LOOKING AT REALITY

Daguerreian Pictures. From Silver To Paper

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After François Arago made the first announcement of Daguerre’s invention to the Academy of Sciences of Paris (January 7, 1839), and the subsequent enthusiastic reactions reported by the newspapers of the time, even before anyone knew the actual details of the process, on June 15th 1839 the French Minister Charles-Marie Duchâtel presented a bill to the Chamber of Deputies, proposing that the French government should purchase the patent of the invention in exchange for a lifetime annuity for its inventors. In his report he referred to the various benefits that he believed the daguerreotype would bring to the sciences and the arts, and with clarity and foresight he announced that “Being called upon to multiply these images modelled upon nature herself, by reproducing them, the art of the engraver will take on a new level of importance and interest”.

Exactly one year later, on June 15th 1840, Alfred Donné (1801-1878) presented his procedure to the Academy of Sciences. He was thus certainly the first to take up the challenge of transforming daguerreotype plates directly into engraved plates, so as to produce multiple printed copies, thereby overcoming their uniqueness and exclusivity. Donné proposed the etching of a daguerreotype plate by means of nitric acid, a method that he had evidently already experimented with in the course of 1839. A reliable contemporary source that testifies to the early development of this process is the report by Macedonio Melloni (1798-1854), to the Academy of Sciences of Naples on November 12, 1839. This was the first scientific report on the daguerreotype to be presented in Italy. Even before he specifically described the physical-chemical properties of the daguerreotype, the Italian scientist insisted on the importance of the “typographical method of Dr. Donné”, who had - with his early experiments aimed at improving the new process - soon succeeded in “not only stably fixing the highly mobile impressions of the daguerreotype upon metal, but in etching them by means of various substances that are likely to corrode the metal plate [...] Thus we can now produce upon metal, due only to the action of light and some chemical reagents, [...] some grooves that are more or less wide and deep, completely analogous to the process of ordinary engraving, and afterwards to produce several copies upon paper”.

Donné’s process was later perfected and patented (by Hippolyte Fizeau in 1843), as was the method described in 1841 by Charles-Louis Chevalier and those of other less for-
Ill. 2, Joseph Berres Wien. *View from the Observatory of the Old University to St. Stephens Cathedral*, 1840. Print from etched daguerreotype, by permission of Albertina, Höhere Graphische Bundes-Lehr- und Versuchsanstalt Wien. See on Daguerreobase
tunate experimenters. They either tried to directly etch the daguerreotype plates or to produce a copy, also by the use of electrotype, of the daguerreotype. These processes did not however prove to have effective and practical applications for the reproduction and printed diffusion of daguerreotype images.

Nevertheless, the immediate and widespread interest of different experimenters [Ill. 2], not only in France, clearly shows that printing copies of the daguerreotype had been one of the foremost endeavours associated with the process ever since it was first invented, due to the desire to overcome the limitations of the unique and non-reproducible image that it produced. The inventor of the process particularly appreciated its qualities of precision, objectivity and absolute fidelity to the “real”, as guaranteed by the absence of any kind of manual intervention or the mediation of an artist, and he therefore did not think it was in any way possible to derive faithful copies from the daguerreotype. Nevertheless, despite these claims, there were many persistent attempts by his contemporaries, particularly in the field of printing and publishing, to ensure the widest possible enjoyment of these wonderful, and hitherto unsurpassed, images of reality. The intention was to make them available to an ever wider and more varied audience, which in previous decades had grown accustomed to an easier accessibility to a large number of images particularly thanks to the diffusion of lithography that, from the early nineteenth century onwards, had produced greater numbers of prints at a lower cost.

