

PHOTOGRAPHY:

CONSIDERED IN RELATION TO ITS EDUCATIONAL AND PRACTICAL VALUE.

THE pages of the *Art-Journal* bear witness to the interest we have ever taken in the progress of this physico-chemical art. From its cradle,—when, as *photogenic* drawing, it first presented itself to the English public—up to its present state of maturity, we have watched its steps, and recorded, with all care, its rapid advances. We have not now to speak of any remarkable discovery, or to note even an especial achievement in photography. Of discoveries, we are not aware that there have of late been any; the scientific investigation ceased—or nearly so, as it always does—as soon as the art assumed that importance which makes it commercially valuable. All the manipulatory details have been carefully studied, and the causes of success or of failure worked out with the utmost diligence, until an exactness has been secured, in the hands of the skilful, which almost surpasses belief. Not merely can the good photographer depend upon every plate he prepares, but he can prepare them at his ease and at his leisure at home, pack them in his portfolio, travel without the encumbrance of chemicals, and develop his picture on his return. It was but recently that we witnessed such an experiment: thirty collodion plates had been prepared; these and the camera-obscura only were taken to the continent: thirty invisible pictures were brought home, every one of which proved, when developed, to be excellent photographs. Another advance, dependent entirely upon careful manipulation, has been made. We have long possessed beautiful views of cities, of temples, and of palaces—but they were lifeless. The plague may have passed like a destroying angel, leaving the streets of the city desolate, turning the temples into tombs, and making the palaces the sad abodes of solitude and silence. These pictures are like the poet's Greece—

“So coldly sweet, so deadly fair,—
We start, for soul is wanting there.
Theirs is the loveliness in death,
That parts not quite with parting breath;
But beauty, with that fearful bloom,
The hue which haunts it to the tomb—
Expression's last receding ray,
A gilded halo hovering round decay.”

Pictures have now been taken of a London thoroughfare with its noonday crowd: we have realized what Daguerre vainly hoped he had accomplished when, in 1841, he informed the writer of this article that, “*by means of my new process, it shall be possible to fix the images of objects in motion, such as public ceremonies, market-places covered with people, cattle, &c.*”

This has now been effected by the collodion process. In one half of a second the prepared plate has been impressed with all the thousand details of the buildings and their adornments; and life has been given to the picture—men, women, and children, cabriolets, omnibuses, carts and horses, have all left their impressions on the tablet. The human eyelids open and close less rapidly than the screen in front of the lens of the camera-obscura; in each case a picture of every external object is formed upon the retina of the eye, and upon what we may call the retina of the camera: a physical effect in one case, and a chemical effect in the other, gives to the mind a correct impression of everything which the sun has rendered visible. Add to this the use of the STEREOSCOPE, and we may reproduce in all solidity each object in nature. Such is the position in which we find photography at the present moment: let us consider its real value, first to Art, and then to the Arts.

THE ARTIST, looking at a photographic picture, may learn some of the mysteries of light and shadow, which cannot be arrived at by

any other study. If, especially, he examine the sun-picture with a lens, he will discover that the effect of solidity is given on a plane,—in a manner which it is the perfection of Art to imitate,—by a simple graduation of shadow. If he brings the stereoscope to his aid, he then calls into play some physiological phenomena, with which it is not our purpose at present to deal. The simple, single photographic picture teaches the combination of infinitely minute detail with that which we technically call “breadth of effect.” Although we have a thousand objects faithfully represented, there is no sense of littleness, such as meets us in looking at many of our Pre-Raphaelite pictures. Everything is there, but no one object obtrudes itself upon the eye. A tree is represented with all its leaves, each leaf lying in a different position relative to the incident light; and the result is not an assemblage of leaves, but a tree, in all its unity, and a tree, too, which we can at once declare to be either an oak, or an ash, an elm, or some special member of the vegetable kingdom. There is no doubt about a photographic tree; we would that we could say so about many artistic ones. Sir William Newton, an artist and a photographer, says, in a paper which appears in the first number of the *Journal of the Photographic Society*,—“I consider it to be a sort of duty, as an artist, to recommend the student in Art *not* to take up the camera-obscura as a means of advancement in his profession until he has made himself well acquainted with the true principles of his art, as well as acquired considerable power of hand, with a view to draw with ease and correctness the *outline* of any object he may wish to represent. If, however, any student should imagine that the camera will help him to this desirable attainment, without the requisite study on his part, he will find himself much mistaken, when, perhaps, it may be too late to repair the injury. I am the more desirous of directing the student in Art to the foregoing observations, because I am well aware of the seductive nature of the practice of photography, and how it is calculated to divert him from his principal object in the earlier part of his studies.” There is much truth in these remarks, and the want of attention to such advice is clearly showing itself in the productions of our young artists; and, indeed, there is evidence of its influence upon some of the pictures of our older *landscape* painters. There is a winning charm about the productions of photography which may well seduce the artist from his true path. The photographic picture of even the rotten stump of an ancient tree is so true—moss, fungus, ligneous structure, bark and all, are represented with so much fidelity, and all effected by light and shadow only—that the more we examine it the more we are delighted with the result. We perfectly understand the desire of the young artist to imitate so perfect a production, and in this desire is the danger which should be avoided.

