epistyle) rectangle may be calculated as follows:

Front, (11 × 0.554) + (8 × 0.791) + (2 × 0.832) . . . . . . . . . . . . . . .   14.086 m.
Length, add 7 × 2.690 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .   18.830 m.

    Total . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .   32.916 m.

Or, in terms of Doric feet,

Front, (11 × $1^{11}/_{16}$) + (8 × 2⅞6) + (2 × 2%6) . . . . . . . . . . . . . . . . .   43%6 D. F.
Length, add 7 × 8¼ . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .   57¾ D. F.

    Total  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .100¹⁵⁄₁₆ D. F.

The triglyph is crowned by a simple fascia 0.112 m. high and 0.0045 m. in projection, with no trace of a crowning moulding; the height is two fifteenths of the triglyph height. The triangular glyphs and the intervals between them were pro-

[63] Thompson, *Hesperia*, VI, 1937, p. 29, fig. 17.

portioned geometrically according to the ratio $\sqrt{2}:1$, so that the width of the triglyph was divided as $3(\sqrt{2}+1)$, in order that the half glyph on the corner triglyph, chamfered at 45 degrees, might have the same actual width as the interval between the glyphs, and yet would seem from the front to be an ordinary half glyph.[64] The resulting widths of 0.0765 m. and 0.1082 m. so closely coincided with recognized divisions of the Doric foot that they were possibly readjusted to give $^{11}\!/_{48}$ Doric foot (0.076 m.) and ⅓ Doric foot (0.109 m.). The glyphs are 0.056 m. deep, perhaps intended as ⅛ Doric foot (0.0545 m.), and so are cut back exactly at 45 degrees. Each glyph rises to a horizontal top with rounded corners barely below the fascia; the rear groove, however, rises 0.035 m. above the bottom of the fascia to form the characteristic undercut vault. The end half glyph, however, rises only 0.015 m. above the bottom of the fascia. The corner glyphs show traces of the characteristic corner pendants, though these are invariably broken away. The metope receded 0.070 m. behind the triglyph face, and was crowned by a simple fascia 0.082 m. high and 0.016 m. in projection, as we see from traces on the side of one of the triglyph fragments (A 747). No actual portion of a metope has been identified.

The extant corner triglyph (A 64) was a separate block, independent of the metopes, with measurements of 0.586 m. and 0.636 m. from finished fascia to the rear joints which meet at right angles. A fragment of an intermediate triglyph (A 747) has a rough back only 0.19 m. behind the face, evidently forming a mere revetment. Both on the corner triglyph and on the small intermediate fragment appear metope grooves, about 0.03 m. deep, and, in the case of the corner triglyph, 0.09-0.10 m. wide.[65] These metopes were separate thin slabs, dropped in between the triglyphs from above, and so evidently were designed to contain sculpture in relief. No fragments of sculpture appropriate for such metopes have been identified.

The corner triglyph (A 64) bears on its top the mason's letters ΔO, which are equivalent to 1:15. The smaller piece (A 747) bears the single letter Θ = 8, and may, of course, have had a second letter on the missing portion. In any case, each was sufficiently designated by two letters; apparently the course was regarded as of such distinctive form as to require no third letter. We may assume, therefore, that one letter fixed the direction or face of the building, the other the serial number from left to right. As in the platform, Δ (ἀνατολή) probably marks the east façade, but the problem of locating O = 15 at a corner is more difficult. With a peripteral temple of six by thirteen columns there were five by twelve intervals, the thirty-four intervals surmounted by sixty-eight metopes separated by sixty-eight triglyphs. If the triglyphs

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[64] I. e., 0.554 divided by $3(\sqrt{2}+1)$ or by 7.2426, giving 0.0765 m., and so $3 \times 0.0765$ m. for the three intervals, and $3 \times 0.1082$ m. for the three glyphs.

[65] The backs of the grooves (on A 64) are 0.16 m. and 0.17 m. behind the faces of the triglyphs; since the metope faces were 0.070 m. behind those of the triglyphs (on A 747), the width of the grooves must have been 0.09 m. and 0.10 m. respectively.

were all numbered from one corner, the corner triglyphs would be numbered either 1, 11, 35, and 45, or 1, 25, 35, and 59. In no case would number 15 fall at a corner. In view of the fact that some of the metopes, at any rate, were sculptured, and keeping in mind the propensity of the temples of this group (" Theseum," Sunium, Rhamnus) to isolate and emphasize the façade pteroma, two column spacings deep, with decorative sculpture, we may here follow the analogy of the " Theseum." Assuming that A indicated not merely the east façade but the east pteroma system, we begin numbering from left to right, not from the southeast corner triglyph, but from the fifth triglyph from the southeast corner on the south flank. With this system, the southeast corner triglyph would be AE, and the northeast corner triglyph AO (i. e., the extant block A 64). The small fragment might then be [A]Θ, the fourth triglyph from the left on the east façade.

The mean height of the cornice, of which the reconstructed splinters yield heights of approximately 0.365 m. on the fronts and 0.305 m. on the flanks, seems to have been 0.335 m. With the fragments of the flank return (A 602 and 238a) adjusted to the angle block (A 238 + 239a)[66] we obtain the projection of the cornice beyond the triglyph, for the vertical bed fascia must have been exactly flush with the plane of the triglyph; the mutule projects 0.425 m. from this fascia, and the face of the cornice 0.039 m. more, or 0.464 m. in all. The crowning moulding, as preserved on still another fragment (A 238a), was a small Doric hawksbeak projecting only 0.017 m.,[67] and so making the total projection 0.481 m. ($1^{15}/_{32}$ Doric feet). With this projection added to the dimensions of the frieze rectangle, those of the cornice rectangle become 15.048 × 33.878 m., or $46^{1}/_{3} × 103^{7}/_{8}$ Doric feet.

The mutules were $1^{11}/_{16}$ Doric feet wide, like the triglyphs. Consequently the viae, half of the difference between the triglyph and metope widths, were normally $^{3}/_{8}$ Doric foot or ½(0.791 — 0.554) = 0.1185 m. in width. None of these happens to be preserved. The two viae above each endmost metope were both enlarged by 1 dactyl, giving 0.139 m. (A 238). The mutules are 0.058/0.060 m. high, and slope at the rate of 1:4, or 14° 2′ from the horizontal. The guttae are 0.019 m. high, and present the same concave flaring profile that we observed on the epistyle, but to an even more marked degree; the diameter at the top is 0.042 m., diminishing slightly to 0.041 m., and then enlarging to 0.046 m. Most unusual is the manner in which the nose of the mutule descends 0.018 m. below the cornice bed, and the lower edges of the guttae as much farther. As if to compensate for this, the fascia above the mutule, forming the back of the " scotia," is unusually high (0.068 m.) and unduly exposed; for, though the scotia is fairly deep (0.035 m.) in proportion to its projection,[68] yet the drip moulding is very high (0.033 m.) above the top of the mutule,

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[66] See pp. 18-19.

[67] A 238a = H 441 (profile published by Miss Shoe, *Greek Mouldings*, p. 108, pl. LIII, 23).

[68] Profile published by Miss Shoe, *op. cit.*, pl. LXXIII, 16.

so as to leave much of the back of the scotia visible in direct elevation. Another curious feature of this cornice is the miniature size of the crowning hawksbeak, only 0.023 m. high and 0.017 m. in projection.

The rear fascia under the mutules retains clear traces of red paint; red paint is preserved also on the viae. Blue occurs on some of the mutule fragments. On the bottom of each gutta, 0.0045 m. from the circumference, is an engraved circle 0.037 m. in diameter, for the demarcation of color, such as we find in the Parthenon and Propylaea. The back of the " scotia " above the mutules is slightly roughened with the toothed chisel for the reception of paint, in this case red.

The cornice blocks were evidently in lengths containing two mutules and two viae, that is, 1.345 m. or half of the axial spacing. Just how the transition was effected toward the middle of each face of the temple remains unknown. The bed of the cornice is smoothed for a margin of 0.06 m. back from the rear fascia, and beyond this point is roughened with the toothed chisel. In one case (A 238) a gutta is separately cut with a rectangular marble tenon, 0.014 × 0.028 m. in plan, which is cemented—somewhat diagonally—into a hole 0.018 × 0.029 m. The top of the façade cornice, with the beveled surface on the corner blocks to fit the bed of the raking cornice, has been described. The top of the flank cornice, instead of being horizontal, inclines upward slightly toward the back as in the Parthenon; but in the corner block it ascended in accordance with the roof slope for a distance of about 0.245 m., and then dropped about 0.056 m. to the inclined bed. Whether the latter was intended for a special course provided with rafter sockets, as at Bassae and in the " Theseum," or merely supported the ends of the rafters directly, remains unknown. Mason's letters ΑΓ appear on the top of a fragment (A 238a) of the great corner block; since this block came from the right corner of a façade (Fig. 9), we might assume that it was the southwest corner block, Α indicating the first block (numbered right to left) and Γ the west façade.

