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The Cliché-Verre in the Nineteenth Century

Elizabeth J. Glassman

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Elizabeth J. Glassman

1977
THE CLICHÉ-VERRE IN THE NINETEENTH CENTURY

BY
ELIZABETH GLASSMAN
B.A., Sweet Briar College, 1971

THESIS
Submitted in Partial Fulfillment of the
Requirements for the Degree of
Master of Art in Art History
in the Graduate School of
The University of New Mexico
Albuquerque, New Mexico
December, 1977
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THE Cliché-Verre IN THE NINETEENTH CENTURY

BY
Elizabeth Glassman

ABSTRACT OF THESIS

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The cliche-verre process is a photographic technique; an image is made on a glass plate which is then employed as a negative for contact printing on a light-sensitive sheet of paper. The cliche-verre method for creating prints was developed in the mid-nineteenth century, a period of intense technical experimentation in photography and of revived interest in the graphic process of etching. As the cliche-verre incorporates elements of both print-making (a drawn matrix through a prepared ground) and photography (the presence of a photographic negative), the technique has occupied a middle ground between the two arts. The process has been explored only tentatively by photographic historians and by those interested in the history of the graphic arts. The purpose of this paper, therefore, is to expand the body of knowledge concerning the uses of the cliche-verre in the nineteenth century, to record the assorted chemical variations pertaining to technical exploration of the process and to examine the cliche-verre print from a visual point of view, ascertaining the character of the medium and the role of the individual impression in the success of the image.

The first portion of this thesis presents the precedents, development and technical procedures applied to the cliche-verre
in the nineteenth century. Despite the claims of H. Fox Talbot to have made the first cliche-verre in 1839, the honor must go to William Havell, Frederick James Havell and James T. Willmore, who, also in 1839, developed a process which most strictly embodied the principles of the cliche-verre. Certainly Talbot's exhibition of his photogenic drawings and the publication of his process were landmark events in the history of photography, but the three artist-engravers encouraged the use of the cliche-verre process for the creation of original designs, the avenue by which the cliche-verre found its most successful outlet.

Notwithstanding individual chemical variations by later practitioners, the basic procedure for executing a cliche-verre changed little from the method first outlined by the Havell brothers and Willmore. Two methods were presented for achieving the design on the plate: by drawing and by painting.

To execute a drawn plate, a glass is covered with a ground and a design is scratched through it. When this negative is put in contact with a sheet of light-sensitive paper and exposed to light, the scratched out areas of the plate allow light to pass through, exposing the paper beneath. The second method is tonal: opaque varnish is applied with a brush to the plate. By varying the density of application, which consequently alters the amount of light received by the paper, a full range of tones can be produced. The cliche-verre was a direct and sensitive means of achieving an autographic original in multiple copies.

Publishers employed the technique as a tool for both reproducing original works and for copying existing ones. In 1859, John W. Ehninger, an American publisher, issued a book of
cliché-verre prints illustrating the poetry of twelve American authors: *Autograph Etchings by American Artists*. Joseph Cundall in England used the cliché-verre technique as the initial step in the preparation of electroplates in *Electrophotography or Etchings on Glass*.

In the mid-nineteenth century France, two men, Adalbert Cuvelier, an industrialist turned photographer, and Constant Dutilleux, painter and lithographer, were responsible for encouraging the intense activity with the cliché-verre in Arras, a village north of Paris. Cuvelier and an assistant, Grandguillaume, prepared, processed and printed cliché-verre plates for a number of artists who visited Dutilleux. Among these were: Camille Corot, Eugène Delacroix, Charles Daubigny, Paul Huet, Jean-François Millet and Théodore Rousseau. The work created under Cuvelier's supervision represents the largest body of cliché-verre produced.

To Cuvelier and other practitioners discussed, the cliché-verre held a variety of fascinations. Some were attracted to the process for its reproductive possibilities, as was Ehninger. Others, especially Corot, found the medium satisfying for its flexibility as a drawing surface. Delacroix undoubtedly was drawn to the cliché-verre because of its association with photography.

But, from the conception of the cliché-verre method by the Havells and Willmore to the various efforts later in the nineteenth century, a similar basic attraction to the cliché-verre is apparent: it was a simple, flexible means of reproducing an autographic original.

The final portion of this thesis explores the visual syntax of prints produced by the cliché-verre method and compares impressions taken from plates in the nineteenth century as well as
impressions taken in the twentieth century from nineteenth century plates. To each medium, be it drawing, etching, painting, there appears not only the autographic presence of the artist, but the inherent vocabulary and texture of the medium itself. The print that results, its distinct physical character, has been previously overlooked in the cliché-verre. The comparisons confirm the importance of viewing cliché-verre prints in quality impressions.

This novel technique has been viewed as a surrogate etching, but the cliché-verre is a photographic process. Interpretations of the negative is chemical, not physical or mechanical like the wiping and printing of a copper plate. And yet, for so long the cliché-verre remained a step-child, finding its place neither in printmaking nor photography.
<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF PLATES.</td>
<td>xii</td>
</tr>
<tr>
<td>INTRODUCTION.</td>
<td>1</td>
</tr>
<tr>
<td>Endnotes.</td>
<td>5</td>
</tr>
<tr>
<td>CHAPTER</td>
<td></td>
</tr>
<tr>
<td>I. PREDECESSOR TO THE CLICHÉ-VERRE</td>
<td>6</td>
</tr>
<tr>
<td>Endnotes.</td>
<td>16</td>
</tr>
<tr>
<td>II. TECHNICAL DESCRIPTIONS OF THE CLICHÉ-VERRE</td>
<td>18</td>
</tr>
<tr>
<td>Endnotes.</td>
<td>26</td>
</tr>
<tr>
<td>III. REPRODUCTIVE APPLICATIONS OF THE CLICHÉ-VERRE</td>
<td>28</td>
</tr>
<tr>
<td>Endnotes.</td>
<td>36</td>
</tr>
<tr>
<td>IV. AUTOGRAPHIC APPLICATIONS OF THE CLICHÉ-VERRE</td>
<td>38</td>
</tr>
<tr>
<td>Endnotes.</td>
<td>48</td>
</tr>
<tr>
<td>V. THE CLICHÉ-VERRE AS PRINT</td>
<td>51</td>
</tr>
<tr>
<td>Endnotes.</td>
<td>63</td>
</tr>
<tr>
<td>APPENDIX.</td>
<td>65</td>
</tr>
<tr>
<td>PLATES.</td>
<td>69</td>
</tr>
<tr>
<td>SELECTED BIBLIOGRAPHY</td>
<td>103</td>
</tr>
</tbody>
</table>
# LIST OF PLATES

<table>
<thead>
<tr>
<th>Plate</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. H. Fox Talbot. <em>Photogenic Drawing of Lace, Feathers and Leaves</em>, 1839</td>
<td>69</td>
</tr>
<tr>
<td>2. H. Fox Talbot. <em>Photogenic Drawing of Fern and Jasmine</em>, 1839</td>
<td>70</td>
</tr>
<tr>
<td>4. R. W. Murray. <em>Photogravure of Lace</em></td>
<td>72</td>
</tr>
<tr>
<td>5. George Cruikshank. <em>Portrait of Peter Wickens Fry</em>, 1851</td>
<td>73</td>
</tr>
<tr>
<td>7. Camille Corot. <em>La Petit Soeur</em>, January 1854</td>
<td>75</td>
</tr>
<tr>
<td>8. Camille Corot. <em>La Jeune Fille et la Mort</em>, March 1854</td>
<td>76</td>
</tr>
<tr>
<td>10. S. R. Gifford. <em>Spring, from Autographic Etchings</em></td>
<td>78</td>
</tr>
</tbody>
</table>
16. Charles Daubigny. La Rentrée de Tropeau, 1862 ....... 84
17. Charles Daubigny. Vaches à l'Abreuvoir, 1862 ....... 85
18. Jean-François Millet. Femme Vidant un Seau. ....... 86
19. Théodore Rousseau. Le Cerisier de la Plante à Biau, from Quarante Clichés-Glace (1921), 1855. ....... 87
21. Paul Huet. Le Pont, ca. 1861 ....... 89
22. Armédee Pastelot. In Vino Veritas. ....... 90
24. Camille Corot. Souvenirs du Bas Bréau, from Quarante Clichés-Glace (1921), 1858. ....... 92
27. Camille Corot. Souvenirs d'Ostie, State I/II, 1855 ....... 95
28. Camille Corot. Souvenirs d'Ostie, State II/II, 1855 ....... 96
29. Camille Corot. Le Songeur, January 1854 ....... 97
30. Camille Corot. Le Songeur, from Quarante Clichés-Glace (1921), January 1854 ....... 98
32. Charles Daubigny. Effet de Nuit, from Quarante Clichés-Glace (1921), 1862 ....... 100

34. Charles Daubigny. *Le Gué*, from *Quarante Clichés-Glace* (1921), 1862 ............................................. 102
INTRODUCTION

The cliché-verre\(^1\) method for creating prints was developed in the mid-nineteenth century, a period of intense technical experimentation in photography and of revived interest in the graphic process of etching. As the cliché-verre incorporates elements of both printmaking (a drawn matrix through a prepared ground) and photography (the presence of a photographic negative), the technique has occupied a middle ground between the two arts. The process has been explored only tentatively by photographic historians and by those interested in the history of the graphic arts. The purpose of this paper, therefore, is to expand the body of knowledge concerning the uses of the cliché-verre in the nineteenth century, to record the assorted chemical variations pertaining to technical exploration of the process and to examine the cliché-verre print from a visual point of view, ascertaining the character of the medium and the role of the individual impressions in the success of the image.