The result of taking a photographic study as a guide in the production of a work of Art is, that however perfect the finished picture may be, it will want the evidence of MIND. No picture was ever painted—no matter how great the mechanical dexterity may have been by which it was produced—*which could live as a work of Art*, unless it bore the impress of thought. It is a marvellous power, but it is ever manifest; the mind makes itself felt through the works of the hand. Two pictures painted by the same hand, one a study from nature, in which the mind of the artist has been busy, and the other a copy from the most exquisite photographic picture, will present striking differences; one would represent living nature, and the other nature—dead. As

a means for directing the mind to observe the minute details of Nature's works, and to study how she produces her beautiful effects, nothing can be more useful than photography. There is, however, that disposition to indolence in human nature, that men will be led to copy direct from the photographic picture, rather than to study it, and then copy from nature: and here is the mischief which photography is doing to Art. The landscape-painter, using his camera-obscura properly, may greatly advance his art; the historical painter may catch the best expressions of his model ere yet they have time to fade, and from these advance to the study of the life, with the finest effects; and using photography so far, and no farther, will lead eventually to highest excellence.

THE ENGRAVER, whether upon copper or on wood, should find in photography a most important aid. The processes of etching upon the steel plate; of preparing the lithographic stone; of precipitating by the electrotype process a copper-plate on a matrix; of cutting through the drawing upon wood, which has been produced by photography in the first stage, cannot yet be regarded as successful. We have, in the *Art-Journal*, duly recorded from time to time the particulars of these attempts, which appear to us to have fallen into a state of slumber, from which we believe the art may be awakened to the production of the best results. Something has been done in the directions indicated, but in either of them the study of an observant mind is yet required to secure the desired perfection.

THE SCULPTOR, by the aid of photography, may secure within his portfolio all the marbles of the Vatican, and the rich treasures of our own museums. By the aid of the stereoscope he may study these in all the roundness of reality, and trace those delicate touches which, giving the semblance of life to stone, declare the greatness of the artist's mind.

THE ARCHITECT especially should be a student of the art of photography. It enables him to preserve examples of every fragment of ancient or of modern skill within a space comparatively small. The recent photographic exhibitions have shown us the perfection with which Egyptian temples and tombs, with their myriads of hieroglyphic characters, can be copied: those of Greece, and of Rome, in like manner, are brought home to us by photographic travellers; and those remains “of hood and cowl devotion,” sacred to us from the memories which crowd their moss-bemantled walls, and which are at the present time the favourite studies of the ecclesiastical architect, may be secured with the utmost fidelity, and preserved in portfolios for daily reference.

THE ENGINEER has in many different ways availed himself of the advantages of photography. The Royal Engineers have, by means of the camera-obscura, secured drawings of the land and coast fortifications of different countries; and these have been obtained under such conditions that an exact measurement may be made from the photograph of every, or any part of the stronghold, which is sufficiently correct for all military or naval purposes. The rule for this is a simple one. You have a picture of a fort or a tower, which is, on your paper, we will say, one inch high; this has been obtained at the distance of twelve inches from the lens, and the camera has been three hundred yards from the object. Now if twelve inches give one inch, what will three hundred yards give? resolves the problem. At the recent Photographic Exhibition, the staff of engineers exhibited the results of photography in their well practised hands. The progress of great military works was regularly recorded, the camera-obscura supplying a report in every way superior to any report from a clerk of the

works. At the Ordnance Map Office, under the direction of Colonel James, the reduction of maps from the six-inch to the one-inch scale is effected by photography, saving many thousands annually to the nation in the expense of reduction by the ordinary processes.

