

ARCHITECTURAL STUDIES CONCERNING THE ACROPOLIS OF ATHENS¹

IT IS indeed strange that comparatively little is known about many of the architectural features of the Acropolis of Athens. Probably the reason for the anomaly lies in the fact that archaeologists have neglected the Acropolis for the many ancient sites recently uncovered throughout the Greek world. And yet it is of importance that the architectural background against which was played much of the drama of ancient Athens should be understood as fully as possible (Fig. 1).

I. MAIN ENTRANCE OF THE ACROPOLIS

An examination of the site of the Propylaea of Mnesicles reveals the fact that there are a number of different building periods to be considered. Recent excavations and restorations have thrown much light upon both prehistoric and early classical building operations; and the same is true for the architectural activities of the time of Pericles. Happily much of the Propylaea is preserved, and this in spite of the fact that Romans, Byzantine Greeks, Franks, and Turks have, in turn, radically altered the building. In fact, it may be claimed that the various building periods on the site faithfully reflect the chief political changes through which Athens itself has passed.

1. PREHISTORIC PERIOD (Fig. 2)

As the Acropolis rock falls away precipitously at 1 and 2, Figure 2, there can be little doubt but that here the prehistoric wall occupied a position along the crest. This theory is strengthened by two facts. First, Kavvadias and Kawerau show the remains of a prehistoric structure at 3, Figure 2: it is more probable that the structure was within the walled area of the Acropolis than that it was outside it.² Second, a little excavating by the writer at 4, Figure 2, brought to light the remains of a wall which

¹ The writer has made a plaster model of the Acropolis as it looked in the latter part of the first century B.C. (after the completion of the Temple of Augustus and Roma). In gathering the data for the model, problems of such unexpected architectural interest were encountered that publication of the most important results thus obtained will justify, it is hoped, the restoration of certain portions of the model. The model is illustrated above, p. 2, Fig. 2 (cf. p. 74, Fig. 1).

The writer is under great obligation to Bert H. Hill, former Director of the American School of Classical Studies at Athens, for generous aid and encouragement in the preparation of this article. To Professor John Meliades, Ephor of the Acropolis, special thanks are due for his kind permission to make test excavations in five places on the Acropolis.

² Kavvadias and Kawerau, 'Η Ἀνασκαφὴ τῆς Ἀκροπόλεως, Πίναξ Β'.

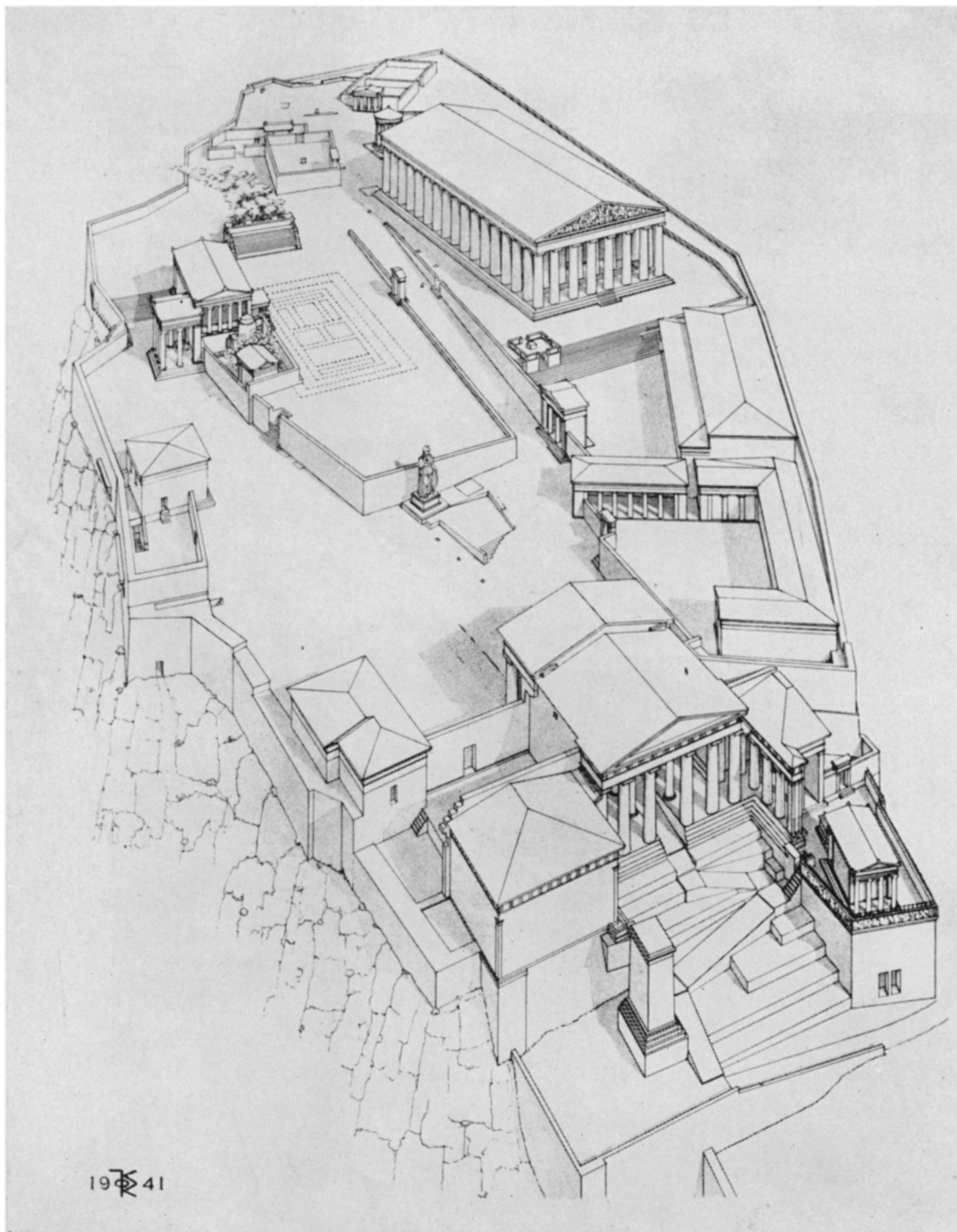


Fig. 1. Bird's-Eye View of the Acropolis: Restoration of the Latter Part of the First Century B. C.

was like the existing sections of the prehistoric circuit wall of the Acropolis. The stones at 4 are *in situ*. They are of Acropolis limestone and laid in a mortar of mud. All the sherds from the mortar date from prehistoric times. To the southeast of 4 lies a well-known section of the prehistoric circuit wall—we refer to wall 5-6, Figure 2.

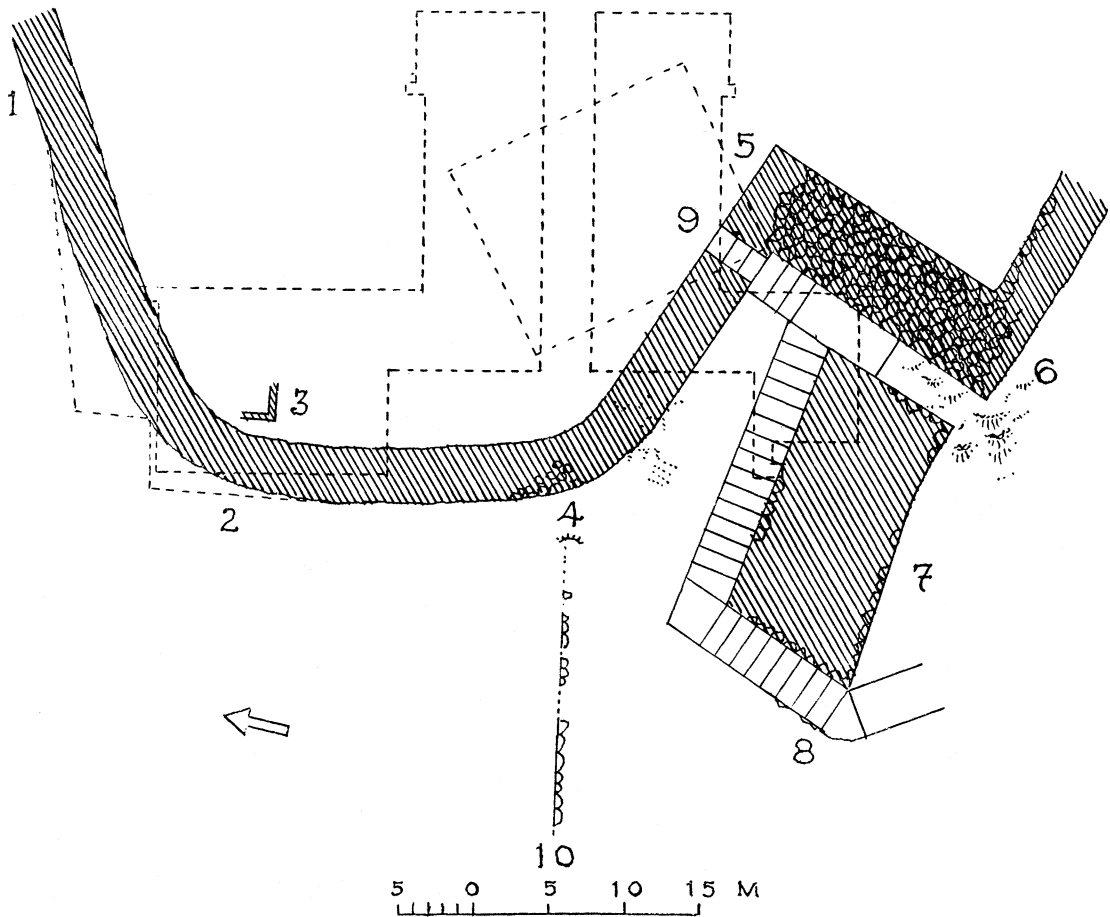


Fig. 2. Plan of the Main Entrance of the Acropolis in Prehistoric Times

Its unusual thickness is undoubtedly due to the comparatively gentle slope of the Acropolis rock to the west of it, for here was the only fairly good approach to the Acropolis, and here, consequently, we should expect to find a strong defensive wall. A thick wall defies the battering-ram, and upon its broad terrace a large number of defenders can be concentrated. In one place the wall is preserved to a height of 4.54 m. above the Acropolis rock, but the original height of the wall may well have been considerably greater.

The bastion at 7, Figure 2, is an even clearer indication of the protection deemed

necessary for the main entrance of the Acropolis. When the Nike Temple and its bastion were recently reconstructed, the plan of the prehistoric bastion within the fifth-century bastion was definitely ascertained (cf. 1, Fig. 3).³ The original height of the bastion is not preserved, however.

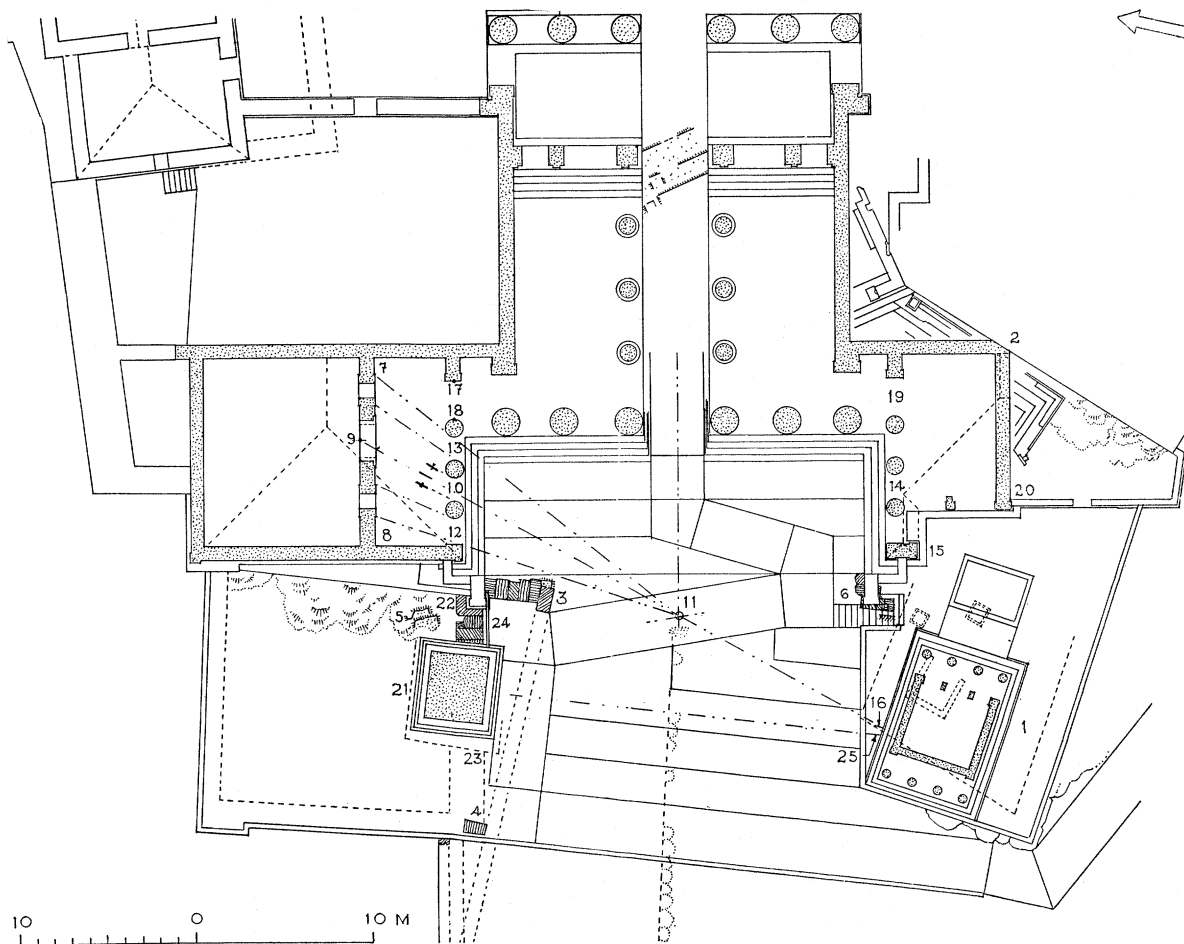


Fig. 3. Propylaea: Plan

Remains of a ramp of the same period as that of the prehistoric bastion are still to be seen at 8, Figure 2.

