

tance, treading on its rich carpeting of wild flowers, and listening to the sweet sounds of bird and insect life.

It is the sparkle of running water which adds so much of life and beauty to Devonshire scenery. There is nowhere stillness and stagnancy, and it is to the abundance of rippling streams in its woods and lanes that the marvelous freshness and richness of their vegetation are mainly due. One may sometimes wander for miles through a network of green lanes bordered by high hedge-bank, whose topmost branches, meeting across the narrow way, form natural avenues of green. Sometimes these lanes are formed by steep cuttings in the hill-side, and in such cases there is sure to trickle, from the higher ground beyond the hedge-top, some pure stream of water. Or it may be that the water gently percolates through the thickness of the hedge-bank, or flows in a tiny rill along the course of the lane. The arching branches, spreading to meet each other from each hedge-top, shut in the moist emanations from the running water, and vegetation revels in the friendly shelter thus extemporized.

Sweet Clovelly, on the northern sea-border of Devon, is hung against the side of wooded sea-cliffs, and is approached by a road, the "Hobby Drive," which presents along its entire distance changing scenes that have probably few equals in the whole world. You enter, from the high road from Bideford to

Clovelly, a carriage-drive which, if you follow it for a few yards, will lead you away into the cool shadow of overarching trees. From this point you pass through a succession of the most enchanting combes, now lost in a world of leafiness as clustering trees close in upon you on all sides, now momentarily bathed in gleams of sunlight which fall on to you from interstices in the leafy canopy above. Down and down your path winds, now crossing the brawling bed of a stream whose banks are densely covered by graceful forms of fern, now coming, on the verge of an opening in the trees, upon a spot whence a charming view can be had, away at the combe mouth, over a great expanse of waving trees, of the blue sea lying calmly beyond. Presently you approach the brow of a richly wooded bluff, to which your path leads from the depth of a bosky recess; and from this charming standpoint you look out from under the sheltering trees upon an enchanting prospect of sea and cliff. The very cliff-top is covered by graceful ferny forms; trees and shrubs rich in leafy beauty surround you. Across the sky white clouds are gently sailing, chased by the soft sea-breeze. And sunshine in a golden flood bursts in upon your path.

"The birds chant melody in every bush;
The smoke lies roll'd in the cheerful sun;
The green leaves quiver with the cooling wind,
And make a checkered shadow on the ground."

Francis George Heath.

THE FRIEZE OF THE PARTHENON.

A DISCOVERY IN CONNECTION WITH THE ATHENE.

IN an able article on "The Phidian Age of Sculpture," which appeared in a former number of this magazine (February, 1882, page 554), Mrs. Mitchell referred to some discoveries concerning the Parthenon which the present writer had the good fortune to make. It is one of these discoveries, the terra-cotta sketch of the upper part of the Athene from the Parthenon frieze, which it is proposed here to notice. It is, no doubt, a great gain to be able to restore to a state of comparatively original perfection a work of Pheidias, disfigured by the ravages of time and vandal hands; but, after all, to the archæologist the chief satisfaction lies in the conditions which led to the discovery. For the discovery was not a matter of accident, neither did it depend upon peculiarly personal qualification or aptitude, but was the result of the simple appli-

cation of a method of archæological observation now becoming systematized and developed—the result of sober, scientific work. This method of archæological investigation, the comparative study of style, consists in carefully studying and noting all the characteristics of well-identified remains of ancient art with regard to the subjects represented, the conception of these subjects, the style and manipulation of the rendering, both higher artistic and materially technical, and in comparing with the standard thus gained the numerous extant works, the date, school, and artist of which are not known. Thus, by means of scientific observation in all respects similar to that which has been practiced with so much success in the natural sciences, the step from the known to the unknown is bridged over, the circle of firmly constituted

facts grows wider as the sphere of the unrecognized and imperfectly known grows more restricted.

Throughout all the works of Pheidias art which have come down to us we notice that, however lofty their spiritual qualities, however great and ideal their artistic conceptions, they manifest to the student one simple and almost humble, yet none the less important, element which is essential to their great effect, namely, a due and sober regard paid by the sculptor to the physical, almost mechanical, conditions which surround each individual work. With all his loftiness and ideality, this great artist never lost his firm footing on the actual ground of his work, never expected that all the surroundings should be fashioned in keeping with his own great ideas, never neglected such seemingly paltry considerations as the limits of the space that was to be filled by his composition, the material to be used, the conditions of light in the position of the work, and the point from which the spectator would view it. As we learn from a careful study of this frieze, Pheidias seems to have asked himself, first, How can I make my figures visible, and distinctly visible? secondly, How can I relate the story I wish to transfer to marble so that it may be clearly understood, and may maintain its unity, though carried along the four walls of this temple? And when he had solved these questions by dint of sober thought and hard work, he set free from its fetters his lofty imagination, and it conceived a great composition which his hands had the power to execute and make real.

