ON A ROSE PRESSED IN A BOOK.

I WIN the summer back again
At touch of this dead rose.—
O lavish joy! O tender pain!
The very June wind blows,
And thrills me with the old refrain
Whose music my heart knows:
I win the summer back again
At touch of this dead rose.

Ah, lost is all the summer's gain,
And lost my heart's repose;
And was it tears or was it rain
That wept the season's close?
The winter suns they coldly wane;
White fall the winter snows:
But Love and Summer come again
At touch of this dead rose.

Louise Chandler Moulton.

DID THE GREEKS PAINT THEIR SCULPTURES?

OF the many problems which are occupying the attention of archæologists, there is none of greater importance to the artists of the present day than that suggested in the above question; none the solution of which is likely to have so great an effect upon the art of the future. Up to the beginning of the Renaissance, from an indefinitely remote period, it had been the general custom to paint wooden and stone sculptures, excepting those used as exterior architectural decorations, in brilliant and often realistic colors. With the awakening of interest in classical art came the desire to imitate the ancients in their methods as well as in their principles; and the statues known at that time being—at least when they came into the hands of artists and amateurs—devoid of color, it was inferred that the Greek and Roman sculptors left the marble in its native whiteness. Consequently the artists of the Renaissance began this practice in their own works, and thus colored sculpture died out. We still find a leaning toward it in the works of the Della Robbias, and in the terra-cotta portraits of Donatello and his contemporaries, but the sentiment regarding the immaculate stone, the unwillingness to "paint the lily," had its origin in their time, and has lasted ever since.

Now, supposing we were to find that the men of the Renaissance were mistaken in believing that their classical predecessors left their sculptures white; supposing it can be proved to-day that the Greeks did color their statues and their reliefs, and that the custom of the middle ages was one handed down by unbroken tradition from classic times, will our sculptors correct the error made by their predecessors; or does the sentiment regarding the essential separation of form from color in sculpture now rest upon such firm ground of its own that we shall ignore the authority of the Greeks in this particular, and continue on our own way? This is a question which a wiser prophet than I must answer.

In the ateliers of sculptors, both in this country and in Europe, I have noticed what seemed to me indications of a desire to get away from the conventional white. The attempts to "tone" the marble with a wash that will give it an "antique" effect, the endeavor to suggest colors by pale, translucent tints, have the appearance of a sort of compromise between what the sculptor feels that his work needs to attain completeness, and what he thinks he ought to do, or to avoid doing, to conform with the traditions in which he has been educated. However, this part of the discussion is beyond my province, and is only indirectly connected with the object of this paper, which is to show what has been, not what will be done. I wish to treat the question with which we began as one of fact, not of sentiment. If we can arrive at a definite or satisfactory knowledge of what the Greeks did, we may be content to leave the consequences to others.

THE interest of the Renaissance in classical sculpture was purely artistic. The scientific spirit which now prompts the archæologist to make careful record of every detail connected with the excavation of a statue, to note every bit of evidence bearing upon its previous history, did not then exist. The sculptures of the ancients were prized solely as objects of beauty, and if they were not in beautiful condition when found, the restorer did not hesitate to make them so. Not only were they carefully

cleaned, and often polished, but missing limbs and features were freely supplied, according to the taste and fancy of the artist to whom the work fell. Sometimes, as in the case of the Laokoön, with an absolute disregard of the indications of the original gestures left upon the figures, pieces were neatly inserted where the surface had been bruised or battered, and, thus rejuvenated, statues and reliefs were offered to wealthy collectors.

Such being the case, there is small cause for wonder that the slight flakes and scraps of color which would have been the only traces that could have survived the burial of centuries were swept out of sight, and even their existence unsuspected. Yet, in a letter to which I shall have occasion to refer later, Professor Lanciani has called my attention to one circumstance which seems to me highly significant upon this point. He says:

> As regards the question of the Renaissance, I beg to notice one thing: The last element of ancient polychromy to disappear is the gilding, especially the gilding of edges, borders, and fringes. Gilding resists obliteration more [than colors] because of the *mordente*. Now, was it not the fashion of the Renaissance artists to gild not only their figures but also their architecture? Take, for instance, the lovely *ciboria* of Donatello, and even of Sansovino, the altar-pieces in *basso-* and *alto-rilievo*. They are always gilded to a certain extent.

Whether this practice was due to a conscious imitation of the antique, or was, like their painted sculptures of which I have spoken, a residue from medieval customs, the belief that an essential quality of classical sculpture in marble was its whiteness was handed down from one generation to another, and almost without question, until the beginning of the present century. Winckelmann, to be sure,—who in his "History of Ancient Art," published in 1764, laid the foundations of the modern science of archæology,—mentioned the fact that he had observed gilding in the hair and drapery of several marble statues, and that there were "heads, indeed, which were entirely gilt."[1] He even went so far as to say, in speaking of the pseudo-archaic statue of Artemis (now in the Museum of Naples), which still retains numerous traces of color, that although he believed that figure to be Etruscan, yet "from a passage in Plato it might seem as if the same practice existed also among the Greeks";[2] but, strangely enough, he left the subject there, without further hint or inquiry, important as it was. The reason is simple. The materials available for investigation in his time were of the kind already described, with very rare exceptions like those mentioned by him; and from these it would have been impossible to attain any positive results.