The total width of the temple, measured on the horizontal cornice of the façade, being 15.048 m., or 46⅛ Doric feet, it may be estimated that the height of the pediment was about 1.79 m. to the apex of the raking cornice.[69] No fragment of the raking cornice has been preserved; but its height, if 0.215 m. as at Sunium (0.198 m. in the " Theseum "), normal to the slope, as Fig. 9 would seem to indicate, would limit the height of the tympanum to about $1.79 - 0.221 = 1.57$ m. From this we must also subtract the amount by which the pediment façade cornice rises above the flank cornice, 0.060 m., leaving 1.51 m. for the clear height of the tympanum.

The raised step on the façade cornice, strengthening it to the extent of 0.060 m., undoubtedly means that pedimental sculptures were planned. Whether they were

[69] Since the pedimental slopes in the Periclean Attic Doric temples vary between 1:4⅓ and 1:4¹⁄₁₂, it would seem that the height of the pediment, measured to the apex of the cornice, was between 1.736 m. and 1.843 m. I here adopt the mean, 1.79 m.

actually executed is another question. And, if they were executed, Roman rapacity would undoubtedly have diverted them to Rome instead of permitting them to be replaced in the reconstructed temple. This raises the interesting comparison with the Niobid group at Copenhagen and Rome, which I have assigned to the temple at Bassae.[70] It happens that the width of the façade cornice in the temple of Ares, 15.048 m., is almost identical with that at Bassae, 15.031 m. The conditions for the exposure of the statues, however, are very different. The steeper pedimental slope at Bassae, in spite of the insertion of a special marble plinth, left a clear central
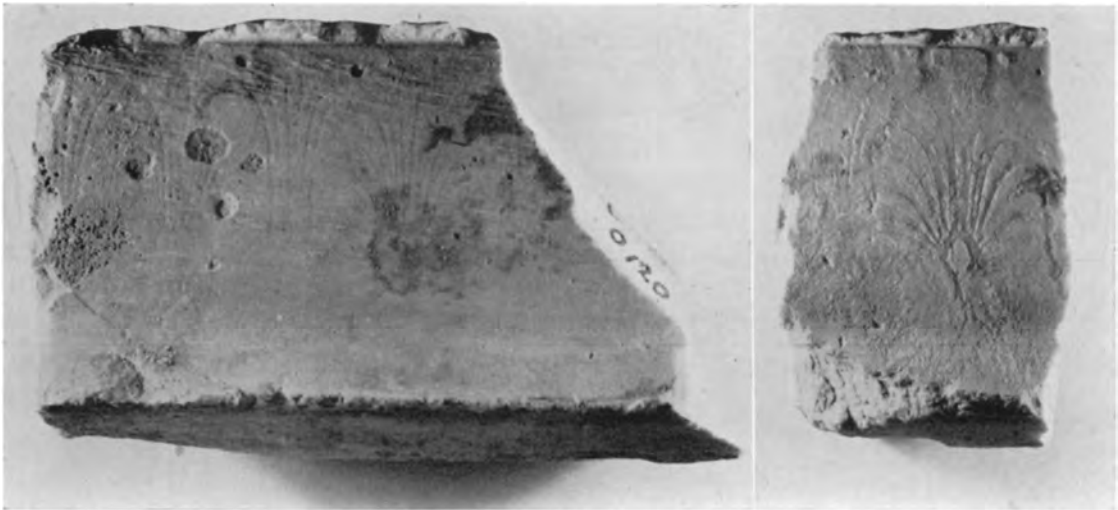


Fig. 11. Raking Simas of Left (Inv. No. A 439) and Right (Inv. No. A 394) Slopes

height of 1.756 m., suitable for figures with an erect stature of 1.60 m. such as those of the Rome-Copenhagen Niobids. The pediment statues required for a tympanum 1.51 m. high, in the temple of Ares, should have an erect stature of only 1.29-1.37 m., or, even with the steepest available slope of $1:4\frac{1}{2}$, giving a tympanum height of 1.56 m., the erect stature of the figures should not have been greater than 1.34-1.42 m.,[71] considerably less than in the Rome-Copenhagen Niobid group.

Several marble simas of the temple of Ares have been discovered. Two of these are raking simas, one (Inv. No. A 439) from a left slope, the other (Inv. No. A 394) from a right slope (Fig. 11).[72] Neither retains its complete length, A 439 having its left joint with a length of 0.45 m., and A 394 likewise its left joint but a length of only 0.18 m. The sima is 0.224 m. high, with a little astragal of 0.01 m. at the top (Fig. 12); below this appears the cyma reversa profile (which developed out of the old

[70] *A.J.A.*, XLIII, 1939, pp. 27-47.

[71] The erect stature is figured as 86-91% of the central clear height of the tympanum (*loc. cit.*, p. 32).

[72] A 394 = E 424 (profile published by Miss Shoe, *op. cit.*, pl. LXXVI, 2).
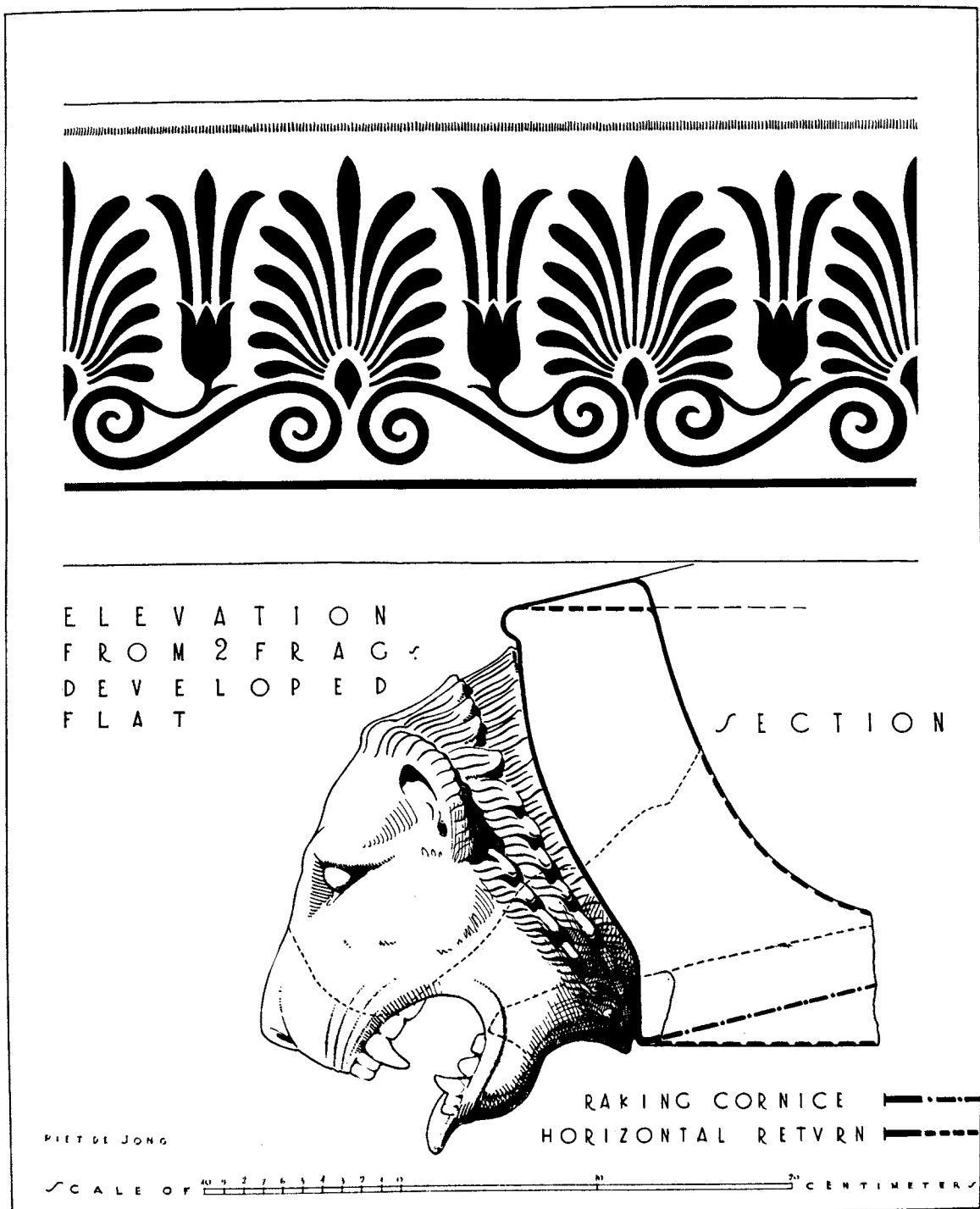
Fig. 12. Restoration of Raking and Flank Sima (P. de Jong)

Corinthian terracotta tiles), occurring also in the " Theseum " and at Sunium.[73] The face is painted with a lotus and palmette ornament, limited by two horizontal engraved lines 0.0385 m. and 0.042 m. above the bottom. The axes of the ornament are spaced at intervals of 0.07/0.073 m., giving double repeats of 0.14/0.146 m.; but they do not seem to have coincided exactly with the tile joints.[74] The palmettes had thirteen petals, the central one lancet shaped, with six S-shaped petals on either side with rounded ends, with two volutes below.