The first technical points which we notice in the frieze are the exceeding lowness of relief, the peculiar working of the edges of the outlines, and the increasing height of relief toward the top. All these idiosyncrasies of relief work must be referred to the peculiar way in which the frieze received its light, and to the conditions under which the spectator could gain sight of it. It must be borne in mind that the frieze, representing the Panathenaic procession, five hundred and twenty-two feet in length, ran along the outer wall of the *cella* at a height of thirty-nine feet, and that this wall was joined to the entablature surmounting the colonnade which ran round the temple and supported the roof.* The frieze could thus receive no light from above.

* To gain a clear view of the general subject we are dealing with, the reader could not do better than to consult Mrs. Mitchell's article, referred to above, and more especially to examine the sketch (page 553) to realize the position of the frieze in the building. [See also chapters XIV. and XVII. of Mrs. Mitchell's "History of Ancient Sculpture" (New York: Dodd, Mead & Co. London: Kegan Paul, Trench & Co.).—ED.]

Furthermore, the entablature surmounting the columns descended one and a half metres ($4\frac{3}{4}$ ft.) lower than the level of the frieze, so that the light could not come directly from the side. It therefore received only a diffused light from the side and below between the columns, and especially the light reflected upward from the white pavement of the colonnade. The spectator, moreover, could not gain sight of the frieze if he stood outside the temple beyond the columns; he had, therefore, to stand between them or in front of them toward the wall. The distance between the wall and the inner circumference of the columns (it is about four and a half metres, including the columns) was 2.96 to 3.57 metres (9.7 to 11.7 ft.), so that the spectator stood very close to the wall and nearly under the relief itself.

The first result of these conditions is that Pheidias had to keep his relief very low. For, in the first place, if he had worked his figures in bold and high relief, the spectator necessarily standing so closely under it, the lower edges of the relief, the feet of men and horses, the tire of the wheels, would not only have been the most noticeable features, and have presented ugly lines, but would have hidden from view a great part of the composition above.

A positive evidence in the work itself that Pheidias duly considered the special position of the spectator, to whom the lower sides of the projections were most visible, is to be found in the fact that while, as we shall see, the other edges of the relief are straight cut and not modeled, the lower surfaces of the edges that can be seen from below, such as the bellies of the horses, are more carefully modeled and more highly finished than any other surfaces in the whole frieze. In the second place, the light received being in every case indirect, either diffused upward from between the columns, or reflected directly from the white floor, a strong relief, especially in the lower parts, would have thrown shadows upward, and would thus have made the upper parts less visible, or entirely hidden them from view. We have thus presented to us the masterpiece of technical skill: layers of figures one upon another, sometimes two or three horses and riders, in a relief standing out four and a half centimetres ($1\frac{3}{4}$ in.), and in the highest parts, namely, the heads of horses and men, five and a half centimetres ($2\frac{1}{4}$ in.). Our wonder at the technical skill must grow still greater when we consider that the several layers of figures put into his exceedingly low relief were worked with such definiteness that the outline of each figure, forming a



PLAQUE IN THE LOUVRE. (SEE PAGE 178.)

part of a great mass, such as the procession of horsemen, became distinctly visible to the spectator at a distance of over thirty-nine feet, in spite of the imperfect light and the unfavorable point of view. This was effected by another peculiar and characteristic method of working the relief in this frieze.

The second result of the peculiar physical conditions of the Parthenon frieze is the manner of dealing with the outlines of the figures and the edges of the outlines. As the relief was kept very low, and the light was so imperfect, the outline, in order to be visible, had to be clearly cut and set off from the ground in an abrupt manner. In a low relief, which is placed on the eye-line before us, we avoid a harsh, perpendicular edge, which interrupts the flow of rounded lines, and we allow the relief as far as possible to run gradually over into the ground. In the Parthenon frieze, on the contrary, the edges of the outlines, with the exception of those that are seen from below, are cut straight and sharp to the ground, often at a

height of three and even of four and a half centimetres, perpendicular to the ground, and sometimes even slightly undercut, the edge slanting inward. In some instances, especially where there are several layers of figures projecting over one another, they are made more visible in that the layers are not parallel to one another, but the one layer has a more slanting plane. Another device is that of cutting a groove near the edge, and thus heightening the relief away from it. This is especially noticeable at the feet of the horsemen. Finally, a more projecting relief is obtained in the upper and most distant parts of the relief, especially in the heads of men and horses, by somewhat sinking the ground as it nears the outline of the head.