Yet the scientific seed was sown, and from the time of Winckelmann excavations were watched more carefully. Greece herself was beginning to open her treasures to the student. The materials which both she and Italy yielded were examined in a new spirit, and the question of color was among the earliest to receive attention. The first special publication on the subject was a superb folio by the French archæologist M. Quatremère de Quincy, issued in 1815, of which the title alone well-nigh covers the entire field.[3] His investigations were chiefly in regard to the famous *colossi* in gold and ivory, the masterpieces of Pheidias, Polykleitos, and the other sculptors of their period; but he also touched upon works in marble, and announced his belief that these were colored in all parts. He was quickly followed by others, architects especially, who began to systematize and enlarge upon the traces of paint found on architectural remains, with a view to restoring the original effect of classic buildings in color as well as in form. Semper was a strong advocate of the use of color in both architecture and sculpture, and, under the influence of men like him, the theory ran riot for a few years, so that we find one writer insisting that the Greeks not only covered their statues completely with color, but even went so far as to paint lights and shadows on them.[4]

These men went further than was warranted by the material then at hand, and their theories received a set-back in an essay by Franz Kugler, the well-known writer on the history of painting, which I may be pardoned for stopping to mention, as it remained until within a few years the most authoritative publication on the subject.[5] Kugler belonged to the class to whom the essence of sculpture is form, and form alone; and realizing that his predecessors had gone further in the matter than they were justified by the facts, he tried to save as much of the white in Greek marble sculpture as he could. Remains of statues and reliefs which retained traces of color had accumulated to a considerable extent during the previous twenty years, and in the essay of which I speak he gave a list of all such pieces as were known to him,

[1] Book VII, chap. 2, § xii. of Lodge's translation.

[2] Ibid., Book VII, chap. 4, § xv.

[3] "LE JUPITER OLYMPIEN": ou l'art de la sculpture antique considéré sous un nouveau point de vue; ouvrage qui comprend un essai sur le goût de la sculpture polychrome, l'analyse explicative de la toreutique, et l'histoire de la statuaire en or et ivoire chez les Grecs et Romains, avec la restitution des principaux monuments de cet art et la demonstration pratique ou le renouvellement de ces procédés mecaniques. Par M. Quatremère de Quincy, membre de l'Institut.

[4] L. Völkel, "Archäologischer Nachlass," Vol. I, p. 82.

[5] "Ueber die Polychromie der griechischen Architektur und Sculptur und ihre Grenzen." Stuttgart, 1835.

describing the remains upon them, with a view to deducing the whole truth from these. But his object was to admit the existence of color only where he found himself compelled to, and some of the arguments he used to justify his results are decidedly amusing. The iris of the eye, for example, he was obliged to admit was colored, and of this he says:

> But the human eye, the focusing-point at which thoughts and feelings are concentrated and expressed, cannot be rendered by form; here Nature has drawn the limits of sculpture; and where she acts solely through color, there must the artist do likewise.

The results of his examination, as regards sculpture, were that the presence of color was established upon the hair, brows, lids, iris, and, in archaic works only, on the lips; also upon certain details of the draperies, such as borders, of which no indication is given in the sculpture itself. All other parts of the figure were white, though, as regards the flesh, he was obliged, in view of the statements of ancient writers, to grant a certain finish, or "toning," with wax, which did not, he thought, materially affect the color.

We need not pause now to criticize this theory, but if the reader will picture to himself the effect of a Greek statue with brown or reddish hair, gilded perhaps, eyebrows and lids to match, the iris of some dark color, and the lips, face, and skin of the natural pallor of marble, or the still more ghastly hue of wax, I think he will share my surprise that any such hideous combination could have been ascribed to the most keenly esthetic people that ever lived; and still more that such a doctrine should have held its own for some forty years, as this did. Such wretched compromises were the last throes of the school to which the term "classic" was synonymous with cold, severe, heartless—by which Greek art and Greek life alike were placed so high in the realm of the ideal as to be devoid of any sympathy with common humanity. Fortunately we have emerged from that epoch. The studies of men like Alma Tadema and Frank D. Millet, not to mention the investigations of archæologists, have shown us that, in the matter of costume at least, the white-marble idea is an exploded one, that the Greeks were as thoroughly human as ourselves, and much fonder of color.

Since Kugler wrote, the discoveries bearing upon our question have multiplied amazingly, especially during the last fifteen years, and the amount of evidence brought to light is now really so large that we can hardly hope for more satisfactory data than we possess. This evidence has been examined by a number of archæologists, especially in Germany, but the one who has made it his special province is Professor Georg Treu of Dresden. Those who have visited within the last few years the fine collection of casts of which he is the director, and have seen there the very interesting results of his experiments in restoring the color of certain statues, must have felt that the subject is an important one, and likely to lead to a revolution of our conceptions of Greek sculpture. In 1884 Professor Treu published a pamphlet entitled "Sollen wir unsere Statuen bemalen?" (Ought we to paint our statues?) which made a profound impression on the artistic world; and the perusal of this led me to give the matter careful attention. Being in Europe at the time, I had excellent opportunities for investigation; and starting absolutely without bias or preconception, I made careful notes of every bit of evidence, *pro* and *con*, which I came upon during a trip through Greece and Italy, and also in the larger northern museums; as a result of which I became convinced of the following points:

(1) That from the beginning of their art of sculpture, through its whole course, it was the custom of the Greeks, and following them the Romans, to paint their marble statues and reliefs.

(2) That this application of color was not restricted to certain details, but covered the entire surface of the marble, both nude parts and draperies, with the possible exception of portions where the natural color of the marble served its purpose in the general scheme.

(3) That the colors used were not merely tints, but strong body-colors, the aim of the artist being to imitate nature in the matter of color just so far as the sculpture itself did in that of form; that is, with a conventional idealization or generalization by which the unpleasant features of realism were avoided.