On the bottom of one of the raking simas (A 439) are clear traces of weathering for a distance of 0.02 m. from the edge; on the other (A 394) the weathering is more irregular, penetrating to 0.025 m., probably because of leakage. The latter, furthermore, from the right slope, has also a cutting 0.01 m. wide for the end of a metal dowel centered 0.110 m. from the front edge and beginning 0.18 m. from the rebate at the left or upper joint; and, since the overlap was probably about 0.05 m. (as suggested by an analogous fragment from the " Theseum," A 1097), it seems clear that we are dealing with a dowel which lay parallel to the face of the raking cornice, centered about 0.09 m. behind the cornice nosing and located about 0.23-0.29 m. below the visible upper joint. This position of the dowel is important in that it constitutes our only definite evidence that the fragment A 394, in any case, is not to be assigned to the " Theseum " in spite of the identical profile. For, in the " Theseum," the raking simas were fastened by dowels parallel to the face of the raking cornice, but centered 0.55/0.585 m. from the cornice nosing and located exactly at the upper joint, and also by dowels perpendicular to the face of the raking cornice, located 0.09-0.14 m. or 0.10-0.15 m. behind the cornice nosing and centered about 0.16 m. below the upper joint.[75] Only at the apex joint of each pediment of the " Theseum " are the front dowels parallel to the face, and these occur 0.14/0.15 m. behind the cornice nosing on the right-hand slope of each pediment. Since A 394 is not an apex sima (as shown by the non-vertical upper joint) and has a dowel which is improperly located for the

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[73] The identity of the " Theseum " sima, of which the profile coincides with that of the temple of Ares, will be discussed in a later report concerning the Hephaisteion; see also below.

[74] In A 439 a palmette is centered 0.229 m. from the left joint, a lotus 0.159 m. from the joint; consequently a lotus axis must have been 0.019 m. from the joint (not preserved). In A 394 a palmette axis is about 0.11 m. from the rebate behind the left joint, and, with the spacing 0.146 m., the next palmette would have been 0.036 m. outside the rebate (now broken off); it seems improbable that this would have coincided with the joint, thus allowing only 0.036 m. for the depth of the rebate.

[75] In the " Theseum " the raking sima joints (in accordance with normal practice and also as demonstrated by the pry holes) coincided with the upper ends of the dowel holes, showing that the joints of the raking simas were 0.65 m. apart (one of the four topmost being of the exceptional length 0.72 m.), so that the fifth joint lay 2.67 m. from the apex, the eleventh 6.57 m. from the apex. The dowels perpendicular to the face are centered 0.835/0.845 m., 1.495 m., 2.17 m., 2.835 m., 3.49/3.495 m., 4.135/4.145 m., 4.75/4.80 m., 5.41/5.44 m., 6.08/6.095 m. from the apex, and so 0.115/0.205 m. (averaging 0.161 m.) from the upper joint of each tile.

apex dowel of the " Theseum," and is also at right angles to the front dowels at all the other raking sima joints of the " Theseum," it is obvious that A 394 cannot be placed anywhere on the " Theseum " and so must be assigned to the twin temple in the Agora below.

One portion of the flank sima (Inv. No. A 700) retains its full height of 0.225 m., with a similar cyma reversa profile and a central lion head spout. The presence of the lion head, and the fact that the lower fascia forms an acute rather than right angle



Fig. 13. Lion Head Spouts (Inv. Nos. A 700 and A 272)

with the surviving bit of lower bed—implying that the bed inclined (Fig. 12)—indicate that we are concerned with the flank. The profile is identical with that of another fragment (Inv. No. A 1094) which is clearly to be assigned to a flank of the " Theseum." [76] Unfortunately our piece A 700 is so small that no technical evidence survives (like that in the case of A 394) to prove that it must be excluded from the " Theseum "; nor is the place of discovery, in a Byzantine cistern 130 m. southwest of the temple of Ares and 125 m. southeast of the " Theseum," in any way conclusive. Equally inconclusive are the facts about another fragment of lion head (Inv. No. A 272) with more spiky locks, found only 25 m. north of the northwest corner of the temple of Ares but in modern fill. Both are of the same size and period (Fig. 13);

[76] See a later article concerning the Hephaisteion.

both may be assigned to the same building (either temple of Ares or " Theseum "), assuming it to have had spouts of alternating designs, or they may be divided between the two temples. In Fig. 12 it is assumed that A 700 belongs to the temple of Ares. In any case, the length of the tiles and the spacing of the lion heads in the temple of Ares cannot be ascertained from these pieces. But, since a quarter of the column spacing (8¼ Doric feet), or half of the mutule spacing (4⅛ Doric feet), coincided very closely with the normal tile standard of 2 Doric feet, we may conclude that the tiles were 2¹⁄₁₆ Doric feet (0.6725 m.) wide, and that the eaves tiles were of double length so that the lion heads were spaced 4⅛ Doric feet (1.345 m.) on centres, coming above alternate mutules.

Another important piece is the lower right corner of a façade sima (Inv. No. A 701) with the return on the flank, a portion of a lion head spout (too insignificant to assist in identifying the lion heads), and an acroterion base (Figs. 9, 14). Here again we are confronted by the problem of the identity of the profiles and hence of the attribution to the " Theseum " or the temple of Ares. It so happens, however, that in the " Theseum " a large dowel hole, 0.05 m. square and 0.065 m. deep, exists at each corner of the temple, only 0.11/0.145 m. from the front cornice nosing, 0.115/0.135 m. from the flank cornice nosing, in each case with a pour channel leading down from the joint next above. The upper half of such a dowel hole must have existed on the bottom of each corner sima block of the " Theseum "; and, if



Fig. 14. Top of Corner Sima with Acroterion Base (Inv. No. A 701)

A 701 were to be attributed to that structure, we should expect to find such a hole, or rather its upper counterpart, on the bottom. On A 701, to be sure, only a small portion of the actual bottom survives, extending 0.05-0.10 m. from the front edge, 0.05-0.09 m. from the edge of the right flank; yet the manner in which the fractured surface tapers off, and the fact that a break at this point would almost inevitably have passed through such a deep dowel hole rather than two or three centimetres away, makes it fairly clear that no such upper half of a dowel hole ever existed on A 701. In other words, A 701 was fastened in some other manner or in some other position than in the case of any of the four corner acroterion bases of the " Theseum," and so may definitely be assigned to the temple of Ares. The axis of the lion head seems to have been about 0.205 m. from the lower edge of the corner of the sima. If the

latter overhung the cornice moulding by 0.02 m., as the weathering on the raking sima (A 439) would suggest, the axis of the lion head would have been 0.185 m. from the corner of the cornice, and so about 0.296 m. ($^{29}\!/_{32}$ Doric foot) outside the face of the entablature, 0.573 m. ($1\frac{3}{4}$ Doric feet) from the centre of the first mutule.[77] Apparently, therefore, the next lion head was located above the second mutule, that is, above the endmost metope; and, in the total length of each flank of the temple, there would have been twenty-four lion heads above the metopes and these two extra heads on the overhanging corners of the cornice. The total length of the flank entablature (below the cornice) being $100^{15}\!/_{16}$ Doric feet, we add $^{29}\!/_{32}$ Doric foot at each end for the distance to the last lion head, giving $102\frac{3}{4}$ Doric feet. From this we subtract twenty-three normal spacings of lion heads at $4\frac{1}{8}$ Doric feet, leaving $7\frac{7}{8}$ Doric feet, or rather $3^{15}\!/_{16}$ Doric feet at either end.[78] It is evident that the endmost spacing was slightly contracted, in sympathy with the colonnade, by $^{3}\!/_{16}$ Doric foot.

If the question of the execution of the pedimental sculptures remains uncertain, there can be no doubt with regard to the acroteria. The corner sima fragment (A 701) retains also a portion of the acroterion base from the lower right corner of a pediment. The original dimensions cannot be ascertained; the two faces are located 0.07 m. inside the upper edge of the sima (excluding the astragal projection) and extend 0.225 m. in both directions, there being broken off. The top surface is entirely lost, the lower edge of the base now rising only 0.06 m. above the top of the sima. On this broken surface, however, remains the bottom of a deep elliptical socket, coming within 0.06 m. of the edge of the acroterion base on the front, within 0.067 m. on the flank. Approximately a quarter of the curve of the ellipse seems to remain; we may estimate that its total length was originally twice 0.16 m., its width (the longitudinal axis of the ellipse being more definitely marked by a deeper oblong socket 0.055 m. wide) twice 0.107 m. Thus we obtain an elliptical plinth, about $0.32 \times 0.215$ m., strengthened by an oblong tenon, about $0.295 \times 0.055$ m., running parallel to the façade. The main cavity is about 0.07 m. below the highest part of the base; the oblong cutting descends 0.02 m. lower. The interpretation is complicated by two drilled holes, 0.014 m. in diameter, one in the top of the base, the other outside the area of the acroterion base, on the top of the façade sima. These cuttings, and particularly the drilled holes, recall the acroteria of the temple of Athena Nike, in which all these traits reappear.[79] Perhaps these also were figures of Nike, appropriate for a temple of Ares, and possibly in precious metal.