Throughout the nineteenth century the cliché-verre process was employed by publishers seeking an inexpensive means of reproduction and by artists exploring new avenues for expression. Artists' activity with the cliché-verre peaked about 1865, and, soon thereafter, the process passed into relative obscurity only to resurface in the early twentieth century.
In 1921 a portfolio of forty cliché-verre prints, *Quarante Clichés-Glace*, was published in Paris by Edmond Sagot and Maurice LeGarrec. The prints, made from glass negatives drawn by Corot, Daubigny, Millet, Rousseau and Delacroix in the nineteenth century, greatly increased the number of cliché-verre prints in circulation as the original editions were quite small. This portfolio was instrumental in bringing the cliché-verre process to the public's attention.

The publication of two articles brought the cliché-verre into further focus and these essays, one by Germaine Hediard, published in *Gazette des Beaux Arts* (1903)² and the other by Osbert Barnard, *Print Collector's Quarterly* (1921)³, have remained the major sources of factual information on the cliché-verre process. Hediard and Barnard described the process and listed many examples of its use, particularly by members of the Barbizon School; but, while making important contributions to the literature, they tangled many facts and did not mention many uses.

In most contemporary histories of photography, as well as those of the graphic arts, the cliché-verre is mentioned only in passing; the reader is directed to the articles by Barnard and Hediard for further information. Sometimes several facts are added, but there is no single source where the miscellaneous references are gathered.

A few writers have examined the cliché-verre of Corot, which has been useful in placing these images into his total oeuvre as an artist. However, the essays do little for our understanding of the cliché-verre, itself.
In the 1970's, the cliché-verre technique is undergoing a small renaissance as several artists are re-examining the potentials of the medium. The current interest is understandable in light of the present concern of artists to explore "mixed media." The boundaries of painting, printmaking and photography are often indistinguishable and, in contemporary art, process and product are at times viewed as two distinct areas for examination.

The procedure used to prepare a cliché-verre plate has received repeated attention and certainly the working method is an integral part of any technique. Yet even these technical facts are unclear in the literature. The first portion of this paper presents the precedents, development and technical procedures applied to the cliché-verre in the nineteenth century.

Technical definitions of a process are limited to methodology; the cliché-verre also exists as print. In the final impression, the process becomes the product. To each medium, be it drawing, etching, painting, there appears not only the autographic presence of the artist, but the inherent vocabulary and texture of the medium itself. The print that results, its distinct physical presence, has been previously overlooked in the cliché-verre.

Many authors refer to the cliché-verre as "photographic etchings," but the comparison to printmaking is only accurate in that both employ a hand drawn printing matrix. The cliché-verre is a photograph, made without a camera; a light-sensitive surface is transformed as chemicals alter in response to light. Interpretation of the negative is chemical, not physical like the
manipulation of ink on a copper plate.

The development of tone is also a distinguishing factor. In etching, the creation of both form and tone depends on hatched lines, printed in black, which, when drawn close enough, visually merge to form grey. In the cliché-verre, dots broken through the ground and large areas of light striking the sensitized paper produce continuous tone. By examining various impressions, both individually and comparatively, the second portion of this thesis explores the visual syntax of the prints produced by the cliché-verre method and confirms the importance of viewing cliché-verre prints in quality impressions.
ENDNOTES

INTRODUCTION

1 See appendix for a discussion of the term "cliche-verre."


CHAPTER 1

PREDECESSORS TO THE CLICHÉ-VERRE

Predecessors to the cliché-verre were established in the experiments of Thomas Wedgwood, the photogenic drawings of H. Fox Talbot and the reproductive work of William Havell, Frederick James Havell and J. T. Willmore. Their investigations established a basic principle of this process--superimposition of an object on a sensitized surface, or contact printing. When direct contact is made, the image is transferred to the blank paper by the action of light.

Late in the eighteenth century, Thomas Wedgwood (1771-1805), son of the famous porcelain manufacturer Josiah Wedgwood, sought to reproduce images on glass using the action of light on the salts of silver. Wedgwood's experiments were derived from the work of a German chemist Johann Heinrich Schulze (1687-1744) who, in 1727, described the light sensitivity of silver salts and succeeded in reproducing images of letters. In Wedgwood's investigation the primary objective was not only to reproduce existing images but also to render these permanent, insensitive to further action of light. Although Wedgwood failed to fix his images, his work stimulated further experimentation concerning the chemical change of silver salts in response to light.

Wedgwood's work on his "Silver Pictures" dated from as early as 1791 but he did not complete his experiments until 1800. He began by moistening white paper or leather with a solution of silver
nitrate which he found was reduced to metallic silver, of dark tone when exposed to light. Wedgwood described this phenomenon in 1802 and noted a crucial aspect of the contact printing process: tones or tints are specifically controlled by the amount of light passing through the imposed image.

When a white surface, covered with a solution of nitrate of silver, is placed behind a painting on glass exposed to the solar light; the rays transmitted through the differently painted surfaces produce distinct tints of brown or black, sensibly differing in intensity according to the shades of the picture, and where the light is unaltered the colour of the nitrate becomes deepest. 

The means of achieving tone is particularly important as a prime distinction between photographic and graphic techniques. In contact printing, the density of particular areas determines the strength or intensity of the tone. In the graphic arts, by contrast, tones are established by techniques of drawing, by application of ink and by procedures peculiar to the graphic process employed.

As indicated by the title, "An account of a method of copying paintings upon glass, and of making Profiles, by the agency of Light upon Nitrate of Silver," which was published in Volume I, 1802, of the Journal of the Royal Institution of Great Britain, Wedgwood hoped to use the new chemical principles to reproduce paintings and silhouettes on glass and to fix images obtained from a camera obscura. Although Wedgwood failed to produce a method for arresting the further action of light and the results of his labors are lost to us, in his investigations the idea of recording the camera obscura image on a surface sensitive to light first evolved.

Like Wedgwood, William H. Fox Talbot (1800-1877) sought to reproduce the images of the camera obscura with light sensitive
materials. Unlike Wedgwood, Talbot did find a method for rendering his images relatively permanent. Among Talbot's experiments he worked with creating images by superimposing objects on a sensitized paper, which he called "photogenic drawings."

Although Talbot began his studies in 1834, and was to some degree successful by the following year, his findings were not published until 1839. Impetus for publication stemmed from the publicity and enthusiasm over the announcement of Daguerre's invention in France. Talbot immediately claimed every aspect of his work, both stated and implied, as his exclusive domain.

In seeking a claim to priority for his invention, Talbot exhibited photogenic drawings at a meeting of the Royal Institution in London on January 25, 1839. While the specific images exhibited are not recorded, many examples of photogenic drawings do exist which date from this period (Plates 1, 2, 3). Talbot also submitted a lengthy description of his experiments to the Royal Society and published accounts appeared in The Literary Gazette and The Athenæum. Talbot's principal goal, to reproduce existing objects, both natural and artistic, was explicitly stated in the title of the paper: "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."

Talbot devoted most of the text to designating applications of his process rather than to a detailed scientific description. A complete technical description was not published until later in the month. But, Talbut did reveal in his original statement that his invention was based on the contact printing of translucent objects on a sheet sensitized with silver chloride. While Talbot recognized
that his contact process and Wedgwood's were similar, he maintained that he was unaware of his predecessor's work when he began his own. Talbot perceived this as an advantage for he wrote:

The circumstance...that the paper on which these images were depicted was liable to become entirely dark...would perhaps have induced me to consider the attempt as hopeless, if I had not, (fortunately), before I read it, already discovered a method of overcoming this difficulty, and of fixing the image in such a manner that it is no longer liable to injury or destruction... This chemical change, which I call the preserving process, is far more effectual than could have been anticipated. The paper, which had previously been so sensitive to light, becomes completely insensible to it..."7

That Talbot succeeded in stabilizing the image was fortunate; had he not we might still be viewing the photogenic drawings only briefly and by candlelight, as Talbot proposed in 1834, before the "preserving process" was perfected.

Photogenic drawings, achieved by superimposition, were actually negative images of the original object. Talbot was aware of this and of the possibility of using the negative to obtain unlimited copies of the image. In point eleven of the lengthy account, Talbot wrote:

But if the picture so obtained is first preserved so as to bear sunshine, it may be afterwards itself employed as an object to be copied; and by means of this second process the lights and shades are brought back to their original disposition...I propose to employ this for the purpose more particularly of multiplying at small expense copies of such rare and unique engravings as it would not be worthwhile to re-engrave, from the limited demand for them."8

While reversal of engravings was disturbing to Talbot, he considered it perfectly acceptable to have black or white lace, "the object being only to exhibit the pattern with accuracy."9
Talbot was somewhat attuned to the beauty of the negative as an image. In the *Pencil of Nature*, he reflected, "The leaves of plants thus represented in white upon dark ground make very pleasing pictures...."\(^{10}\) Talbot failed to recognize, however, that in the photogenic drawing subtle gradations of tone dominate precise detail, the image becoming more than an exact copy of the object superimposed.

**Jasmine and Fern** (Plate 2) is a photogenic drawing executed by Talbot in 1839. The sharp, solid white-yellow of the leaf shapes appear as floating, ghostlike images of a jasmine or fern. The formerly three dimensional objects are represented as flat pattern. In contrast, shifting tonal variation dominates the background. Brown in the center, the tone gradually becomes pink toward the edges. Delicate coloring of the tonal field contrasts markedly with the hard-edge shapes of the plants. While the pattern of the plants is represented with accuracy, the whole is not one of realistic representation. Rather, there is an ephemeral quality, an un-earthliness to the image.