The gate itself would probably be located where it could be best protected, that is at 9, Figure 2, for attackers would in that case be forced to advance the greatest distance while under fire from three directions. The system of defense is almost

³ Gabriel Welter, *Archäologischer Anzeiger*, 1939, pp. 1-22.

identical with that of the two principal gates at Mycenae, a fact which gives us a rough indication of the date of the Athenian example.⁴

There is a difference in level of 8.34 m. between points 8 and 9 of the ramp, Figure 2, while the developed horizontal distance between the same points is *ca.* 33 m. These two measures give an excessive grade of 25% for a ramp without steps. The maximum permissible grade for pedestrians should not exceed 14%. The difficulty may be overcome by introducing low steps. Those shown in Figure 2 have risers 0.15 m. high and treads 1.25 m. wide, and the treads themselves have a grade of 10%. Sacrificial animals could have conveniently used such a ramp.

The Athenians who built the gate of the Acropolis of the prehistoric period had no idea of making a beautiful entrance—good defense was their sole preoccupation.

Wall 4-10, Figure 2, does not belong to the same period as that of the prehistoric circuit wall of the Acropolis. It is a polygonal wall built of Acropolis limestone, with fairly well-cut joints. It may date from either the sixth or seventh century B.C. The northern face of the wall is dressed to a plane. The southern face was left rough, a fact which signifies that the wall was built to support a terrace. The top of the wall was probably considerably inclined, the inclination roughly following the slope of the Acropolis rock beneath it. If the wall was inclined, it is likely that the terrace it supported was also inclined or else constructed in a series of small terraces. What was the reason for the terrace? Two purposes may be suggested: (1) To aid in the defense of the entrance to the Acropolis. To the north of the terrace the Acropolis rock falls off rapidly for a height of three or four meters: the wall and its terrace would strengthen considerably the natural defense at this point. (2) To eliminate dangerous accidents to those who might fall from the ramp leading to the entrance gate by raising the ground at the foot of the ramp to somewhere near the level of the ramp itself.

2. 437 B.C. (Figs. 4 and 6)

There is a good deal of evidence for the appearance of the entrance of the Acropolis in 437 B.C., the year in which Mnesicles began to build his famous Propylaea.

The foundation at 1, Figure 4, of wall 1-2 is of squared poros blocks. They have a different orientation from that of the Mnesiclean Propylaea above them; hence they indicate a wall earlier in date than the Propylaea. To the east of 1, the Acropolis rock is dressed for the wall shown running eastward from 1. At 2, Mnesicles utilized the foundations of the circuit wall of the period under consideration for the western foundations of his "Picture Gallery." From 2, the circuit wall can be traced in a northeasterly direction by rock cuttings: then it turned to the east, at 3, along the crest of the Acropolis.

⁴ Steffen, *Karten von Mykenai*.

There is an indication that the upper portion of wall 5-6, Figure 2, was rebuilt in this period. For the wall of Mnesicles' Propylaea is cut at an angle at 2, Figure 3, to fit against the lower part of the prehistoric wall: the cutting is irregular for a height of 4.85 m. above the floor of the Propylaea; for all but 0.64 m. of that height

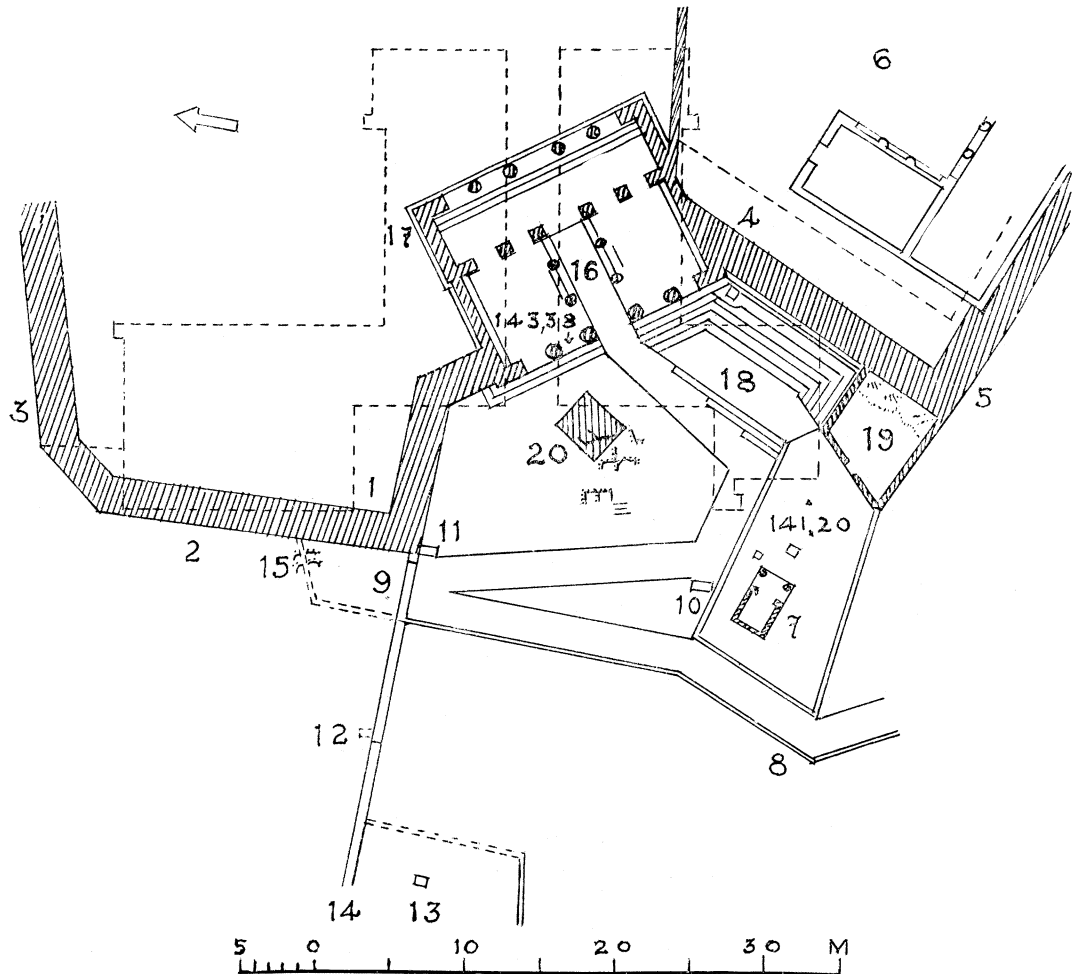


Fig. 4. Main Entrance of the Acropolis in 437 B. C.: Plan

the cutting still fits the irregularities of the prehistoric wall. But above the 4.85 m. level the cutting is regular and 0.25 m. to the east of the cutting below. Evidently, when the southwest wing of the Propylaea was built, its southeast corner was set against an existing wall the bottom portion of which belonged to the prehistoric wall, while the upper portion was a wall with a well-dressed face set back somewhat from the face of the prehistoric wall. We may conjecture with a fair degree of plausibility that the Persians destroyed, in 480 B.C., the upper portion of the prehistoric wall, and that

Cimon rebuilt the destroyed portion in ashlar when he erected the south wall of the Acropolis.⁵ Some idea of the height of the ashlar wall may be had from the fact that the cornice block over the southeast corner of the southwest wing of the Mnesiclean Propylaea was cut with an angle to fit against the ashlar wall. Moreover the ashlar wall was probably not as thick as the original wall—such a thick wall was no longer necessary from a military point of view and would have been costly. In addition, a thinner wall appreciably increased the area of the sanctuary of the Brauronian Artemis (6, Fig. 4). The thickness of the wall was perhaps not far from that of wall 3-2-1, Figure 4.

Were walls 3-2-1 and 4-5, Figure 4, provided with crenelations? It is difficult to answer this question, for, although crenelations were in use long before the period under consideration, they were not always thought necessary—parapets were often deemed sufficient.

The prehistoric bastion at 7, Figure 2, lost in this period some of its defensive character. Upon it was built a small temple in poros, with an altar in front of it (7, Fig. 4). The temple and its altar give us the level of the terrace—it was 1.395 m. below the level of the terrace of the fifth century. No evidence was found during the rebuilding of the bastion to show that the level of the terrace was below the level of the prehistoric terrace, although this may well have been the case.

The ramp 8, 9, 10, 16, Figure 4, is gentler than that of the prehistoric period: it has a uniform grade of *ca.* 14% and thus requires no steps.

Block 3, Figure 3 is *in situ*. It is not parallel to the blocks immediately north of it. If the direction of block 3 be followed westward, a block *in situ* is encountered at 4, Figure 3 (block 12, Fig. 4), with its south face in the same plane with the north face of block 3. Moreover, if the direction of block 3 be followed still further westward, the orientation of a Pisistratid altar at 13, Figure 4, is found to agree with that of block 3, Figure 3. From these data we may gather that there was a wall at 9-14. It probably replaced wall 4-10, Figure 2: in other words, the terrace which wall 4-10 supported was enlarged toward the north. The eastern portion of the terrace—a horizontal portion—was buried when Mnesicles built his approach to the Propylaea in the second half of the fifth century B.C.⁶

There are rock cuttings at 5, Figure 3 (also shown at 15, Figure 4) which are probably to be associated with the period under consideration. They occur about half way up the ramp and may have been intended to receive a wall which supported a small terrace, for here was an excellent place for people to wait while other people were passing on the ramp. There is a remarkable view from the small terrace; to combine beauty with utility has always been a sign of the good designer. The un-

⁵ G. P. Stevens, *The Periclean Entrance Court of the Acropolis of Athens*, pp. 24-27 = *Hesperia*, V, 1936, pp. 466-469.

⁶ W. B. Dinsmoor in *The Archons of Athens*, fig. 2, illustrates this terrace.

expected direction of the northern wall of the small terrace is due to a peculiarity in the formation of the Acropolis rock beneath the wall. The writer believes that the terrace dates from the time of Cimon.

Farther up the ramp, at 10, Figure 4, a number of poros blocks protrude from beneath the foundation of the Mnesiclean Propylaea (cf. 6, Fig. 3). The fact that they have a different orientation from that of the Propylaea is proof that they antedate the Propylaea. As a matter of fact, they have the same orientation and the same technique as the blocks at 1, Figure 4, already mentioned, and may well have been associated with them. The blocks at 6, Figure 3, are foundation blocks, and their level is correct for their location in the foundation of the ramp at this point.

The propylon at 16, Figure 4, affords an illustration of the way the study of archaeology advances. In 1904 Charles H. Weller published an excellent article about this gate.⁷ More recently William B. Dinsmoor has added to our knowledge by excavating at 17, Figure 4, and finding rock cuttings for the northwest wall of the propylon. Result: The propylon should be restored with a façade of four columns, not with a façade of two columns as Weller believed.⁸ Little is known about the interior of the propylon. But there must have been some arrangement for doors. Perhaps the plan of the propylon resembled that of the central portion of Mnesicles' Propylaea (cf. Figs. 3 and 4). In yet another way the two propylaea probably resembled each other. The level of the rock cutting for the stylobate of the east façade of the propylon shows that the columns here were raised three steps above the columns of the west façade (cf. Figs. 3 and 4). We cannot start with a well-proportioned portico and take three steps out of the height of its columns and still have a well-proportioned portico. Granted that the order of the eastern portico was the same as that of the western portico (as in Mnesicles' Propylaea), all portions of it—the eastern portico—would then be raised three steps, the height of three steps probably corresponding to the height of the architrave, so that there might be some alignment between the two orders (the architrave of the east aligning with the frieze of the west). Furthermore, it is likely that the entire eastern portico, not the order alone, was thus raised; this is what Mnesicles did in the case of his Propylaea (cf. Figs. 3 and 4).⁹ Figure 6 gives an idea of how such a raised eastern portico would look in perspective.

For information concerning the "exedra" at 18, Fig. 4, the reader is referred to Weller's article cited above. He discovered three rock-cut steps in front of a pre-

⁷ C. H. Weller, *A.J.A.*, VIII, 1904, pp. 34-70.

⁸ *A.J.A.*, VIII, 1904, p. 57, fig. 4 and pl. VIII. From what is left of the southwest anta we can calculate the height of the columns at *ca.* 4.714 m. Further, T. Wiegand shows a Doric entablature in his *Poros-Architektur der Akropolis zu Athen*, pl. XIII, 4, which has a correct axial unit of the triglyphs for our four-column façade. Scholars the world over are looking forward with eager interest to a publication of Dinsmoor's exhaustive studies on the Propylaea.

