

**THOUGHTS ON TALBOT IN 1839: A postscript to
'Accounting W. H. F. Talbot's Photogenic Drawing at the Royal Society in 1839'**

by
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1839 – Photogenic Drawing

As we have seen, in 'Accounting W. H. F. Talbot's Photogenic Drawing at the Royal Society in 1839', when reports of Daguerre's discovery reached London in mid January 1839 Talbot became eager to be acknowledged for his past unpublished work on 'photogenic drawing'. Yet as he had not pursued the subject during the previous couple of years, he himself had obviously realised that he had not attained the breakthrough required for his work to warrant publication. Indeed in 1839 Talbot's past exploration of the subject was of little consequence with regard to the discovery of the central techniques required for photography. However, of special significance in 1839 was Sir John Herschel who began his investigation of photographic science and technology when that January he heard the news from Paris of Daguerre's discovery. With admirable ease he solved the basic problem of fixation that had been the crucial barrier to success.⁴³ Herschel had indeed not given any previous thought to these matters, but it was immediately obvious to him that light sensitive silver salts would be the way to produce images. This illustrates well the situation in the late 1830s when such knowledge was extremely widely known. To use but one example of that fact — which does also show that Talbot was very far from unique in having pre-1839 ideas of photography. The most popular textbook of the day in England was Brande's *Manual of Chemistry*. In the 1836 edition Brande described 'a very pretty experiment showing the action of light upon nitrate of silver, was devised by Mr Wedgewood [sic]':

a piece of paper. or other convenient material, was stretched upon a frame and sponged over with a solution of the salt [nitrate of silver]; it was then placed behind a painting upon glass; and the light, traversing the painting, produced a kind of copy of it upon the prepared paper; those parts in which the rays were least intercepted being of the darkest hues....

Yet traditional histories of photography provide more the impression that Talbot was unique in the 1830s in pursuing ideas of photography. And the established view of events in 1839 is equally Talbo-centric, but is not indeed borne out by contemporary sources. Thus Talbot may from his own efforts have captured the attention of the press in England in February 1839, but the way he obtained a stable image by converting the light sensitive silver halide combination to a non-sensitive pure chloride was only a partial solution to the problem of preservation of images. If Talbot had been absent from London, other people familiar with current knowledge as expressed by Brande would have, and indeed did, take up the challenge of solving the crucial problem of fixation. Herschel did not stand on the shoulders of Talbot – indeed it is worth noting that Herschel simply gave all his attention to research and experiments, publishing what he thought was significant, without like Talbot disfiguring publication by any obsession with obtaining priority of discovery.

At the risk of giving it even more exposure and influence, let us look (figure 3) at the beginning of one of the first publications⁴⁴ of W. H. F. Talbot that he wrote at end of January 1839 on learning that an announcement had been made in Paris about the diorama painter Daguerre inventing a way of capturing the images seen in a camera obscura. Talbot says

In the spring of 1834 I began to put into practice a method I had devised sometime previously, for employing to purposes of utility the very curious property which has long been known to chemists to be possessed by the nitrate of silver ; namely, its discolouration when exposed to the violet rays of light.

And introducing his *Pencil of Nature*, of 1844, Talbot gives his own ‘Brief Historical Sketch of the Invention of the Art’ that has widely formed the easy basis of many historians’ own un-investigated accounts of the history of photography:

One of the first days of the month of October 1833, I was amusing myself on the lovely shores of the Lake of Como, in Italy, taking sketches ... And since, according to chemical writers, the nitrate of silver is a substance peculiarly sensitive to the action of light, I resolved to make a trial of it, in the first instance, whenever occasion permitted on my return to England.

It now seems a familiar story. For a great deal of it became the basis of the story of the opening stages of photography as repeated by historians for more than a century. Talbot’s own words have become the paradigm that indeed strangles the discipline.. If the relationship between Talbot’s own account in his first publication and the history of the beginning of photography as written by historians is not absolute, then it is primarily because the historical writings have some additional journalistic amplification which has been repeated from another variation on the theme by Talbot in the ‘historical sketch’ to his *Pencil of Nature* of 1844. Take that sketch and the first comments shown in figure 3 away from the history of photography and we have a situation where historians would be deprived of an easy option and would have had to have actively researched more on [to have taken more notice of] a wider range of contemporary sources published in 1839. Take away the same publication from his contemporaries, and the following one published on 23 February where Talbot provided information about the chemicals and technique he used to produce what he called photogenic drawings, and what would have been the situation?