Lastly, we notice that the variations in the height of the relief are only to be found in the upper part of the frieze, which reaches the extreme height of five and a half centimetres, while the lower parts uniformly remain within the limit of four and a half centimetres. This treatment is due, in the

first place, to the fact that while, from the peculiar lighting, high relief in the lower parts might have thrown disturbing shadows over the upper part of the relief, there was no fear of such a disturbance in the upper part, and the artist was free to make this more strongly projecting. Secondly, it is due to considerations which we know Pheidias to have studied. It is because of the foreshortening which is the result of the spectator's point of viewing the composition. These considerations on the part of the artist are manifested in the way in which the lower portions of the bodies, for instance of the seated gods, are proportionately shorter than the upper parts, because, to the spectator viewing them in their original position, the lower parts would appear larger. The lower parts also appear more projecting and the upper parts receding when viewed immediately from below. To avoid this effect and thus to keep the figures in drawing, the upper parts of the frieze had to be projected more strongly than the lower parts. Only then would they appear to the spectator from below as being of the same height in relief. From the point in which it was seen in its original position, the variation in the height of the relief produced the same appearance that a relief of equal height throughout, which is placed on the eye-line, presents to the spectator.

Furthermore, the walls of the temple which Pheidias was called upon to decorate with a continuous scene possessing unity of artistic organization, presented to the sculptor four distinct sides, only one of which could be seen at a time. The task was thus set of giving connectedness to the scenes, while each was to be endowed with a certain completeness of meaning and harmony of composition. They were to be like the stanzas of a poem or the movements of a symphony. Pheidias used the limitations of outer physical conditions to realize in his work one of the central tasks of organized life, and more especially the organized life of art, which may be expressed by various terms, all containing the same fundamental idea: to find and constitute the proper relation and just balance between unity and variety, law and freedom, typical life and individual life, symmetry of form and flow of nature, the ideal and the real. This unity of artistic organization chiefly depends upon giving to the work some physically perceptible central point of interest and importance, toward which all the parts of the work tend, with regard to spiritual interest, or to volume, color, or line. This central point of unity was clearly suggested to the sculptor by the fact that the

four walls were not strictly equal in importance, in length, or in position; but that the oblong temple contained two shorter and two longer walls, and above all, a front (the east end) and a back (the west end). Instead of a mechanical, unvarying movement round the four walls, if they were equally important, without any growth of interest, the east front became the chief side toward which all the others were to lead, upon which the climax of the action was to be represented. The action will begin at the back, the west end, will proceed along either long side of the oblong temple, and like the band of a victor the two ends meet, and the dramatic knot is tied at the brow of the temple, the east front. The scene represented is the procession at the Panathenaic festival. Each of the four sides of the temple contains one definite stage of the whole action, while the bulk of the scene is naturally assigned to the long walls, on the north and south.

The west wall or back is the least important side, and at the same time it is the side facing the Propylæa, the entrance to the Acropolis, which the visitor first saw upon nearing the Parthenon. Thus it is on this side that the beginning of the whole action is placed, the preparation for the procession. Horsemen are mounting; there one is trying to hold back a rearing horse, another is drawing on his boots, another is forcing the bit into the mouth of his restive horse; others are already mounted, and are beginning to fall into line.

The north and south walls, as has been said, contain the procession proper. But, to keep up the continuity of composition between the several sides, the figures at the corners anticipate and take up the character of representation belonging to the side on to which they join, forming an organic transition from one movement to another, as in a musical composition the key or rhythm of the following movement is led up to in the previous one, and the *motive* of a former movement is repeated in a modified form at the beginning of the succeeding one. So, here, at the end of the western frieze, there are figures which, by their action, lead round the corner to the northern and southern frieze; and at the beginning of the northern frieze there is one group of preparation, a boy-servant tying the girdle of his master at the back, over which the drapery will be pulled in projecting folds. Then follow the matchless groups of horsemen in full processions, charioteers with warriors in armor, dignified elders carrying branches, musicians, kitharists and flute-players, maidens carrying offerings, and then the sacred hekatombs,



ATHENE. (ORIGINAL CONDITION.)

cows and sheep offered by Athens and its dependent colonies. The varying life and movement of these groups, all toned down and made worthy of a translation into so lasting a material as is marble, by harmony of composition, is made still more varied and living by the heralds and officers interspersed between the advancing grouping and keeps them in order.