In October 1839 the British magazine “The Athenaeum” published an article dedicated to various experiments regarding the direct reproduction of daguerreotypes. After mentioning the rather poor results obtained by Donné’s procedure, as well as the “héliographic” process (“héliographie”) of Nicéphore Niépce, a letter from Daguerre to the Academy of Sciences of Paris is cited. The illustrious inventor of the Daguerreotype states that he himself conducted a number of experiments, with the aim of making the

instable image formed on the silver-coated copper plate more permanent, but without obtaining satisfactory results: “I therefore commenced a series of experiments with the aid of acids, and I obtained various results; [...] but the results were defective, and always for the reason before mentioned – namely, the impossibility of biting with acid, without the intervention of the engraver’s art: besides, I knew that silver is too soft to give even a small number of impressions”. Daguerre’s apparent renunciation, at least officially, of the possibility to replicate the daguerreotype, is closely related to its “photogenic” nature (as an image automatically generated by the action of light), which he thought made it incompatible with its ability to be directly reproduced. This, as pointed out by Stephen C. Pinson (in his essay “Photography’s Non-reproducibility, or, the Rhetoric of touch”), “was not simply a matter of overcoming the physical and chemical properties of the metal plate, but of doing so without significant manual intervention by traditional artistic means”.

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Indeed, the new publishing initiatives that commenced at the end of 1839 and the early months of 1840, attempting to capitalise on the ability of the daguerreotype to reproduce reality in an extraordinarily faithful way and to successfully exploit the already flourishing market of “topographical” and “picturesque” views, still had to resort to the usual manual means of graphical “translation”. For the creation of engravings or etchings the traditional methods of transferring a preparatory drawing were therefore applied, which in this case was the daguerreotype image (at that time considered to be an authentic “analogon” or exact counterpart of visual reality), and etching techniques were employed that were particularly effective for these kinds of images, such as lithography and the most skilled and refined aquatint procedures. The popularity of similar practices is evinced by the Avis (a preliminary note) which appears as the preface of an early edition of Daguerre’s manual. Here the publisher (Alphonse Giroux) advertises and recommends the use of instruments and products certified and guaranteed by the inventor, due to their effective action. Among other things it is announced that in the shops of M. Giroux “You can also acquire a varnish prepared to safeguard the images and facilitate their tracing”.9

The series of prints Paris et ses environs reproduits par le daguerréotype, edited by Charles Philippon (1840)10, consisted entirely of lithographs in which the work of the artist was emphasized and the picturesque character of the views, particularly dear to the romantic spirit, was given a strong prominence that makes their derivation from daguerreotypes seem rather look suspect and doubtful. Instead, for the analogous but far more famous series Excursions daguerriennes, the Parisian publisher Noël-Marie Paymal Lerebours (1807-1873) chose the aquatint, “that most closely resembles nature”, with the use of steel as a support, “because it allows one to combine delicacy with solidity”.11

Noël-Marie Paymal Lerebours began to publish this series of prints in 1840, issued in folders containing four plates each. The entire series then appeared in an extra fine edition bound in two volumes, the first of which, with sixty prints, was published in 1842, while the second, consisting of fifty-one prints, was planned...

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6 Attempts at Engraving the Daguerreotype Pictures, in “The Athenaeum. Journal of Literature, Science and the Fine Arts”, October 1839, pp. 780-781 (quoted by Stephen C. Pinson, Photography’s Non-reproducibility, or, the Rhetoric of Touch, in Kathleen Stewart Howe (ed.), Intersections. Lithography, Photography and the Traditions of Printmaking, Tamarind Papers v. 17, Albuquerque, University of New Mexico Press, 1998, pp. 3-13 (p. 6). The extensive tests and experiments of Joseph-Nicéphore Niépce (1765-1833), should be considered, which led to the discovery that he called héliographie. It concentrated particularly on the mechanical reproduction of engravings through the use of photosensitive substances. Daguerre instead attempted to permanently fix images that were spontaneously formed by the action of light in the dark room, and in his letters and writings he often pointed out the conceptual as well as technical differences of his procedure from that of his predecessor, differences that were also emphasized by Arago: see Chambre des Députés. Deuxième Session 1839. Rapport fait au nom de la Commission... par M. Arago. Séance du 3 Juillet 1839, in Historique et description..., op. cit., pp. 9-29 (p. 13-17).