⁹ R. Bohn, *Die Propyläen der Akropolis zu Athen*, pl. 7.

viously known marble bench. The southwest wing of Mnesicles' Propylaea was built over much of the steps of the "exedra" and consequently hides them, but if we imagine two additional rock-cut steps, and also suppose a step at the junction of the "exedra" and the bastion, a proper connection can be made between the propylon and the bastion by way of the "exedra" (cf. Fig. 4). What a marvellous reviewing stand the "exedra" would make for the Panathenaic officials!

The back of the "exedra" is composed of large slabs of marble probably taken from the metopes of one of the early temples on the Acropolis.¹⁰ On two of the slabs, perhaps those near the middle of the "exedra," was cut the famous Hecatompedon inscription—famous both for the important archaeological information it gives us and for the beauty of its lettering.¹¹ When some of the fragments of the inscription were first found, the letters were still picked out with vivid red paint; unfortunately the color has now almost entirely disappeared. The date of the inscription is 485 B.C.¹² The chief purpose of the inscription was to inform the visitor of certain prohibitions on the Acropolis.

The Sanctuary of the Graces, 19, Figure 4, appears in this period in fairly well-defined form. There are traces of the northeast wall of the precinct, against which the "exedra" was built; and there is the start of the northwest wall of the precinct at the west corner of the "exedra."¹³

At 20, Figure 4, are a number of poros blocks partly buried beneath the Propylaea of Mnesicles. They have a different orientation from that of the Propylaea, thus showing that they antedate the Propylaea. What did the blocks support in 437 B.C.? The four-horse chariot which Herodotus saw on his left as he entered the propylon?¹⁴ He was a native of Halicarnassus, but he is known to have traveled extensively from ca. 464 to ca. 447 B.C. and even to have been settled in Athens from ca. 447 to 446 B.C. Thus, as Mnesicles' Propylaea was not started until 437 B.C., Herodotus had opportunities to see the chariot.¹⁵ Both the width and the depth of the plinth upon which the chariot rested are known accurately within a range of error of no more than a few centimeters: from the size of the plinth we may judge that the horses and charioteer were

¹⁰ T. Wiegand, *Die archaische Poros-Architektur der Akropolis zu Athen*, p. 110.

¹¹ *I.G.*, I², 3-4. For an illustration of the inscription consult J. Kirchner, *Imagines Inscriptionum Atticarum*, pl. 10, no. 19. Bert H. Hill has been working on the inscription for a number of years. He has many interesting results to publish.

¹² According to B. H. Hill the date is certain.

¹³ C. H. Weller, *A.J.A.*, VIII, 1904, pls. I and V.

¹⁴ Herodotus, V, 77.

¹⁵ Dates connected with the chariot:

507 B.C. Chariot set up probably to commemorate a victory over the Boeotians and Chalcidians. It may have been located on the site of the Promachos.

480 B.C. Chariot carried off, or destroyed, by the Persians.

446 B.C. A new chariot with a new plinth set up in front of the Propylon.

446 B.C. Herodotus saw the new chariot.

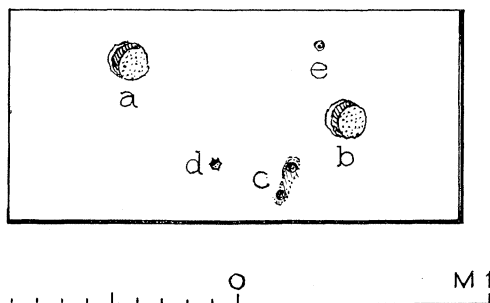
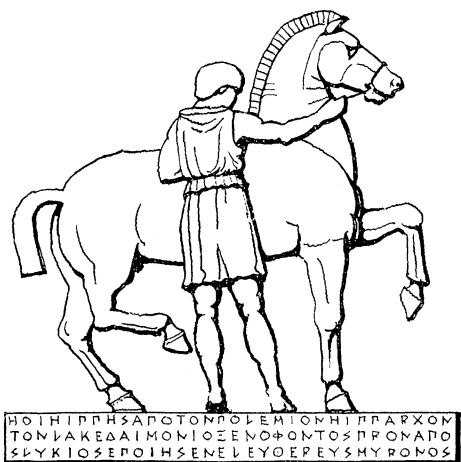


Fig. 5. Group from the Approach to the Propylaea: Restoration

approximately life size.¹⁶ There are cuttings of the pre-Mnesiclean period to the west of 20 (cf. Fig. 4), but they are too small for the pedestal of the quadriga. Site 20 is an excellent one for the monument, because the ramp on the south side of it is parallel to it, and because the ramp wound around it so that three of its sides could be well seen. Moreover, in agreement with what Herodotus says, it was on the visitor's left, and thus not for one, but for three stretches of the ramp. It occupied the position we would choose for a monument which was to dominate the approach to the propylon.

In ca. 450 B.C. two equestrian groups commemorating the Athenian cavalry were set up probably outside the propylon. Later on, Mnesicles placed them on either side of the approach to his Propylaea, at 6 and 24, Figure 3, perhaps not far from their original positions (cf. Fig. 4, 10 and 11 and Fig. 6). So much has been published about these famous groups and their vicissitudes, that an attempt will be made here only to justify the restoration of one of the groups, that shown in Figure 5.¹⁷ The base we see today at 6 in Figure 3 is made of bluish Hymettian marble, a kind of marble not generally used

for such purposes until after the time of Mnesicles; nor is Mnesicles likely to have used an inferior building material like this in such a conspicuous position.

437 B.C. If 20, Fig. 4, was the position of the chariot when Herodotus saw it, then the chariot must have been removed when Mnesicles built his Propylaea, for the foundations of the Propylaea almost cover the foundation blocks proposed above for the chariot. Mnesicles, therefore, may have moved the chariot to a position between the Promachos and the Propylaea, where Pausanias saw it in the 2nd century A.D. There is a large rock cutting, suitable for the monument, about 8 m. to the northeast of the east portico of the Propylaea. ca. 150 A.D. Pausanias speaks of the chariot after describing the Promachos (I, xxviii, 2).

¹⁶ G. P. Stevens, *The Periclean Entrance Court of the Acropolis of Athens*, pp. 62-64 = *Hesperia*, V, 1936, pp. 504-506.

¹⁷ Pausanias, I, xxii, 4; J. G. Frazer, *Pausanias's Description of Greece*, vol. II, p. 255; *Δελτία*, 1889, pp. 179 ff., for an illustration of the cuttings in the under side of the base; *I.G.*, I², 400 for the inscription shown in Fig. 5.

Moreover, the base does not quite fit the Mnesiclean pier beneath it. The base is, therefore, probably a copy of the original base. And the restored base of Figure 5 is in turn probably a restoration of a copy. The cuttings in the base show that the group was made of bronze, not marble. The cuttings "a" and "b," Figure 5, were for two of the horse's hoofs; the remaining two hoofs were raised; that is, the horse was in action. As the cuttings "a" and "b" are contained in one half of the base, the horse was not centered over the pedestal—there was room for some other object over the other half of the base. At "c" are cuttings for the foot of a man, doveled at the ball and the heel of the foot, and at "d" a cutting for the other foot of the man, doveled at the ball only. Cuttings "c" and "d" plainly tell us that a man was standing above them, that he was facing the horse, and that he had his left heel raised. The standing figure was undoubtedly an athletic young groom, with his attention centered in holding a spirited steed.¹⁸ If there was a groom, there was probably no rider, for one man would be sufficient to care for the horse. A second figure unnecessarily complicates the composition. A section of the Panathenaic frieze shows an almost identical group.¹⁹ The groups of the Propylaea were both symbolic and decorative. In modern times we find examples of "horse-tamers" in many places in Europe. They are similar in action to the groups of the Propylaea, but they are generally purely decorative.

So much is now known about the approach to the Acropolis in 437 B.C. that a fairly accurate restoration of it can be made (Fig. 6).

If Figures 2 and 4 are compared, it will be observed that the prehistoric entrance to the Acropolis has undergone a radical change. A decided element of beauty has appeared. Here we have a good example of the remarkable artistic awakening of the Athenian people.

3. 420 B.C. (Fig. 7)

The propylon of 437 B.C. was replaced by the Propylaea of Mnesicles. The new structure was started in 437 B.C. and practically finished in 432 B.C.; but, as the Nike Temple and its bastion (Fig. 3, 1) are such important parts of the composition, the date of the completion of the temple, namely, *ca.* 420 B.C., may be considered as marking the end of the new building period.

Only a few salient features concerning the Mnesiclean period will be discussed here.

Reference has already been made to the fact that the bastion at 7, Figure 4, was transformed in this period. It was originally built of rough polygonal blocks. Now its exterior was encased with ashlar of Piraeus stone. The operation considerably

¹⁸ There is an additional cutting at "e," Fig. 5. It is so rough that it may not belong to the period of the other cuttings; if it does, it was perhaps used in doweling a small trophy to the base.

¹⁹ G. Fougères, *L'Acropole, Le Parthenon*, pl. 76, 25.

increased the area of the bastion (cf. 1, Fig. 3). Furthermore, the terrace was raised 1.395 m., and the small temple in poros was replaced by a bigger and more handsome temple in marble. Thus the elements of the previous period reappeared enlarged and beautified.

The Propylaea and the new Nike bastion caused a complete re-arrangement of the ramp (cf. Figs. 4 and 7). We have seen that *ca.* 14% is a maximum grade for a ramp without steps, and that low steps 0.15 m. high may be inserted from time to

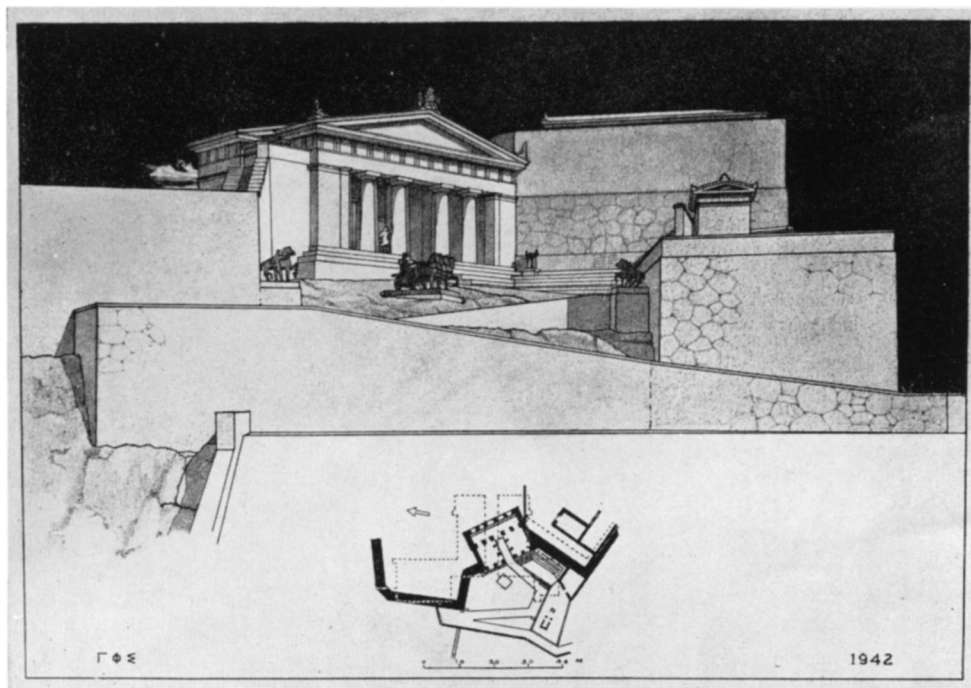


Fig. 6. Main Entrance of the Acropolis in 437 B. C.: Restoration

time in a ramp without making the ascent too difficult for sacrificial animals. If we use such a ramp between 1 and 2, Figure 7 (the level at 1 is that of the Acropolis rock; the level at 2 is that of the floor of the Propylaea) we find the five following checks upon its correctness.

1) The development of the ramp will have to be of the length shown in Figure 7.