The last statement perhaps requires a word of explanation. In saying that the Greeks colored the nude parts of their figures so as to imitate nature in this particular just so far as the sculpture did in the matter of form, I have in mind the fact familiar to all, that Greek sculpture in its greater epochs was never exactly real—that the sculptors always allowed themselves a certain reservation which resulted in a conventional idealization. The most obvious instance of this is the so-called Greek profile, the straight line running from the line of the hair to the tip of the nose. Precisely such a profile as this probably never existed, yet the broad, low forehead and the straight, short nose were characteristic of the Greek race then, as now, in the purer types of the people; and one of the most interesting proofs of the genius of the Greek sculptor was the skill with which he eliminated what we may call the accidental features of the face and figure, and produced

a generalized or composite type, which has been for all subsequent ages the standard of the ideal in art.

It is my belief that there was, in the same way, a conventional scheme of color applied to the nude; a color which was not precisely that of nature in any one individual, but which stood for it, avoiding minor and unessential details,—such as the difference of complexion between one man and another,—and thus escaping the charge of realism. Such a treatment did exist in their paintings, the best illustration of which is in the distinction between the male and female sex. The Egyptians made this distinction by painting the flesh of the former a deep dun-red, and the latter yellow. Whether the Greeks borrowed this scheme or originated it for themselves, we find them adopting a similar method from a very early period of their vase-painting; and in a tomb at Pæstum, the wall-paintings from which, now in the museum at Naples, belong to a period not later than the middle of the fifth century B. C., we find this shown in a most striking manner. The flesh of the women is very fair, almost white, with a pink flush on the cheeks, while that of the men is a warm brown-red—a much greater distinction than would naturally exist between the two sexes of the same race. Every scrap preserved to us of the paintings of Greece, Rome, and Etruria shows this same distinction, with more or less refinement, according to the epoch from which it dates. Perhaps the finest example is to be found on the "Amazon Sarcophagus" in the Archæological Museum at Florence, beautifully reproduced in color in the "Journal of Hellenic Studies" for 1883, plates 36, 37, 38. This monument has an especial value in the history of Greek polychromy, because it represents an art at least three centuries earlier than that of the paintings of Herculaneum and Pompeii.

HAVING stated my creed, it now remains for me to prove it. In endeavoring to do this I desire to say at the outset that I claim no originality for the reasons I shall give. The reader will find hardly a fact brought forward that has not been noted before, and if this contribution to the discussion possesses any merit, it is because the conclusions stated were arrived at by independent and unbiased examination both of the monuments themselves and of the arguments hitherto advanced in support of both sides.

Unfortunately there is no work of Greek sculpture now extant of which we can be certain that it has lost nothing of its original appearance. Within the last few years a large number of statues and reliefs have been brought to light with traces of color upon them, some with more and some with less; but among all that we have there is not one at which we can point and say, "There, that is exactly what the Greeks did in regard to color, and it is all they did," because, with every trace that we possess at present, there are also indisputable indications that there was originally something more, and it is the absence of that something which causes the difficulty. This being the case, the natural impulse would be to follow the rule adopted in the investigation of other branches of Greek art, and to look to ancient authors to fill up the gaps in the evidence given by the monuments. Here again we meet with discouragement at the start, because, through the whole course of classical literature which is preserved to us, there is no description of a painted statue —no direct statement that statues were painted. Now, this silence may be interpreted in one of two ways: It means either that they were not painted at all, or that the practice was so universal as not to require specific mention, any more than we should find it necessary to state that the water of the Atlantic is wet, or the coal from Pennsylvania is black. Were the sculptures not painted at all, the matter would end there, but were they painted universally, we should expect to find at least a hint of the fact in an occasional chance allusion, perhaps by way of simile or comparison. Of remarks of this nature we have a number which, though by no means large, is happily sufficient to establish the fact. I shall not attempt to give the complete list of them, as it would be out of place here,[1] but will select three or four of the most striking.

Vitruvius (Book VII, chap. 9), speaking of the application of vermilion to exposed parts of buildings, says:

> And if any one should be more particular, and should wish the vermilion finish to retain its color, he must, when the wall is finished and dry, rub over it, with a stiff brush, Punic wax melted and tempered with a little oil; and afterward, with live coals in an iron vessel, heat the wall so thoroughly as to dissolve the wax and make it smooth; then rub it down with a candle and clean cloths, just as nude marble figures are treated (*uti signa marmorea nuda curantur*).

This extract, I admit, does not in itself establish the application of color to the marble, and might be held to refer simply to a method of giving it a finish. But it is a process foreign to modern sculpture; it has evidently nothing to do with form, and apparently was applied only to the nude parts. If not necessarily con-

[1] Those who care to pursue this part of the question further are referred to a pamphlet by Christian Walz, "Ueber die Polychromie der antiken Sculptur," Tübingen, 1853, where all the important allusions are discussed from a philological point of view.

ENGRAVED BY C. A. POWELL.

ARCHAISTIC STATUE OF ARTEMIS.
(FROM POMPEII, IN NATIONAL MUSEUM, NAPLES.)

nected with color, it must, even though we had no further evidence, be accepted as an indication of at least some kind of toning process. That it referred to something more than that I think we shall see presently.

Much more satisfactory is a passage in one of Plutarch's "Essays,"[1] in which he illustrates the relation of actors to the drama they perform by saying:

> They are like the toilet-makers and chair-bearers of a luxurious woman; or rather, like the encausters and gilders and colorers of statues (ἀγαλμάτων ἐγκαυσταὶ καὶ χρυσωταὶ καὶ βαφεῖς).