The wall blocks are so fragmentary that exact dimensions are difficult to obtain. An orthostate (Inv. No. A 704), of which the top is broken away so that the maxi-

[77] I. e., half of mutule 0.277 m. + projection of cornice 0.481 m., total 0.758 m., from which we subtract 0.185 m., obtaining 0.573 m.

[78] I. e., $102\frac{3}{4} - (23 \times 4\frac{1}{8}) = 7\frac{7}{8}$ Doric feet.

[79] Stevens, *A.J.A.*, XII, 1908, p. 402; Orlandos, *Ath. Mitt.*, XL, 1915, p. 43, fig. 10.

mum height is now only 0.78 m., retains its complete length 1.103 m. (3⅜ D. F.). Since the dimension is a reasonable one for the lengths of wall blocks,[80] we may assume that this was the unit employed, even though it involves the assumption that the orthostates were of the same length as the wall blocks (as at Bassae), rather than of double length as in most of the Attic marble temples. This length seems to be confirmed by a fragment of a wall block (Inv. No. A 263) wherein a dowel hole extends within 0.475 m. of a joint, the pry hole and consequently the joint above having been at the missing other end of the dowel; assuming that this dowel hole was about 0.075 m. long, the joint above would have been about 0.55 m. from that
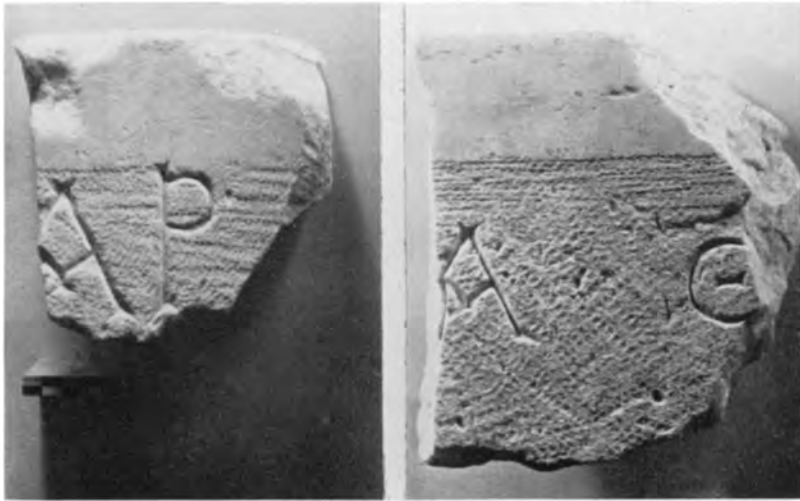


Fig. 15. Mason's Letters of Augustan Date on Wall Blocks

below, implying a block length of about 1.10 m. The thickness of the orthostate, measured to the rough back, is 0.295 m., implying that the total wall thickness was somewhat over 0.60 m. Another calculation of the thickness is obtained from a fragment of wall block (Inv. No. A 238d) retaining the T-clamp cutting at one end of the top, 0.335 m. from the face; allowing 0.015 m. for the width of the clamp cutting, and an equal distance to the opposite face, we should obtain a total thickness of about 0.685 m., suggesting a wall thickness of about 2⅛ Doric feet (0.693 m.). No blocks retain their complete height; but, in view of the shorter length, we should expect that the height would be less than the average height of 0.507 m. employed in the " Theseum," or even less than the typical Athenian height 0.49 m. (1½ Doric feet), perhaps no more than 0.385 m. as at Bassae and Tegea.

The wall blocks generally have two mason's letters deeply engraved on the top (Fig. 15), ΑΕ, ΑΘ (Inv. No. A 238b), or ΑΡ (two examples, Inv. Nos. A 238c, 238d).

[80] In the " Theseum " the unit is 1.246 m.

Others again now retain single letters only, Α (Inv. No. I 690), Δ (Inv. No. A 699), Ε (two examples, Inv. Nos. A 238, I 315), Θ (two examples, Inv. Nos. A 263, I 2517), or Λ (Inv. No. A 238e); these may in each case have had a second letter, now broken away. At any rate, four blocks out of eleven certainly belong to an Α classification; the second letter runs at least as high as Ρ = 17; and there are some duplicates (two ΑΡ's). Consequently it would seem that one long wall was marked Α, and that the courses were numbered Α to Ρ from top to bottom, and that the individual blocks within each course all received the same designation, the interchange of wall blocks within a single course being regarded as immaterial. The heights of the wall courses are unknown; but, even if Α were the epikranitis and Ρ the orthostate course, there must have been at least fifteen intervening plinth courses. With three courses (Β-Δ) aligning with the internal epistyle and frieze, there would remain at least twelve courses (Ε-Π) to fill the height from top of anta capital to top of orthostates. Assuming that the peristyle column height was 6.277 m., subtracting about 0.10 m. for the toichobate, and allowing twice the plinth height for the orthostates, fourteen (12 + 2) courses would average 0.4485 m., and fifteen (13 + 2) would average 0.4185 m. Either of these would be possible; or we might even restore a pseudo-isodomic system like that at Sunium, with courses alternately 0.299 m. and 0.598 m., or 0.285 m. and 0.571 m.

The orthostate course (A 704) has a relieving margin 0.018 m. wide at the lower edge, where it rested on the projecting toichobate. The single extant block has a dowel at the left end of the bottom, 0.12 m. from the wall face. The beds of the wall blocks have smooth bands 0.065 m. wide along the edges, the inner portions being roughened with the toothed chisel. Dowels on the wall blocks (A 263) are 0.165 m. from the face, there having been two at each joint.

Two fragments of anta capitals (Inv. Nos. A 601, 702) yield some information with regard to the terminations of the walls. The total height of the capital is only 0.182 m., consisting of a fascia 0.049 m. high, a hawksbeak, and an abacus 0.080 m. high, including its crowning ovolo. The fascia has a slight forward inclination; the abacus face seems to be vertical. The face of the abacus overhangs the pilaster face by 0.069 m.; the crowning ovolo adds 0.016 m. to the projection. One of the pieces (A 601) has a vertical joint cutting through the abacus mouldings, which are preserved to a distance of 0.225 m. from the joint and are there broken off. The preserved distance exceeds any reasonable allowance for either offset of the anta, and suggests that each anta capital consisted of two or more blocks with intermediate joints, in conformity with the small units employed for the wall blocks. Possibly this multiplicity of joints may be regarded as an argument in favor of the pseudo-isodomic jointing system.

Two long pieces of marble ceiling beams lie near the " Valerian Wall " south of the Stoa of Attalos. Their soffit width is 0.543/0.561 m., averaging 0.552 m., and

the height, including the crowning ovolo, 0.273/0.277 m. Above the top protrudes a stiffening flange, 0.22 m. high and 0.44 m. wide. One of the pieces (Inv. No. A 388) retains a maximum length of 2.50 m., with neither end preserved.[81] The other is now 1.885 m. long, and retains one end, terminating 0.405 m. beyond the mitred joint of the crowning ovolo. On each side of this butt end is a vertical slot like a dowel hole, 0.17-0.23 m. above the soffit, and 0.05 m. deep; on one side it is 0.165-0.18 m., on the other side 0.20-0.215 m., from the mitred moulding. Several pieces of interbeam blocks of the same height were discovered in the " Valerian Wall " in 1939; none is of complete length, and there seem to be no pieces that join in such a way as to determine the intervals between the beams. The thickness of the interbeam blocks is 0.095-0.18 m., with rough backs and without the raised flanges. Two fragments, however, measure 0.235 m. from face to back and have a flange rising 0.13 m. above the moulding; these were evidently from one or two wall beams running parallel to the main beams and at right angles to the interbeam blocks. The most peculiar feature of these wall beam fragments is that the backs are neither roughly tooled like concealed surfaces elsewhere in the temple, nor are they—as would seem to be the case at first glance—smoothly finished; they form wavy surfaces with, at one point, a jump in plane, betraying the use of the stone saw. Since this implement was never employed on marble in the Periclean age, we may infer that these backs were recut (possibly splitting a normal beam in halves lengthwise) during the Roman reconstruction. On the fragment preserving the full height of the flange, furthermore, the top is cut to fit under the sloping roof, clear evidence that they were employed, not in the porches, but in the front peristyles where alone the wall beams could have fitted snugly under the rafters. This is exactly what we might have assumed from the dimensions: for the width and height of the beams are identical with those employed in the front peristyles of the " Theseum." The fact that they cannot be employed in the " Theseum " is good evidence for assigning them to the twin temple in the Agora; and this is confirmed by the presence of mason's letters (as H on the beam retaining its end, N' on one of the interbeam blocks) and by the Roman recutting of the wall beams.[82]

Of the crowning ovolo, 0.048/0.052 m. high, several fragments have accumulated. The lower edge projects 0.007 m., the nosing 0.045 m., from the side of the beam. The ovolo is painted with eggs-and-darts spaced 0.056 m. on centres in some cases, 0.077 m. in others. The upper edge is protected by a relieving margin 0.002 m. high.