7 Stephen C. Pinson, Photography’s..., op. cit., p. 6.

8 For a more in-depth critical analysis of issues related to the spread of the series of prints “after the daguerreotype”, as well as Stephen C. Pinson, Photography’s Non-reproducibility, op. cit., I refer the reader to a previous paper of mine, which deals with many of the considerations and information discussed in the present article: M. F. Bonetti, “D’après le Daguerréotype”... L’immagine dell’Italia tra incisione e fotografia, in M. F. Bonetti, Monica Maffioli (ed.), L’Italia d’argento. 1839-1859 Storia del dagherrotipo in Italia, exhibition catalogue, Firenze, Fratelli Alinari, 2003, pp. 31-40.


10 Paris et ses environs reproduits par le daguerréotype, sous la direction de Charles Philippon, Paris, Aubert et Cie, 1840 (60 lithographic plates). On this volume, as well as the Album du daguerréotype reproduit (1840), and various other series of engravings “after the daguerreotype”, see Paris et le daguerréotype, op. cit., pp. 190-191, 259-261, and bibliographic ref. p. 265. See also Bajac, Planchon-de Font-Réaulx (ed.), Le daguerréotype..., op. cit., pp. 230-231, 234, cat. 139-140.
IIl. 3 Louis-Armand-Hippolyte Fizeau *Paris rooftops*, 1843 circa. Experimental etched daguerreotype plate. Private collection
to be completed before October 30th 1843, as announced in an advertisement published by Lerebours in the pages added to the fourth edition of his *Traité de Photographie* (June 1843). This advertisement gives us a great deal of important information concerning the overall publishing programme, Lerebours’ intentions, the various authors who wrote the accompanying texts, the various pictures already published or planned for publication in the second series, as well as several other lesser collections available for buyers and their relative prices. In this note, that boasts of the great popularity soon attained by the album *Excursions daguerriennes*, Lerebours confirms that “In this second attempt, as well as in the first, we shall have the co-operation of eminent artists, and of writers of established fame, worthy to do justice, by the graver or the pen, to the same masterpieces that Daguerre’s instrument so faithfully copies, by means of the sun, the light and the shade”.[13] Here the term “graver” [burin in the original French] evidently refers to the various techniques of engraving as well as etching, since in fact the prints were obtained with the graphic procedures of the aquatint and, in some cases, lithography.

In his *Traité*, Lerebours thoroughly discusses the various procedures tested hitherto in order to obtain the engraving of daguerreotypes or their copying by means of electroplating. He explains and discusses Donné’s method, as well as the similar process of Joseph Berres (in chapter XXII, “De la gravure”) [14], that of W. R. Grove (in chapter XXIII, “De la gravure des images photographiques, par M.W. R. Grove”) [15], and Hippolyte Fizeau’s procedure of reproduction of the plates through electroplating (in chapter XXI, “De la reproduction des épreuves la gravure des images photographees par la galvanoplastique”) [16], which he regarded as still unsurpassed, “for the large plates that he produced were admirable”. In a note commenting on the method of Donné, Lerebours describes Fizeau’s recently developed procedure for engraving daguerreotype plates “which is very superior to any hitherto known. We have seen some of the proofs struck off, without any particular care, by a workman of ordinary ability, and we can affirm that the most of these engravings, when seen through a magnifying-glass, showed the exact representation of the Daguerrean image, with its most minute details. Moreover, in the proofs which have been submitted to our examination, the dark parts of the picture were reproduced with a great degree of vigour, and, what is very remarkable, the white parts of the paper were perfectly pure. When one reflects on the future results of this discovery, one cannot be surprised that Mr. Fizeau should have wished to keep it secret. For our own part, it would be of immense utility to us for the publication of the Daguerrean Excursions; for, with its aid, we might immediately reproduce, at very small expense, the remarkable views which our correspondents are continually sending us; and, in order to avoid any greater or lesser alteration in the press,

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we should immediately reproduce several plates by the electrotype”\textsuperscript{17}.