Here is certainly an interesting list of trades connected with the art of sculpture, the nature of which is beyond all doubt. Certainly no one of them would have been called upon to finish a statue that was to be left in the purity of the marble.

Again, Plato himself gives us a most valuable hint. In the "Republic" (Book IV, p. 420, C), Sokrates is insisting upon the relation which the parts of an object should bear to the whole, and uses this illustration:

> If we were painting a statue [ἀνδριάντας γράφοντας], and some one were to come and blame us for not putting the most beautiful colors on the most beautiful parts of the body,—for the eyes, he would say, ought to be purple, but they are black,—in that case we might fairly answer, Sir, do not imagine that we ought to beautify the eyes to such a degree that they are no longer eyes; but see whether, by giving this and the other features their due, we may make the whole beautiful. (Jowett's translation.)

But the most significant allusion which we have in any ancient writer is the oft-quoted passage in Pliny's "Natural History" (Book XXXV), in which he describes the Athenian painter Nikias, and, after showing how highly his works were valued, says (133):

> This is the Nikias of whom Praxiteles, when asked which of his marble works he esteemed most highly, said, "Those to which Nikias has put his hand," so much did he prize the *circumlitio* of that artist.

This word *circumlitio* has no satisfactory definition, nor can it have until we know more about the technical processes of the subject we are discussing. Literally it means a "smearing over," which suffices to show that it had no reference to the sculptor's side of his art. It was a painter's work of some kind; and the fact that one of the foremost artists of his time in Athens—a man whom Brunn compares to Masaccio—should have been called upon to perform it, shows that it required more than the eye or skill of an ordinary artisan to attain the

[1] "De Glor. Athen.," chap. 6.

best results. This statement of Pliny was a hard nut for Kugler to crack, but he attacked it bravely, and offered three possible solutions of the difficulty, of which the reader is free to take his choice: first, that there might have been two men of that name, whom Pliny confounded; second, that this might have been a process of wax-coating which Nikias practised while still a young man, and without fame as a painter; third, that the statement itself was a joke—*vielleicht war es nur ein Bon-mot.* To be sure, the last suggestion has never been controverted, to my knowledge, but archæologists are agreed that there is no sufficient ground for splitting Nikias in two, and the theory of the wax-coating without color is the invention of those who, for sentimental reasons, are loath to give up the white. The simplest and most direct interpretation of the passage is that the *circumlitio* was some sort of a coloring process requiring the hand of an artist, and that it was because he was a skilled painter that Nikias's results merited the praise of Praxiteles.

Nevertheless, accepting our own interpretations of the passages quoted, we have not yet advanced the matter much beyond the point where Kugler left it. He might have admitted that Nikias painted the hair and details, drawing the color-line at those; but I am trying to maintain that the entire figure was painted, and to do this we must look elsewhere than to writers for assistance. We must turn now to the monuments themselves, and, gathering a bit here and a bit there, see if we can reconstruct the whole. It is not my intention to give a catalogue of the sculptures which retain traces of color upon them,—not even the hospitable pages of THE CENTURY would admit that,—but to select from each epoch just enough for our purpose.

FROM PHOTOGRAPH MADE FROM CAST IN BOSTON MUSEUM OF FINE ARTS. ENGRAVED BY T. SCHUSSLER.

SCENE FROM THE "AMAZON SARCOPHAGUS." (ARCHÆOLOGICAL MUSEUM, FLORENCE.)

Before doing this, however, let us remember the great length of time that has passed since these sculptures were made. We are discussing works which were created from 2000 to 2500 years ago, and, after that interval of time, are looking for satisfactory remains of that most perishable of all artistic mediums—paint. Moreover, time has been by no means the only destroyer of evidence. Some sculptures, for example, after standing for centuries in the open air, exposed to wind, rain, and the chemical effects of the atmosphere, have been overthrown by earthquakes, and then lain buried in the mud of overflowing rivers. Others have been buried in lime, than which there is no more destructive agent; and still others, which have been really protected by the soil in which they lay, have been unearthed with color still bright upon them and have lost it all in a few hours.[1] In view of these circum-

[1] See extract from Professor Lanciani's letter on p. 880.

stances, and of many others which might be cited, the cause for surprise is not that such slight traces have been preserved, but that there are any at all. Naturally the mineral pigments have been the best to withstand the various influences, and therefore the traces of red, blue, and gold are out of proportion to those of other colors.

Among the oldest of the dated Greek sculptures we possess are the three well-known metopes from Selinus, Sicily. This town was colonized by Greeks about 628 B. C., and there is sufficient reason for believing that the temple among the ruins of which these metopes were found was built in the years immediately following. When unearthed, in 1822–23, the metopes showed numerous traces of color, some of which they still retain, as follows:

(*a*) "Perseus slaying Medusa."— On the background traces of red; the female figure at the left, brownish black on brows, lids, and pupils, red on the borders of the garment, yellow on the garment itself; Perseus, green on the garment, red on the belt and cap, blue on the belt; Medusa, yellow on the face, red on the eyes. The eyes of the Perseus and the wings of the Pegasos also showed remains of color when discovered, the shade of which was no longer determinable.

(*b*) "Herakles carrying the Kerkopes" (the thieving gnomes who robbed him while asleep).— On the background, traces of red; on the Herakles, red on the right thigh, on the right arm directly under the shoulder, on the

ENGRAVED BY F. LE BLANC.

HERAKLES CARRYING THE KERKOPES. (METOPE FROM TEMPLE OF SELINUS, IN MUSEUM AT PALERMO.)

Print, from "Die Metopen von Selinunt," by Otto Benndorf, author of "Griechische und Sicilische Vasenbilder." Heft I, IV. Preis, 164 Marks.