What if, in January and February 1839, W. H. F. Talbot had been momentarily inactive due to illness or away from public communication on a quiet holiday? So continuing our exercise of imagination of removing Talbot from the scene in January and February 1839 (of course we allow him activity after 1839 - this is not a critique of Talbot’s very significant contribution of the later calotype process, that is a very different situation) then, in the judgement of the present writer, the work and understanding of other persons in 1839 experimenting with photography on paper would not have been greatly different - the subsequent actual development of photography would have been little affected, but the writing of that history would have been less historiographically distorted [and less whining self-promotion emanated by Talbot]. However, the influence of Sir John Herschel would have been clearly recorded by early historians without constraint from a Talbot-centric mindset that actually existed. The reality that Talbot was indeed very publicly involved at

the beginning of photography in 1839 still does not change the actual influence of Sir John Herschel in 1839, except that Talbot's own writings and long continuance in photography have hidden the importance of Herschel's paper of 14 March 1839 because of later historiographic factors.

No doubt it can be said that Talbot did indeed participate in the opening chapter of photography in 1839, and that is a fact which cannot be imagined away. However, the purpose of the present exercise is to provide a yardstick by which the significance of Talbot's contribution of his photogenic drawing method can be judged. It was not so significant for the development of photography as would appear from the early and standard accounts of the history of photography. This exercise better allows us to see that Talbot's contribution in 1839 was far from being the only one, and indeed was not the most successful. Talbot's photogenic drawing did not allow progress in the development of photography, it was a failure. The potential inherent in the light sensitivity of silver salts for obtaining images was widely known and did not need Talbot to make that knowledge universal. On the other hand, Herschel's grasp of what would now be call photographic science was masterly. Within a few days Herschel had entirely overtaken Talbot's lack of progress and his announcement of the use of hypo to provide permanence to silver salt images provided the foundation stone on which photography could be built. And again in contrast with Talbot, the published work by Herschel in 1839 was truly momentous, yet obscured by the terms of reference of historians.

The author is not suggesting that recent historians have continued to entirely neglect original contemporary sources, or that Herschel's contribution of hypo in solving the outstanding problem of the use of silver salts to obtain images by light is not now fully recognised. But when Herschel's work is discussed it is through his manuscripts and autograph correspondence with Talbot – sources available in museum photographic collections. Although there is a better recognition of Herschel's work it is not in the context of the time-span of wider events of 1839 as would be obvious if the work of the historians had been done from a wide range of newspapers and journals of the period rather from those specific photographic sources which are isolated in photographic collections. In spite of discussion of Herschel due to his correspondence with Talbot, the publication of his communication to the Royal Society on 14 March is almost without exception absent from accounts of his work. A better recognition of Herschel's work has not indeed led to readjustment of the old conceptual paradigm by the earlier Talbo-centric literature.

End Notes

43. See the author's preceding article (originally written as a companion to 'Accounting W. H. F. Talbot's Photogenic Drawing at the Royal Society in 1839' and this present 'Postscript'): 'Fourteenth March 1839, Herschel's key to photography, the way the moment is preserved for the future', in *Jubilee – 30 Years ESHPh. Congress of Photography in Vienna*, edited by Anna Auer and Uwe Schögl, Fotohof edition (nr.104), Salzburg, Austria: 2008, pp. 18-31
44. The history **according to Talbot** is found in three published sources: (a) Henry Fox Talbot, 'Some Account of the Art of Photogenic Drawing...', *The Athenæum* No. 589 (9 February 1839), 114–17; (b) 'Brief Historical Sketch of the Invention of the Art' in Part

1 of his *The Pencil of Nature*, London 1844 (a special issue on Talbot and Pencil of Nature of *Image*, the journal of George Eastman house, June 1959, Vol. 8, No. 2, is a useful presentation of the full text and discussion on Talbot); (c) *A History and Handbook of Photography, translated from the French of Gaston Tissandier, edited by J. Thomson, Second and Revised Edition with an Appendix by the late Henry Fox Talbot*, London 1878, pp. 345-382