All this movement leads on to the final scene at the east frieze, where the preparations for the scene that is to follow the offering of the hekatombs to the goddess Athene, are clearly suggested in the central group of the priest and priestess preparing to perform the sacrifice. But the true climax of the scene as represented is in the arrival of the procession before the assembled gods, who, according to the truly Greek idea, are present at the feast which the people give in their honor, the partakers of the people's joy, and are grouped on either side of the center. Such is the largeness of conception and treatment given to these gods that, though they be but in relief and half life size, they each furnish a model for a great monumental statue; nay, they need but to be transferred from relief to the round and increased in dimensions to make, each of them, a great statue, equaled only by the pedimental figures from the same temple. They have the dignity in conception and attitude, the breadth of treatment in modeling, and, withal, the grace and

serenity which characterize the works of Greek art, especially of the art of Pheidias.

Among these gods and goddesses, the figure which has been most admired by archæologists, artists, and amateurs is that of Athene, who, corresponding to Zeus on the one side, is seated on the other side of the central group, and is here figured from the frieze in the British Museum. And it has been thus admired despite the loss of the head—a loss which has been regretted by all writers on the subject.

Among a number of terra-cotta fragments in the Louvre Museum at Paris, the writer came upon the fragment of an antique terra-cotta plaque which at once arrested his attention. The fragment here figured (see page 176) from the original is seven and a half inches in height, five and a half inches in width, and one and a half inches in thickness. The color of the terra-cotta is of a faded reddish brown with a few spots of white, the remnants of a ground-color which was put on ancient terracottas to hold the upper colors, as we use white of egg to fix the gilding. The relief technique of Pheidias and the general character of the whole made it most evident that here was a specimen of Pheidiac relief work, and the writer felt convinced in a moment that it was one of the figures from the eastern frieze. A pencil-sketch made at the time, when compared with an illustration of the frieze, afforded a complete confirmation of this con-

jecture, in showing it to be the seated figure of Athene. The question was, What was the degree of relationship between this terra-cotta and the actual frieze? When the directors of the Louvre Museum, among whom M. Léon Heuzey was especially kind, generously sent a plaster cast of the fragment to England, so that it could be carefully collated with the frieze of the British Museum, the identity of the two works became palpable, and the general character of the plaque as compared with the frieze was that of an "early state" as compared with the finished work.

The peculiar working of the edges of the relief in the Parthenon frieze to which attention has been drawn is maintained throughout in the terra-cotta; nay, it even acts disturbingly when we view it closely. The edge of the arm is worked straight down to the background, perpendicular to it, and sometimes even slanting inward. The outline of the face, especially the line of brow and nose, has the same straight-cut edge. The head is highest in relief, and therefore the hair has suffered most from friction, being most prominent. So close is the resemblance of workmanship to that of the Parthenon frieze, that, as there, so here, the stronger relief of the head is attained by adding to the actually greater height by sinking the ground around this upper part. The chiton is fastened in the same way above the shoulder, the brooch being more distinct in the plaque than in the frieze, where it is rubbed away. From this point the chief folds of the drapery radiate, two running above the right breast under the upper seam of the garment, which projects in a similar manner above the left breast in both instances. From the shoulder, running between the right breast and the opening at the side, there are five fold-grooves, the upper ones running toward the center of the figure, where they break up into numerous transverse folds, while the lower ones are subdivided by smaller grooves, less defined in the plaque and more clearly cut in the frieze. The triangular opening is identical, as also the manner in which it runs out into a curved fold at the bottom. Below it there is the same cavernous fold, and between it and the arm the drapery is subdivided in both instances by a small groove and a larger one toward the arm,—in the plaque the smaller one being visible up toward the arm, while in the frieze it is visible further down. There are no indications of a spear in the terra-cotta, because this could not well be rendered in that material. By the side of the cavernous fold, just above the breakage, there are three parallel curves in the folds which are quite similar in the drapery of the frieze. Unluckily, the terra-

cotta is fractured at the lap of the figure, and the whole lower portion is wanting.