The tonality apparent in the photogenic drawings marks these experiments as distinctly photographic in execution. A comparison between a photogenic drawing by Talbot (Plate 3) and a photogravure made by contact with lace (Plate 4) illustrates well the disparities between photographic and graphic execution. The photogravure records the lace pattern as strict black lines on white ground. Intensity of black correlates to the amount of ink held in the grooves. Wherever the line has been more deeply engraved, the ink collects with increased density, translating as a darker line. The suggestion of tone in the upper left seems to be the result of a plate not
cleanly wiped; a residue of ink film remains.

The abstract quality of the photograph, achieved in tones, contrasts with the precise representation of lace in the photogravure. The lace in the photogenic drawing appears divorced from the object as it exists in reality. The tone of the background, produced by the amount of light reaching the sensitized sheet, and the flat pattern of the lace, overlapping in areas and resulting in yet another subtle shift in tone, causes the image to emerge as independent of the thing represented. In the photograph, tone carries the image. Light initiates chemical changes which result in the final representation of shifting values. In the photogravure, the image is formed by lines carrying varying amounts of ink.

In addition to photogenic drawings of natural objects, Talbot executed reproductions of paintings on glass by contact printing. Talbot described these reproductions briefly on point seven, "Paintings on Glass." The pictures thus formed, he wrote, "resemble the production of the artist's pencil more, perhaps, than any of the others."

The question of copying works of art by photographic means would later engage Talbot in one of his notorious disputes on priority, when the idea was taken up, enlarged and reorganized by three of his contemporaries: William Havell (1782-1857); his brother, Frederick James Havell (1801-1840); and James Tibbits Willmore (1800-1863).

In March of 1839 these English artist-engravers exhibited their camera-less photographs at the Royal Institution and the Royal Society and William Havell disclosed the mechanics of the technique in a detailed account which appeared in The Literary
Two methods were reported: 1) scratching a design on a thin ground of white lead varnish; 2) painting on highlights in white lead paint and achieving half tints by varying the opacity of the varnish.

The painted plate had the greatest appeal to the Havells and Willmore because of its resemblance to the mezzotint process, a technique they used in their mezzotint copies of Turner's paintings. When writing of the technique, William Havell often used his experience as a printmaker not only in judging his efforts but in executing his experiments as well. For example, light seepage in the middle tints caused a disturbing darkness to the completed image. Havell remedied the shift by using a technique familiar to the engraver.

I immediately painted the parts over with black on the other side of the glass, which answers to the practice of engravers in stopping out, when a plate is bitten too fast by the acid. This may be wiped off, renewed or suffered to remain at pleasure.

The ground for the drawn plates was composed of a formula achieved by modifying his etching ground formula. The mixture, made of white lead and sugar of lead, to quicken the drying, mixed with wax and copal varnish, was also used for the painting varnish. Havell wrote that they often incorporated in one image the painted method and the drawn plate, an effect he admired for its resemblance to lithography. Once prepared, the whitened plate was placed on black paper and was ready to receive a drawing. The artist, according to Havell's account, could proceed with any sharp instrument, such as an etching needle or pen knife, depending on the type of line desired.
Unfortunately, none of their prints are known to exist, but their efforts were described and praised by contemporaries. One critic raved that the images were "exquisitely beautiful;" others greeted news of the invention with fear. One editor remarked:

Mr. J. F. Havell and Mr. Willmore, have, by covering glass with etching ground and smoke, sketched designs upon it. Through the glass thus exposed by the scratches, the photogenic paper receives the light, and the design, which the sun may be said to print, may be multiplied with perfect identity forever! Designs thus produced will probably become much more common, and even more generally applicable than lithography, because all the means are more readily accessible, whilst it will receive its rank as an art, and be excellent in proportion to the skill of the artist, as a draughtsman with the etching needle... The first report of the discovery in France alarmed the painters from nature; next, the specimens of etched plates and printed impressions alarmed the engravers; this further discovery has replaced it as an art, in the hands of its professors. But, since the sun has turned printer, we fear that the devils will ultimately suffer.14

Golding Bird, a botanist, discussed the achievements of the trio at length in The Mirror and Robert Hunt acknowledged the work of the three man team in his Popular Treatise on the Art of Photography.15

While the initial project was to copy an etching by Rembrandt, Faust Conjuring Mephistophiles, Havell did not use the original print as a matrix but rather he copied it onto a glass plate. Havell emphasized the importance of this distinction and he cited the essential difference between his and Talbot's work.

Mr. Fox Talbot's "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" is exactly the reverse of my process.

My objective is to delineate the work of the artist's pencil by the photographic process, for the knowledge of which we are indebted to the frank disclosure of Mr. F. Talbot on the 23rd of February.16
Havell, in this perceptive statement, separated his process from Talbot's and emphasized his intention to reproduce original drawings. Havell also accurately forecast the many uses later adapted to the process.

These processes may be applied to original designs, copies from paintings...without the aid of engravers, printers, or presses...It will give use to a new employment: to the artist, in making original designs on glass, as well as copies from pictures; it will be a source of amusement to the amateur; and an elegant employment for ladies, particularly those who can paint or draw. It is perfectly available to those who wish to publish a limited number of illustrations...It will be an art per se.17

Fox Talbot, having heard of the inventors' intention to patent their process, claimed that he, "nearly five years ago," had made, "imitations of etchings, which were executed wholly in this manner with a needle upon glass."18 Although the claim was absent from his first account, Talbot rectified the omission and restated his findings. The March and April issues of the Athenaeum and The Literary Gazette became a battle ground for a polite but heated discussion of priority of invention.

The debate concerning priority continued for several more weeks with biting letters from William Havell and J. T. Willmore and sharp responses from Fox Talbot. The argument dissipated in April after a letter was published in which William Havell withdrew his claim for a patent19, and it is Talbot's name that was ultimately associated with the process. Nevertheless, judging from the published statements, the Havell brothers and Willmore must rightfully be named as the inventors of the cliché-verre process as their principle goal was the reproduction of original drawings which were made on glass expressly for that purpose.
The earliest extant cliché-verre is a caricature by George Cruikshank (1792-1878), the English satirical artist, of the photographer Peter Wickens Fry (Plate 5). Cruikshank's cliché-verre, dated December 19, 1851, is a spontaneous and humorous sketch of the photographer looking down his glasses and, according to the inscription, exclaiming, "Etched on Glass! Dear me! How very curious!"

Handwritten notes by Helmut Gernshein, in whose collection the print was located, indicate that this cliché-verre was printed by Peter Fry, a fact corroborated by a note in the 1854 *Liverpool Photographic Journal* that "etchings, by George Cruikshanks (sic) and Bartholomew, on glass, covered with collodion and gutta perch, and printed by P. W. Fry, also (were exhibited at the London Photographic Society) on the 19th of December, 1851..." At this point, Bartholomew's efforts remain a brief mention; perhaps further evidence of activity with the cliché-verre will be documented, in time, by the appearance of works by Bartholomew and other practitioners whose efforts are now unknown.
ENDNOTES

CHAPTER 1


4 Newhall, History, p. 33; The Lattice Window by Talbot, for example, dates from 1834.


6 The Athenaeum, February 23, 1839, p. 156.

7 The Athenaeum, February 9, 1839, p. 115.

8 The Athenaeum, February 9, 1839, pp. 116-7.


10 Talbot, Pencil, p. 92.


*The Literary Gazette*, March 30, 1839, p. 203.

The first editor is quoted from *The Literary Gazette*, April 6, 1839, p. 215; the second, longer comment appears in *The Literary Gazette*, March 23, 1839, p. 187.


The prospectus for Ackermann's Photogenic Drawing Apparatus, a kit issued in 1839 by Ackermann and Co. which was "sufficiently clear to enable Ladies to practice this pleasing art," there are instructions for executing a cliché-verre, termed a "line-engraving on prepared paper." Helmut Gernsheim papers, Humanities Research Center, University of Texas at Austin.

*The Literary Gazette*, March 30, 1839, p. 204; and *The Athenaeum*, April 6, 1839, p. 260.

The letter, dated April 11, 1839, was published in *The Literary Gazette*, April 13, 1839, p. 236.

CHAPTER II

TECHNICAL DESCRIPTIONS OF THE CLICHÉ-VERRE

The basic procedure for executing a cliché-verre changed little from the method first outlined by the Havell brothers and Willmore in 1839. An image is made on a glass plate which is then employed as a negative for contact printing on a sensitized sheet of paper. Two methods were presented for achieving the design on the plate: by drawing and by painting.

To execute a drawn plate, a glass is covered with a ground through which a design is scratched. When this negative is put in contact with a sheet of light-sensitive paper and exposed to light, the scratched out areas of the plate allow light to pass through thereby exposing the paper beneath. The second method is tonal: opaque varnish is applied with a brush to the plate and by varying the density of application, which consequently alters the amount of light received by the paper, a full range of tones can be produced.

Throughout the nineteenth century individual practitioners did introduce chemical and technical variations to the cliché-verre process. Many touted the process under a different name; some claimed independent invention.

Helmut Gernsheim wrote in The History of Photography that a "similar technique had been independently devised by F. A. W. Netto." Netto (1783-?), author of the first German daguerreotype manual, published his technique of "glass printing" in a brochure, Die
Glasdruckkunst oder Hyalotypie (Leipzig, 1840). Netto was actively involved in photography and he immediately experimented with new techniques, however, the originality of his method of "glass printing" can not be documented.

In 1841 the procedure for executing a cliché-verre was described in two important technical manuals: *The Art of Engraving* by T. H. Fielding and *A Popular Treatise on the Art of Photography* by Robert Hunt. That the cliché-verre was included in both photography and printmaking manuals is significant. As early as 1841 writers like Fielding and Hunt discussed the process in dual terms, referring to the cliché-verre as both photograph and etching.