Addendum. W. H. F. Talbot's publications in 1839

1. Letter dated 30 January 1839 to Editor of Literary Gazette, 'Photogenic Drawing', *Literary Gazette* No. 1150 (2 February 1839), 73-4;
2. (a) **Report** of Talbot's letter ('Some Account of the Art of Photogenic Drawing') read at Royal Society on 31 January 1839, *The Athenæum* No. 588 (2 February 1839), 97, and *Proceedings of the Royal Society* 4: 36 (6 December 1838 - 7 February 1839), 120-1. The manuscript is in the archives of the Royal Society - Archive Papers AP20.23bis.
(b) In addition a different and shorter report appeared in *The Literary Gazette* No. 1150 (2 February 1839), 75.
3. **Full text** of 'Some Account of the Art of Photogenic Drawing', *The Athenæum* No. 589 (9 February 1839), 114-17; also reprinted from *The Athenæum* in *Mechanics Magazine* 30:810 (16 February 1839), 345-51; *Philosophical Magazine* 3rd series, 14: 88 (March 1839), 196-208. These pages fully transcribe the manuscript of the paper preserved at Royal Society (Archive Papers, AP23.19)
4. 'An Account of the Processes employed in Photogenic Drawing' (letter dated 20 February, read at Royal Society meeting of 21 February 1839), *Literary Gazette* No. 1153 (23 February 1839), 123-4 (*The Literary Gazette* headed the letter with a different title, 'Photogenic Drawing (Further discoveries)'); *The Athenæum* No. 591 (23 February 1839), 156 (Two introductory paragraphs of general remarks by Talbot omitted); *Philosophical Magazine* 3rd series, 14: 88 (March 1839), 209-11; *Proceedings of the Royal Society* Vol. 4: No. 37 (14 February-21 March 1839), 124-6 (First two paragraphs of general remarks omitted). This Issue No. 37 of the *Proceedings* probably appeared in mid April. The manuscript of this paper is preserved at the Royal Society (Archive Papers 23.20 [not 23.20 bis]) and its text is closely transcribed in the *Literary Gazette* and *Philosophical Magazine*.
5. 'Note Respecting a new kind of Sensitive Paper' (read at Royal Society meeting of 21 March 1839), *The Athenæum* No. 597 (6 April 1839), 260; *Proceedings of the Royal Society* Vol. 4: No. 37 (14 February-21 March 1839), 134; *Philosophical Magazine* 3rd series, 14: 90 (May 1839), 368-9. Only an abbreviated version of Talbot's Note is printed.
The **full text** of Talbot's manuscript 'Note...' dated 19 March 1839 consists of three pages with an 'Addendum' also of three pages, has not been published, but does survive at the Royal Society, Archive Papers AP23.21. Although the minutes of the RS's Committee of Papers held on 11 April 1839 (CMB90.3.113) show it was due to be "Referred", no referees' report appears to have been done, and at following meetings was "postponed". Indeed the 'Note...' was a poor effort by Talbot to belatedly provide chemical data.

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PHOTOGENIC DRAWING.

Some Account of the Art of Photogenic Drawing, or the Process by which Natural Objects may be made to delineate themselves without the aid of the Artist's Pencil. By Henry Fox Talbot, Esq. F.R.S.

I. In the spring of 1834 I began to put in practice a method which I had devised some time previously, for employing to purposes of utility the very curious property which has been long known to chemists to be possessed by the nitrate of silver; namely, its discoloration when exposed to the violet rays of light. This property appeared to me to be perhaps capable of useful application in the following manner.

I proposed to spread on a sheet of paper a sufficient quantity of the nitrate of silver, and then to set the paper in the sunshine, having first placed before it some object casting a well defined shadow. The light, acting on the rest of the paper, would naturally blacken it, while the parts in shadow would retain their whiteness. Thus I expected that a kind of image or picture would be produced, resembling to a certain degree the object from which it was derived. I expected, however, also, that it would be necessary to preserve such images in a portfolio, and to view them only by candle-light; because if by daylight, the same natural process which formed the images would destroy them, by blackening the rest of the paper.

Such was my leading idea before it was enlarged and corrected by experience. It was not until some time after, and when I was in possession of several novel and curious results, that I thought of inquiring whether this process had been ever proposed or attempted before? I found that in fact it had; but apparently not followed up to any extent, or with much perseverance. The few notices that I have been able to meet with are vague and unsatisfactory; merely stating that such a method exists of obtaining the outline of an object, but going into no details respecting the best and most advantageous manner of proceeding.

The only definite account of the matter which I have been able to meet with, is contained in the first

Figure 3.