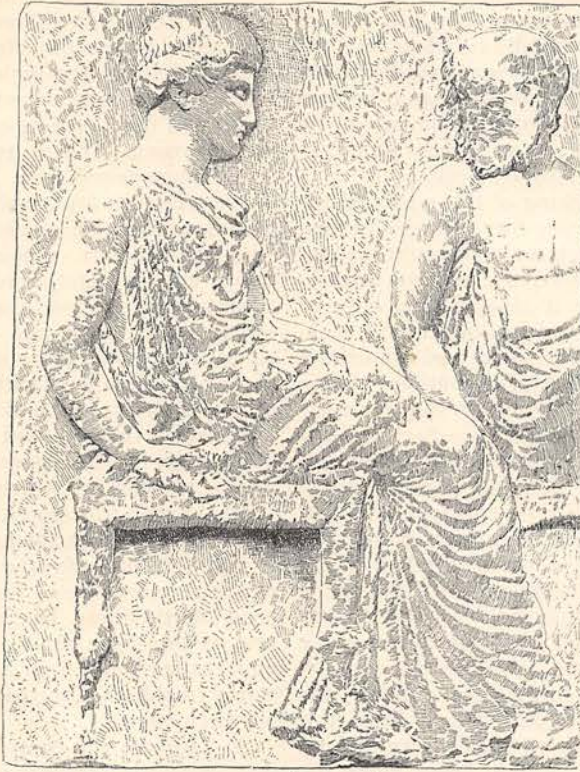
On the other hand, the greatest satisfaction is gained from the plaque in that the head has been perfectly preserved, and that we can now complete in our mind the picture of the Athene of the frieze, whose mutilated head so painfully destroys the effect of the whole figure. And when the scale of the terra-cotta relief is taken into account, the delicacy and nobility of the modeling of the face and neck are surprising. The firmness of the features is still far removed from hardness, the cheek is soft and yet firm, and the texture of the hair is well set off against that of the face. The whole has a combination of maidenly purity and graceful nobility. There is no accentuation of the distinctively feminine charms; nay, from one aspect, the head is almost boyish in character. And this quality of the head, combined with the feminine forms of the body, produces that mixture of attributes which characterized the virgin daughter of Zeus in the less stern conception of the patron goddess of Athens. It has now become possible to restore the headless Athene to a state closely attaining the original perfection. Accordingly, the head of the plaque, enlarged to the size of the indications of the head on the frieze, has been modeled on a cast of the frieze at M. Brucciani's, a new mold taken, and from the cast of this restored mold the accompanying illustration has been copied.

So fortunate and complete is this discovery that, with the fatalistic skepticism which is inherent in us, the thorough coincidence in all points almost calls forth within us a doubt "whether it is not too good to believe." The question that will have to be answered at the outset will then be, What exactly is the plaque, and what uses did it serve? It is either a Roman copy or a contemporary Greek sketch.

The first possibility, that it is a copy made in Roman times, is one which has much in its favor. Whoever is conversant with Roman history and Roman literature, knows how intense was the admiration of this people for Greek culture in all its forms, and how they strove to imitate and assimilate with their own all its manifestations. We furthermore know that it was a common undertaking for a high-bred Roman, and an event which was almost essential to his complete education, to travel in Greece. Here it was that the Roman patrician's artistic nature was trained by the study of the great art treasures, as, fifty and a hundred years ago, the wealthy inhabitants of northern Europe completed their education by a visit to Italy. It was only excep-

tionally, under the influence of war and conquest, and with the ensuing public desire to decorate their capital, that conquerors like Sylla ventured to carry off original works of art. There existed a strong quasi-religious

thought worthy of any mention by ancient authors, should be copied and should be desired by artist or by amateur. Yet this may be easily explained. A Roman patrician of cultivated taste is struck by the beauty of the



ATHENE. (RESTORED.)

piety which forbade them under ordinary circumstances to desecrate the soil of the country which the Romans considered their original home, by despoiling it of its most sacred treasures of art. And yet the appreciative Roman felt, as we do, a desire to carry home with him reminiscences of the treasures he had seen, and to adorn therewith his house and gardens. And so there existed in the Roman period, after Greece had lost its inventive artistic genius together with its political independence, a numerous colony of half-mercantile sculptors, who copied, modified, and combined works of Greek art to supply the demand of the Roman market. Most of the statues in Italian museums are such copies or modifications. To this class of work the Paris plaque would belong if it is a copy. But, on the other hand, we must remember that there were so many supreme works of pure sculpture from the hands of the great artists, that we cannot well understand why a part of this decorative work, which, in comparison with the great works, is not