Fielding described both the drawn and the painted methods of creating a design on the plate. To execute a cliché-verre by the drawn method, which Fielding called a "photogenic etching," he recommended a ground composed of lamp black and varnish. For the painted plate, an "imitation of mezzotint engraving," Fielding suggested a painting medium of white lead mixed with varnish. That Fielding included mention of the cliché-verre in his treatise on engraving is not surprising for he hailed photography as "the most wonderful discovery that has ever taken place in the fine arts."³

Robert Hunt devoted a section to the cliché-verre under the heading, "Positive Photographs from Etchings on Glass Plates." By this technique, Hunt felt, "a very easy method of producing any number of positive photographs from an original design, is in the power of everyone having some slight artistic talent." Writing one of the first critical evaluations of the cliché-verre, Hunt commented:

> When the etching is executed by an engraver, the photograph has all the finish of a delicate copper-plate engraving. The only thing which detracts
from this method of photography is, that the great merit of self-acting power is lost. 4

A Parisian photographer, Barthélemy Pont, encouraged his contemporaries with "artistic talent" to try his method for photographically printing their original drawings on glass. Pont's process included the standard technical procedures, but his chemical variations added the possibility of creating effects of wash, stump and roulette. Thus, Pont claimed, artists working in a variety of styles would be attracted to "the process of autographic engraving." 5

Pont received a French patent in November, 1854, and his "process of autographic engraving" was protected under British patent law in February of the following year. 6 In 1855 Pont published a complete technical and chemical description in an article which appeared in Bulletin de la Société Française de Photographie. 7 The article was co-authored with Harville who must be given equal recognition. Harville and Pont were aware that the idea of the cliché-verre was not a new one; they mention three predecessors: Berry, Saint-Evre and Beauvière. It is interesting that the author cites neither the work of the Havells and Willmore, nor of Talbot but rather three experimenters whose work is unfamiliar today.

Harville and Pont hinged their refinements on the development of a new ground. Their predecessors used a ground of printer's ink which they found unsatisfactory for two reasons. The ground, too hard and tight, tore easily and produced lines which in the final print were thin and faint. Harville and Pont's improved ground was based on the newly discovered process of coating glass plates with collodion. Collodion, a mixture of guncotton in alcohol and ether, was adapted to photography by Frederick Scott Archer in
1851 and quickly became the leading method for sensitizing glass-plate negatives.8

Harville and Pont began by flowing a thin coat of collodion, to which iodine of ammonia had been added, evenly over the plate. The plate was then placed in a diluted bath of acetate of lead. An opaque yellow precipitate formed on the glass which provided a thin, uniform drawing surface. The artist could then proceed to execute a design on the plate, which had been placed on a black cloth for contrast. Drawing completed, the plate was processed by submersion in another bath, this one of potassium bichromate, which changed the white salts of lead into yellow chromate. Once the plate was dried and varnished, it was ready for printing.

However, if the artist planned to use stump or wash techniques, Harville and Pont instructed the technician to submerge the plate in a bath of potassium bichromate before proceeding to draw on it. The plate was also coated with dextrine to provide a harder support for the action of the stump. After the artist composed with needle and stump, the plate was varnished. At this point, wash effects could be added by brushing opaque paint on the plate.

At least one cliché-verre printed by Harville and Pont remains extant, a landscape by Jules Noël (1815-1881) (Plate 6). The print, dated 1855, is mounted on a larger sheet which is stamped: "Brevet d'Invention/ S. G. D. G./ Procédé Harville and Pont." The landscape illustrates the wide range of effects possible with the Harville-Pont method.

In the traditional cliché-verre process, tonal variation was difficult to achieve. Lines drawn on the plate received equal
amount of exposure and tones remained consistent throughout. As a result, space in the cliché-verre appeared flat or two dimensional. In creating additional tones on the plate in wash and stump, Harville and Pont alleviated this problem. Noël's landscape, printed in a deep, rich brown, is enlivened by a delicate tone of beige and by highlights of whiter areas. The overall effect contributes to a sense of space in delineating a slow shift from foreground to a deep recession of hills in the distance.

In contrast to the complex technique of Harville and Pont was the straightforward manner which Adalbert Cuvelier, an amateur photographer working in Arras, north of Paris, devised for executing a cliché-verre. Most likely spurred by Pont's disclosure, Cuvelier published his independent findings in the following issue of the Bulletin de la Société Française de Photographie, but he had been successful with the process by at least 1853. A professor of drawing in Arras, L. Grandguillaume was actively working with Cuvelier but did not attach his name to the publication of the process.

Cuvelier's technique was direct and flexible; the plate could be prepared quickly and was immediately ready to draw on. This simplicity was attractive to artists who, with no prior experience, could master the preliminaries with few instructions. Cuvelier and Grandguillaume prepared, processed and printed cliché-verre plates for a number of artists who visited Constant Dutilleax (1807-1865), a French painter who lived in Arras. Cuvelier actively encouraged Camille Corot, Eugène Delacroix, Charles Daubigny, Jean-François Millet and Théodore Rousseau to experiment with his process of "dessin heliographique." The work created in Arras represents the
largest body of cliché-verre produced.

Cuvelier, as others before him, developed two categories of cliché-verre plates: the drawn plate and the painted plate. In contrast to Harville and Pont, who began with a ground of printer's ink and changed to collodion, Cuvelier initially adopted sensitized collodion as a ground for drawn plates but later abandoned it, switching to printer's ink. Cuvelier found the collodion dry and brittle; lines dragged across the plate appeared ragged in the final print. For example, *La Petite Soeur* by Corot (Plate 7), an early plate of 1854, was drawn on a collodion surface. The line quality is rough and scratched, stopping and starting in the length of one stroke. Dark areas appear in random fashion where, in attempting a cross-hatched tone of regular density, the collodion base has flaked off.

To remedy this situation, Cuvelier soon developed an alternative method. The new ground was formed by rolling a thin film of printer's ink on the glass plate which provided a tight uniform surface. To help the artist visualize the results, finely powdered white lead was sprinkled on the ink film and the plate was placed on a black cloth creating the sensation of drawing black lines on a white field.

In contrast to the thin ragged line created on a collodion base, lines drawn on the ink film appear continuous and flowing. Using a variety of tools -- etching needles, the end of a paint brush, sticks -- Corot created *La Jeune Fille et la Mort* in 1854 (Plate 8). Loose hatching models the forms and dark tonal patches give strength to the bare tree. The allegorical image, unusual in Corot's cliché-verre, is one of bold flowing lines, each clear and distinct.
Half tones could be created by breaking the ground with small dots, referred to as tamponnage because the artist tapped on the plate with a stiff brush. The small holes in the ground appear in the impression as a continuous tone.

A second method of creating half tone involved a very different approach. Instead of drawing lines of hatching or tapping dots on the plate, one painted the composition in opaque oil paint. The painted method was simple and direct and had the advantage of requiring little preparation. To aid in visualizing the results, the plate was placed on a black cloth and the scene painted in a light color. The opaque substance served to block the light, creating areas of white in the final impression. Gradations of tone were achieved by using a more transparent substance. Often the tonal areas were reinforced by drawing lines with a stick through the painted areas. André Jammes, in describing Corot's approach to the painted plate method, commented on a basic characteristic of the technique.

Corot smeared the glass surface with an opaque substance and with small sharpened sticks drew lines that came out black on the print.

Coats of paint of different thickness created variations of tonality. It was actually a painting evolving into a photograph.

While the Harville and Pont team and Cuvelier differ in details of technical execution, they shared an important similarity of purpose. Each used the cliché-verre as a drawing surface for the creation of original works, not as a method of copying existing images.

Despite repeated publication of the cliché-verre technique,
individual photographers persisted in publishing the process as an original invention. In 1868, an anonymous author writing in The Photographic Journal recorded the work of "a practical man" who has succeeded in producing imitations of etching, a process "which has been described before, but is still little known." 14

As late as 1924, an isolated artist working in Singapore claimed to have found the method for creating "reproductions of etchings," according to an anonymous contributor to the Bookman's Journal and Print Collector. The correspondent wrote of the incident with some humor as the writer was aware of the numerous cliché-verre produced in Arras under Cuvelier's direction. Titling his article, "The Cliché-Verre Again," the author was not impressed by the artist's process. For, according to the correspondent, cliché-verre prints lacked "quality" in that there is "no texture and no relief" and the cliché-verre, he felt, should be reserved for the amateur "anxious only to reproduce a happy drawing for a few friends." 15
ENDNOTES

CHAPTER II

1 See appendix for a discussion of the term "cliché-verre."


4 Hunt, Photography, pp. 34-5.

5 Bulletin de la Société Française de Photographie, 1855, p. 359.


7 Bulletin de la Société Française de Photographie, 1855, pp. 358-60.

8 Newhall, History, pp. 48-9.

9 Bulletin de la Société Française de Photographie, 1856, pp. 23-4; 1853 is the date of Corot's first cliché-verre, Le Bucheron de Rembrandt (Plate 12).

11Hediard, "Procédés," p. 411; Corot used this technique to great advantage in Le Grand Cavelier sous Bois (Plate 15).

12Two examples of this technique are illustrated: Le Songeur, Corot (Plate 29) and Vaches à l'Abreuvoir, Daubigny (Plate 17).


14The Photographic Journal, XXX (May, 1868), p. 60.

CHAPTER III

REPRODUCTIVE APPLICATIONS OF THE CLICHÉ-VERRE

While artists admired the cliché-verre because it offered a direct and responsive drawing surface, publishers employed the technique as a tool for reproducing both original works of art and for copying existing works. As noted, the Havells and Willmore team were especially interested in the reproductive application of the cliché-verre as a means of augmenting their printing and publishing activities. Throughout the history of the cliché-verre, publishers, often "rediscovering" the process, explored the reproductive applications of the cliché-verre technique.