The Athenæum (London),

9 February 1839. p. 114

first three paragraphs only of

'Some Account of the Art of Photogenic Drawing...'

by [W.] Henry Fox Talbot

leaves no doubt that Hickey's original was derived from it. That no manuscript of this kind is to be found in the Public Library at Cambridge, where More's manuscripts after his death were deposited, and that the contents of the Harleian Manuscript agree with the Catalogue of 1697. It was therefore, probably, lent by Bishop More to Bishop Tanner; and not having been returned before the death of the former, or from some other unexplained cause, passed into the library of the Earl of Oxford. The circumstance of this very curious manuscript being mentioned, at nearly the same period, as in the possession of several individuals, induced the belief that two, or even three copies of it were in existence.

LITERARY AND SCIENTIFIC MEETINGS FOR THE ENSUING WEEK.

Monday.—Royal Geographical, 9 P.M.
 Tuesday.—Royal Medical and Chirurgical, 8 P.M.; Civil Engineers, 8 P.M.; Zoological, 8 P.M.
 Wednesday.—Society of Arts, 7 P.M.; Geological, 8 P.M.; Medico-Botanical, 8 P.M.
 Thursday.—Royal Society, 8 P.M.; Antiquaries, 8 P.M.; Royal Society of Literature, 8 P.M.; Numismatic, 7 P.M.
 Friday.—Royal Institution, 8 P.M.; Botanical.
 Saturday.—Royal Asiatic, 8 P.M.

FINE ARTS.

ROYAL SOCIETY. [Feb 21]

AFTER routine business, amongst which we noticed the election of Lieut. Col. Reid, the author of the very interesting "Theory of Storms," the following letter from Mr. Fox Talbot to the secretary, was read by Mr. Christie:—

PHOTOGENIC DRAWING.

(Further discoveries.)

Dear Sir,—In compliance with the request of several scientific friends, who have been much interested with the account of the art of Photogenic Drawing, which I had the honour of presenting to the Royal Society on the 31st of last month, I will endeavour to explain, as briefly as I can, but at the same time without omitting anything essential, the methods which I have hitherto employed for the production of these pictures.

If this explanation, on my part, should have the effect of drawing new inquirers into the field, and if any new discoveries of importance should be the result, as I anticipate, and especially if any means should be discovered by which the sensitiveness of the paper can be materially increased, I shall be the first to rejoice at the success; and, in the meanwhile, I shall endeavour, as far as I may be able, to prosecute the inquiry myself.

The subject naturally divides itself into two heads; viz. the preparation of the paper, and the means of fixing the design.

(1.) Preparation of the paper.—In order to make what may be called ordinary photogenic paper, I select, in the first place, paper of a good firm quality and smooth surface. I do not know that any answers better than superfine writing paper. I dip it into a weak solution of common salt, and wipe it dry, by which the salt is uniformly distributed throughout its substance. I then spread a solution of nitrate of silver on one surface only, and dry it at the fire. The solution should not be saturated, but six or eight times diluted with water. When dry, the paper is fit for use.

I have found, by experiment, that there is a certain proportion between the quantity of salt and that of the solution of silver, which answers best and gives the maximum effect. If the

* We fancy, from the oversetting of a wagon-load of Bishop More's manuscripts at a ford, in consequence of a flood, in their transit to Cambridge.—Ed. L. G.

strength of the salt is augmented beyond this point, the effect diminishes, and, in certain cases, becomes exceedingly small.

This paper, if properly made, is very useful for all ordinary photogenic purposes. For example, nothing can be more perfect than the images it gives of leaves and flowers, especially with a summer sun: the light passing through the leaves delineates every ramification of their nerves.

Now, suppose we take a sheet of paper thus prepared, and wash it with a saturated solution of salt, and then dry it. We shall find (especially if the paper has been kept some weeks before the trial is made) that its sensibility is greatly diminished, and, in some cases, seems quite extinct. But if it is again washed with a liberal quantity of the solution of silver, it becomes again sensible to light, and even more so than it was at first. In this way, by alternately washing the paper with salt and silver, and drying it between times, I have succeeded in increasing its sensibility to the degree that is requisite for receiving the images of the camera obscura.

In conducting this operation it will be found that the results are sometimes more and sometimes less satisfactory in consequence of small and accidental variations in the proportions employed. It happens sometimes that the chloride of silver is disposed to darken of itself, without any exposure to light: this shews that the attempt to give it sensibility has been carried too far. The object is, to approach to this condition as near as possible without reaching it; so that the substance may be in a state ready to yield to the slightest extraneous force, such as the feeble impact of the violet rays when much attenuated. Having therefore prepared a number of sheets of paper with chemical proportions slightly different from one another, let a piece be cut from each, and having been duly marked or numbered, let them be placed side by side in a very weak diffused light for about a quarter of an hour. Then, if any one of them, as frequently happens, exhibits a marked advantage over its competitors, I select the paper which bears the corresponding number to be placed in the camera obscura.