ENGRAVED BY F. LE BLANC.

PERSEUS SLAYING MEDUSA. (METOPE FROM TEMPLE OF SELINUS, IN MUSEUM AT PALERMO.)

Print, from "Die Metopen von Selinunt," by Otto Benndorf, author of "Griechische und Sicilische Vasenbilder." Heft I, IV. Preis, 164 Marks.

sword, belt, and scabbard; the same color on the bands, shoulders, and upper arms of the Kerkopes.

(*c*) "The Four-horse Chariot."— Red was found upon the background, the pole, the axles, and the garment of the middle figure; upon the horses: indistinct traces of gray were found on the body of the second, and white on the third, and reddish brown on the harness.[1]

These traces are merely slight patches or flakes of color scattered here and there but they show that, in the part of the Hellenic world to which they belonged, at the earliest period of Greek art, the ground of relief-work was colored; the flesh of males was painted red or reddish, while that of a female monster like the Gorgon was yellow,— a fact substantiated by terra-cottas from other places,— and that the various parts of the eye, and details in the drapery and other accessories, were indicated by colors.

Let us turn now to Athens itself, and see if the same practice obtained there. Our knowledge of the polychromy of early Attic sculpture has been infinitely broadened recently by the discovery on the Akropolis of statues and reliefs antedating the period of the Persian invasion. These were described and illustrated in an article by Mr. Russell Sturgis in "Harper's Magazine" for September, 1890, to which the reader may be referred. There is, however, one among these valuable relics, not

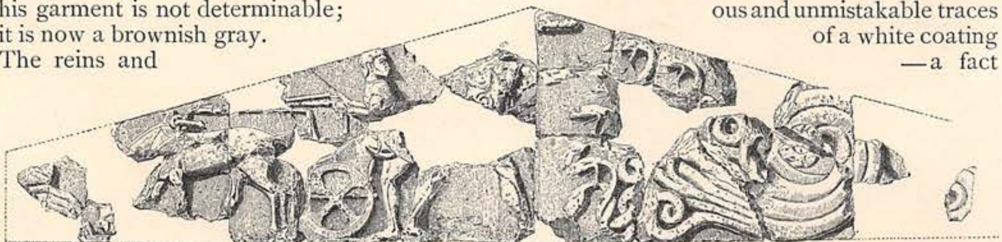
[1] Benndorf, "Die Metopen von Selinunt."

ENGRAVED BY C. A. POWELL.
HEAD OF PERITHOOS.
(FROM WEST PEDIMENT OF TEMPLE OF ZEUS, OLYMPIA.)

illustrated by Mr. Sturgis, which I must mention in detail because its bearing upon our subject is of especial importance. This is the decoration, in high relief, of the pediment of a small building, the total length of the relief being about twenty feet. The very primitive style of the sculpture shows that it belongs to the epoch of the metopes from Selinus, probably the early part of the sixth century B. C., though obviously the work of a different school. The subject is the combat of Herakles with the hydra. At the left Iolaos holds a two-horse chariot in waiting, his face turned to watch the struggle. In the center Herakles, the figure much mutilated, advances with raised club and outstretched arm against the many-headed monster, whose huge coils occupy the right half of the pediment. The material is "poros," or Peiraieus stone. In 1885 I noted colors upon this as follows: The outer of the two horses was black, the color having turned now to a dark green; the other a reddish brown. The charioteer has black hair and beard. His flesh is colored in all parts, the color being now a strong rose. The original color of his garment is not determinable; it is now a brownish gray. The reins and other parts of the harness, and the body of the chariot, are reddish brown. The color of the wheel is gone. The legs and a bit of the arm of the Herakles show the same color as the charioteer. The hydra was of various colors, black, green, and red being now distinguishable. The background shows no trace of color.

It has been argued that the colors on this pediment are so well preserved as to enable us to assert that where no traces of color are left, as on the background, it was never applied; but this is an unwise assumption, since, among these very sculptures from the excavations on the Akropolis are several examples which should warn us against accepting such a theory. For instance, there is the marble head of a boy, of a more advanced style of art, the face of which is still a strong reddish tint, the lips a deeper shade of the same, while the hair shows no sign of color. Are we to suppose this to be the artist's intention? So, of the female figures illustrated by Mr. Sturgis—through all of which it is fair to presume that the same general system of coloring prevailed, since they are of the same school and period—we find some whose lips show absolutely no trace of color, while those of others are still, or were when I saw them, bright red.

The statues found on the Akropolis give all the proof needed of the completeness and variety of shade with which garments were colored; they show not merely that the inner garment was distinguished from the outer in this way, but that borders, patterns, decorations, of which the sculpture itself gives no hint, were liberally supplied by the artists mentioned by Plutarch in the passage quoted above. Of the painting of the skin itself I noted one very surprising example—an archaic head of Athena, of life-size, the material being white marble. When I saw it, in 1885, it was in a flat case in Room V of the Akropolis museum. The remains of the helmet were of the dark bluish green that indicates gilding, on which a honeysuckle pattern was traced with a sharp tool. In the hair were slight remains of red; the brows, lashes, outline of iris, and pupil were black; the iris itself brown. On the face were numerous and unmistakable traces of a white coating—a fact



HERAKLES AND THE HYDRA. (ARCHAIC PEDIMENT RELIEF IN ATHENS.)
Print, from "Ephemeris Archaiologike," issued by the Archæological Society at Athens.

which I verified in several visits to the museum. This was extraordinary, because the marble itself was so white, though whether the coating still retained its original color, I could not determine. On the lips there were no remains of color.