Parthenon frieze. Now, it must be borne in mind that the Roman's true taste inclined more to great architectural works of splendor than toward pure sculpture, and that Roman sculpture is essentially decorative in character. He feels a desire to decorate with the same reliefs the small temple in his country home, or still more probably his house or his villa, or a room or a court in them. Accordingly, he orders a reduced copy to be made in terra-cotta, and of this copy the plaque, probably found in Rome or its neighborhood, might be a fragment.

Much as this possibility has in its favor, serious objections may still be raised. In the first place, the later schools of artists in Rome and even in Greece had distinct styles of their own, markedly differing from the simple grandeur of the Pheidias age. Now it is contrary to experience that these later characteristics of style should be lost even in copies of earlier works intended to be correct. The later Roman copies that fill our museums, such as those of the Doryphoros of Polykleitos

and the Myronian Discobolos (of which an earlier copy exists for comparison with the later ones in the replica of the Palazzo Massimi at Rome), are most instructive in this respect. We should expect traces of such later work in the plaque, if it were a late copy. But of this there are no traces. The plaque has all the simplicity bordering on severity of the figure in the frieze; nay, it is almost severer and larger in character, while at the same time it is far removed from that stereotyped and exaggerated severity which is given to the copies of early work when the late copyist makes a point of maintaining the characteristics of archaic art.

Furthermore, it is physically impossible that a copy so accurate in all its details, including not only the folds, but even the peculiarities of Pheidias relief-technique, should be made by a copyist standing below while the frieze was in its original position, with the imperfect conditions of lighting to which attention has been drawn. For this purpose, the copyist would have had to be face to face with the original. Now, it is hardly conceivable that, even if it were permitted by the magistrates in charge of the temple, the copyist would have gone to the trouble and expense of erecting a scaffolding round the wall of the *cella* to the height of thirty-nine feet—the only means of enabling him to reproduce it with such accuracy.

There remain two other possibilities. If it was a work contemporaneous with the frieze itself, the reasons just mentioned would speak against its production when once the marble relief was in position; the terra-cotta must, therefore, have been made before the relief was fixed to the temple. Now, it is hardly probable that copies of the decorative sculptures of the Parthenon should have been made at the time. I must again remind the reader of the fact that, though to us the sculptures of the Parthenon are of the highest interest and importance as independent works of art among those that we collect in our museums, they were not so to the Greeks of the time of Pheidias. They were to them merely decorations of the great architectural structure; and the works which were chiefly estimated by them as works of art, complete in themselves, were the statues by the great artists, which the ancient authors describe, while they pass over the frieze without a remark.

We naturally feel some hesitation in suggesting the third possibility. But, in spite of this hesitation, we must not hide from ourselves the fact that it is not impossible that the plaque is the original sketch, and we are bound to bring forward as fairly as possible all circumstances which speak in favor of such

a possibility. Let us make sure that our desire to possess an original from the hand of Pheidias does not prejudice our observation; but let us equally make sure that our hesitation to state something uncommon, and our fear of laying ourselves open to the easy denial and ready incredulity of those who stamp even the admission of such a possibility as venturesome, does not equally hamper us in a just consideration of the work before us.

When we consider the extraordinary correspondence in the details and, above all, in the working of the relief, especially as regards the edges of the figure, the greater height of the upper parts, and the sinking of the background about the head, all of them, as we have seen, modifications suggested by the peculiar conditions of the frieze of the Parthenon, we at once feel that they speak strongly in favor of this view. Furthermore, the terra-cotta, though it marks all the chief lines of the drapery, still (as compared with the marble relief) does this with a certain definiteness and a want of life which characterize the "first state" of a work as distinguished from the finished production.