[81] Miss Shoe erroneously reports the length 2.50 m. as complete (*Greek Mouldings*, p. 45).

[82] Another beam (A 705), found in a late mediaeval foundation only 10 m. south of the middle of the south flank of the temple, would seem from the place of discovery to be a likely candidate for attribution to this structure. But it belongs to a series of beams 0.334 m. high (including the crowning moulding of 0.059 m.), and thus exceeds the height of the above-mentioned peristyle beams which ought to have been the largest in the temple. The profile of the crowning ovolo, projecting only 0.030 m., and its workmanship, are likewise adverse to such an attribution. It seems to come from some unknown larger building of later date.

A vast number of marble coffer fragments exist, many of them taken in 1933, and others again in 1939, from loose fill in the " Valerian Wall." [83] The concave vault of the coffer seems to have been 0.195 m. square, surrounded by a flat margin 0.009 m. wide. Outside this is an ovolo moulding projecting 0.015 m., with a flat band 0.0095 m. wide at the bottom; hence the entire square of the coffer measures 0.262 m., a dimension preserved on two pieces. The intervals between the coffers vary only from 0.194 m. to 0.196 m., averaging 0.195 m. The intervening space is decorated with two sunken astragals, 0.0165 m. wide [84] and 0.035 m. apart,[85] each surrounding a coffer at a distance of 0.0635 m.[86] Thus the coffers are spaced $0.262 + 0.195 = 0.457$ m. on centres, as may indeed be measured on one piece. The nosing of the ovolo moulding on the beams was at least 0.018 m. outside of the sunken astragals, as indicated by traces of the colored border. Hence, if there were two coffers in each interval between the beams, the distances between the ovolo nosings would be at least 0.915 m.[87] Since the beam soffits averaged 0.552 m. in width, with the ovolo mouldings projecting 0.045 m., it is apparent that the spacing of the beams would have been at least 1.557 m., obviously with no relation to the column spacing. When we observe that, with the width of the temple measured on the epistyle calculated as 14.086 m., and the epistyle soffit as 1.039 m., the clear width between the flank epistyles was 12.008 m., it becomes evident that there were eight ceiling panels with seven intervening beams exactly as in the " Theseum." Since, however, the form of the wall beams proves that they did not overhang as in the " Theseum," but were practically flush with the inner face of the epistyle, we may conclude that the interval between the beams was 1.018 m.,[88] and that the spacing of the beams was 1.570 m.

The coffer depth is 0.060 m. to the bottom of the ovolo,[89] 0.0755 m. to the top of the ovolo,[90] 0.081 m. to the deepest concavity of the vault.[91] The vault is painted with a central circle 0.027 m. in diameter, formed by a red line 0.002 m. wide, leaving the central area 0.023 m. in diameter without color. This is surrounded by a sixteen rayed star, the eight rays on the diameters and diagonals being larger, the intervening rays smaller; the background is brilliant blue, and the rays were probably gold. The rays have semicircular butt ends, the larger ones 0.020 m., the smaller ones 0.028 m., from the centre point of the circle. A red stripe 0.008 m. wide covers 0.004 m. of the edge of the vault, and 0.004 m. of the flat band (0.009 m. wide) inside the ovolo; the

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[83] Some of these inventoried as A 387, but most are so small that they were stored in drawers. Profile of ovolo published by Miss Shoe (*op. cit.*, pl. XXI, 10).

[84] The average of twelve examples, 0.015-0.017 m., is 0.0164 m.

[85] The average of six examples, 0.033-0.036 m., is 0.0352 m.

[86] The average of six examples, 0.062-0.0645 m., is 0.0632 m.

[87] I. e., $0.018 + 0.080 + 0.262 + 0.195 + 0.262 + 0.080 + 0.018 = 0.915$ m.

[88] I. e., $(7 \times 0.552) + (8 \times 1.018) = 12.008$ m.

[89] The average of six examples, 0.058 — 0.061 m., is 0.0598 m.

[90] Two examples measure 0.074 and 0.076 m.

[91] This is taken from a single example.

remainder of this flat band formed a green stripe. The ovolo has painted eggs, spaced 0.0255 m. on centres (seven eggs occupying 0.178 m.) ; the outlines of eggs and darts are incised; the background between the eggs is blue, and the eggs themselves are likewise blue, with red darts, and gray shells which suggest that they once were gold. At the foot of the ovolo, the band 0.095 m. wide is painted with a red background on which is a small beaded astragal in gray (presumably formerly gold). The sunken astragals are similarly decorated with a larger painted bead and reel, spaced 0.037 m., elliptical beads 0.022 m. long separated by pairs of reels; these are now grayish and were probably in gold, and the background retains much of the original cobalt blue. On either side of each sunken astragal was a red stripe only 0.003 m. wide, and outside this a green stripe 0.006 m. wide. Outside this again, at the extreme edge of the ceiling panel but not between the coffers, was an unpainted border 0.013 m. wide; and outside this in turn is a broad band of red of indefinite width lying immediately above the relieving margin of the ceiling beam ovolo, and of which, according to our calculations, only 0.0065 m. would have been exposed to view from below.[92]

The lateral joints of the coffer slabs are carefully located, as in most such cases, at one side of a sunken astragal; and since we find a joint on every extant piece that is sufficiently preserved to show it, we may conclude that all the blocks were two coffers in length to span the interval from beam to beam, and were only one coffer spacing in width, 0.461 m. The lateral joint, concealed in the sunken astragal, has an anathyrosis 0.045/0.05 m. wide along the lower edge. The bearing ends run 0.083 m., 0.109 m., and 0.125 m. beyond the sunken astragals in three examples, so that the lengths must have averaged 1.10 m.[93] The bearing bed at the ends of the blocks is worked with a toothed chisel, beginning at a point corresponding roughly to the back of the relieving margin on the ceiling beam. Some of the coffer slabs, being of sufficient thickness to accommodate the coffers 0.081 m. deep, have flat tops; I noted a thickness of 0.105 m. in one such instance, 0.087 m. in another; in some cases the height is so little greater that the thickness of marble at the vault is only 0.01 m. In other cases the slab is only 0.07 m. thick, quite inadequate for the vault, and so has to rise to a higher level by about 0.03 m. in passing over the vault. Some of the coffers have mason's letters on their tops, as BB.

A few fragments (I noted five in all, one of them a large piece) differ from the others in being of wretched quality, both in tooling and profiles, though they show the same dimensions, profiles, patterns, and colors. It seems evident that these are carelessly executed Roman replacements done at the time of the re-erection of the temple. This Roman workmanship of certain fragments, and also the Roman letters BB (placed one above the other) on the top of one of the original Greek coffers, form additional evidence for the attribution of this ceiling to the temple of Ares.

[92] I. e., ½ (1.018 — 0.090 — 0.915) = 0.0065 m.
[93] I. e., 0.954 — (2 × 0.0335) + (2 × 0.106) = 1.099 m.

With regard to the plan of the cella, little can be said in view of the solid construction of the foundation in Roman times, betraying no evidence of the locations of the walls. In the plan (Fig. 5) the walls are restored in agreement with those of the " Theseum."

We have, throughout this discussion, adopted the view of the excavators that the temple was that of Ares, an identification which agrees with the topographical description by Pausanias when considered together with the other identifications as revealed by the excavations.[94] It must here be observed that Dörpfeld has recently disputed this identification,[95] on the ground that Pausanias was not in this portion of the Agora when he described the temple of Ares, that the latter must be associated with the area named for Ares, the Areopagus,[96] and that the temple which we have described was probably never seen by Pausanias since it may have been ruined 250 years earlier and never rebuilt. With regard to the first of these objections, the general topography of the Agora is the best answer.[97] As for the objection that the temple is not in a location suitable for Ares, this is probably true; but we are so definitely concerned with a transported and reconstructed temple that its original position may well have been in some more appropriate locality.[98] Finally, the theory that Pausanias never saw this temple, for the reason that it was destroyed a quarter of a millennium before his time, is contradicted by the mason's letters and other indications that the temple was rebuilt at about the time of Augustus; and it probably survived for a century after the visit of Pausanias, being sacrificed only for the " Valerian Wall " in which so many of its fragments were immured. Thus the Pausanias argument is wholly favorable to the identification.[99]

The internal evidence, so far as it goes, likewise favors the identification as the temple of Ares. We know from Pausanias (I, 8, 4) that the cult statue of Ares was the work of Alcamenes, whose career began in the lifetime of the master (before 432) but extended at least as late as 403 B.C. (the relief of Heracles at Thebes; Pausanias, IX, 11, 6), and whose cult statues of Athena and Hephaestus in the neighboring " Theseum " date from 421-415 (I.G., I², 370/371). Since the erection of the temple would presumably have antedated the cult statue by only a few years, any period in

[94] It may be noted that Robert (*Pausanias als Schriftsteller*, pp. 312-313) thirty years ago had drawn the correct inference as to the location of the temple.