Passing to the transitional epoch, we find evidences of color sufficient to show that the practice was continued, though there are no such striking examples as those we have examined. On the sculptures from the temple of Zeus at Olympia significant traces were found. There was red upon the mantle of the great Apollo of the western pediment. On the metope representing Herakles and the Cretan bull the head of Herakles still showed the brown-red when it was excavated, and the bull a similar color, the ground of the relief being blue. Many of the figures from this and other works of about the same time present the curious phenomenon of perfectly smooth hair, in which not a line is traced, it having been left thus intentionally by the sculptor, to be finished by the painter.

We come now to the most interesting monument of Greek sculpture. Was the frieze of the Parthenon painted? There is not a trace of color on it to-day. When the portions of it now in the British Museum were carried to England by Lord Elgin, they were subjected to a careful chemical investigation by a commission of which Sir Michael Faraday was the head. The commission was unable to detect the slightest trace of anything that indicated the presence of artificial color on the surface of the marble. Of positive evidence, therefore, we have none. At the same time, the frieze of the Parthenon offers some of the most convincing illustrations of the Greek practice of coloring sculpture that we possess. First of all, its situation is an argument. I think that everybody who has had the opportunity to appreciate its exact position upon the building has felt that much of the labor spent upon its execution was in vain. It was about forty feet above the floor of the colonnade. The colonnade itself measures only fifteen feet in width; and seen at this angle, the crowded groups on the long walls would be nothing but a confusion of legs and heads were we to judge from its present colorless condition. But assuming that the horses were picked out in different colors, as was done in the archaic reliefs described above; that the garments of the riders, and the other accessories, were distinguished in the same way, the modeling would then give the design an effect

ENGRAVED BY CHARLES STATE.

MARBLE HEAD OF ATHENA PARTHENOS. (IN BERLIN MUSEUM.)

Print, from "Antike Denkmäler" des Deutschen Archäolog. Instituts. I, Plate 3.

PHOTOGRAPH MADE FROM CAST IN BOSTON MUSEUM OF FINE ARTS.

YOUTH TYING HIS SANDAL.
(FROM WESTERN FRIEZE OF THE PARTHENON.)

which it never could have had if painted on a flat surface, and the color would supply to the relief the means of a ready distinction of details from whatever distance it was seen, whereas many are now indistinguishable, even at a few yards. I had the pleasure of seeing the experiment tried on a cast from a slab of the western frieze by the German sculptor Carl Cauer. He covered the slab entirely with colors, in a naturalistic scheme, and though the result was at first sight rather startling to modern taste, it was certainly very convincing on this point. The slab was exhibited at a considerable height, yet the details showed with astonishing clearness.

However, this is only begging the question. Of some kind of combination of color we have absolute proof in the metal accessories that were affixed to the marble. The bridles and reins of all the horses were of metal, probably gilded bronze, to judge from analogous cases, and the holes for attaching them are still plainly visible on the heads of the horses and on the hands of the riders. They are never indicated in the carving. Of metal also, and secured in the same way, were many of the objects carried by individuals, as well as other details. Here we have, then, a combination of at least two colors, which, if carried no further, must have had an effect not less tawdry than that of the crowned and bejeweled marble figures in Italian churches. Left to themselves upon a pure-white marble surface, these gilt details would neutralize all the refinement exhibited in the modeling. Combined with other colors, they would have occupied their proper place in relation to the whole. Moreover, while there are, as I have said, no remains of color on the frieze, there are many details in it which must have been represented by this medium, if at all. The sculpture itself gives no suggestion of them, and there are no holes to show that they were affixed. So numerous are the cases of this omission that one is embarrassed in the choice of a block which will best illustrate them. That on page 879 will answer well enough. Two of the three figures have their hands raised as if grasping some object like a staff; but where is the object itself? The marble is as smooth as when finished, and shows absolutely nothing. Again, of the sandals of these and all other figures in the frieze only the soles are indicated in the relief; the straps are omitted entirely. A striking case of this is the young soldier of the western frieze who has stopped to tie his sandal, with his foot raised upon a large stone. Although the action of the hands is unmistakable, they are quite empty. Neither in them nor about the ankle is there any sign of a strap. Among the cattle led to sacrifice are some struggling finely with their leaders. The men pull, the beasts pull, but they pull nothing. There are no indications of straps or cords either in the hands of the one or about the heads of the other. Examples of this kind might be multiplied indefinitely, but space is precious.

It is the painting of the nude upon the frieze of the Parthenon which we cannot prove, and this we can establish only inferentially if we can show that it was done both before and after the time to which that building belongs. We have seen that it was done before, and fortunately we have just one monument of the first quality to show that the practice still existed in the fourth century B. C. This is the mausoleum at Halikarnassos, the work of four of the greatest Athenian sculptors of their time, Skopas him-

self being one of them. During excavations on this site, in 1857, Sir Charles Newton discovered a number of blocks of the frieze on which color was still brilliant; and of this he says: [1]

It has been already noted that the whole frieze was colored. From the examination of a number of fragments on their first disinterment, I ascertained that the ground of the relief, like that of the architectural ornaments, was a blue, equal in intensity to ultramarine, *the flesh a dun-red*, and the drapery and armor picked out with vermilion and perhaps other colors. The bridles, as on the frieze of the Parthenon, were of metal, for the attachment of which the heads of several of the horses are pierced.

SLAB REPRESENTING POSEIDON, HELIOS, AND A FEMALE. (FROM EASTERN FRIEZE OF THE PARTHENON.)

