FINE ARTS—The Daguerotype,” 19 January 1839

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M. Arago made, on the 7th of this month, a verbal communication to the Academy of Sciences, on the fine discovery of M. Daguerre, which confirms all the important points of the report which we gave last week. We extract some passages—“In the camera obscura, the image is perfectly defined when the lens is achromatic; the same precision is seen in the images obtained by M. Daguerre, which represent all objects with a degree of perfection which no designer, however skilful, can equal, and finished, in all the details, in a manner that exceeds belief. It is the light which forms the image, on a plate covered with a particular coating. Now, how long a time does the light require to execute this operation? In our climate, and in ordinary weather, eight or ten minutes; but, under a pure sky, like that of Egypt, two, perhaps one minute, might suffice to execute the most complex design.”

Considering the great utility of the discovery to the public, and the extreme simplicity of the processes, which is such that any person may practise it, M. Arago is of opinion, that it would be impossible, by means of a patent or otherwise, to secure to the inventor the advantages which he ought to derive from it; and thinks that the best way would be for the government to purchase the secret, and make it public. M. Arago mentions the attempts formerly made to obtain images in a similar manner, by the action of the light on nitrate of silver on this point he says,—“M. Daguerre has found a substance infinitely more sensible to the light than the chlorure of silver, which is altered in a inverse manner, that is to say, which leaves on the several parts of the plate, corresponding to the several parts of the object, dark tints for the shadowy, half tints for the lighter parts, and no tint whatever for the parts that are quite luminous. When this action of the light on the different parts of the plate has produced the desired effect, M. Daguerre stops it at once, and the design, which he withdraws from the camera-obscura, may be exposed to the full light of the day, without undergoing any alteration.

“If we consider M. Daguerre’s discovery with respect to the utility which it may have in the sciences, it is evident that so sensible a reagent as that which he has found, may enable us to make photometrical experiments, which have hitherto been reputed impossible. Such,” said M. Arago, “are experiments on the light of the moon; which the Academy had deemed of sufficient importance for it to appoint a committee, composed of M. de Laplace, M. Malus, and myself, to make them. The light of the moon is known
to be 300,000 time weaker than that of the sun; yet we did not despair of obtaining some sensible effects, by means of a lens of very large dimensions. We made use of a very large lens, brought from Austria; and, placing some chlorure of silver in the focus, that being the most sensible reagent known, not the slightest discoloration was perceptible. It occurred to me, that M. Daguerre might have more success with his new reagent; and, in fact, he obtained, in twenty minutes, on his dark ground, a white image of the moon, with a lens far less powerful than ours."

M. Biot added some details to those given by M. Arago. "I have several times," said he, "seen M. Daguerre, and I can say, that in the numerous trials which he has made to attain these astonishing results, he has discovered several extremely interesting properties of light, some of which might have been foreseen by natural philosophers, as soon as they inquired what must happen in certain given circumstances, but of which others were completely unexpected."

As for the principal discovery, I can speak of the perfection of the results obtained, not after my own judgment, but after that of a celebrated artist, M. Paul Delaroche, in whose company I have examined some of the designs taken by the new process. M. Delaroche thinks they may give, in the manner of expressing by light and shade, not only the relief of objects, but the local tint; the same bas-relief in plaster and in marble, will be differently represented in the two designs, and you can tell, at the first glance, which is the image of the plaster.

In one of these designs, you may almost tell the hour of the day. Three views of the same monument are taken; one in the morning, one at noon, and the other in the evening; and nobody will mistake the effect of the morning for that of the evening, though the sun’s altitude, and, consequently, the relative lengths of the shadows, are the same in both.—Le Temps.

Paris, 12th January, 1839

The discovery of M. Daguerre has been for some time past the subject of marvelous statements. The ingenious contriver of the Diorama had devoted himself to the study of the properties of light, with the ardour and perseverance of which genius alone is capable. Yet the accounts, fabulous as they appeared, are conformable to the truth, except that M. Daguerre’s pictures do not give the colour, but only the outlines—the lights and shadows of the model. It is not painting, it is drawing, but drawing carried to a degree of perfection which art can never attain. The facsimile is faultless.

Every picture that was shown us produced an exclamation of admiration. What fineness in the strokes! What knowledge of the chiaroscuro! What delicacy! What exquisite finish! How soft is that stuff! How salient those bas-reliefs! There is a Venus crouching down, seen in different points of view. How admirably are the foreshortenings given: it is nature itself. All this is wonderful. But who will say that it is not the work of some able draughtsman? Who will assure us that they are not drawings in bistre or sepia? M. Daguerre answers by putting an eyeglass into our hand. Then we perceive the smallest folds of a piece of drapery; the lines of a landscape invisible to the naked eye. With the aid of a spy-glass, we bring the distances near. In the mass of buildings, of accessories, of imperceptible traits, which compose a view of Paris taken from the Pont des Arts, we distinguish the smallest details; we count the paving-stones; we see the humidity caused by the rain; we read the inscription on a shop sign. The effect becomes more astonishing if you employ the microscope. An insect of the size of a pea, the garden spider, enormously magnified by a solar microscope, is reflected in the same dimensions.
by the marvellous mirror, and with the most minute accuracy. It is manifest how useful M. Daguerre’s discovery will be in the study of natural history.

The artist has already enriched science with the solution of several problems. The experiments on the light of Sirius have confirmed the testimony of natural philosophy, and abundantly proved that the stars are bodies of the same nature as the sun. At the request of M. Biot, M. Daguerre has submitted his apparatus to the influence of the light of the moon, and has succeeded in fixing the image of that light, something like the tail of a comet, and we ascribed it to the movement of the body during the operation, which is of much longer duration than that by the light of the sun.

We have seen that the impression of the image is made with more or less rapidity, according to the intensity of the light, which is more powerful at noon than the morning or evening, in summer than in winter, in a latitude near the equator than near the pole. M. Daguerre has hitherto made his experiments in Paris only; and, even under the most favourable circumstances, they have always proceeded with a slowness, which has not allowed him to obtain complete success, except with inanimate nature, or nature in repose. Motion escapes him, or leaves only indefinite and vague traces. It may be presumed that the sun of Africa would give him instantaneous autographs,—images of nature, in motion and life.—*Le Commerce.*

[End of text. Variant spelling of “daguerotype” (daguerreotype) is per original text.]
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