2) Mnesicles built a good sized terrace at 4, Figure 7. The western wall of that terrace shows how far to the west the ramp extended; this distance toward the west is needed for the development of our ramp. Let us explain the matter more in detail. All the walls of the terrace were of poros like the poros employed elsewhere by Mnesicles. The wall which supports the "Picture Gallery" at 5 is built of ancient poros blocks dressed as shown in Figure 8. The same sized blocks and the same

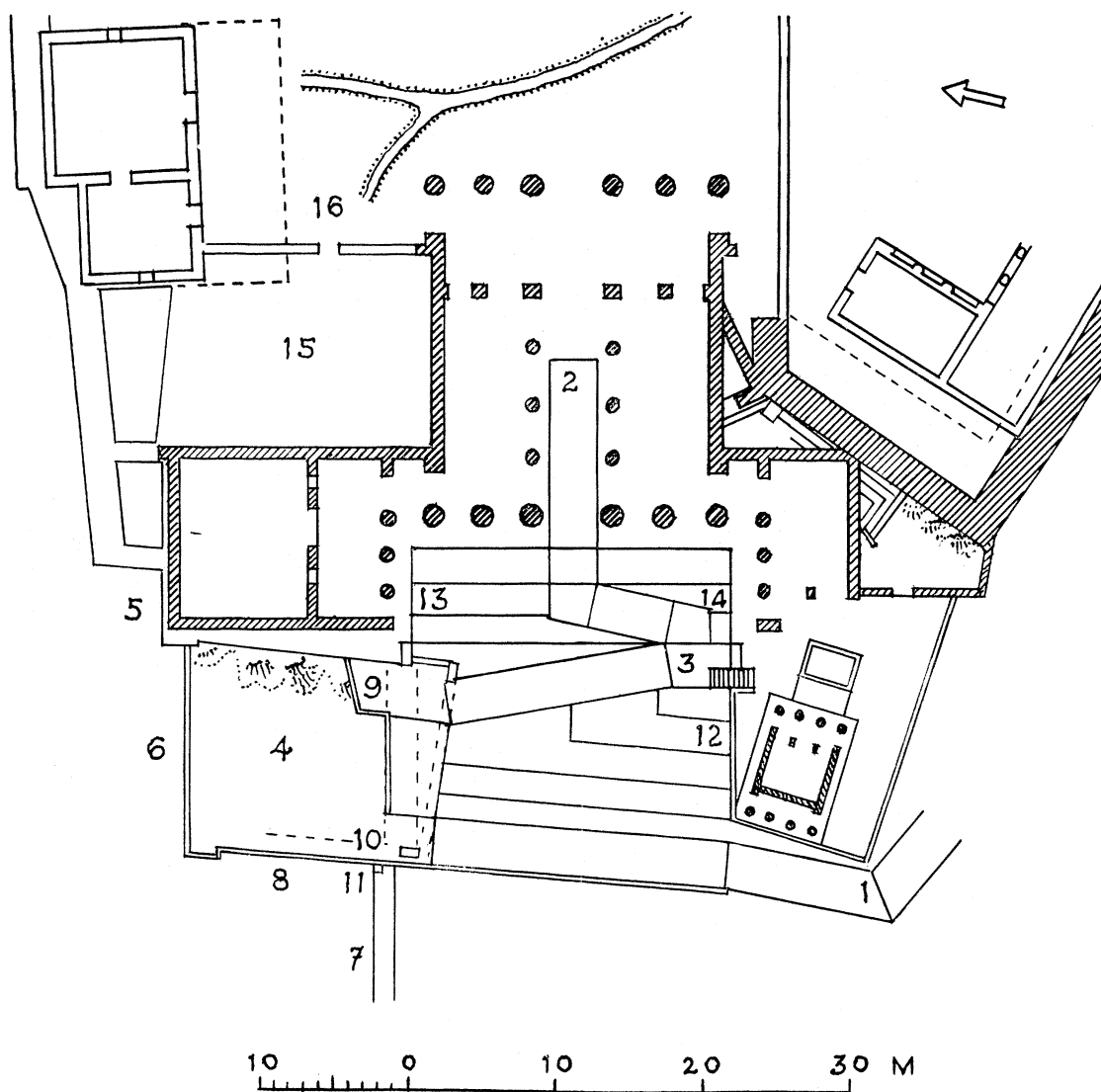


Fig. 7. Propylaea in 420 B. C.: Plan

technique appear at 6 and 7 (north side).²⁰ Furthermore, near the base of wall 6 is an inscription running across four blocks: the inscription dates from the 4th century B.C., possibly earlier.²¹ It follows that the wall is at least as early as the inscription. The western face of wall 8 was rebuilt in modern times, but, in spite of this, the rebuilt

²⁰ Walls of this type do not seem to have been in use in Athens later than 330 B.C. (cf. W. Wrede, *Attische Mauern*).

²¹ *Hesperia*, VIII, 1939, p. 223 and fig. 18. It is B. H. Hill who has kindly supplied the writer with information upon the date of the inscription. He comes to his conclusion from the character of the letters.

portion gives us the position of the face of the original wall. Wall 9-10, which is perpendicular to the Propylaea, was needed to support the new ramp. Both sides of this wall are roughly finished—they were intended to be buried.²² At 10, wall 8 and wall 9-10 have certain consecutive horizontal joints which align, a condition we should not be likely to find unless the two walls were contemporary.²³ But the interior angle of these two walls has a bond of only 0.12 m. for the courses excavated: however, the exterior angle, which is modern, may have had a better bond. At 11 an ancient block protrudes 0.26 m. from wall 8. At first glance the block does not seem to be *in situ*, as there is some brickwork beneath it. But, unless there were a good reason, the restorers of wall 8 would not be likely to insert a sole protruding block

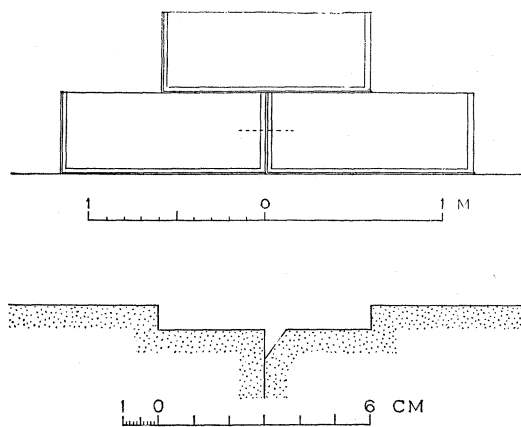


Fig. 8. Finish of Poros Blocks in the Foundation of the "Picture Gallery," North Side

in a wall which was otherwise rebuilt with its western face in a true plane. We therefore believe the block to be *in situ*. If *in situ*, it shows that wall 8 and wall 7 were bonded together. If they were bonded together, they were contemporaneous. Thus walls 5, 6, 7, 8 (on the inside) and 9-10 are, in all likelihood, of the same date. As there can be no doubt but that Mnesicles built wall 5, it follows that he was very probably responsible for the other walls as well. The point we wish to make is that wall 8, built by Mnesicles, was needed for the proper development of the ramp shown in Figure 7.²⁴

3) It is now known that the so-called monument of Agrippa was erected in 174 B.C.

(the monument will be discussed in the section on the "Propylaea, 174 B.C.," pp. 89 ff.; in what immediately follows, however, it will be necessary to anticipate some of the conclusions reached in that section). The visible portion of the monument is built of Hymettian marble. On the north side of the base is a well-defined euthynteria; but below the euthynteria the foundation is constructed entirely of conglomerate. The euthynteria establishes the level of the terrace in 174 B.C. within a few centimeters, the conglomerate being, of course, underground. The level agrees with the level required by our ramp (cf. Fig. 10).

4) If we look at the south side of the monument, we find that conglomerate has

²² The writer excavated for a depth of five courses on the north side of the wall and for a depth of three courses on the south side.

²³ The alignment takes place for the five courses excavated by the writer (see footnote 22).

²⁴ The small staircase now connecting the terrace with the Klepsydra dates from the second century after Christ (cf. *Hesperia*, VIII, 1939, p. 225).

again been employed in the base, but this time in a stepped formation and above the level of the euthynteria of the north side of the monument. The ramp covered the stepped formation, thus concealing the conglomerate.

5) As we ascend the ramp we have selected, we find that the platform at 3, Figure 7, coincides with the underside of the bottom step of the small staircase leading to the Nike bastion (cf. Fig. 3, 6).

Thus there are five checks upon a ramp the sections of which have a uniform grade of 14%.

Mnesicles replaced the inclined wall 12-14, Figure 4, with another inclined wall, namely 11-7, Figure 7. The new wall had the same orientation as that of the Propylaea. The early inclined plane seems to have been retained to the west of the first big run of the ramp (cf. Fig. 7), but the Pisistratid altar at 13, Figure 4, was probably buried at this time.

There are traces at 12, 13 and 14, Figure 7, which show that the ramp had a series of supporting terraces. They fulfilled two purposes: (1) upon them, without doubt, stood votive offerings. Between 13 and 14 the Acropolis rock rises to such an extent that, were it not for the terraces, even small votive monuments would have had rock-cut foundations probably with the orientation of the Propylaea. There are no such rock cuttings. We should not expect to find rock-cut foundations elsewhere, for the rock shelves off rapidly toward the west. (2) If a person happened to slip off the ramp, he would fall no great distance.

Mnesicles' Propylaea and its approach is a model of good design. It strongly influenced the arrangement of later propylaea elsewhere. For example, the visitor to Lindos on the Island of Rhodes finds the same general disposition of ramp, votive monuments and propylaea. In both places the large mass of the propylaea was the leading feature in the composition, while the great number of small votive monuments acted as an exceedingly pleasing foil.

Mnesicles was a talented designer. To illustrate this point two of the many ingenious features which he introduced into his building may be cited. The first feature is aesthetic in character. When we examine wall 7-8, Figure 3, we find that the door and windows are not symmetrically placed in the wall; nor are they symmetrically placed in regard to the columns in front of them.²⁵ Why was this so? When the ancient Greek visitor reached 11, Figure 3, the door of the "Picture Gallery" 9, Figure 3 appeared to be on the axis of intercolumniation 10, Figure 3. And if he looked from 11 toward the windows of the "Picture Gallery," they, too, appeared to be in the middle of the intercolumniation 13 and space 12. As about a metre of the wall beneath the windows was visible, the latter frankly continued to look like windows. Furthermore, Mnesicles, for the sake of symmetry from 11, took great pains to repeat

²⁵ Cf. G. W. Elderkin, *Problems in Periclean Buildings*, pp. 1-13.

the colonnade 13-10-12 at 14, although this required an isolated and otherwise meaningless pier at 15. He wanted to have his building look its best from point 11, for people coming up the ramp would instinctively pause for a good look at the building when they reached the main axis of the building—that is, when they arrived at 11. If line 9-10-11 be prolonged, it meets the euthynteria of the Nike Temple at 16, Figure 3. Here, too, is a place from which the Propylaea could be well seen, this time by people who had plenty of time to gaze. Naturally, Mnesicles would wish his building to look



Fig. 9. "Picture Gallery" from the Nike Bastion

well from such a vantage place. Figure 9 gives the reader an idea of how the door and windows look from this point. Now let us suppose that the reader is standing at 16. If he will glance under his feet, he will find an ancient scratch on the pavement, put there to mark the station point—it is 3.42 m. from the west end of the euthynteria of the temple. The second feature is both practical and aesthetic in character. The practical advantage was the following: We have just seen that sight-line 10-11, Figure 3, determined how far eastward door 9 should be pushed. The reader will note that the distance 17-18 is bigger than the intercolumniations 13 and 10, and still bigger than the space 12.²⁶ The "Picture Gallery" was visited by many people. The shifting of the door eastward and the spreading of the space 17-18 undoubtedly eased the circulation from the central portion of the Propylaea into the "Picture Gallery."

²⁶ The distance from 17 to 18, Fig. 3, is 1.788 m., while the width of the intercolumniation at 13 is 1.457. The difference is 0.331 m. Perhaps the difference was intended to be one Attic foot, namely, 0.328 m.

The same principle holds good for the space 19—increasing the width of the opening aided the circulation to the Nike bastion. The aesthetic advantage was the following. By increasing openings 17-18 and 19 the western arrises of columns 18 and 19 were brought into line with the western arrises of the six columns of the central portion of the Propylaea (cf. Fig. 3): the operation greatly improved the general appearance of the western façade of the Propylaea.

At 20, Figure 3, we find a cutting in the anta for the coping of the wall which bounded the Precinct of the Graces on the west. The top of the cutting is 2.17 m. above the floor of the Propylaea, or 2.56 m. above the pavement of the sanctuary itself. The cutting measures 0.11 m. in height, 0.43 m. in width and 0.11 m. in depth. The wall has the same orientation as that of the Propylaea but not that of the wall it replaced: it must, on that account, be considered a Mnesiclean adjustment (cf. Figs. 4 and 7). Moreover, the new wall caused little change in the area of the space enclosed. The precinct does not seem to have been tremendously important—the rites, secret in character, were only occasionally performed.²⁷

The area at 15, Figure 7, was intended to be covered, but there is no proof that a roof was actually constructed over it. The space was probably a service court with a reservoir beneath it.²⁸ The level of the area seems to have been approximately flush with the level of the ground at 16, Figure 7, an arrangement which would facilitate the storing and removing of heavy materials such as scaffolding, hoisting machines, chains and the like. There must have been storage space somewhere on the Acropolis for such materials while not in use. It is unthinkable that unsightly objects would be left lying about on the Acropolis where visitors and worshippers could see them.

If we compare Figures 2, 4 and 7, we note that the plans greatly differ. By the time of Pericles order and beauty have supplanted the original idea of defense; Athenian civilization has fully blossomed.

4. 174 B.C. (Fig. 10)

The so-called “Monument of Agrippa” makes its appearance in 174 B.C., for it bears a partially effaced inscription of that date on its western face (Fig. 3, 21 and Fig. 10, 1).²⁹ The monument is parallel to the bottom course of the foundation of the “Picture Gallery” (cf. Fig. 3). An important factor determining the orientation of the monument may have been the terraces between it and the Nike bastion, for the monument and the terraces had the same orientation (cf. Fig. 3). The visible portion of the monument, as has been said, was made of a blue-gray Hymettian

²⁷ Harrison and Verrall, *Myth. and Mon. of Ancient Athens*, pp. 373-385.