[95] Dörpfeld, *Alt-Athen und seine Agora* (II, 1938), pp. 140-142.

[96] This was formerly the prevalent view as to the location of the temple; cf. Wachsmuth, *Stadt Athen* (1874), p. 168; Harrison, *Mythology and Monuments of Ancient Athens*, pp. 75-77; Frazer, *Pausanias*, II, p. 91; Judeich, *Topographie²* (1931), p. 349, note 3. Earlier still, Cyriac of Ancona and Ross had identified the " Theseum " as the temple of Ares.

[97] See above, pp. 1-2.                   [98] See below, p. 50.

[99] We need not, therefore, delay to consider Dörpfeld's alternative identification as a hypothetical temple of Zeus, never reconstructed because at the time of its destruction the erection of the other and greater temple of Zeus Olympius had already been resumed by Antiochus IV (and Augustus).

the last four or five decades of the fifth century would fit the evidence of the statue. Such is the date that fits the architectural character of the remains. I have noted Miss Shoe's estimate of the mouldings, made at a time when they were still unidentified and dispersed, as of the second half of the fifth century, with a trend toward its earlier portion. The hawksbeak moulding of the anta capital resembles very closely those of the Parthenon and Propylaea, which would agree with such a date.

The profile of the sima is of the older cyma reversa or so-called " Corinthian " type, as executed in the " Theseum " and temple at Sunium (Fig. 16), antedating the intrusion of the Ionic ovolo type into Doric structures such as the Parthenon, the Propylaea, the temple at Rhamnus, and the Argive Heraeum. We are not necessarily to infer from this that the s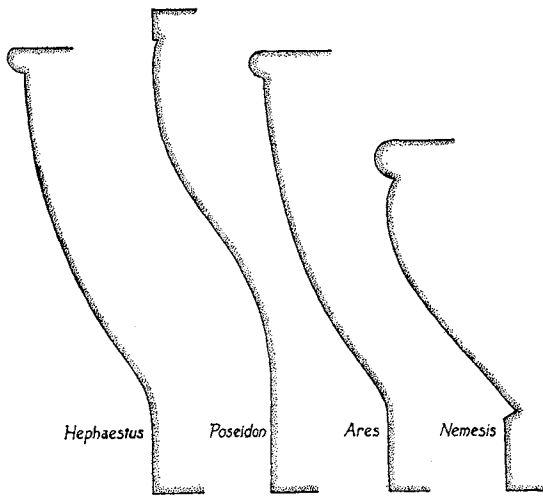ima of the temple of Ares is earlier than that of the Parthenon; it merely represents an earlier tendency which might have survived side by side with the work on the Parthenon. The palmettes decorating the sima are of a hybrid or transitional type, with their lancet central petals and S-curved lateral petals, but round-lobed and not yet of the flame type. All these features would be satisfactory for a date in the 'thirties. We are probably, however, to lay no particular stress on the fact that the bottom step of the temple was left with its protective surface on riser and tread, limited by finished margins at the bottom of the former and at the back of the latter. Such unfinished surfaces on steps are of too frequent occurrence to be significant; and the completion of all the other members would be adverse to any suggestion that work was interrupted by the preliminaries of the Peloponnesian War in 432 B.C.



Fig. 16. Sima Profiles by the " Theseum Architect "

Somewhat more intangible are the dimensions and proportions. We have noted some dimensions (Fig. 17) which are identical with those in the " Theseum " and at Sunium, such as the (assumed) height of the epistyle (2⁹⁄₁₆ Doric feet) and the (resulting) total mean height of the entablature (6⅛ Doric feet). In these very members, however, we find diversities, the triglyph being ½ dactyl lower, and the cornice reciprocally ½ dactyl higher, in the " Theseum " and temple at Sunium; also the triglyph is proportionately narrower (1⁷⁄₁₂ Doric feet) in these two temples, and wider (1¹¹⁄₁₆ Doric feet) in the temple of Ares; and the triglyph spacings differ in all three (3²⁹⁄₂₄ Doric feet in the " Theseum," 3⁴¹⁄₄₈ Doric feet at Sunium, 4⅛ Doric feet in the temple of Ares).

It would seem that the triglyph width was first proportioned for the " Theseum," where it forms exactly one fifth of the axial spacing ($\frac{1}{5} \times 7^{11}\!\frac{}{12} = 1\frac{7}{12}$ Doric feet), with the usual proportion of $2:3$ to the metope width, and was then copied exactly at Sunium, where it is $\frac{2}{3}$ dactyl wider than the " proper " proportion.[100] This wider proportion was repeated in the temple of Ares, where the dimension was likewise
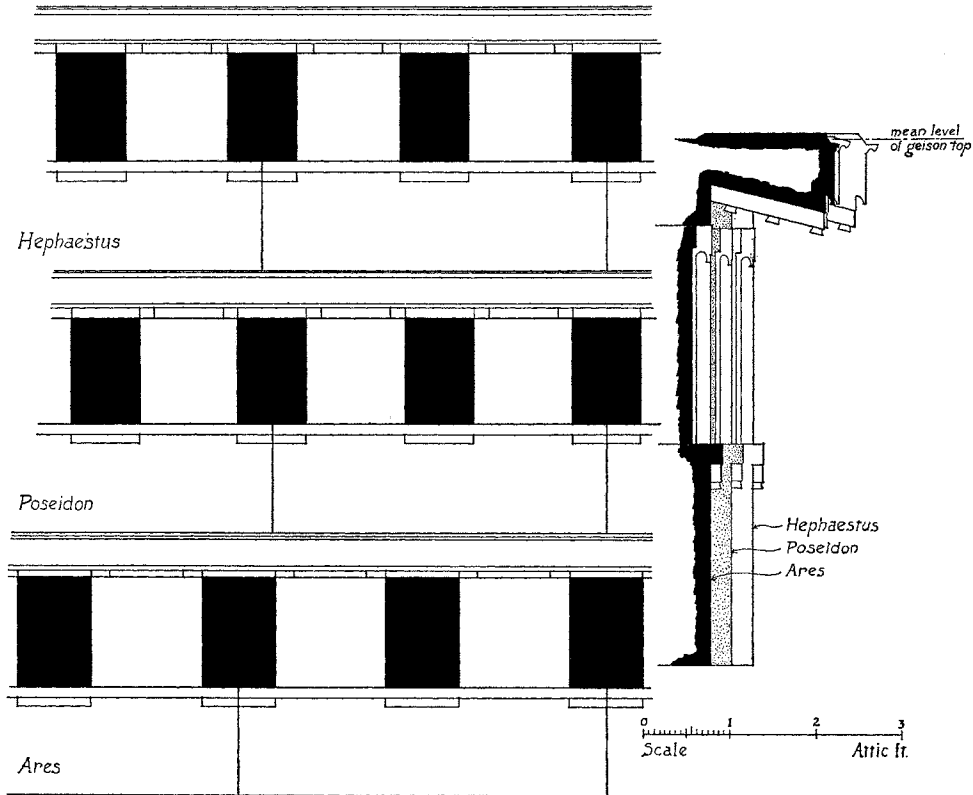


Fig. 17. Entablature Proportions by the " Theseum Architect "

increased, so that the triglyph is not only $1\frac{2}{3}$ dactyls wider than those of the " Theseum " and at Sunium, but is also $\frac{3}{5}$ dactyl wider than the " proper " $(2:3)$ proportion.[101] The natural query as to why the increase in width was not limited to $1\frac{1}{6}$ dactyls (giving $1^{2}\!\frac{1}{32}$ Doric foot, the nearest equivalent to one fifth of the axial spacing), instead of $1\frac{2}{3}$ dactyls, may perhaps be answered by the assumption that the " Theseum " triglyph width being copied at Sunium resulted in closer proportions, and these closer proportions in turn being copied in the temple of Ares resulted in a

[100] I. e., $1\frac{7}{12}$ D. F. being $\frac{1}{24}$ D. F. wider than $\frac{1}{5} \times 7^{11}\!\frac{}{24} = 1^{13}\!\frac{}{24}$ D. F.
[101] I. e., $1^{11}\!\frac{}{16}$ D. F. being $\frac{3}{80}$ D. F. wider than $\frac{1}{5} \times 8\frac{1}{4} = 1^{13}\!\frac{}{20}$ D. F.

greater triglyph width.  For, at Sunium, the ratio between triglyphs and metopes ($1\frac{7}{12}$ and $2\frac{13}{48}$ Doric feet) became $76:109$, the nearest simple ratios being $9:13$ and $7:10$.  Of these, the ratio $7:10$ could not be adjusted to the triglyph spacing $4\frac{1}{8}$ Doric feet in the temple of Ares, whereas the ratio $9:13$ yielded commensurate quantities, $1\frac{11}{16}$ and $2\frac{7}{16}$ Doric feet.