In 1857 Robinson Elliott, an English artist experimenting with photography, secured a patent for his "improved invention" for copying pictures.¹ The Elliottype applied the cliché-verre method not only to reproducing existing works of art, but also to enlarging and reducing these images.

Elliott disclosed his method in his patent application. He began by placing a glass plate, brushed with a thin transparent paste, over the image being copied. The outlines of the work were then traced in chalk on the glass. The picture was removed from behind the glass plate and a black cloth was substituted. Elliott then completed the design on the glass, filling in details in opaque paint the areas that would appear white in the final print. Sensitized paper was placed in direct contact with the painted side of the glass.

28
and the print was exposed, developed and fixed.

Elliott's process was analogous to the painted plate technique described by the Havell brothers and Willmore in 1839 and their prior invention was acknowledged by the anonymous author who documented the invention of the Elliottype in The Art Journal. The author did praise, however, the contribution of Elliott: "The cheapness of the Elliottype will enable everyone to possess faithful copies of the rarest pictures by the highest masters."

Contemporary with Robinson Elliott's work was the publication in 1859 of Autograph Etchings by American Artists by John W. Ehninger. Twelve American artists sketched designs on glass to illustrate the poetry of twelve American authors for Autograph Etchings. The artists included important artist-illustrators, such as S. R. Gifford, Asher B. Durand, F. O. C. Darley, W. P. W. Dana, Eastman Johnson, J. F. Kensett and John Ehninger, as well as contemporaries -- L. R. Mignot, E. Leutze, J. W. Casilear, J. W. Parsons, and George Boughton. Writing in an introduction addressed to "my brother artists," Ehninger noted the importance of the album:

In presenting to the public this collection of original etchings by twelve native artists, I would willingly believe that I may be in some degree instrumental in furthering the interests of American art, by facilitating its diffusion in a form less liable than any hitherto introduced into general use, to the inevitable distortions which accompany the best efforts of the engraver. 4

John Whetton Ehninger (1827-1889), active as an illustrator throughout his life, constantly sought a means of reproduction more sensitive than the engraver's translation of an original design. In his search for the single most effective means of reproduction, Ehninger tried many different techniques. He expressed his initial
interest in etching as a means of multiplying designs "without recourse to the intermediate aid of an engraver." In the publisher's preface to Autograph Etchings, Ehninger noted that he became interested in etching as a means of multiplying his designs but he soon realized that the complex and delicate technique demanded years of experience and "is fraught with so many chances of failure, as to be almost unavailable for the great masses of artists."

The idea of "autograph etchings" first came to Ehninger in the fall of 1857 when a friend mailed him an article from the German newspaper, Coelnischer Zeitung, which described the cliché-verre process. Ehninger followed the method introduced in the article with little success. However, he was convinced the process was worth pursuing with modifications.

According to Ehninger, white lead paint was recommended for coating the glass. The finished plate was immersed in a strong bath of sulphuret of potassium which blackened the plate and rendered it opaque. Ehninger, unsuccessful in perfecting the method described, complained of three major problems. First, he could not achieve an even surface on the glass, which caused the lines to be scratchy, ragged and heavy. Second, the surface of paint flaked off as it dried; a critical point as this surface supported the drawing. And last, the final bath made the paint extremely soft, causing the surface to brush off with the slightest disturbance.

Ehninger, sufficiently convinced that the basic principle -- superimposition of a hand drawn negative on a sensitive sheet -- was worth pursuing, began experiments to find a replacement for white lead paint as the coating medium. His solution, which he considered
an independent and original finding, was to substitute opaque collodion. He first flowed the glass plate with collodion mixed with silver nitrate. The opaque plate, placed on a dark material for contrast, was at this point ready for the drawing. Ehninger varnished the drawn surface for added protection and proceeded to expose the negative on photographic paper.

Ehninger was enthusiastic about the directness and simplicity of the drawn plate technique. In contrast to etching, lines drawn on the plate appeared black on a white ground, as they would in the final print. And artists needed no previous experience with the process to create successful cliché-verre prints.

Only one quality of the cliché-verre method disturbed Ehninger; half tones which differentiate planes in the composition and contribute to aerial perspective were absent. The Havells and Willmore resolved the problem by developing the painted plate method, Pont by the addition of stump and wash techniques and Cuvelier by tapped dots on the surface. But Ehninger wrote only of the drawn plate; he neither mentioned the painted plate, nor is one included in Autograph Etchings.

In the drawn plate method, light reaches the sensitized sheet through the scratched lines with equal intensity. The foreground areas print the same tone as those of the background. To Ehninger, without the "invention of the method of subduing color, in parts where greater delicacy is required" the scope of the cliché-verre was "necessarily rather limited."

John Ehninger did contribute a significant and independent addition to the cliché-verre process with his solution to the problem of achieving aerial perspective. Ehninger resolved the problem
by painting the reverse side of the drawn plate. This idea had been mentioned by the Havells and Willmore, but the technique was never fully explored by them.

Ehninger coated the reverse side of the drawn plate with a thin varnish composed of asphaltum dissolved in turpentine. When the varnish was dry, he outlined the areas of the design which were to appear lighter in the final print. From all areas which were to remain dark, he removed the dried varnish with alcohol. By diminishing the intensity of light transmitted through the coated areas, Ehninger was able to establish two tonal areas, one receiving full light and one filtered light.

Of the twelve illustrations in Autograph Etchings, the varnished plate is utilized in only four. The Tropics (Plate 9), a cliché-verre by L. R. Mignot, which accompanies a poem by R. H. Stoddard, illustrates the use of the varnished plate to suggest aerial perspective. The area of the ships and sky are varnished from the back and print as greyish brown. The dark mass of the rock and more open areas of vegetation in the foreground receive full intensity of the light and print as black.

While Ehninger's technique does provide an additional tone on the plate, suggesting a third dimension, the final solution is not a total visual success. Instead of producing half tones of black, which could fuse the far and near space, the two tones read as separate units. Rather than creating a movement from foreground to background, the result is two distinct dimensions. In The Tropics, for example, the abrupt shift in space from harbor to shore jars the viewer.

The effect of two distinct dimensions is not as disturbing
when there is an extreme distance from foreground to background. In these images the extreme spatial shift can be accommodated visually. In *Spring* (Plate 10), drawn by S. R. Gifford, with poetry by N. R. Willis, the separate spatial planes are acceptable because the church tower and pastoral village appear far removed from the two children exploring a brook in the woods. A middle ground is suggested by the enclosure of the enveloping tree which emphasizes the spatial distance between background and foreground.

Ehninger's own contribution to *Autograph Etchings* illustrates H. W. Longfellow's poem *The Exiles* (Plate 11). In a well executed, though sentimental, example of a cliché-verre, Ehninger creates a number of tones by varying the density and quality of line rather than by employing the varnished plate technique.

As did Ehninger in America, Joseph Cundall, (1818-1895), an English publisher, employed the cliché-verre process as a method of reproduction in book illustration. Cundall, also like Ehninger, used the cliché-verre as a drawing surface for the creation and multiplication of original works, not as a method of copying existing works. In this Ehninger and Cundall differed only in technical execution from the Havells and Willmore.

Cundall, as well as being an active publisher, printer and editor, had a long history of involvement in photography. He was a founding member of the Photographic Society of London (now Royal Photographic Society) and arranged some of England's earliest photography exhibitions at his shop, The Photographic Institution.\(^8\)

In 1864 Cundall issued a pamphlet entitled *Electrophotography* or *Etching on Glass* which described "an entirely new process for the reproduction of artist's own drawings."\(^9\) Cundall felt the
process offered "many advantages to those who desired to see their own work reproduced line for line." To illustrate this point, he included in the pamphlet images by six English artists: J. C. Hook, Birket Foster, Frederick Walker, W. S. Coleman, W. P. Burton, Harrison Weir. Some of the images were executed on glass plates and then printed as electrotypes and some were printed directly from glass plates.

Cundall had employed photoelectric plates in his 1856 publication entitled Photographic Art Treasures but this was the first instance of using "etchings on glass" as the initial step in the preparation of electrotype plates. According to Cundall's description, a drawing was made on a "glass plate specially prepared with collodion." The cliché-verre was then photographically printed onto a metal plate from which an inked impression could later be taken.

Cundall credited Charles Hancock, another English publisher and printer, with the invention of the entire process termed "electrophotography." Whether or not this included the addition of the cliché-verre as the initial step is not stated. Osbert Barnard, writing in Print Collector's Quarterly, speculated that Cundall borrowed the idea of drawing on glass from the French and that only the preparation of electrotypes from plates can be attributed to Hancock. Aaron Scharf, in Art and Photography, cited a volume published by Hancock entitled A Handbook for Posterity or Twiddle Twaddle which included illustrations by George Cruikshank printed by electrophotography.

Both Cundall and Ehninger continued other publishing
ventures after their experiments with the cliché-verre. They did not return, however, to the cliché-verre process as the method of reproduction in these publications. Perhaps printing a large number of impressions of consistent quality was difficult or perhaps the photographs were not well received. The cliché-verre certainly could not compete with the camera as a means of copying existing images, yet the cliché-verre process was well suited to the creation of original works of art.
ENDNOTES

CHAPTER III

1. Patents for Inventions, Part II, No. 2295, p. 92.


4. Ehninger, Publisher's Preface to Autograph Etching, n.p.

5. Ehninger discusses his experiments with etching and the cliché-verre in the Publisher's Preface to Autograph Etchings.