²⁸ For the fifth-century date of the wall of the east side of the area consult G. P. Stevens, *The Periclean Entrance Court of the Acropolis of Athens*, p. 70 = *Hesperia*, V, 1936, p. 512.

²⁹ The date is according to the views of W. B. Dinsmoor (cf. *Les Guides Bleus, Grèce*, 1932, p. 30).

marble. The lower portion of the base supplies us with a good deal of valuable information.

North side of the base. Here, as already hinted on page 86, there is a euthynteria the under side of which is at level 135.87 m., the upper side at 136.20 m. The

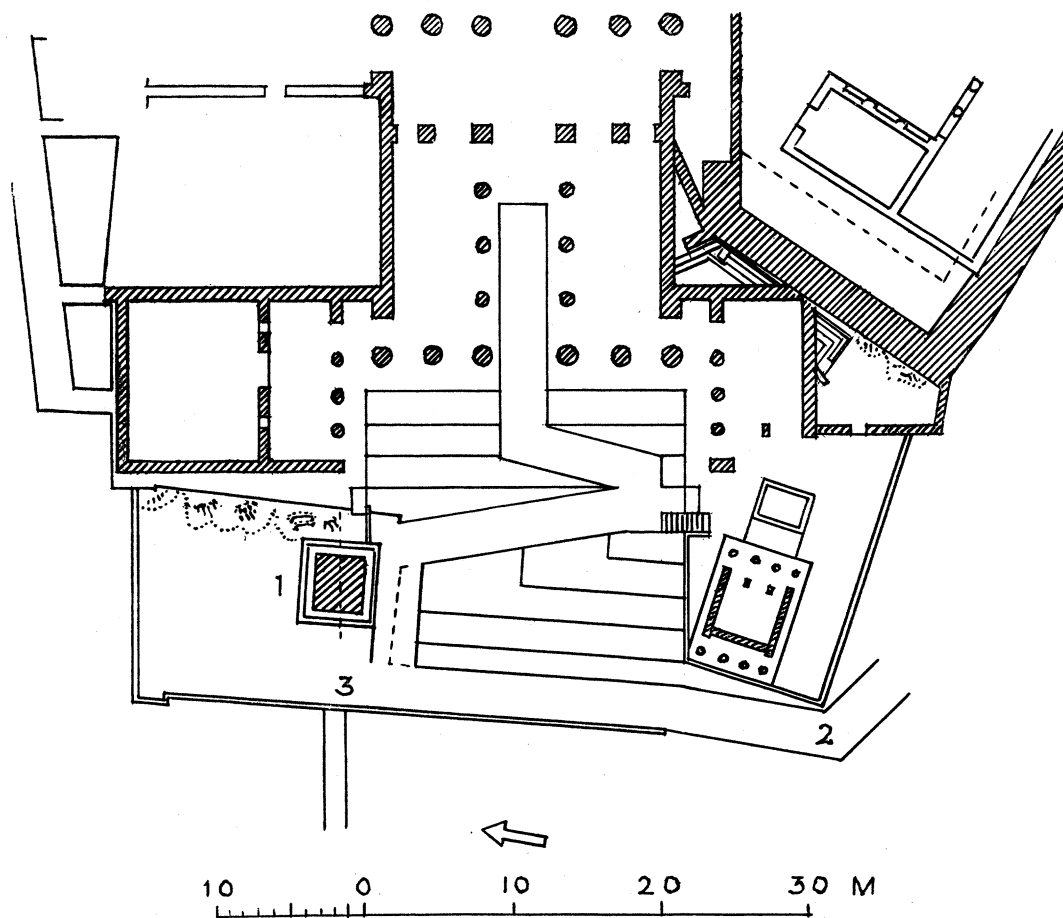


Fig. 10. Propylaea in 174 B. C.: Plan

masonry above the euthynteria has a drafted band on its right and left edges and a corresponding band immediately above the euthynteria itself. The euthynteria projects *ca.* 0.12 m. from the drafted bands. A mediaeval wall has hidden the masonry beneath the euthynteria until recently. The Greek archaeological authorities kindly permitted the writer to remove enough of the mediaeval wall to establish the fact that the entire foundation beneath the euthynteria is built of conglomerate. As conglomerate is used for foundations *under ground*, it is evident that, when the monument was put up, there was a terrace which hid the conglomerate, and, further, that the

level of the terrace was somewhere between 135.87 m. and 136.20 m. Level 136.06 is the level required at the top of the first portion of the ramp—portion 2-3, Figure 10.

South side of the base. As already stated (cf. pp. 86-87), the conglomerate foundation was stepped to agree with the inclination of the ramp immediately to the south—only marble was visible from the side of the ramp. The base above the ramp was once adorned with votive offerings—probably stelae and tablets—for there are many dowel cuttings here, placed somewhat irregularly. On the other hand, there are no dowel cuttings on the remaining three sides of the monument. Some of the votive offerings may, of course, have been put in place many years after the monument was erected.

East side of the base. The fourth and fifth courses below the steps of the shaft of the pedestal are partly constructed of poros. From the beginning, then, the base had three different kinds of stone in it: Hymettian marble, conglomerate and poros—an unusual feature. The writer was permitted to excavate the south side of wall 22, Figure 3. There is no bond between the three top courses of the wall and the monument, but the fourth course runs under the monument, proof that the monument is of later date than the wall. Both the north and the south faces of wall 22 are rough, showing that they were originally intended to be hidden. There are traces at 24, Figure 3, of a stone parapet, 0.08 m. wide. It rose to the lower torus of the set of moldings at the bottom of the shaft of the monument. The existence of the parapet indicates that the small terrace to the north of it—at 9, Figure 7—was no longer functioning when the parapet was put up. The “Monument of Agrippa” was erected over the western part of the small terrace. This meant the demolition, in any case, of the western wall of the terrace. Little of the terrace would then be left; moreover the monument would largely cut off the fine view from the terrace. Furthermore, the larger terrace at 4, Figure 7, deprived the small terrace of much of its usefulness. For these reasons it seems probable that the builders of the monument removed the whole of the small terrace.

West side of the base. The lowest courses were rebuilt in modern times (1865 and 1914), but it is highly probable that the restorers reproduced the general lines of the original base. There is a notable peculiarity in the bottom courses—they are not parallel to the courses in the upper part of the base (cf. Fig. 3). Moreover, the lowest courses project just far enough to the south to touch the base courses of wall 3-4 (cf. Fig. 3, 23). From all the above data, then, we gather that the “Monument of Agrippa” was set up parallel to the bottom course of the foundation of the “Picture Gallery” and with the orientation of the terraces between the monument and the Nike bastion, and that the monument straddled wall 22-4, and was laid against wall 3-4.

The “Monument of Agrippa” encroached somewhat upon the ramp. Figure 10 illustrates the small adjustment which would be required to meet the new condition—

the ramp is shown slightly pushed to the south. Steps about 0.15 m. high may also have been employed to help the adjustment.

The "Monument of Agrippa" was deemed sufficiently important in antiquity for its axis to be scratched on the pavement of the Nike bastion (Fig. 3, 25). The scratch occurs at a distance of 3.065 m. from the west end of the euthynteria of the Nike Temple. This is a second indication that the area of the Nike bastion north of the temple was a place of vantage where people would be sure to gather.

It is difficult to say whether the "Monument of Agrippa" enhanced the approach to the Acropolis or detracted from it. By the time the monument was set up undoubtedly many others had already been erected in its immediate neighborhood—under such conditions the monument would not look so isolated and so conspicuous as it does today. But even today its very mass in a way balances that of the Nike bastion about the axis of the Propylaea. We must remember that in 174 B.C. good building traditions in Athens had not entirely disappeared.

5. A.D. 50³⁰ (Fig. 11)

In the reign of Claudius (A.D. 41 to 54) Mnesicles' zigzag ramp was replaced by a monumental staircase for which there is ample evidence (Fig. 11).

An entrance for pedestrians was made on the axis of the Propylaea, at 1, Figure 11, but its disposition is unknown, as constructions of later date completely destroyed or buried all traces of the original arrangement. We may be fairly certain, however, that the Roman gate was an important one. The reason for arriving at this conclusion is as follows. Walls 2 and 3 have inclined courses, the inclination being as much as 25½%. An earthquake of the intensity to which Greece is not infrequently subjected would tend to make the courses of the walls slide downward to the west. Thus we are led to imagine a mass of masonry (dating even from the time of Pericles), such as a tower, for example, at the foot of each inclined wall. We have, then, a central passageway flanked by massive constructions, the whole occupying the width of the monumental stair. The ensemble thus acquires considerable architectural importance.

Sacrificial animals used the old approach at 4, Figure 11, and were taken up a central inclined plane especially designed for them (cf. Fig. 11).

The monumental staircase was the cause of an alteration in the small stair leading to the Nike bastion (cf. Figs. 7, 3 and 11, 5).

From an artistic point of view we may question the appropriateness of a monumental staircase, for the informality of the Mnesiclean approach must have made an exceedingly pleasing contrast to the formality of the building itself,—a contrast which is lacking in the Roman scheme.

³⁰ Discussions of mediaeval and later transformations of the Propylaea fall outside the scope of the present article. They are being undertaken by John Travlos, a talented Greek architect connected with the staff of the American School of Classical Studies at Athens.

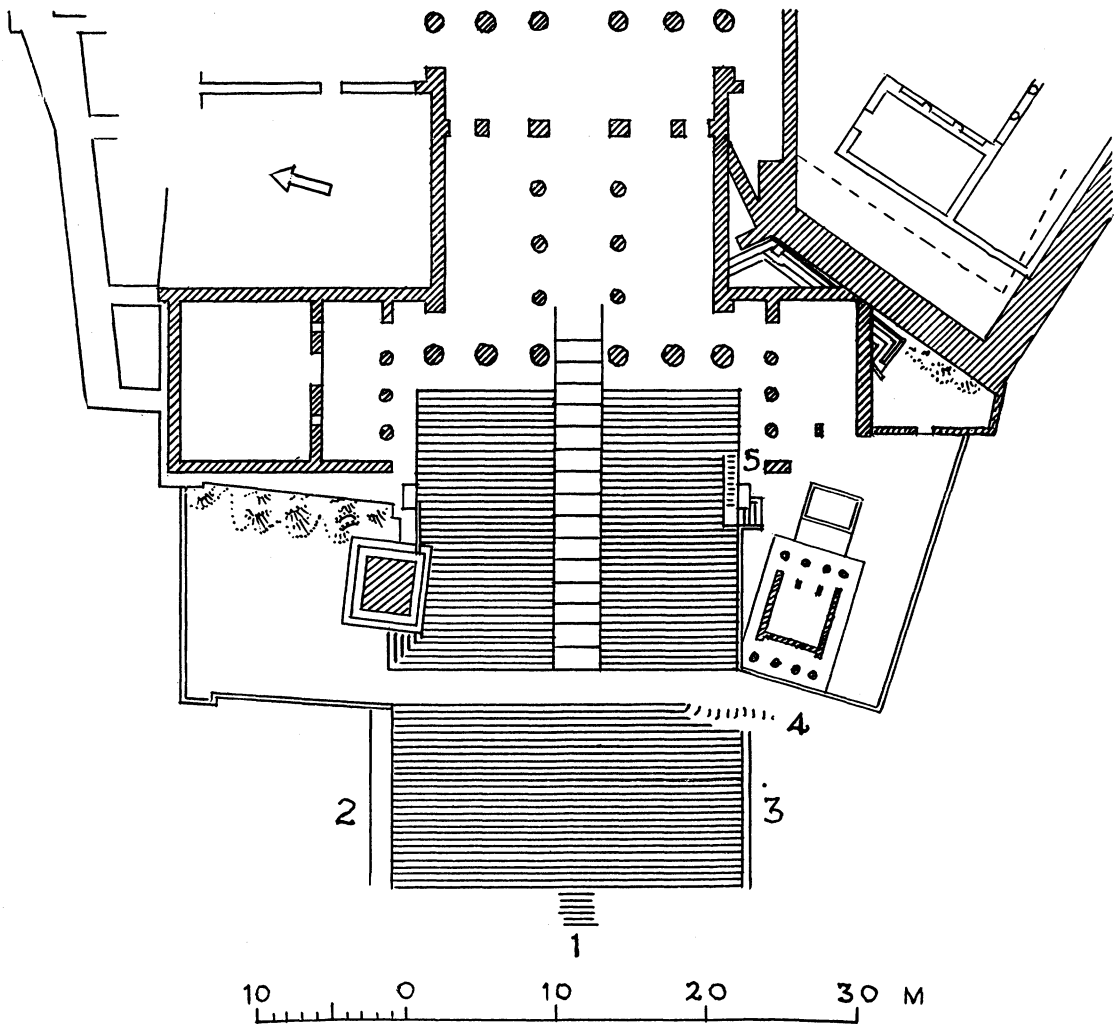


Fig. 11. Propylaea in A.D. 50: Plan

II. ERECHTHEUM

1. CECROPIUM (Figs. 12, 13, 14)

The location of the Cecropium—the place where Cecrops, a mythical king of Athens, was buried—is known to have been at the southwest corner of the Erechtheum (Fig. 12).³¹ The evidence at the site today is confined to the east and south sides of the precinct.

East side (Fig. 13). Here the proof is clear, that, when the Erechtheum was built, it was fitted against something older than itself—something so sacred that it

³¹ *I.G.*, I², 372.