The method of Fizeau, who since 1841 had resumed and developed Donné’s experiments, was based on a combination of a chemical treatment (an etching of the original daguerreotype plate by acid), with an electrolytic process (strengthening the etching by means of a layer of copper obtained by electrotype)\textsuperscript{\[Ill. 3\]. However, this method was still unable to satisfy Lerebours’ exacting requirements for printing and in fact the latter used this method for only three prints of his oeuvre. The images obtained by the method of Fizeau\textsuperscript{18}, although precise, did not retain the same fine details of the original daguerreotype plates, and they were rather complex and impracticable to create\textsuperscript{19}. However, Lerebours emphasized the potential of this process, and brought it to the attention of the subscribers to his series of prints. In fact for them he realized a special issue of a print impressed directly from a daguerreotype of one of the bas-reliefs of Notre-Dame de Paris, etched with the method of Fizeau, in the days immediately following its official presentation\textsuperscript{[Ill. 4]. In the second volume of the series Excursions daguerréennes \textsuperscript{\{published between 1843 and 1844\}}, together with the addition of six lithographs at the request of several subscribers to give a greater variety to the collection, he included the above-mentioned print \textsuperscript{\{Plate 24, accompanied by an explanatory text by Challamel, Un des Bas-reliefs de Notre-Dame de Paris. Epreuve de daguerreotype transformée en planche gravée – Procédé Fizeau, which also contained a short technical description of the procedure\}} in addition to two others that were realized in the same way, by etching the daguerreotypes directly by chemical means, without any manual retouching \textsuperscript{\{Plate 19, Hotel-de-Ville de Paris and Maison élevée rue St George par M. Renaud, a plate that was added in only a few special editions of the second series, between plates 33 and 34, but not included in the index of the volume and realized, as Henry Berthoud explains in the accompanying text, from a daguerreotype that was not directly taken of the building but of the drawing that the architect had exhibited at the Louvre, “engraved after the admirable Fizeau process”\textsuperscript{20}\}. In addition to these plates, explicitly carried out by the Fizeau method of etching, there are currently a few other rare examples of experiments conducted by directly engraving daguerreotype plates, and in some cases the plates themselves survive, even though the paper proofs that were taken from them do not\textsuperscript{21}.

It is moreover hard to precisely identify the surviving daguerreotypes which were copied or traced by the etchers and engravers in order to transfer the image to the plates used for the prints that are known to us today. In some cases it is possible to guess, due to the close similarity of the daguerreotype with the relative print, as in the case of the daguerreotype probably commissioned by Lerebours Saint Pierre et Chateau St.Ange. Vue prise du port Ripetta à Rome, now in the Robinson University Library of Newcastle. This plate is very similar to the print depicting the same subject, published by Lerebours in

\textsuperscript{17} Ivi, op. cit., pp. 124-125 (Traité..., op. cit., p. 132).

\textsuperscript{18} Louis Armand Hippolyte Fizeau (1819-1896) did not patent his process until September 12th 1843, and he presented it at the Academy of Sciences on the 8th of July 1844. See H. Fizeau, Procédé de gravure photographique, in “Bulletin de la Société d’encouragement pour l’industrie nationale”, Paris, Quarante-troisième année (N. CCCCLXXIV), octobre 1844, p. 452.

\textsuperscript{19} Alfred Donné himself had already judged this method somewhat unreliable: see Alfred Donné, Cours de microscopie complémentaire des études médicales... Atlas exécuté d’après nature au microscope-daguerréotype, Paris, Bailliére, 1845 (86 etchings by Oudet after daguerreotypes by Jean-Bernard-Léon Foucault), Introduction, pp. 5-14 (partly republished in Rouillé, La Photographie..., op. cit., pp. 73-76).

\textsuperscript{20} “... gravé d’aprs l’admirable procédé Fizeau”. See the second volume of Excursions daguerréennes (ed. Paris, Lerebours, Rittner et Goupil, H. Bossange, 1840-1842 [1844]) kept at the Bibliothèque nationale de France (Departement des Estampes et de la Photographie, VH-40 PET FOL) which contains 52 prints (instead of the 51 listed in the index of the volume) and an Avis aux Souscripteurs. (Épreuves de daguerréotype transformées en planches gravées. - Procédé de M. Fizeau). \textsuperscript{\textit{Read on line}}
National Technical Museum, inv. 24214
the first series (1842) of the *Excursions daguerriennes*, and its surface also appears to be particularly damaged, perhaps because it was used as a template for copying it to create the etched plate [Ill. 5-6].