8. It was at The Photographic Institution that the second photography exhibition held in Great Britain took place. The exhibition was arranged by Philip H. Delamotte whose manual, The Practice of Photography was published by Cundall in 1853. Cundall, himself author of a manual on the collodion process, The Photographic Primer (1854), was also an accomplished photographer whose work was included in Delamotte's album, The Silver Sunbeam. In addition to Cundall's writing, publishing and photography, he acted as a printer, printing many plates for an English contemporary Lewis Carroll. Ruari McLean, "Joseph Cundall: A Victorian Editor, designer, publisher," The Penrose Annual, LVI (1962), pp. 84-5.


CHAPTER IV

AUTOGRAPHIC APPLICATIONS OF THE CLICHÉ-VERRE

George Cruikshank regretted he was not introduced to the cliché-verre earlier in his career because the process, he claimed, "would have altered the whole character of my drawing; and it is so much easier for me to draw by this method." While many artists were not so enthusiastic and produced only a few cliché-verre prints, others were quite prolific. Camille Corot sketched over sixty-six images on glass, while Eugène Delacroix lost interest after one. Whether the artist's essays were numerous or few, the fact that at least eighteen were encouraged to try the cliché-verre is significant.

Printers, like Pont, and publishers, like Cundall, interested in photography encouraged artists to work with the cliché-verre. In mid-nineteenth century France, two men, Adalbert Cuvelier, "a dilettante industrialist who gave himself to photography," and Constant Dutilleux, artist and lithographer, were responsible for encouraging the intense activity with cliché-verre in Arras. More specifically, the close friendship of Dutilleux with Corot and other Barbizon artists brought the painters to Arras. Once there, Cuvelier was the catalyst in stimulating them to try drawing on the plates. Cuvelier printed the images; thus, the artist's ease of execution was insured from start to finish.
In June, 1851, mourning the death of his mother and father and seeking comfort among friends, Camille Corot (1796-1875) visited Dutilleux in Arras. Corot grew fond of the region and began to make regular trips to Arras, a habit which lasted until 1860 when Dutilleux moved to Paris.⁵

On one visit, while attending the wedding of Alfred Robaut to Elisa Dutilleux in May of 1853, Cuvelier persuaded Corot to experiment with his process. Corot, who, according to Robaut, was quite taken with the results, sketched six cliché-verre plates during that visit and several more on each subsequent trip to Arras; he even carried plates back to Paris for further experimentation. Cuvelier and Grandguillaume prepared and printed the glass plates sketched by the artists in Arras. The availability and enthusiasm of these printer-photographers stimulated artists to try the cliché-verre who would not have otherwise. Corot, for example, experimented with a number of printmaking processes but was never involved in the physical printing of his efforts.⁶

Corot's first cliché-verre was Le Bucheron de Rembrandt (Plate 12), a fresh and lively image drawn on a collodion covered plate. The tribute to Rembrandt, the master etcher, is fitting as Corot approached the glass plate much as one would an etching plate -- sensitive to linear structures in building tone and form. Le Bucheron de Rembrandt reveals the graphic dimensions of the cliché-verre where lines weave and mesh distilling the form of the woodcutter in the forest.

Corot, however, was soon attuned to the possibility of creating tone in large masses on the cliché-verre plate. In his second effort, Les Enfants de la Ferme (Plate 13), Corot used a
tapper to produce an overall tone. Densely meshed line drawn on the
plate creates areas of tonal contrast. The *tamponnage* in *Les Enfants
de la Ferme* imparts a unifying atmospheric tone to an otherwise awk-
wardly drawn and disjointed image. It is significant, however, that
Corot, even in his earliest trials with the cliché-verre, approached
the plate with his eyes and mind open to discovering the unique
qualities of the cliché-verre process.

From 1853 to 1860, Corot produced fifty-two cliché-verre in
Arras. He was there less frequently after Dutilleux moved to Paris
in the latter year, but in a series of visits to the village between
1871 and 1874, he executed another fourteen plates, resulting in a
total of sixty-six. Even after Dutilleux's death in 1865, Corot re-
mained close to the family: Dutilleux's son-in-law, Alfred Robaut,
documented his enormous oeuvre, while another son-in-law, Charles
Desavary, took over the printing of the cliché-verre plates.

Corot's cliché-verre are, with one exception, landscapes;
like his paintings they are often based on mythological themes or
reminiscences of Italian scenes. The single exception is a self-
portrait created in 1858. *Corot par lui-même* (Plate 14) is developed
in a rich network of vigorous line. The bold strokes create a dark
void. From the black emanates a face confronting the viewer directly
and defiantly. With a bold hand, Corot presents himself in a por-
taxt that is both confident and deeply mysterious. The haunting
image contrasts markedly to those photographs of Corot which portray
him as a jovial man sketching in Arras, "le bon homme en blouse," as
Corot referred to himself. It is, for this reason, that *Corot par
lui-même* is one of the artist's most striking cliché-verre. In this
enigmatic portrayal, Corot allows the viewer to glimpse another facet
of the man so loved and admired by his friends and peers.

In addition to the self-portrait, Corot created three outstanding cliché-verre: Le Grand Cavelier sous Bois (Plate 15), Souvenir d'Ostie (Plates 27 and 28), Le Jardin d'Horace (Plates 25 and 26); noteworthy for both their scale and incorporation of tonal effects. In Le Grand Cavelier sous Bois, Corot displays the lush atmospheric effects obtainable with the cliché-verre process. Graphical and photographic, linear and tonal elements interplay to create a unified work which evokes the serene calm of the forest. Dark areas are created in hatched line; unifying areas of tone are created in dots, tamponnage. Simultaneously, Corot focuses on the specific and the general: the individual lines, the accumulation of tone, and the relief of white spaces. The effect is one of spontaneity.

In creating this delicate print, Corot must have used a working method similar to the one he described for his painting in 1847:

The masses and character interest one most, then when that's firmly established I work in refining color and form. I go back to it constantly, without stopping and without a system.10

Charles Daubigny (1817-1878) was a close friend of Corot. Often they traveled together, sketching and comparing their impressions of the various landscapes. With Corot's introduction, Daubigny visited Arras in 1862 and, with Cuvelier's guidance, produced eighteen cliché-verre: sixteen by the linear method and two using the painted plate technique. In general, Daubigny's response to the cliché-verre is less spontaneous than that of Corot. Reflecting Daubigny's training as a graphic artist, the drawn lines tend to be hard and even. While Daubigny's composition is often stilted, his approach to the medium is experimental.11 His striving to
discover the possibilities inherent to the cliché-verre by applying techniques of printmaking led to exciting and novel results.

Daubigny's unique methods are illustrated in La Rentrée de Tropeau (Plate 16). In general, the composition is weak, composed of stiff lines and awkwardly drawn figures, but the experimental use of printmaking techniques enliven the print. In the upper portion of the composition, Daubigny has placed a veil of active line which is reinforced by dots created with a roulette, a tool normally associated with etching and mezzotint. The dots of the roulette and the nervous line have the effect of softening the stiff branches of the winter limbs and denoting the sparkling texture of the approaching sunset. The use of dense line, interwoven with white spaces to create the long rays of the last light of day, was explored with brilliant success in another of Daubigny's cliché-verre, Effet de Nuit (Plate 31).

Daubigny was the only artist to use the roulette on cliché-verre plates. The dots, breaks in the ground, appear much like those made with a stiff brush, but instead of randomly placed, the pattern of dots appear in a regular line. In Les Cerfs (Delteil 134) and Le Ruisseau dans la Clairière (Deltiel 137), the roulette is employed with much success.

In his painted plates, Daubigny best demonstrated his sense of the cliché-verre as a photograph. Vaches à l'Abreuvoir (Plate 17) shimmers with light -- diffused, refracted and reflected. Differences in tonal strength establish the major direction of the composition by dividing the planes of sky, earth and water. It is also tonal contrast, not linear outline, which differentiates the figure of the cows from the background. Line work serves as accent, establishing
the branches of the trees and their reflection in the water. *Vaches à l'Abreuvoir* demonstrates Daubigny's sensitivity to the quality of light and tone that is unique to the photograph. The draftsman's line is superseded by the brush stroke of the painted plate, imparting a sense of activity of movement. In *Vaches à l'Abreuvoir*, Daubigny explores the effects of light as it reflects off the water and permeates the forest at a specific time of day.

Jean-François Millet (1814-1875) lived in the Barbizon forest beginning in 1851. During his travels in the region, Millet arrived in Arras and there, with the help of Cuvelier, Millet executed two cliché-verre. Millet was impressed with other photographs he had seen, particularly the calotypes of Gustave Le Gray. Perhaps this admiration inspired Millet to try the cliché-verre. While Millet's two prints, *La Précuation Maternelle* and *Femme Vidant un Seau*, are not dated, their close stylistic resemblance indicates the prints were executed within a brief time period.

In *Femme Vidant un Seau* (Plate 18), the line work is thin and regular, a style characteristic of Millet. The forms of the composition -- the woman, the jars, the architectural setting -- are rendered as solid objects, weighty and robust. Millet, considering equally the negative and positive areas, has left much of the plate unworked lending a sense of refined simplicity to the barnyard scene. Millet has created a composition that is clear in execution and simple in delineation.

Critics have faulted the "dry appearance" of Millet's work, stating the prints lack tonal range. To the critic expecting the poetic nature of Corot's images, this may be so; but the deliberate line work is appropriate to Millet's subject: genre scenes of
quotidian charm, tender and intimate representations of daily tasks.

Théodore Rousseau (1812-1867), a visitor to Arras in 1855, was also induced to draw on glass plates. During his stay Rousseau executed two cliché-verre. Le Cerisier de la Plante à Biau (Plate 19), in contrast to the strong straight stroke of Millet or the loose scrawl of Corot, is articulated in a tight circular line. While the sparse quality is pleasing, the total effect of the composition is weak.