The civil engineer has, in like manner, used this art to aid him in his works; and since Mr. Vignoles and the late Emperor of Russia employed the camera-obscura to register the progress of the work at the suspension bridge of Kieff, others have had recourse to the same means of recording the advances of large undertakings in which they have been engaged.

Machinery is now frequently copied by photographic means; thus, by one impulse, in a few minutes, the most elaborate system of wheels, cranks, piston-rods, &c., can be copied, which would occupy the ordinary draughtsman days, or even weeks. Patterns of parts of machines are also copied by the camera, and, as these can be sent by post, time and money are economised.

THE WEAVER and CALICO-PRINTER may not only employ photography to multiply their patterns, but there is a prospect that the art itself may be made available for purposes of ornamentation. The use of the bichromate of potash for producing copies of natural objects upon cotton and silk, has been on several occasions advocated, and some very promising results have been exhibited. Attention has been confined to the salts of silver; but several of the salts of iron and other metals are susceptible of photographic change, and capable of being permanently fixed, while by their use a considerable variety of colours might be obtained.

THE SCHOOLMASTER—regarding that function as the public educator in the largest sense of the word—will find in photography numerous useful aids to study. Botanical specimens may be copied with a fidelity which cannot by any other means be obtained; the minute down upon the stalk, every delicate veneration of the leaf,—the structure of every part, can be shown and studied with a facility which is only excelled by the natural object itself. We have recently seen selected specimens of minerals copied by the stereoscopic camera, and inspected them with the stereoscope. It was difficult to believe that real crystals of quartz, of fluor spar, and baryta were not before you, so true were they in form, in colour, and in transparency. These and similar examples of fossil remains were intended for the use of schools. The three kingdoms of nature, in all their infinite variety, admit of being thus treated, and they might thus be used with the best effect for purposes of instruction.

With the *stereomonoscope* of Mr. Claudet these results of high relief can be shown upon a ground glass to a class of any number. "I was led to think," say Mr. Claudet, "that it would be possible to construct a new stereoscope, in which, looking with both eyes at once upon a ground glass at the point of coalescence of the two images of a stereoscopic slide, each refracted by a separate lens, we could see it on that surface in the same relief which is produced by the common stereoscope." This result has been obtained in the most satisfactory manner, and no doubt, in a short time, we shall find this new form of stereoscope in very general use for such purposes as those suggested.

Those who have examined the beautiful pictures of Mr. Lake Price—"The Rod" and "The Gun"—fish and game—cannot but have been struck with the perfection of every part. The truth to nature is really a marvellous proof of the power of photography in the hands of a skilful operator. Some recent travellers in the East have brought home a great number of casts of the faces of the different native tribes

of the Himalayan range and Thibetan valleys. The difficulty of transporting those has been very great. If these men had been instructed in the use of the camera, they would have equally served the science of ethnology, by obtaining and preserving photographic portraits of the peoples amongst whom they had travelled.

THE ASTRONOMER points the camera-obscura to the heavens. The sun instantaneously impresses his image, and marks with all distinctness those wondrous black spots which are so strangely connected with the temperature, and the magnetism of our earth. The moon faithfully draws, by her own rays, those mountains and valleys which mark her surface, indicating a period of terrific disturbance long since past away. All is now quiet; but the grandeur of the rock-piled hills, and the terror of the deep chasms and vast gorges tell the tale of convulsions, such as those which are indicated to the geological student upon this planet. Photography, too, promises to lead to the solution of the problem—Has the moon an atmosphere? is she fitted to be the abode of organised beings? It is thought that the photographic moon indicates an atmospheric stratum of considerable density. The planets have also been pictured by means of photography, and some new facts have been observed, which had hitherto escaped attention.

THE PHYSICIST—we have no other word in the English language than this sibilating French derivative to express this class of natural philosopher—has employed photography to register the ever varying temperature of the day, and the year: the rise and fall of the barometer are in like manner recorded; and the variations of the earth's magnetic intensity, however slight, are, by the agency of light and a chemically prepared paper, detected and registered for every minute of the day.

Such are the numerous purposes to which photography has been applied. There are many others.