We must however bear in mind the close similarity of scenes that were photographed from the same point of view, but above all it must be considered that copying a daguerreotype to create an etching or an engraving, typically led to its loss, due to its manipulation in the tracing or transfer of the image, which tended to destroy the delicate daguerreotype image on the silver plate.

Lerebours himself, again in his *Traité de photographie* (A Treatise…), in the short chapter entitled “On the transfer of the proofs”, describes one of the methods for transferring images directly from the daguerreotype plate: “A great many researches have been made on the possibility of transferring Daguerreian images upon the lithographic stone. Up to the present time [1843], these inquiries have been fruitless, and the only results which have attended them, consist in a method of transferring the image depicted on the plate, by means of a press, to a sheet of black paper covered with a coating of gelatine in a moist state. It is left in the press for about half an hour, and, at the expiration of that time, dried in the sun; the paper then separates from the plate, and tracings of the Daguerreian image, more or less complete, will be seen on its surface”22.

More usually views “d’après le daguerréotype” were produced by manual transpositions, in which the interventions of artists (the draftsmen or engravers), are still very evident, and in some cases they produced a “corrected” image of the scenes, sometimes with a certain deformation of the perspective of the space, thereby providing a more simplified and emblematic interpretation of the topoi selected. An example of this is the view of the *Port Ripetta à Rome*, of which, in addition to the print included in the *Excursions daguerriennes* (dated as early as 1840), also a daguerreotype is known to exist, probably commissioned by Lerebours himself, as were many of those used for his series of prints. It was then sold in London, by Claudet & Houghton to Hugh Lee Pattinson, who was also a chemist and a daguerreotypist, from whose collection the plate then arrived at the Robinson University Library of Newcastle upon Tyne23 [Ill. 7-8].

Like Lerebours the Milanese publisher Ferdinard Artaria, who since the spring of 1840 had begun to publish, on separate sheets, the series of prints *Vues d’Italie d’après le daguerréotype* - at first featuring only the city and the territory of Milan and then extended to the most popular sites andlocalities of the Italian Peninsula - opted for the technique of aquatint, entrusting the translation of the daguerreotype plates onto copper to some of the most skilled etchers of vedute who were active in Milan at the time (such as: Louis Cherbuin, Johann Jakob Falkeisen and Francesco Citterio). The aquatint is in fact characterized by tonal effects and gradations, not by means of incised lines, but by areas covered with very fine dots, obtained by graining with powdered rosin, and thus it was more effective than other graphic techniques at suggesting the subtle effects of light and shade and the continuous gradations and textures of the photographic image, successfully conveying the delica-

21 See, in particular, the proofs taken from etched daguerreotypes, by an unidentified hand, kept at the Musée Carnavalet in Paris (some of which represent the church of Saint-Sulpice) and those of Hippolyte Fizeau in a private collection, in addition to the proof that accompanied the latter’s patent application, filed in June 1843 (now in the Institut national de la propriété industrielle, Paris). Also some etched plates by Fizeau still exist, depicting views of the rooftops of Paris (at the Musée d’Orsay and the collection of Serge Kakou, in Paris) and the Dôme des Invalides (Santa Monica, J. Paul Getty Museum). See *Paris et le daguerréotype*, op. cit., p. 235, cat. 103, and pp. 262-263; Bajac, Planchon-de Font-Réaulx, *Le daguerréotype…*, op. cit., p. 219, cat. 124-125 and pp. 234-236, cat. 141-142.