One other artist experimented with the cliché-verre in Arras under the guidance of Cuvelier and Dutilleux: Eugène Delacroix. On a visit early in 1854, Delacroix (1798-1863) executed a plate entitled Tigre en Arret (Plate 20). Judging from the awkward quality of the drawing, one could assume that the artist either found himself uncomfortable working on the coated glass surface or perhaps approached the experiment as a curiosity. While Delacroix was enthusiastic about the new art of photography and was in fact a founding member of the Société de la Photographique Française, the cliché-verre technique apparently did not capture his interest; Tigre en Arret was his sole effort. Writing to Dutilleux on March 7, 1854, he expressed his pleasure at having experimented with the process but added that he had no time for further trials.

Constant Dutilleux (1807-1865), whose presence in Arras precipitated the numerous artists' visits, executed thirteen cliché-verre prints. While no Dutilleux prints have been located in United States museums, Germain Hediard in his article on the cliché-verre reproduced a Dutilleux cliché-verre, a landscape.

Hediard, after viewing other examples by Dutilleux in Robaut's collection, reported that Dutilleux tried both the linear
and the painted plate methods. From these prints, Hediard conclud-
ed that Dutilleux admired the cliché-verre but had "no personal
sympathy for the process." 18

Many painters who lived and worked in Paris went to Arras
to visit Dutilleux and to enjoy the temperate summer weather.
There, Cuvelier would, more often than not, persuade them to sketch
on his glass plates. For example, Paul Huet (1803-1869) was both a
friend and a neighbor of Dutilleux. Huet first sketched on cliché-
verre plates in Paris around 1855. Encouraged by Barthélemy Pont
to try the Pont process, Huet collaborated on two cliché-verre prints.
About six years later while visiting Dutilleux in Arras, Huet drew
six additional plates.

In Le Pont (Plate 21), a typical example of his cliché-verre,
Huet depicts a serene landscape in a free, loose stroke. Stylisti-
cally, however, there is a hidden tension in the bucolic scene. Tra-
ditional compositional devices like strong diagonal emphasis carry
the eye into deep space, while, simultaneously, the uniform tonal
value created by the photographic process tends to flatten space,
pushing the background forward. At one time the composition insists
on a rapid movement through deep space, while the technical process
denies it. Additionally, contrast between the pastoral scene and the
nervous quality of line strikes a further chord of imbalance.

Delteil recorded only seven cliché-verre by Huet. He also
added an interesting note which claimed that six of the images were
published in L'Album Auto-Photographique 1ère series. No further
evidence of the album has been located, but Delteil did indicate that
Mr. Bouasse-Lebel owned a copy of the publication. 19

As many of his colleagues, Albert-Henrick Brendel (1827-1895),
a German painter and etcher, worked in his Paris studio during the winter months. Summers he spent wandering the Barbizon region. At one point he must have visited Arras for Hediard has recorded six cliché-verre by Brendel in the Cuvelier collection.

Hediard cited other artists who drew on plates in Arras. The painter Charles Jacque (1813-1894) is credited with two cliché-verre and Antoine Barye, the sculptor (1796-1875), with at least one print. Two prints are attributed to A. Wacquez, a painter.

The majority of cliché-verre prints executed in mid-nineteenth century France are landscapes. To this generalization there is one glaring exception, a vanitas image by Armédée Pastelot (Plate 22), a French landscape painter (active 1846-1870). Pastelot has sketched a man seated at a table holding a glass. Across from him sits a skeleton, draped bony hands resting on a bottle of wine. In the upper right corner appear the words, "In Vino Veritas." The unusual plate is signed by Pastelot but not dated.

One wonders where this curious image was printed and who introduced Pastelot to the cliché-verre process. There is only one clue: the print is laid on a larger supporting sheet, a mounting not seen with cliché-verre printed by Cuvelier in Arras but rather associated with Barthélemy Pont in Paris. The cliché-verre by Jules Noël, printed by Pont, is similarly treated but the Noël print is additionally marked with the Harville-Pont embossment (Plate 6). The cliché-verre by Paul Huet, said to have been included in an album, are also mounted on sheets. The Pastelot print does appear to have been cut from a book. It is tantalizing to speculate that an album of cliché-verre was issued in mid-nineteenth century France, but no such album has been located.
Although less actively than in France, isolated artists in England and the United States did work with glass plates in creating cliché-verre prints. In England, Augustus John experimented with the process. According to Barnard, John executed several cliché-verre in 1900, while studying at the Slade School. Where Augustus John learned the process is not known; Barnard proposed that he performed his experiments independently, without knowledge of others working with the technique.24

The card file of the New York Public Library lists four cliché-verre prints by E. L. Whitaker and three by Thomas Moran (1837-1926). Thurman Wilkins, writing in Thomas Moran, Artist of the Mountains, stated that Moran executed his first cliché-verre in 1860. Drawing on a collodion grounded plate, Moran recreated a theme of an earlier painting, The Haunted House.25

Although Moran maintained a strong interest in photography and a highly experimental approach to his work in etching, he did not return to the cliché-verre technique for further expression. As so many others, his efforts with the cliché-verre are limited to a few experiments. Moran, like most artists, unfortunately left no evidence indicating the reason for their pleasure or displeasure with their cliché-verre prints.
ENDNOTES

CHAPTER IV

1 Scharf, Art and Photography, n. 5, p. 330.


6 William Asprewall Bradley in French Etchers of the Nineteenth Century (Boston: Houghton Mifflin Co., 1916), pp.97-100, reported that Corot never printed his etching plates; others had pushed him to try the technique and printed the results. Robaut put transfer paper and lithographic crayon in Corot's lap, encouraging him to sketch. These images were then printed as "autographs" or transfer lithographs. Delteil (Vol. 5: Corot) mentions the possibility that one of the autographs, Souvenir de Sologne (Delteil 34), was drawn on a glass plate rather than transfer paper, but he does not elaborate further.

7 Delteil (Vol. V: Corot) records sixty-six cliché-verre by Corot; Van Deren Coke cites the existence of over seventy in The Painter and the Photograph (Albuquerque, New Mexico: The University of New Mexico Press, 1972), p. 239; one plate not listed in Delteil was located at the Art Institute of Chicago; however, its authenticity has been questioned by members of its staff.
Charles Paul Etienne Desavary (1837-1885), who was initially a pupil of Dutilleux and later took over Dutilleux's lithography workshop, was himself an accomplished photographer. Many of his photographs of Corot are reproduced in Robaut, *Corot*.


Daubigny was also active in inventing entirely new techniques in etching. F. L. Leipnich, *A History of French Etching from the 16th Century to the present day* (New York: Dodd, Mead and Co., 1924), p. 79.


*Bulletin de la Société Française de Photographie*, 1855.


The date of Dutilleux's efforts is not known, but André Jammes, writing in *French Primitive Photography*, assigned the date 1855 to a Dutilleux cliché-verre, *Catalogue* no. 77.


23. The Pastelot was located in the collection of Ruth E. Fine, Jenkintown, Pennsylvania.


CHAPTER V

THE CLICHÉ VERRE AS PRINT

As authors described the cliché-verre under an assortment of names, so printers of cliché-verre plates devised individual formulas for the chemical procedures. In publishing their processes the printers described in detail these chemical variants. However, variation in the initial drawing on the plate, in printing and in impression quality, have been generally ignored. The only exception in the literature on the cliché-verre was the 1902 Gazette des Beaux Arts article by Germaine Hediard who considered not only the procedures in making a plate but the drawing and printing of the plate as well.¹

Hediard cautioned the artist to approach the plate with two precepts in mind: use a variety of tools and do not overwork the plate. The advice displays Hediard’s sensitivity to the fact that a cliché-verre is a photographic process. Lines drawn on glass do not have depth, as in etching; variety in line weight, created by different tools, is necessary to differentiate and distinguish individual areas on the cliché-verre. Pauses in line work and density keep the final print from reading as a solid black mass. Heavily worked areas of cross-hatching, for example, cannot be relieved by tonal wiping as is the case in etching. Light is the carrier of tone in the cliché-verre process.

Two examples by Corot illustrate this point. Using a variety
of line, Corot has created a lively sketch in *Orphée Entrainant Eurydice* (Plate 23). The nervous scrawl sets up a dance pattern, while strong horizontal elements in the composition, the trees, stabilize it. Spaces of white paper allow the image to breathe; the variety of line creates visual interest; and the diagonal emphasis of the composition establishes spatial direction.

In contrast, *Souvenir du Bas Bréau* (Plate 24) drawn in a series of straight parallel lines of even weight, is so densely packed that it is virtually unreadable. Close lines, cross-hatched, and solid black areas of tone produce a flat, almost abstract, pattern of black and white. What might be an intimate forest scene is here a curtain wall of webbed line.

In general, Corot approached the glass plate as a means of creating a spontaneous sketch. While Corot experimented with the cliché-verre to find properties peculiar to the medium, the sketch was also a relief from a day of painting. Some compositions were successful, others were not; but this drawing surface did become a source for a rich legacy of Corot's work.

Corot, like other artists who drew on glass plates, was responsible for the image; the printer too had options when realizing the final print. Three methods for printing a cliché-verre plate have been recorded. In one procedure, the drawn surface of the glass plate was placed in direct contact with the paper. Because the drawing and paper were in intimate contact during exposure, details of the drawing print clearly; lines are sharp, sometimes harsh. With this method, the drawing is printed in reverse direction. Signatures were probably placed initially in a readable fashion and those prints with signatures in reverse may have been printed with drawing and
paper in direct contact, for example La Petit Soeur (Plate 7). An alternative method -- placing the plate on paper, drawn side up -- produced a more diffuse effect. The light passed through a thickness of glass before reaching the sensitized sheet. In La Jeune Fille et la Mort (Plate 8), for example, much of the line work, especially in the lower right, appears light and fuzzy; only the lines drawn deliberately strong, and thick, print dark. A third method was devised, a variation of the first two, in which a second pane of glass interrupted direct contact between paper and plate. Effet de Nuit (Plate 31) by Daubigny illustrates the velvety quality obtained with the greater thickness of glass. Cuvelier often experimented with the plates, using different printing methods for varying effects. Many impressions, particularly those taken from Daubigny's plates, were printed both as drawn and in reverse.