It is scarcely necessary to mention the ordinary process of portraiture, now so very common, but the extraordinary one of making the camera-obscura a detective officer, must not pass without a word. The portraits of convicted thieves are now regularly taken, and preserved in a gallery, to which constant reference can be had. Thus every criminal leaves in the hands of the police unmistakable evidence against himself, to be used on a future occasion if necessary. Photographic pictures may be adapted to the magic-lantern, but we may soon expect to see the stereomonoscope employed with a similar object, and made an instrument similarly adapted to educational purposes. The solar rays fall upon the surface of the earth, and give rise to all the wonderful organizations which live and move, and have their being, upon the surface. Those rays are the supporters of life, and the developers of beauty, in form and colour. Not only do they, under the Supreme cause, create organic forms, but they give to man the means of copying these creations in all their truthfulness. When the alchemist first noticed that Horn Silver (*the chloride of silver*), blackened by exposure to the light, he little dreamed that he had made a discovery which was to lead to the great ends which now mark the photographic art. A few only of its useful and educational applications have been named. A brief contemplation of those few will prove instructive, showing the great importance of noting the most simple, apparently, new facts, and proving that no new fact can be born into this world, however abstract it may appear to be, without its becoming, sooner or later, in various ways, of the greatest use to the arts of industry, and to the purposes of advancing the human mind.

ROBERT HUNT.

THE NATIONAL GALLERY.

In a recent number of this Journal, we gave some brief account of the interesting additions which have just been made to the national collection. But in reference to the purpose with which such works have been selected for our public gallery, much remains to be said; especially as the catalogue begins to assume dimensions which, at its present rate of increase, will, in a few years, describe the contents of a gallery in every way worthy of the epithet—"national." With respect to the site of the collection—are we to receive the glazing of the most precious works as an admission that they cannot be more advantageously situated than they are at present? If so, the uselessly debated question of situation thus receives its solution. Protected by glass, and secured from damp, these pictures will, a thousand years hence, yet be in fine preservation.

These recent acquisitions, selected from the Lombardi-Baldi collection at Florence, occupy the small room on the right, at the top of the stairs, which is sufficiently well lighted for works that have been principally executed for interior ecclesiastical decoration. To the light of this room, in reference to such works, we simply allude because in the larger rooms the *best places* have long been filled. In those rooms, when the question is the exhibition of the best pictures of the maturity of the art, we feel at once that there are degrees of light—differences which ought not to exist in an edifice erected expressly for the purpose of showing works of Art. In a design for such an erection as the new Palace at Westminster, the rule of selection was perhaps to entertain that proposition which, with due nobility of structure, combined the most signal fitness for the contemplated end. The so-called houses, with the multitudinous halls, corridors, and chambers, have been planned in obedience to a taste which affects the sacredness of subdued light. The expenditure upon Art has already been lavish in the Houses of Parliament; but there is not light enough to enable us to estimate accurately whether the money has been worthily bestowed—a negative advantage in certain cases, as sparing the spectator pain and the artist condemnation. Although more should have been done for the display of the interior decorations of the houses, yet the exhibition of Art was not in those edifices a primary condition of their erection; but, in the case of the National Gallery, every architectural crochets should yield to the best means of lighting the pictures. The consideration of this subject is forced upon us whenever we enter the National Gallery, for it contains no works which will not stand the test of the most overt exposure. These late accessions to the public catalogue suggest the question—"In what way is it proposed to class the works, so as to realize the proposed history of Art?" The question is not now premature, since the collection of materials for the earliest chapters of the history will soon be, if not ample, at least exemplary and suggestive. All the great collections of Europe are disjointed into an affectation of "schools"—an arrangement suitable to the meagre acquisitions of connoisseurs who speak freely of "schools" and "styles," but who have never penetrated into principles. The arrangement of a gallery in schools presupposes a certain knowledge of Art in the visitor; and we know of none of the public galleries in Europe, thus disposed, that are not labyrinths of dire confusion; we are led

"From Dutch to Roman—Roman back to Dutch;
Compare Teniers with Raphael, touch for touch."

In all the German galleries the school arrangement prevails. In Dresden the works are not better lighted than those in Marlborough House, and the classified confusion is most embarrassing; at Berlin the lighting is somewhat better, but the arrangements are equally objectionable. At Munich, much might have been expected; but even there inveterate tradition holds its own; and as to lighting, there also the enthusiast will be disappointed. The Tribune at Florence is a casket of inappreciable gems; yet the composition of its contents is an outrage on the school system professed throughout the rest of the collection. From all of these we turn with pleasure to the splendid mixture in the Pitti, in which there is no affectation of order. The arrangement of our own collection has hitherto been simply that of temporary expediency, and must continue so