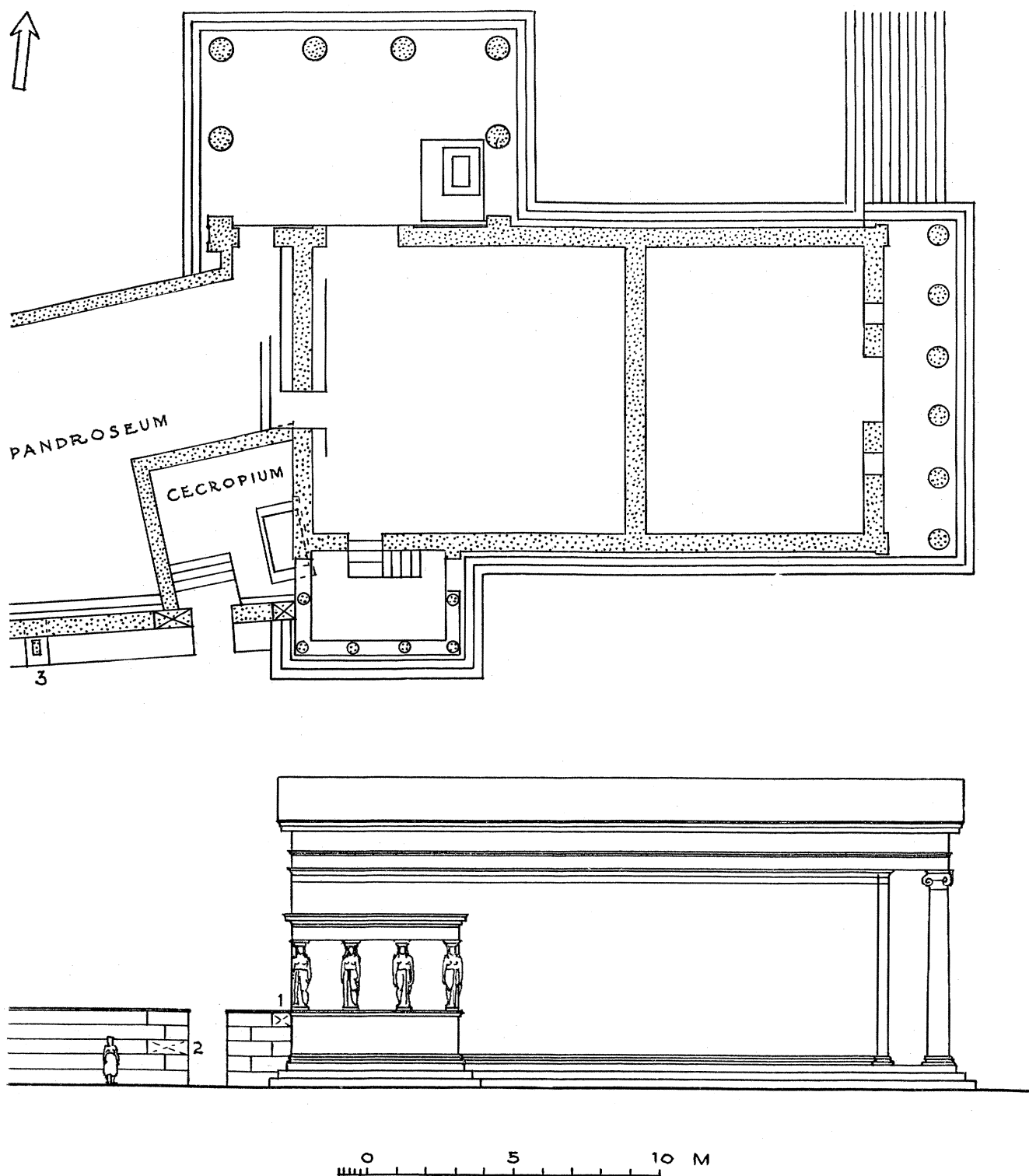


Fig. 12. Erechtheum, Plan and South Elevation: Restoration

could not be moved out of the way.³² The big three-course lintel (cf. Fig. 13) spans a niche which is sufficiently large to receive a side of the monument of the hero, but not deep enough to receive the entire monument (cf. Fig. 12)...The face of the orthostate below 1-2, Figure 13, is roughly dressed and has a number of depressions which look as though they had been cut to fit against blocks of some kind. Above 1-2 the wall is well finished. This leads us to conclude that the floor of the Cecropium was at 1-2. This would leave a little more than 2 m. of fill between the Acropolis rock and 1-2 for the burial of the actual body of the hero. At 3 is a raised surface, which was

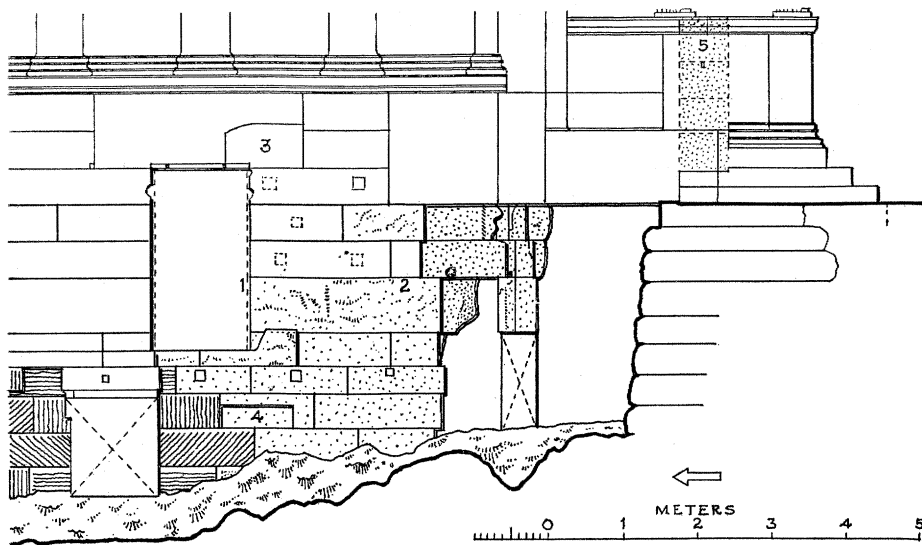


Fig. 13. Southwest Corner of the Erechtheum, Seen from the West:
Actual Condition

left when the final dressing was given to the outside face of the western wall of the Erechtheum. The block at 4 is cut to fit against a pre-existing block. Also, the door leading into the Erechtheum was enlarged 0.11 m., probably in church times—0.055 on each side. We may explain 3, 4, and the enlarging of the door in the following way. The raised surface at 3 gives the profile of the coping of the abutting wall, but only on the north side of the abutting wall; it was not thought necessary to carry the final finish of the west wall of the Erechtheum downward along the south face of the abutting wall, as this portion of the west wall of the Erechtheum could not be seen from the Pandroseum. Instead, the final finish was carried horizontally southward from the top of the coping and was stopped at the first opportunity, namely, at the first vertical joint encountered (cf. Fig. 13). From Figure 13 one might imagine that the coping was not well balanced over the wall beneath it. But we must

³² Paton and Stevens, *The Erechtheum*, pp. 127-137.

remember that originally the south jamb of the door was somewhat farther to the north. Furthermore, as the back of the niche under the big lintel is perpendicular to the north precinct wall of the Pandroseum, we are probably correct in making the abutting wall at 3-4 parallel to the north precinct wall of the Pandroseum, or, in other words, perpendicular to the back of the niche. Under this condition the abutting wall makes a considerable angle with the west wall of the Erechtheum; and, consequently,

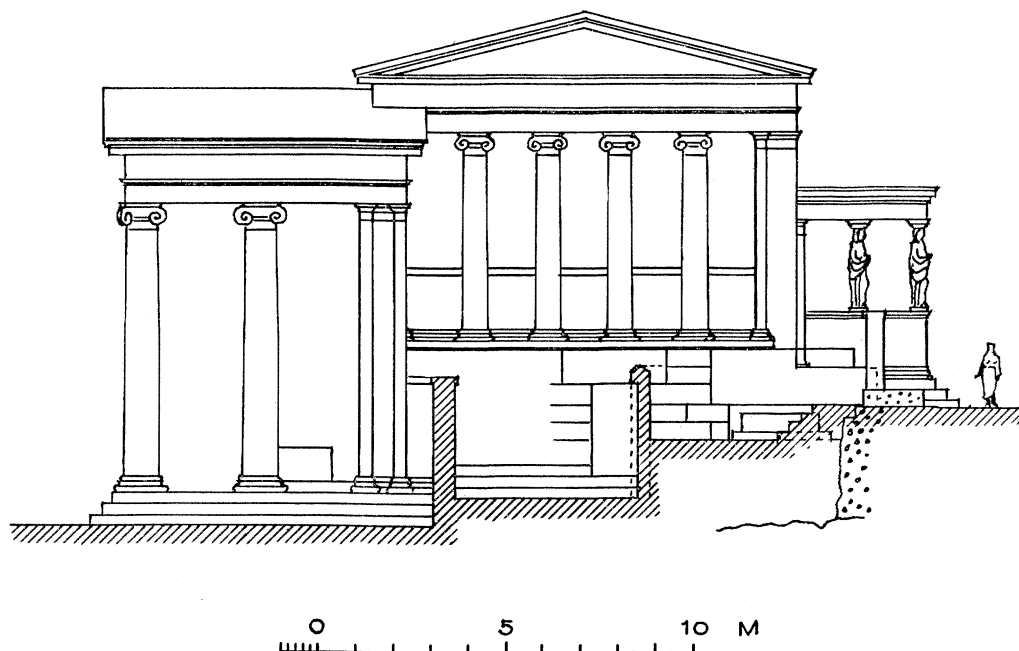


Fig. 14. West Elevation of the Erechtheum, Showing the Tomb of Cecrops:
Restoration

at no great distance from the Erechtheum the coping would have a full bearing upon the wall beneath it (cf. Figs. 12 and 14). Cutting 4, Figure 13, indicates the place where the foundation of the early wall abutted against the Erechtheum.

South side. At 5, Figure 13, are unmistakable traces of the southern wall of the precinct.³³ Two blocks of the wall can be located as shown at 1 and 2 in Figure 12, 1 with certainty and 2 with a fair degree of probability.³⁴ Just how far west the wall was carried cannot be determined. The last indication of it is at 3, Figure 12. Here is the only stylobate block still *in situ* of the Old Temple of Athena. On the top of this block is a trace of our wall, and, furthermore, there is a sunken area in the top of the block for a votive monument which was backed up against our wall. The sunken

³³ Paton and Stevens, *op. cit.*, pp. 132-134.

³⁴ For details of the two blocks consult Paton and Stevens, *op. cit.*, footnote on page 133.

area postdates the Old Temple of Athena, as a column of the temple stood directly over the sinkage.³⁵

With the data contained in the two preceding paragraphs we may attempt a restoration of the Cecropium (cf. Figs. 12 and 14).

2. THE PAVED AREA EAST OF THE NORTH PORTICO (Figs. 15-18)

At the time the Erechtheum was built, the area east of the North Portico of the temple was, as we shall see, flagged with thick slabs of Pentelic marble. The pavement rested upon a solid foundation of poros blocks (cf. Fig. 15).³⁶ As no other pavement in the vicinity of the Erechtheum was, so far as we know, constructed with such lavishness and care, we must attach to the area a special significance.

Figure 15 represents the present condition of the area. At "A," the steps along the foot of the northern wall of the temple turn north. And on the northern face of the podium of the East Portico of the temple are clear traces of other steps running north. There is no doubt that a flight of steps, starting at the podium, led up from the paved area to the level in front of the temple. How far north did this flight of steps run? At least as far north as the poros foundations extended. The northern face of the flagging stone at "B" is well finished. This lack of anathyrosis shows that the block had no block in contact with its northern face; that is, block "B" probably gives us an indication of the northern extent of the paved area. Note that the northern extent of the poros foundations of the paved area supports this supposition (cf. Fig. 15). As for the flagging stones along the south of the area, they are parallel to the steps and run under the steps the usual amount.³⁷ Moreover, they break joint regularly with the joints of the steps and the wall. All the southern flagging stones, with the exception of "C," have anathyrosis on their northern faces. The northern face of "C" is broken, and portions of it project *ca.* 0.085 m. to the northward of the other flagging stones. Perhaps the projection can be accounted for by supposing that there was a monument (an altar?) immediately north of "C"—some monument whose base did not extend as far south as the northern face of the other flagging stones. The above data concerning the present condition of the paved area are meager.

Let us now examine the Acropolis wall north of the flagged area (Fig. 16). The southern face of the wall, the face we are particularly interested in, is much weathered. And, to make matters worse, we find that the wall was restored a number of times.

³⁵ *Antike Denkmäler*, vol. I, 1891, pl. I, bottom figure.

There is another stylobate block lying near the one *in situ*. It has a cutting for a somewhat similar votive monument with its back against the precinct wall. The original position of the block cannot be determined.

³⁶ Paton and Stevens, *The Erechtheum*, Text, pp. 15-18 and pls. I, II, V and XIV; L. B. Holland, *A.J.A.*, XXVIII, 1924, pp. 402-425.

³⁷ Paton and Stevens, *op. cit.*, Text, fig. 1.