(2.) Method of fixing the images.—After having tried ammonia, and several other reagents, with very imperfect success, the first thing which gave me a successful result was the iodide of potassium, much diluted with water. If a photogenic picture is washed over with this liquid, an iodide of silver is formed which is absolutely unalterable by sunshine. This process requires precaution; for if the solution is too strong, it attacks the dark parts of the picture. It is requisite, therefore, to find by trial the proper proportions. The fixation of the pictures in this way, with proper management, is very beautiful and lasting. The specimen of lace which I exhibited to the Society, and which was made five years ago, was preserved in this manner.

But my usual method of fixing is different from this, and somewhat simpler, or at least requiring less nicety. It consists in immersing the picture in a strong solution of common salt, and then wiping off the superfluous moisture, and drying it. It is sufficiently singular that the same substance which is so useful in giving sensibility to the paper, should also be capable, under other circumstances, of destroying it; but such is, nevertheless, the fact.

Now, if the picture which has been thus washed and dried is placed in the sun, the white parts colour themselves of a pale lilac tint, after which they become insensible. Numerous

experiments have shewn to me that the depth of this lilac tint varies according to the quantity of salt used, relatively to the quantity of silver. But, by properly adjusting these, the images may, if desired, be retained of an absolute whiteness. I find I have omitted to mention that those preserved by iodine are always of a very pale primrose yellow; which has the extraordinary and very remarkable property of turning to a full gaudy yellow whenever it is exposed to the heat of a fire, and recovering its former colour again when it is cold.—I am, &c.
 H. FOX TALBOT.
 44 Queen Ann Street, Feb. 20th, 1839.

We are much pleased with the frank and ingenuous manner in which our countryman has come forward to give publicity to his process, and state the results of his experiments. This is the way to promote the general benefit, and lead others into the method of pursuing similar inquiries, by which the discovery may be improved and perfected. In this class we rejoice to learn that Sir John Herschel has devoted his attention to the subject, and has already, we understand, made curious progress, inasmuch as he has obtained the pictures from the light of Daniell's great galvanic battery. Sir David Brewster too, we are informed, has taken up the investigation; and when such men set to work, we may look for much to follow.

Before laying down our pen, we should mention that, at the Royal Society, Mr. Talbot shewed us the perfect picture of a riband, some three inches broad, and of a ribbed and watered pattern, taken in this manner, but not by the sun, the only active agent being the common day light! and in a London atmosphere of the month of February too. After this, who can doubt the extreme sensibility of the prepared paper?—Ed. L. G.

GRAPHIC SOCIETY.

THE second conversation of this Society took place on Wednesday, when the largest assembly of members and visitors took place since its foundation; and we have never seen a more numerous or interesting display of drawings, sketches, and engravings, than were sent by the members for the gratification of their friends—among these, the principal contributors were Mr. T. Creswick, Mr. Evans, Mr. West, Mr. Cope, Mr. Pryne, Mr. Cowen, Mr. S. Cousins, Mr. Dox, Mr. W. Finden, Mr. Corbould, Mr. Windus, and others. It is probable that the very numerous meeting arose from the expectation that some drawings, produced by the action of light, by Mr. Talbot, would be shewn, but they were not sent. Two small specimens, produced by Sir John Herschel, were exhibited, but they were feeble in effect, and said to be first attempts; but it was stated by a gentleman present, who had seen those prepared by Daguerre, in Paris, that his were so far superior, as to bear the character of a different process—still the most favourable report of the process relieved the anxiety of the artists. The painters were quieted that Daguerre could produce nothing in colour; and the engravers, that no impressions could be taken from the design effected by light on his coppers. The secret will soon arrive, and we shall then be able to follow up the early notices which we gave of this curious art, by a full disclosure. There were also shewn some prints of different sizes, taken from the same plate: this seemed to be even a greater puzzle than Daguerre's. It is said, however, that a mode of effecting this has suggested itself to Professor Wheatstone, who saw these prints at the Graphic; if so, we shall hear more about it. This invention is also French, and was dis-

Figure 4. 'Photogenic Drawing' Literary Gazette (London) No. 1153 (23 February 1839), 3 columns of pp. 123-4 (letter dated 20 February, read at Royal Society meeting of 21 February 1839),