It would seem, furthermore, that the height of the triglyph was likewise designed for the " Theseum," in accordance with the ratio $5:8$ ($1:1\frac{3}{5}$), the height being executed to fit the Doric unit of measure as $\frac{1}{30}$ dactyl less than the result given by this ratio, and so as $2\frac{17}{32}$ Doric feet.[102]  This height was exactly copied together with the proportion at Sunium.  But in the temple of Ares, with the increased width of $1\frac{11}{16}$ Doric feet, such a height if copied exactly would have yielded a ratio of exactly $2:3$ ($1:1\frac{1}{2}$), apparently so desirable from the viewpoint of harmony that its intentional avoidance calls for comment.  The reason for increasing the height arbitrarily by $\frac{1}{2}$ dactyl, to $2\frac{9}{16}$ Doric feet, thus destroying this simple ratio without securing any other, may be the result of deference to two later tendencies: increasing the triglyph height to equal that of the epistyle (exemplified in the Parthenon), and diminishing the cornice height (exemplified in a most marked degree in the Propylaea).  In the temple of Ares the frieze was made higher by $\frac{1}{2}$ dactyl, and the cornice reciprocally lower by $\frac{1}{2}$ dactyl, so that the total mean height of the entablature remained $6\frac{1}{8}$ Doric feet, exactly as in the " Theseum " and at Sunium.

This brings us to the remaining coincidence, the identical entablature height of $6\frac{1}{8}$ Doric feet used throughout.  This again was probably designed originally for the " Theseum," built up around the triglyph height of $2\frac{17}{32}$ Doric feet, the epistyle being made $\frac{1}{2}$ dactyl higher or $2\frac{9}{16}$ Doric feet, and the mean height of the cornice one fifth of the sum of these, or one sixth of the resulting total entablature, increased by $\frac{1}{5}$ dactyl to fit the Doric foot unit.[103]  Since, at this early stage of the Periclean style, it seems to have been felt that the column height should be slightly less than three times the entablature height, the ratio of $7:20$ was chosen, so that the entablature of $6\frac{1}{8}$ Doric feet yielded a column of $17\frac{1}{2}$ Doric feet, which was also exactly $5\frac{3}{5}$ lower diameters.[104]  Later, at Sunium, the ratio of exactly $1:3$ ($7:21$) was chosen, so that the same entablature of $6\frac{1}{8}$ Doric feet yielded a column of $18\frac{3}{8}$ Doric feet.  And finally, in the temple of Ares, probably under the influence of Ictinus, who used slighter entablatures both at Bassae and in the Parthenon, the column height was made more than three times the entablature height, evidently in accordance with a similar increase of ratio to $7:22$, so that the entablature of $6\frac{1}{8}$ Doric feet yielded a column of $19\frac{1}{4}$ Doric feet.[105]

[102] I. e., $2\frac{17}{32}$ D. F. being $\frac{1}{480}$ D. F. lower than $1\frac{3}{5} \times 1\frac{7}{12} = 2\frac{8}{15}$ D. F.
[103] I. e., $1\frac{1}{32}$ D. F. being $\frac{1}{80}$ D. F. more than $\frac{1}{5}(2\frac{9}{16} + 2\frac{17}{32}) = 1\frac{3}{160}$ D. F.
[104] I. e., $5\frac{3}{5} \times 3\frac{1}{8} = 17\frac{1}{2}$ D. F.
[105]

With regard to the absolute dating, we are assisted by the fact that the temple of Ares exhibits such similarities to three other works that we are able to assign all four to a single nameless architect, the so-called " Theseum architect," as Beazley might name him because the " Theseum " was not the Theseum. Indeed, the similarity of the temple of Ares to the " Theseum " is so great that it is almost impossible to distinguish between their simas; and the dimensions of the peristyle ceiling beams likewise are almost identical in both. A comparison of these four works by the same man enables us to place them in their relative positions and so to determine the date of the temple of Ares. The two temples which seem to mark extremes in the career of this architct, the " Theseum " and the temple at Rhamnus, apparently date from 449 and 436 B.C. respectively.[106] Between them seems to lie the temple at Sunium, partaking of the characteristics of both. Also between them lies the Parthenon, a work by different architects (Ictinus and Callicrates), of which the architectural design was begun in 447 and finished in 438 B.C., with immediate consequences for the design of subsequent structures (such as the Propylaea begun in 437, and the temple at Rhamnus begun in 436). As a typical illustration of the difference, we may refer to the marble simas of these four temples (Fig. 16), of which three retain the older form, while that at Rhamnus is of the Parthenon type. Even the temple at Sunium embodies some of the features of the Parthenon (such as the two-stepped toichobate, and the carved moulding in the anta capital), and so may be placed shortly after 447 B.C. But our analysis of the relative dating has suggested that the temple of Ares is the third in the series " Theseum," temple at Sunium, temple of Ares, and also that it antedates the beginning of the temple at Rhamnus in 436 B.C. Considering it as a part of the activity of the so-called " Theseum architect," it would fall into its place approximately as follows:

> B.C. 449-444 Athens (" Theseum " = temple of Hephaestus)
> "  "  444-440 Sunium (temple of Poseidon)
> "  "  440-436 Athens (temple of Ares)
> "  "  436-432 Rhamnus (temple of Nemesis)

Thus we are to imagine the temple of Ares, designed about 440 B.C., as surrounded by a peristyle with thirteen columns on the flanks and six on the fronts, with lion head spouts along the entire length of the flanks rather than merely at the corners as in the Parthenon, probably with pediment sculptures of an unknown subject, and with golden Nikes on the roof. And now must be mentioned a curious coincidence.

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[106] See my article on " Archaeology and Astronomy " (*Proc. Am. Phil. Soc.*, LXXX, 1939, pp. 152, 163-165), in which I discuss the archaeological evidence as combined with the astronomical observations which yield the precise dates.

After this study of the temple had been completed, Bulle published a fragment of a calyx crater (Fig. 18) at Würzburg, painted about thirty years after the temple was begun, and representing (in the only fifth century example yet known of that modern system of oblique perspective with which I have always felt confident that the Greeks were then acquainted) a structure which he has independently identified as the temple



Fig. 18. Calyx-Crater Fragment with Temple of Ares (Würzburg)

of Ares.[107] Behind a scene apparently reminiscent of Micon's painting of the battle of the Amazons appears the peripteral temple with six Doric columns—three, at least, to the left of the central axis—on the front, lion-head spouts along the entire flank, the unknown pedimental statues of combatants dominated by Athena, and, just below the break, the fringes of the drapery of the golden Nikes.

As the date of the destruction of the temple of Ares, the moment of Sulla's

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[107] Bulle, Ἀρχ. Ἐφ., 1937, pp. 473-482; I owe to Bulle a photograph of this fragment and permission to publish it.

occupation of Athens has been suggested.[108] Such a theory is hardly plausible in view of the extreme care with which the temple was taken apart from top to bottom, and put together again on new foundations. Such a process has nothing to do with repairs after cataclysmal wars or earthquakes, but indicates a transfer of site, as in other instances where late mason's letters were employed (e. g., the monument of Nicias). The carefully cut mason's letters, appearing on all blocks sufficiently well preserved to show them, and indicating that the courses were numbered from top to bottom, imply that they were cut during demolition rather than erection, but for the purpose of reconstruction. Another detail, appearing especially on some of the euthynteria blocks, the enlargement of the clamp heads to permit extraction (paralleled by blocks of the Older Parthenon reused in the present Parthenon, and by blocks of the monument of Nicias reused in the Beulé Gate), likewise implies that the original temple was carefully taken down and rebuilt at a later date. The few repairs or additions of the moment of reconstruction are confined to delicate members, the almost transparent ceiling coffers, which might have been injured during the demolition; there is nothing to suggest wanton damage. In consequence, we must consider a transfer of site entirely disconnected from warlike operations.

The clue to the date of this demolition is furnished primarily by the early Roman levels in contact with the foundations, and by the mason's letters themselves, of forms appropriate to the reign of Augustus or thereabouts. In this connection it is appropriate to recall the dedication to Ares and Augustus ("Ἄρει καὶ Σεβαστῶι), on a statue pedestal (I.G., II², 2953) from which the name of the archon, unfortunately, is broken away.[109] It has been noted that the archon mentioned in this dedication bears the title ἐπώνυμος; but since this title was never used in the archon lists, its presence or absence elsewhere offers little indication of date;[110] the next definite use of the title ἐπώνυμος is in 41 A.D. (I.G., II², 3268). Another evidence of activity in this period is a dedication to Caius Caesar, adopted son of Augustus, under the title of the " New Ares " (νέον Ἄρη), in an inscription which is probably as late as 2 A.D. and yet must antedate the death of Caius on February 21, 4 A.D. (I.G., II², 3250).[111] It would not

[108] Riemann, Arch. Anz., 1937, p. 103 (assuming that it was rebuilt); Dörpfeld, Alt-Athen und seine Agora, pp. 141-142 (assuming that it was never rebuilt).

[109] Graindor, Athènes sous Auguste (Rec. Trav. Univ. Egypt., I, 1927), p. 113.