Vivid as these colors were when the frieze was discovered, they had so nearly disappeared by the time the marbles reached England that Newton was obliged to secure the written statements of those who had seen them in order to prove their existence. The unequivocal testimony of a monument of such importance, executed under the influence of pure Attic art, needs no commentary.

Of the last period of Greek sculpture — that known as the Hellenistic — I shall cite only two examples, one the Great Altar of Pergamon, upon the sculptures of which, now in the Berlin museum, no remains of color have been found, so far as I am aware. This is by no means strange, and proves nothing as regards the original condition, in view of the manner in which many of the blocks had been utilized for building walls in the later barbaric ages, and also of the presence of lime-kilns in the neighborhood. But upon the draperies of the figures are shallow grooves or lines, chiseled in the marble, which, in my opinion, can be nothing else than indications of the edges of stripes and borders that were represented in color. The explanation of them as representing folds or wrinkles in the garments is absurd, because they are not in the places of, nor do they follow the lines natural to, folds or wrinkles. The other work is a Bacchic relief in the museum of Naples, pictured on page 881, on which the traces of color are so numerous and satisfactory as to deserve detailed description.[2]

[1] "Travels and Discoveries in the Levant," Vol. II, p. 131.

[2] Of course the most convincing examples of the coloring of Greek sculpture, in the Hellenistic or any other epoch, are the beautiful sarcophagi discovered a few years since at Sidon, and now in Constantinople. Not having seen these or any colored reproduction of them, I am unable to describe them except from hearsay; but they will soon be published in a manner worthy of their importance by MM. Théodore Reinach and Bey-Hamdi.

GODDESS HURLING VASE. (FROM THE RELIEF OF THE GREAT ALTAR AT PERGAMON.)

First figure: The hair shows traces of red; on the flesh are a number of specks, especially in the folds, which are undoubtedly remains of paint; the same on the drapery, but in both cases the color itself is indeterminable; on the sides of the tympanum are reddish traces, and on the top are traces of a star-like pattern, surrounded by a wreath.

Second figure: Traces of a yellowish color in hair and tail; on the flesh and the panther-skin are numerous specks similar to those on the first figure.

Third figure: There is red in the hair; remains of paint in the ear and about the eye; the panther-skin shows very decided traces of yellow, and the spots were painted on it in a color which is now a greenish gray; the left foot still shows strongly the red-brown color. On the background are remains which show that it was not painted simply a flat color, but decorated, as there are traces of green or blue near the first figure, of yellow near the third figure, and of a star pattern, three stars of which remain, to the left of the figures.

As to Roman art, I shall let him speak who is best qualified to do so, and quote the following from a letter of Professor Lanciani:

The points upon which you kindly ask my opinion are:

(1) The universality of the practice of coloring marble statues in Greece and Rome.

Speaking, of course, of Rome alone, I divide the 350 statues, or important fragments of statues, discovered under my direction into two classes. The first comprises the statues found in free ground and embedded in earth (45 per cent. of the total number); the second comprises the statues found in the thickness of Decadence walls, and consequently embedded in lime (55 per cent. of the total number). These last are out of the question, as the lime has eaten up the surface of the marble, and made investigation impossible. Of the statues found in good condition, in pure earth, and at a considerable depth, *one half* showed traces of colors at the very moment they

were brought to light. Of this half, two thirds lost their polychromy at once, one third still preserve it. Among the best specimens of polychrome sculpture dug up under my care, or within my recollection, I may mention the "Faustina" of the Monte della Giustizia (Capitol), the recumbent Venus at Ostia, the "Boys Playing 'Osselets'" of the Campo Verano (Palazzo dei Conservatori), a sarcophagus recently found outside the Porta S. Lorenzo, etc., etc. The Mythraic and Methroac sculptures are *always painted*, and so is every bit of terra-cotta. I have never seen architectural marble fragments with traces of coloring,[1] except, of course, Trajan's Column, which is said to show them. Gilding is even more frequent than painting. The "Tritons" of the Palazzo dei Conservatori, the sarcophagus of Vicovaro (see Bull. Com.), the Medea sarcophagus in the Tandolo collection, are or were gilt. The traces of coloring are, in 80 per cent. of the cases, to be seen in draperies alone; the flesh is very seldom painted. Blue, red, purple, and gold are the prominent colors.

On Christmas Eve, 1874, the Archæological Commission found seven statues in an empty room (*Horti Lamiani*). They had never had any contact with earth. Of the seven statues and busts, the colossal head of Commodus had never been painted; the head of Diana had the hair reddish; the two Tritons were gilt; the Venus Lamiana had never been painted; the two Muses —uncertain.

(2) Whether this system of coloring aimed at imitating nature.

Yes; I think it did. We have, in the Palazzo dei Conservatori, a large head of Mythras (or Atys) with the Phrygian cap painted in red, eyelashes carefully painted in black, lips in pink, and so on. In the sarcophagus found at Porta S. Lorenzo each piece of clothing of the various figures is carefully painted in imitation of the real stuff. The female *tunicæ* and *pepla* are in monochrome, save the border, or fringe, which is either gilt or polychrome.

(3) The extent to which flesh-tints were represented.

I do not think I recollect more than two or three instances of this flesh-coloring (save the Mythraic bas-reliefs and figures).

ENGRAVED BY M. HAIDER.

BACCHUS PRECEDED BY A FAUN AND A BACCHANTE. (FROM HERCULANEUM, IN NATIONAL MUSEUM, NAPLES.)

Professor Lanciani's opinion regarding the head of Commodus and the Venus found with it, as well as some observations of my own, lead me to think it probable that at a late period, possibly during the empire, exceptions were made to the universal custom of painting sculptures. The materials for a satisfactory investigation of this point, however, we do not at present possess. One of the most satisfactory examples

[1] In Athens, however, such fragments are very common.