When we consider the actual mode in which the great works of art were produced during the few peaceful years of the supremacy of Pericles, a new light is thrown upon the possible destination of the terra-cotta relief of which the plaque is a fragment. Within these few years a number of great compositions, among which was the colossal Athene Parthenos decorated by many figures in relief and in the round, all of them over life size, were designed and executed by Pheidias. To these works, important temple-statues, Pheidias, in addition to the design, gave also the technical execution, or at least the finishing touches. According to our modern idea of the working power of an artist, a single work like the Athene Parthenos would call upon the time and energy of a sculptor for a period of several years. Now, besides this, there were all the decorations of the Parthenon with its ninety-two metopes, its hundreds of figures in relief in the frieze, its large pedimental compositions. It is inconceivable that Pheidias should have executed with his own hands all these works, though he may have given the finishing touch to some of the most important parts. Though the designs were made by him, the execution must have been put into the hands of marble-workers ranking from high-classed artists down to mere artisans. The occasional discrepancies in the actual execution of the marble-work in various parts of the frieze, the pediments, and the metopes, is in part to be re-

ferred to this fact. This assumption is fully verified by the ancient authorities. We hear from Plutarch that a great number of artists and artisans skilled in marble-work, metal-beating, wood and ivory carving, etc., flocked to Athens from all parts of Greece and the colonies, and were added to the large number of native workmen. These workmen were free from taxation, and all inducements were offered to the skilled among them. The same writer further tells us, "that these buildings were of immense size and unequalled in form and grace, the workmen striving emulously that the workmanship should excel in artistic finish; nothing was more to be wondered at than the rapidity with which they were brought forth."

It has even been assumed by archæologists that works like the frieze were sketched in small in their totality by Pheidias himself. Quatremère de Quincy gives the following account of what he supposed the process of their execution to have been:—"I quite believe that a small sketch of the whole composition, either in terra-cotta or in wax, was first made in order to fix the *ensemble*, the details, and the relation of the parts of this composition to each other. But I presume that from the sketch an exact tracing, the actual size of the frieze, was taken of the outlines of each figure and of the forms of each object; these outlines were faithfully chalked on the unhewn slab of marble in accordance with their succession and position in the sketch. It is after these designs that the sculptor then proceeded to work his marble."

Now, it is not likely that if the sculptor had at his disposal means of readily reproducing his designs, he would rely upon one copy only of so extensive a work, consisting of so many parts, each of which was essential to the whole, especially when we bear in mind the carelessness of workmen and the chances of destruction to which whatever is fragile is exposed in any marble-works. Modern sculptors avoid these difficulties by making molds from their clay models, from which any number of plaster casts can be produced. There is no evidence that the early Greek sculptors made plaster casts; there is evidence that they made lasting models of their statues. Molds are still extant in which terra-cotta figures were made. It is therefore not unreasonable to suppose that the small, thin, and fragile sketches of a work like the Parthenon frieze, which were given into the hands of the marble-workers, were fixed by means of clay

molds from which terra-cotta plaques, corresponding to the fragment we are considering, were reproduced.

The last question to be answered is, Is it likely that such sketches would be preserved? To answer this in the affirmative, it would have to be shown, first, that the ancients valued original models from the hand of great artists, as we prize the sketches of a Raphael or a Michelangelo; and secondly, that Pheidias stood in such esteem in later antiquity, that his works and sketches had an interest corresponding to that which the sketches of the great Italian masters have for us.

The first of these two points is proved by a passage from Pliny in which we are told that the models (*proplasmata*) of the sculptor Arkesilaos brought higher prices than actual statues of other sculptors; and also by another which shows that in the time of Pliny an antiquarian interest existed which drove people to pay high prices for old Greek plate for the sake of its antiquity, even if the design was almost effaced. With regard to the second point, the tone in which the later authors speak of Pheidias shows that he was held in reverence almost approaching religious worship, and that everything pertaining to him was preserved with piety. This is confirmed by the fact that his studio at Olympia was built in the sacred Altis, and was shown to the traveler in after days, and has been discovered by the German excavators at Olympia. Is it then unlikely that the original sketches of Pheidias works were carefully preserved by the ancients, and were bought at a high price by one of those rich Roman amateurs who gave so much money for the original models of an Arkesilaos?

I do not attempt to answer ultimately which of these possible destinations the plaque had. I must leave it to the unbiased reader to draw the conclusion. What I have proposed to myself is to give the facts.

The writer cannot refrain from giving in a few words the sequel to the story. A few months after this discovery, he found that another terra-cotta fragment in the Museum at Copenhagen, the relation of which to the Parthenon was noticed by Professor Petersen of Prague, turned out to be of the same dimensions, the same material and workmanship as the Louvre plaque, and moreover the boy with the *peplos* or cloak, the figure immediately next to the Athene.

Charles Waldstein.