23 See Bajac, Planchon-de Font-Réaulx, *Le daguerréotype…*, op. cit., p. 357, cat. 302-303. The above-mentioned view of St. Peter’s and Castel Sant’Angelo has the same provenance.
Ill. 5 Photographer unknown [Daguerréotype Lerebours à Paris]. *Saint Pierre et Château St. Ange à Rome. Vue prise du port Ripetta à Rome*, 1839-1840. Daguerréotype, full plate. Newcastle University, Robinson Library Special. Collections (by permission of the Librarian, Robinson Library, Newcastle University)

Ill. 7 Photographer unknown [Daguerréotype Lerebours à Paris]
Port Ripetta à Rome, 1839-1840. Daguerreotype, full plate. Newcastle University, Robinson Library Special Collections. (by permission of the Librarian, Robinson Library, Newcastle University)

te nuances of shading in the sky and subtle tints that were particularly appreciated those with aesthetic tastes inclining towards the Romantic.

The engravers worked “after transferring the image to steel, by means of tracing with the drypoint, thanks to which the outline of the work was indicated”, then “the special task of the artist, in the execution, is to complete with colour the character of the sites, monuments or objects represented”; and also “The engraved views will be enlivened by figures. When the pictures taken on the site have none, they will be provided with some groups depicted by sketches from the life made in the same localities”.24

Similarly, in the contract he drew up with Artaria, the engraver Louis Cherbuin undertakes “to trace the outlines of the objects represented, from the above-mentioned plates, transpose them to copper and there execute the similar shadows with the addition of the sky and the small figures required according to the present agreement”.25

As a testimony to the particular drawing skills of the engravers chosen by Artaria, especially in being able to gracefully include groups of figures to animate the views, according to the hitherto prevailing traditions and stereotypes of painting and graphic art, some of their finished watercolour drawings still survive, which were certainly used as preparatory sketches for some views of the series, and they correspond exactly (also in their dimensions) to various prints, for which they certainly constituted the model.26

Direct descendants of the eighteenth and nineteenth century Voyages pittoresques, which contributed towards forming and establishing the stereotypes for landscapes and the emblematic topoi of cityscapes, in the series of prints “after the daguerreotype” the introduction of figures in the foregrounds, as well as for decorative purposes, was seen as essential for the artists in order to satisfy the demand for the “picturesque” that was still persistent and widespread in the buying public, which at the time largely consisted of travellers who considered the representation of popular customs and vivacious daily activities in the places depicted, as one of the most evocative elements of such scenes.

Alongside this, however, the intention to objectively document the monuments, landscapes, and urban contexts was now more manifestly apparent, and there sometimes seems to be an attempt to confer a greater degree of simplicity and essentiality upon the images, especially in those cases in which they represent contemporary architectural features and monuments, which could not have appeared in the older prints, and which could now be more effectively documented by a new and more modern means of visual communication.

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24 “…après avoir obtenu le report sur acier d’un calque à la pointe sèche, par lequel la marche du travail se précise […] la part spéciale de l’artiste, dans l’exécution, est de compléter par la couleur l’expression des sites, des monuments ou des objets représentées […] les vues gravées seront animées par des figures. Lorsque les épreuves faites sur les lieux n’en auront pas, on y suppléera par quelques groupes pris dans des croquis tracés d’après nature dans les mêmes localités”. See [N.M.P. Lerebours], Avis de l’éditeur, in Excursions…, op. cit., first series, 1842.


26 At the Civica Raccolta di Stampe Achille Bertarelli (Milan) there are eight drawings, signed by L. Cherbuin and J.J. Falkeisen, dating to around 1842-1843, and measuring 162 x 214 mm circa (corresponding to the daguerreotype full plate), representing the following scenes: Veduta del Lago di Como (inv. P.V. 52-61); Villa Sommariva al Lago di Como (inv. P.V. 52-60); Ponte sul Bisagno a Genova (inv. P.V. 52-66); Villa Reale a Monza (inv. P.V. 52-62); Il Pantheon a Roma (inv. P.V. 52-64); Arco di Trionfo fuori Porta San Gallo a Firenze (inv. P.V. 52-67); Il Manicomio a Genova (inv. P.V. 52-65); Teatro Carlo Felice a Genova (inv. P.V.52-63). Cfr. M.F. Bonetti, D’après le Daguerréotype…, op. cit., p. 39, note 26 and figs. pp. 35, 36, 45 (i), 46 (q), 47 (u,v).