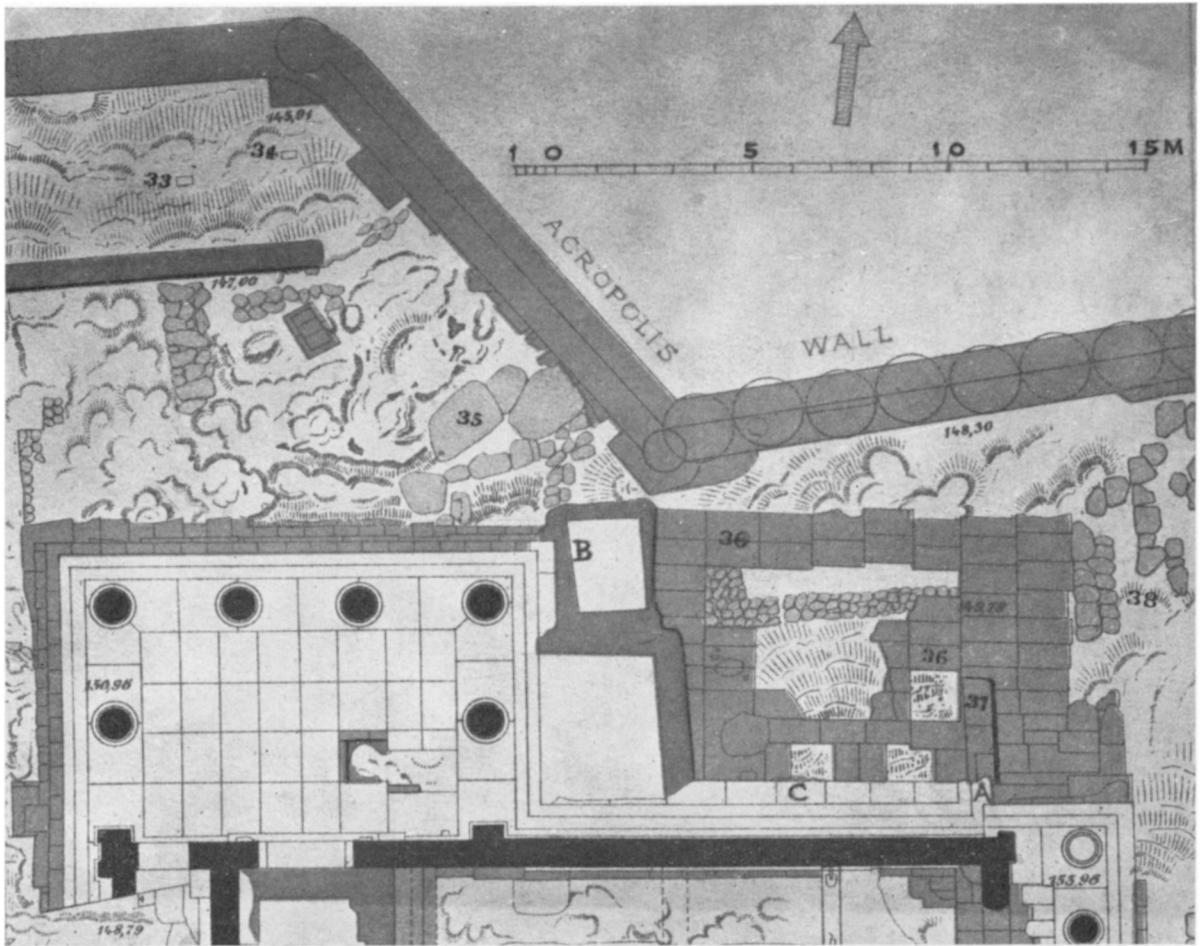


Fig. 15. The Paved Area East of the North Portico: Plan, Actual State

Kavvadias and Kawerau, *Ἡ ἀνασκαφὴ τῆς Ἀκροπόλεως*, Πίναξ Γ'

From the drums upward the wall itself certainly dates from a time soon after the Persian sack of the Acropolis (480 B.C.), for the drums come from the Earlier Parthenon.³⁸ The unfluted column at "F" does not belong to the original wall—it dates from a Hellenistic or a Roman period. The block at "G" may be coeval with the column. But "G" is backed up with brickwork which can only be mediaeval or Turkish. And, finally, the whole wall was consolidated in modern times by the Greek Government.

In the following paragraph, we plan to discuss evidence derived only from the south side of the original wall.

³⁸ A. Tschira, "Die unfertigen Säulentrommeln auf der Akropolis von Athen," *Jahrbuch*, LV, 1940, pp. 242-264.

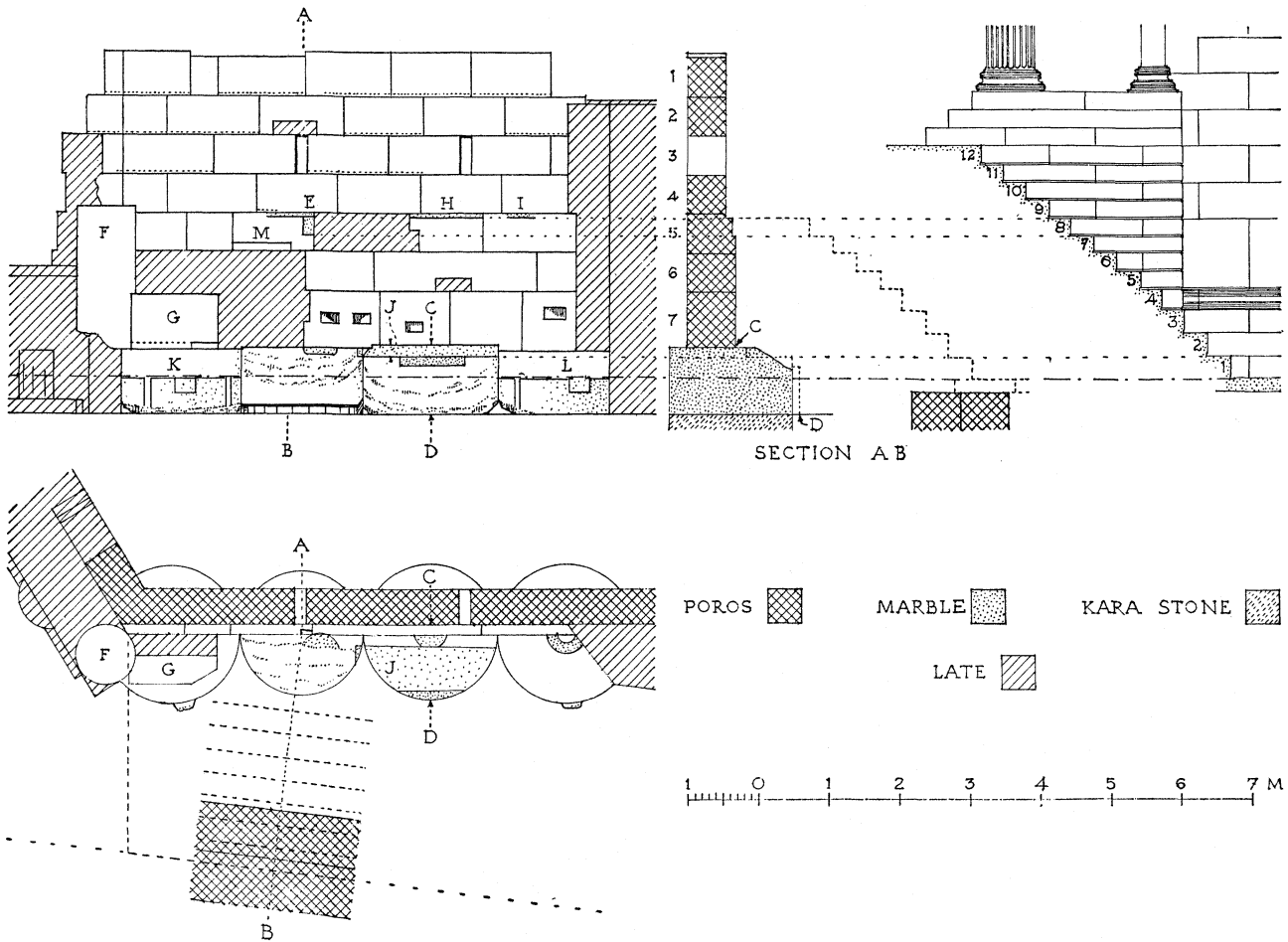


Fig. 16. Actual Condition of the Acropolis Wall North of the Paved Area: Plan, Elevation of South Face, and Section. Restoration of the North Face of the Podium of the East Portico

Upon close examination of the wall we find that:

- 1) There is no proof to show that a course of blocks rested upon course 1 (Fig. 16). The wall probably rose no higher than it does today.
- 2) Courses 1 to 4 inclusive have their southern faces dressed as exposed faces.
- 3) The small windows in course 3 are original, for the jambs are well dressed through the entire thickness of the wall.
- 4) Courses 5, 6 and 7 are thicker than the courses above, and their southern faces are not dressed as exposed faces—the faces were originally concealed from view.
- 5) The cutting at “E” is of exceptional importance.
 - a) It is of Greek workmanship.

b) Its height is equal to that of one of the upper steps of the flight of steps running northward from the podium of the East Portico (cf. steps 5 to 12 inclusive, Fig. 16).

c) It aligns accurately with the eighth riser of the flight of steps running northward from the podium (cf. Fig. 16). In order to make the alignment, the top of course 5 of the Acropolis wall had to be notched as shown in Figure 17. The notching is preserved for *ca.* 0.50 m. to the west of "E" (the notching may have extended even farther to the west); the notching also appears at "H" and "I" to the east of "E."

d) The northern face of cutting "E" is not parallel to the Acropolis wall; it is parallel to the Erechtheum.

e) The western face of cutting "E" is perpendicular to the Acropolis wall.

In other words, the step whose riser is numbered 8 in Figure 16 ran northward from the podium, and then westward, leaving a trace at "E."

6) The horizontal portion of the cutting at "J" aligns with the bottom of the second step of the flight of steps running northward from the podium (cf. Fig. 16); an indication that a course corresponding to that second step was carried northward as far as the Acropolis wall.

7) The dressing of the marble drums at "K" and "L" shows that the builder of the flagged area considered that the portions of the drums below the floor of the flagged area could be left rough. This means that a course corresponding to the lowest step of the big flight of steps was carried to the north wall, and then westward to cover "K."

Now we are ready to attempt a reconstruction of what surrounded the paved area. To the west and south of the area we have a flight of three steps—the steps are actually there. Along the east of the area ran a flight of twelve steps extending northward at least as far as the poros foundations went; the courses corresponding to steps 1, 2 and 8 touched the Acropolis wall for a considerable distance. Exactly what happened on the northern side of the paved area is difficult to say, but, aided by the evidence in the last paragraph, we may make a shrewd guess: There was a flight of eight steps parallel to the Erechtheum and aligning with the eight bottom steps on the east side of the paved area (cf. Fig. 16). It seems probable, also, that the first riser of the steps against the northern wall was in line with the riser of the bottom northern step of the North Portico, for in that case the first step of the flight against the Acropolis wall not only had a proper poros foundation throughout its length, but

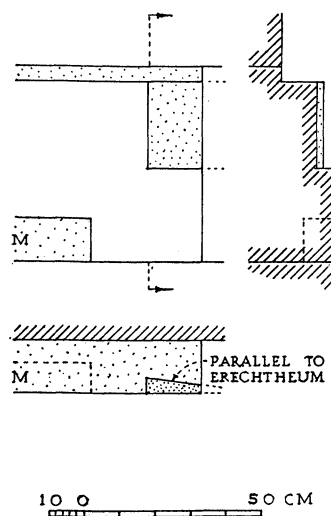


Fig. 17. The Cutting at "E,"
Fig. 16, in Detail

also was so placed as to give the same width to the north and south border stones of the paved area (cf. Fig. 18). When we make a drawing which includes all the evidence, we find that there was a wedge-shaped platform against the Acropolis wall eight risers above the paved area (cf. Fig. 18), running at least 0.50 m. to the west

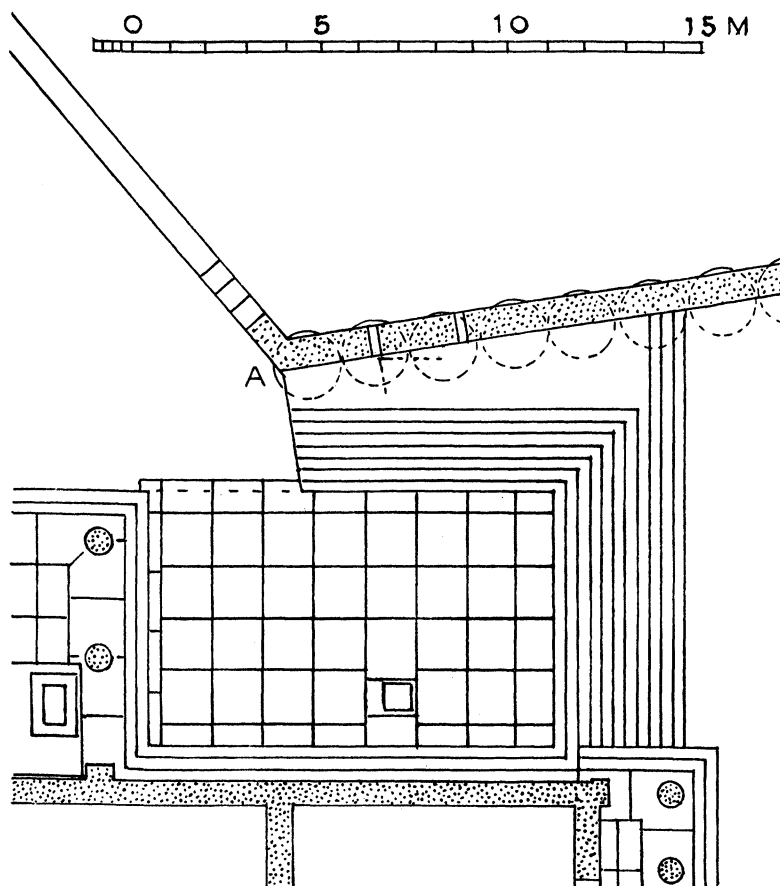


Fig. 18. Restored Plan of the Paved Area

of cutting "E" (Fig. 16). The fact that the western face of cutting "E" is perpendicular to the Acropolis wall seems to indicate that the western face of the steps against the Acropolis wall was perpendicular to the Acropolis wall. If this was so, then the flight of steps probably ran as far west as the angle where the Acropolis wall turns to the northwest (cf. A, Fig. 18).³⁹ In spite of the meagerness of the evidence, we believe that the reconstruction is fairly accurate.