[110] Keil (Beiträge zur Geschichte des Areopags, p. 49, note 56) had affirmed that the title was not used before 9 A.D.; and Graindor (Chronologie des archontes athéniens sous l'Empire (Mem. Acad. Belg., VIII, 1921), p. 9, note 5, and p. 39, note 1; Athènes sous Auguste, p. 114) had assumed that ἐπώνυμος appeared in some archon lists (I.G., II², 1723, 1725, 1735) but not in the earlier ones. Dow, however, has ascertained that the word never occurred even in these three (Hesperia, III, 1934, pp. 160, 164-165, 167, 186).

[111] Gardthausen, Augustus und seine Zeit, II, pp. 754 f., note 44; R.E., X, pp. 427-428; Riewald, De imperatorum Rom. cum - - - dis - - - aequatione (Diss. 1912), p. 316, no. 95; Graindor, Athènes sous Auguste, p. 51. Graindor notes that the attempt to restore the name of Caius as

be unreasonable to assume that the reconstruction of the temple was complete by this date.

The association of the temple and its cult with Augustus and Caius Caesar suggests a theory as to the possible original site of the temple. As we have seen, the cause of the reconstruction was undoubtedly a transfer of site. And in view of the modern attempts to associate the temple with the Areopagus, the possibility of an earlier location on the slopes of this hill must not be ignored. But the reason for the transfer, under such circumstances, is not readily apparent. On the other hand, it is obvious that in the time of Augustus, or immediately before, another site fairly close to the present location of the temple of Ares must have been denuded, and that any monuments of permanent value thereon must have been moved elsewhere. This is the site of the great Roman Agora, begun with the assistance of funds contributed by C. Julius Caesar (*I.G.*, II², 3175) probably in 47 B.C. when he was in Athens after the battle of Pharsalus.[112] The work was at first under the superintendence of Herodes of Marathon (apparently the archon of 60/59 B.C.), and then under that of his son Eukles, who also was archon at about 46/5 B.C.,[113] and priest of Apollo for the rest of his life until our era; the dedicatory inscription of the Roman Agora mentions him also as hoplite general. It is possible that the work was interrupted because of insufficiency of funds at the time of the assassination of Julius Caesar, and that the resumption was made possible by means of an embassy of Eukles, mentioned in the dedicatory inscription, and presumably to Augustus before his visit to Athens in 20 B.C. The dedication by Eukles occurred in the archonship of Nikias the son of Sarapion of Athmonon; this date is not exactly defined, though it may be very closely estimated as about 10 B.C.[114] On the apex of the pediment of the entrance gateway was set up a statue of Lucius Caesar (*I.G.*, II², 3251), who was adopted by Augustus in 12 B.C., and died August 20, 2 A.D. It has been suggested that, as Lucius stood above the Doric gate of the Agora, so Caius, who could not have been neglected, must

"son of Ares" in another dedication (*I.G.*, II², 3785) is erroneous; the reference is to C. Julius Nicanor, son of Areios. Cf. *I.G.*, II², 3257, Drusus as the "New Ares," 20-23 A.D.

[112] For the chronology of the Roman Agora, I follow the arguments set forth by Graindor, *B.C.H.*, 1914, p. 436, note 4; *Musée Belge*, 1924, pp. 109-121; *Athènes sous Auguste*, pp. 31-32, 51-52, 148, note 5, and 184-198; *Herode Atticus et sa Famille* (*Rec. Trav. Univ. Egypt.*, V, 1930), pp. 5-8. See also Dow, *Prytaneis*, p. 169. The assumption that the dedication was to Caius Caesar, adopted son of Augustus, thus giving the date as between 12 B.C. and 4 A.D., is shown by Graindor to be erroneous.

[113] Dinsmoor, *Archons*, pp. 280, 281, 284-285; Dow, *Hesperia*, III, 1934, pp. 155-157.

[114] Graindor, *Chronologie des archontes*, pp. 48-49, no. 15; *Athènes sous Auguste*, p. 32 and note 3. The archon list for the years 18/7–12/1 is preserved (*I.G.*, II², 1713; cf. Dinsmoor, *Archons*, pp. 282-284) with no trace of the name of Nikias, who must, therefore, be assigned to 27/6–19/8, all presumably too early, or to 11/10 or thereafter. On the other hand, the archon was always priest of Drusus in the years 9/8 B.C. and thereafter (Dow, *Hesperia*, III, 1934, pp. 178-179, 186), so that we seemingly are restricted to 11/0 or 10/9 B.C.

have stood either above the inner façade of the Doric gate or above the western gate near the Tower of the Winds.[115] For this assumption, however, there is no evidence apart from a desire for symmetrical impartiality. Lucius may have presided over the old site (the Roman Agora), Caius over the new (the temple of Ares).

It is hardly a mere coincidence that the present site of the temple of Ares is contiguous to another structure apparently of the Augustan period, erected by the father of Lucius and Caius. The central portion of the Agora, undoubtedly originally open ground apart from the numerous small votive and commemorative structures, is now occupied by a large building, about 42.50 × 52.50 m., in the form of a covered theatre or Odeion. This can only be the Odeion mentioned by Pausanias (I, 8, 6) in his description of the Agora, with the statues of the Ptolemies standing before it.[116] It is probably, furthermore, identical with " the theatre in the Cerameicus which goes by the name of the Agrippeion," in which the Sophists lectured in the second century after Christ (Philostratus, *Vit. soph.*, II, 5, 4; 8, 4).[117] If so, it may have been erected during the period when Agrippa governed the East, before 13 B.C., and particularly at the time of his visit to Athens, in 16 B.C.[118] From the relative positions of the two buildings it would appear that the Odeion was built first, with an untrammeled choice of the area, with its back against and parallel to the South Stoa, facing northward; then the temple of Ares was erected, almost exactly parallel to the Odeion, but facing east and thrust so far toward the west as to leave the façade of the Odeion unobstructed.[119] If this sequence should be confirmed by the analysis of the excavation, we should be provided with a probable date *post quem* for the transfer of the temple site, namely, about 16 B.C.

Thus the temple of Ares was apparently erected between 440 and 436 B.C. on a site not far from the Anakeion which formed the centre for military assemblies. Around it were probably begun, soon after 47 B.C., the initial stages of the erection of the Roman Agora. The actual demolition and transfer of the Temple of Ares may have been postponed until the securing of new funds from Augustus, to whom, accordingly, the new temple was in part rededicated. For the new site was chosen, between 15 and 10 B.C., an area beside the recently completed Agrippeion, in the open centre of the Agora, which during the Augustan period was suddenly expropriated as avail-

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[115] Graindor, *Athènes sous Auguste*, p. 52.

[116] Shear, *Hesperia*, V, 1936, pp. 6-14; for the plan, *Hesperia*, VI, 1937, pl. IX.

[117] The identity of Odeion and Agrippeion was suggested by Dörpfeld, *Ath. Mitt.*, XVII, 1892, pp. 252-260; Harrison, *Mythology and Monuments*, pp. 91-92; Frazer, *Pausanias*, II, p. 112; Graindor, *Athènes sous Auguste*, p. 49; Judeich, *Topographie*,[2] pp. 98, 350.

[118] For the date of the visit, see Reinhold, *Agrippa*, pp. 106-110.

[119] Of course it is equally possible that the new temple of Ares and the Odeion were parts of a single co-ordinated scheme. Homer Thompson suggests to me that the use of good double-T clamps in the Augustan wall of the Odeion may have been a consequence of the use of such clamps in the reconstruction of the temple of Ares.

able ground for new building projects. Here the cult was still in progress as late as 116/7 A.D. (*I.G.*, II², 1072), and here Pausanias saw the temple about fifty years later. As for the date of its destruction, it is significant that the neighboring Agrippeion, according to the latest coins (those of Gallienus) found in the burned stratum which covered the floor, was probably destroyed at the time of the invasion of the Heruli in 267 A.D.[120] So too the temple of Ares, of which many fragments were used as filling material in the so-called " Valerian Wall," erected at about 277 A.D., ten years after the Herulian raid,[121] was probably a victim of the same catastrophe.

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ADDITIONAL NOTE: In mentioning the dedication to Ares found at Menidi (*I.G.*, II², 2953), on pages 1 and 49 above, I overlooked Robert's new discussion of it (*Études épigraphiques et philologiques*, in *Bibl. École des Hautes Études*, CCLXXII, 1938, p. 295), together with other inscriptions of the deme of Acharnai proving that here was a local cult of Ares and Athena Areia (*ibid.*, pp. 293-316). Elimination of *I.G.*, II², 2953 from the list of *testimonia* concerning the cult at Athens does not alter any of the conclusions reached in my article.

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[120] Shear, *Hesperia*, V, 1936, p. 11.
[121] Shear, *A.J.A.*, XLII, 1938, p. 4 (noting sixteen coins found in mortar under the wall, dated from Aurelian, just before 275, to Probus, just after 276 A.D.; the fact that only one coin was of the contemporary emperor Probus, the rest being of the year or two preceding him, suggests that the building occurred early in his short reign of 276-282 A.D.).