AUGUSTUS CÆSAR. (IN MUSEUM OF THE VATICAN.)

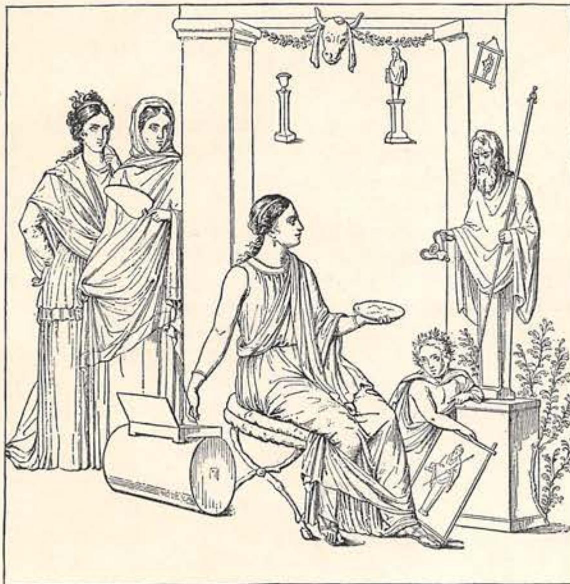
of the polychromy of Roman sculpture is the famous statue of Augustus Cæsar in the Vatican, which was discovered at Prima Porta in 1863. The following description of the colors upon it is translated from Otto Jahn's "Aus der Alterthumswissenschaft," published in 1868 (p. 260). It must be remembered, however, that the colors here described are those which always last the longest, and it is by no means to be supposed that they were the only ones originally applied:

The tunic of Augustus is *crimson*, the mantle *purple*, the fringe of the armor *yellow;* on the nude portions of the body no traces of color are noticeable, except the indication of the pupils with a *yellowish* tint; and the hair no longer shows color. But the relief decorations of the cuirass are painted with especial care, although the flat surfaces are left without color. The god of heaven, rising from *blue* waves or clouds, holds a *purplish* garment in both hands; the chariot of the sun-god is *crimson;* before him soars a female with outspread *blue* wings; the goddess of the earth wears a wreath of wheat in her *blonde* hair. Apollo in a *crimson* mantle rides upon a griffon with *blue* wings; the *light-haired* Diana, in a *crimson* garment, is borne by a *reddish brown* stag. In the middle stands a Roman

Commander in *blue and red* armor, *crimson* tunic, and *purple* mantle, with a *blue* helmet. A bearded warrior in *crimson* tunic and *blue* trousers holds up a Roman standard with insignia painted *blue*. The barbarian on the right, with *auburn* hair, in a *purple* mantle, holds a war-trumpet; the figure on the left is likewise *light-haired*, and clothed in a *blue* mantle.

So much for the testimony of sculpture itself. And now, if I have not taxed the reader's patience too far, I should like to add just one bit of evidence from another source, which strengthens the argument where the testimony of sculpture is weakest; namely, in regard to flesh-painting, especially in female figures.

While in Naples, a few years since, I made careful studies of the wall-paintings and mosaics from Herculaneum and Pompeii, to discover what bearing they might have upon the matter. It was my intention to continue the investigation at Pompeii itself, but illness prevented, so I was obliged to content myself with conclusions reached in the museum. Among the paintings there I found eighty-one representations of sculpture (including five about which I was doubtful). Of these, fourteen, from their yellowish or greenish tinge, apparently represented bronze. On seven I could not be certain that there was any color but white. On one the flesh was white, but the hair, eyes, and border at the neck of the garment were dark brown. The remaining fifty-nine were colored so completely and realistically that often it was only by the fact that they stood on pedestals or in niches that they could be distinguished from the living figures. Through all of them distinction between males and females in the color of the flesh was that which has been described above; the male figures being a warm, ruddy brown, the females pink and white. Beings of an effeminate nature, like the "Hermaphrodite" and "Young Dionysos," have the male color. The only exception to the rule which I noted was in the statue of an Amazon, whose flesh was of a shade between the two. In this she differs from the Amazons on the Amazon sarcophagus, who are decidedly fair. Even the "Karyatids," and those other architectural sculptures which are introduced so frequently in the bizarre type of Pompeian decoration, are colored as naturally as the living figures in the same pictures — hair, flesh, drapery, and accessories. Among the mosaics is one representing the statue of a boxer, of a good type. He stands upon a pedestal of bluish marble-color, behind which runs a red railing. The background is deep blue. Upon his hands he wears the *cæstus*. The materials used for representing the figure are white (on the high lights), pink, red-brown, light brown, dark brown, and pale blue — the last three being used in the shadows. In other words, this statue is of the same colors as the living male figures in the other mosaics collected here. This ought to be even more convincing than the paintings, since mosaic-colors are the least likely of all to be affected by the various influences to which antiquities have been exposed. Yet, if the reader is still skeptical, I will refer him to one of the pictures from Pompeii in which a woman is represented in the very act of painting a piece of sculpture! Her subject is a *herma*, a quadrilateral pillar surmounted by the upper part of a figure; and it represents an old, bearded Dionysos, who holds a drinking-cup in one hand and a *thyrsos* in the other. His hair is dark brown, beard gray, flesh a dark tone, and mantle yellow. With this evidence I am content to rest the case.



WOMAN PAINTING A HERMA. (WALL-PAINTING FROM POMPEII, IN NATIONAL MUSEUM, NAPLES.)

Print, from Baumeister's "Denkmäler des Klassischen Alterthums."

Edward Robinson.