³⁹ The cutting at "M," Figs. 16 and 17, does not seem to belong to the original scheme. Block "G," Fig. 16, has a cutting along its lower southeast edge, which may be contemporary with the cutting at "M."

It is tempting to try to find a place in the restoration for the marble thrones inscribed with the names of the priests who officiated at certain altars within the Erechtheum.⁴⁰ The thrones may have been placed on the eastern side of the flagged area, near the pavement in the traditional Greek manner. It is equally likely, if not more likely, that the thrones were placed on the northern side of the area, for here there is some evidence of fairly early date for a special architectural treatment of the steps (cf. note 39). Unfortunately there is not enough proof to assign the thrones definitely to the area.



Fig. 19. Frontal View of the Porch of the Maidens (Caryatids)

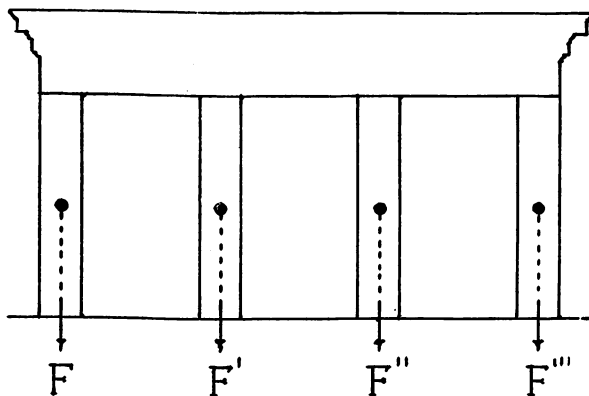


Fig. 20. Schematic Representation of the Frontal View of the Porch of the Maidens; Equal Weight on Both Feet of the Maidens

The significance of the paved area? There are examples of somewhat similar areas at both Knossos and Phaestos, but we are not entirely sure what the areas were used for. And the same mystery envelops the Erechtheum area. The most likely answer to our question is that religious ceremonies (perhaps dating back to a remote antiquity) were performed on the site of the paved area certainly as late as the fifth century B.C., and possibly even later, with spectators using the steps so that all might see. (Cf. Elderkin, "Cults of the Erechtheion," *Hesperia*, X, 1941, pp. 113-125.)

3. POSE OF THE CARYATIDS OF THE ERECHTHEUM ⁴¹ (Figs. 19-25)

Did the artist, by posing the Caryatids as we see them today (Fig. 19), give greater or less stability to the portico than if he had posed them with the weight on the other foot? Look well at Figure 19.⁴² Do not the Caryatids, considered as sup-

⁴⁰ Paton and Stevens, *op. cit.*, Text, pp. 484-485.

⁴¹ There is an interesting article on the Caryatids of the Erechtheum by K. Ronczewski in the *Arch. Anz.*, 1922, pp. 174-183.

⁴² The Caryatid east of the southwest-angle Caryatid is a cement copy of the Caryatid in the British Museum. The one behind the Caryatid of the southeast corner is largely restored.

ports, seem to tip outward from the axis of the Porch? You will surely say that the Portico would look more stable if the maidens were posed on the other foot. Can this peculiar fact be explained? We believe that it can.

Let us suppose that instead of Caryatids we have rectangular piers (cf. Fig. 20). It is evident that Figure 20 schematically represents the relation between the weight of the maidens, F, F', F'', F''', and the portico as a whole, *provided the Caryatids are posed with both feet carrying equally the weight of the body*. But this is not the pose of the maidens. The maidens to the west of the axis of the porch (including the maiden behind the angle maiden) carry their weight upon the right foot; the reverse is true for the maidens on the east side of the axis of the portico (cf. Fig. 19). When we throw our weight upon the right foot, for example, the weight of our body is transmitted to what we are standing upon chiefly through the right foot—the weight of our body is no longer transmitted symmetrically about both feet. This point is illustrated for a Caryatid in Figure 21 where we suppose that the vertical black line passes through the center of gravity of the maiden. However, the eccentricity of the transmission is not excessive. Figure 21, in addition, shows that the resultant pressure upon the capital of each maiden from the weight of the marblework above acts vertically downward through the axis of the capital and is, like the weight of the maiden, eccentrically transmitted to the plinth of the maiden. We have, then, two eccentric loads upon the plinth, one caused by the weight of the maiden, the other by the weight of the marblework above the capital. It will suffice to show that the eccentric loading caused by the weights of the maidens made the portico less stable than if the loads had been as shown in Figure 20, for, if this point can be established, it will be obvious that the loads from the stonework above the capitals only add to the instability of the portico.

To return to a simplified portico of piers: Figure 22 represents the unsymmetrical transmission of the weights of the piers to the podium for the case of poses like those of Figure 19 (the actual poses of the maidens). If this transmission is true for a portico of piers, it is equally true for a portico of maidens.

Now let us imagine that the poses of all the maidens are reversed. Figure 23 illustrates this condition. Figure 23 represents a more stable portico than Figure 22, because, in Figure 23, all the piers are inclined inward (as they rise from the podium) and they thus prop up—buttress—the portico. Their action is like that of the well-known inclined columns at the angles of the Parthenon, which certainly help to brace the colonnades against movements of the porticos due to earthquakes. The piers of Figure 22, on the other hand, have no such buttressing effect. Piers which tip outward (as they rise from what they rest on) contribute to the instability of a portico. Thus, if the poses had been reversed, the porch would have been more stable.

Why did the Greek artist who designed the portico select a pose which gave less stability to the portico than another pose which would have given more stability?



Fig. 21. Caryatid in the British Museum. The Inked Line is Vertical

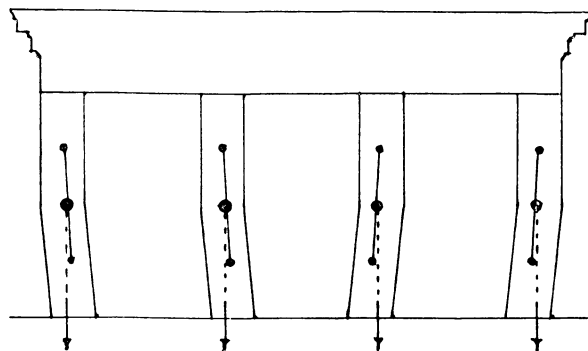


Fig. 22. Schematic Representation of the Frontal View of the Porch of the Maidens; Actual Pose of the Maidens

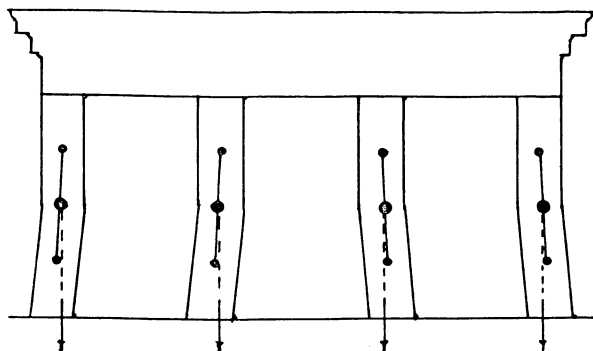


Fig. 23. Schematic Representation of the Frontal View of the Porch of the Maidens; Pose of the Maidens Reversed

We have seen that the weight of the maidens was not transmitted excessively eccentrically to the plinths beneath them (cf. Fig. 21). Moreover, the weight of the marble architraves plus the weight of the marble ceiling was so great in relation to the combined weights of the six maidens, that the difference in pose made very little difference in the stability of the portico. In other words, the designer felt at liberty to select the pose he thought the more suitable *from artistic considerations*. We admit that the frontal view of the portico (cf. Fig. 19) is weak. But, as soon as the observer moves away from this one position, he begins to see the portico in its three dimensions. In general the ancient Greek artists appreciated the fact that the three dimensional view was more important than the frontal view—the Parthenon is an excellent example of this point.⁴³ In the case of the Porch of the Maidens, the view from the

⁴³ G. P. Stevens, *The Setting of the Periclean Parthenon* (*Hesperia*, Suppl. III), pp. 3-4.

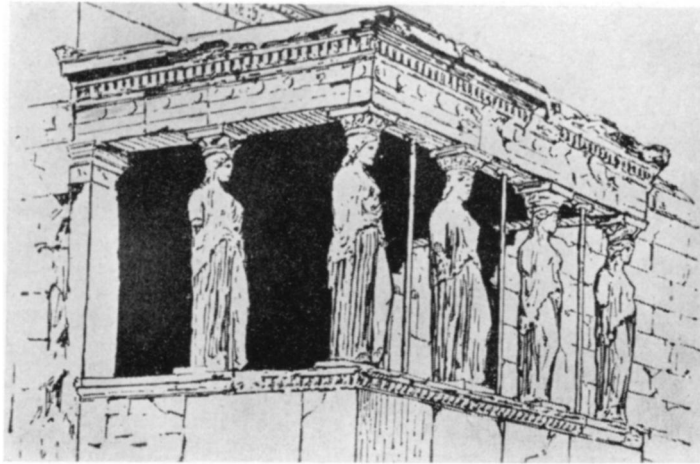


Fig. 24. Three-Dimensional View of the Porch of the Maidens; Actual Pose of the Maidens

From *Arch. Anz.*, 1922, fig. 2, p. 182

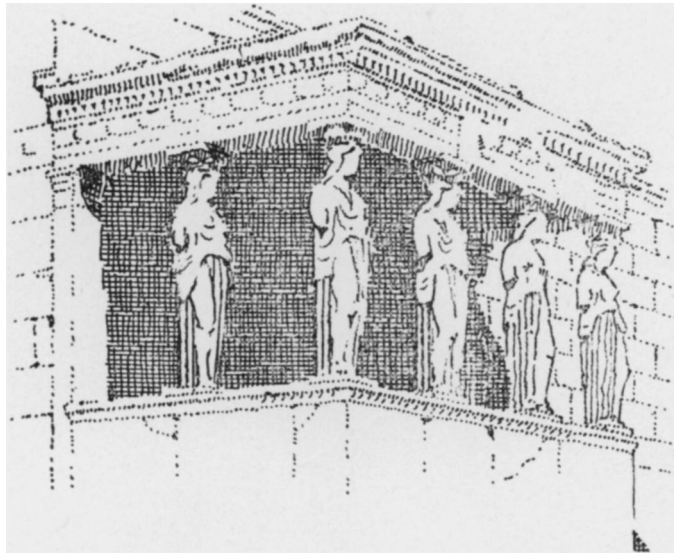


Fig. 25. Three-Dimensional View of the Porch of the Maidens; Pose of the Maidens Reversed

southeast, that is from the direction of the open space to the west of the great Altar of Athena, was especially important. And the view from the southwest was no less important, provided either that the Old Temple of Athena had actually been removed by the time the Erechtheum was designed, or that there was a general belief that it would eventually be removed. The artist in all likelihood said to himself "I must

make the portico look its best from about a 45° angle, seen from either southeast or southwest." By posing the Caryatids as he did, the three Caryatids at each angle of the portico had rigid straight legs on the outside of the Portico. You feel that the legs are full of vigor because they carry weight—are under strain. They appear more capable of holding up the marblework above than if the legs had been bent. Further, the tunics over the rigid legs are treated with vertical folds resembling the fluting of columns. Thus all the Caryatids, seen from the outside of the portico, somewhat resemble columns: they seem like sturdy architectural supports, in harmony with the other architectural members of the porch (cf. Fig. 24).

What would have happened if the artist had selected the other pose? The bent legs would have been on the outside of the portico, where everyone would have seen them well (Fig. 25). Bent legs look weak. The maidens could not, apparently, have carried the weight of the cornice and ceiling so easily as they seem to do with the pose the artist actually employed (cf. Figs. 24 and 25).

Are the laws of mechanics to overrule aesthetic considerations? This question has confronted the artist of every age. Provided aesthetic considerations outweigh mechanical considerations—the more they outweigh them the better—the true artist always has, and always will, cast his vote in favour of the aesthetic consideration.

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