One Daubigny print, Le Ruisseau dans la Clairière (Delteil 137), a unique impression, now in the Baltimore Museum of Art, is printed in blue lines by a method which is the reverse of the cyanotype process: the cyanotype, first used by Sir John Herschel (1792-1871), produces white lines on a blue ground. In 1860, a French printer-photographer, Poitevin, formulated a direct process using ferrous salts. He termed the images "ink pictures" because the tone resembled writing ink. While the technique was seldom used, reference to the "blue line process" or "cyanofer" is not uncommon in early photographic manuals. In 1892, P. C. D chochois, who printed Ehninger's album of cliché-verre, referred to an improved version of Poitevin's process indicating the blue line process was in use for at least thirty years after its formulation.

Only one other example has been located in which color was

In some cases, Cuvelier experimented in printing a single negative using a variety of techniques. Impressions of *Le Jardin d'Horace* by Corot, one with in stark black and white contrast (Plate 25), the other in stark black and white contrast (Plate 26), have been compared to changes in the day, to sunset and sunrise. In one impression, "sunset," linear description of the trees is fused by extensive use of the tapper. There is a generous variety of line ranging from thin and nervous to broad and defined. In this magnificent impression, drawing has become photographic. Delineation of the surface by line has been infused with tonal properties. Atmosphere seems to have been rendered visible. The "sunrise" print is flat and harsh when compared to the rich tonalities achieved with the additional tamponnage and additional thickness of glass in printing the plate.

If in fact Cuvelier was interested in varying effects, it is curious he did not pursue his experiments in more instances. It seems likely that Cuvelier did print from plates varying the method until he found the quality judged most visually appropriate by the artist and printer. The comparisons serve to emphasize the importance of viewing more than one impression from a single plate.

In addition to the method of printing, the freshness of the plate was a factor in richness of the final impression. The drawn surface of the glass plate, whether coated with collodion or printer's ink, was delicate and rubbed off with continued handling. Osbert Barnard commented on this aspect of the cliché-verre process:
The process has also the advantage that if the plates are carefully handled, a large number of prints can be taken from them. It would appear that all these would be of equal quality, but this is not the case. The first few are much superior to the rest, especially in the case of the clichés done in the oil-colour method, for in taking these the contact of the plate with the paper rubs off a great deal of the delicate work. The process has also its disadvantages. The plates are fragile and very easily damaged, and the ground is very liable to get scratched.9

Delteil recorded several plates by Corot which were scratched in printing. Using a printmaker's terminology, Delteil listed these plates as second states.10

While many authors refer to cliché-verre as "photographic etchings," the comparison to printmaking, especially etchings, is accurate only in that both employ a hand-drawn printing matrix. For example, in etching the wear of the plate causes lines to thin, holding less ink and therefore reading as lighter lines. When considering an etching, one thinks of a weak impression, having been pulled from a worn plate, as faint and without distinct clarity in the lines. Lines created on the cliché-verre print are caused by light which reaches the photo-sensitized paper in contact with the plate. The opaque ground on the glass plate exists as the substance which blocks light from reaching the sensitized sheet. A worn plate is one from which portions of ground have been rubbed off; additional light passes to the sheet, and the print is darker.

While Delteil's catalogue is a useful tool, the assigning of state numbers based on considerations of printmaking can be misleading in relation to cliché-verre prints. For example, compare two impressions of Souvenir d'Ostie by Corot. Delteil assigned "State I/II" to the faint impression (Plate 27) and "State II/II" to the darker print (Plate 28), the distinction being the addition of the signature.
Perhaps, and it is likely, the faint impression was pulled first. Cuvelier may have taken the impression and Corot, finding the image unsatisfactory, made additions of line and tamponnage on the plate.

The addition of line alone does not make the "second state" the stronger print. The lines which do exist in the "first state" are ghosts -- the horse and rider as phantoms traveling across the foreground. The printing of the plate and the paper chosen for the print also contribute to the impression quality.

In the "second state," the lines are clean, clear and crisp. The reversed plate must have been in direct contact with the sensitized sheet. A pane of clear or grounded glass was probably interspersed between the drawn surface and the sensitized sheet when printing "State I." The diffusion of the light through the crystals of glass created spreading or blur of the lines which did exist on the plate.

Different emulsions were also employed to sensitize the printing paper. The lines of the faint impression are reddish-brown, indicating uncoated paper was used. The surface of the sheet is textured and grainy. In contrast, the emulsion side of the paper in the stronger impression is smooth and shiny; the impression was printed on coated paper, impregnated with emulsion. In addition, the print was gold toned after exposure creating lines which are a rich brown color.

The "age" of the plate or the order of printing should be considered less important than the visual success of any particular impression. Cuvelier did not indicate the number of prints taken from any particular plate (although some estimate twenty).
In 1921, Maurice LeGarrec (b?–1937) and Edmond Sagot (1857–1917) issued a portfolio of cliché-verre, Quarante Clichés-Glace; a project designed to increase public awareness of the unusual technique. Osbert Barnard, opening his 1922 article in Print Collector's Quarterly praised both the cliché-verre technique and the Sagot-LeGarrec portfolio:

The publication by M. LeGarrec, of Paris, of a series of 40 photographic prints from clichés-verre by artists of considerable attention to this process, which transfers onto paper, even more freely and directly than does etching, the touch and personality of the artist.  

The glass plates used for the 1921 portfolio were from Adalbert Cuvelier's collection. Cuvelier had willed the plates executed under his auspices to a relative, Eugène Cuvelier, who, as an amateur photographer, recognized the value of the glass negatives and carefully preserved them. Sometime in the early twentieth century, the plates were sold to Albert Bouasse-Lebel. According to Lugt, Bouasse-Lebel took impressions from some of the plates in 1911. At some point after 1911, the plates were acquired by Sagot and LeGarrec. After the completion of the 1921 portfolio, the Cuvelier collection of cliché-verre plates was dispersed to several museums with the stipulation that no further proofs could be taken.  

According to the advance notice of publication, 150 copies of Quarante Clichés-Glace were printed, each numbered and stamped with the Sagot-LeGarrec mark in red on the verso. In addition a number of special portfolios were released with a set of double proofs, the extra impressions having been printed in a variety of tones and at times interspersing glass plates or reversing the image for the special printing.
The Parisian publishers indicated that extreme care was taken to insure that the restrikes were close to the nineteenth century impressions. They record that research was done to find a paper similar to that used by Cuvelier in Arras. Mr. Barry, the printer of the editions, took many impressions, sometimes as many as 400, to achieve 150 good prints.

Confident of their success in achieving a close likeness, the publishers placed their stamp prominently on each print to insure that there would be no confusion between the nineteenth century prints and those of 1921. While the prints contained in Quarante Clichés-Glace are certainly quality impressions, close examination of impressions printed by Cuvelier in the nineteenth century and those printed by Barry in the twentieth dispels any thought of confusion. Three comparisons illustrate the loss of delicate tone and subtlety in the Sagot editions, caused by the condition of the plates and the choice of printing techniques.

Black tones were used in printing the Sagot editions and often the prints appear heavy with black masses, as illustrated in a comparison between a nineteenth century printing of Le Songeur (Plate 29) by Corot with a Sagot impression from the same plate (Plate 30). The darkness of the Sagot printing obliterates the very subtle range of tone and play of light found in the earlier impression.

The dark appearance of the later printing could be caused also by the condition of the plate. As a cliché-verre plate is glass, the lines do not thin and grow faint as might occur with the copper plate of an etching. Rather, with use, the collodion surface of the plate is disturbed and the ground supporting the drawing
flakes off, leaving additional areas of the sensitized paper exposed to light.

Le Songeur is a painted plate; that is, opaque ground is painted on the plate to delineate form. Lines are then drawn through the painted areas to obtain lines of accent. In the Cuvelier impression, brush strokes are visible in the sky and active broad lines are readily apparent in the trees; in the Sagot printing only a lone form, which could easily be a mountain as a man, can be deciphered.

The majority of the nineteenth century impressions taken by Cuvelier were printed in a brown-sepia and often the delicacy of the sepia impression is lost in the Sagot printing. Compare two impressions from the print room of the Chicago Art Institute of Effet de Nuit by Charles Daubigny: one nineteenth century impression (Plate 31) and one from the Sagot portfolio (Plate 32).

White paper and line work fuse in the sepia impression to create an effect of light emanating from behind the textured sky. Moonlight reflects off the water revealing a boat in the foreground. Individual trees are clearly silhouetted against the dense sky. The effect of the night, the light of the moon, delicately fuse foreground and background in a sensitive impression from the plate. The Sagot impression is heavy, most notably in the sky, whereas in the nineteenth century example the spaces of white filter light as if through a tonal veil. In the earlier print the linear work delicately balanced the larger areas of white, but in the Sagot printing dense tone dominates whole areas of the plate print as black.

The problem in Le Gué, also by Daubigny, is the opposite; the Sagot impression (Plate 34) is thin and pale in comparison to one printed in the nineteenth century (Plate 33). The choice of
printing methods, and perhaps an esthetic bias for a lighter impression, is the determining factor here.

The images in Le Gué are identical but the Sagot impression is printed in reverse indicating that the position of the plate in relation to the sensitized paper has been altered. Direct contact between the paper and drawn surface of the plate resulted in a dark, sharp impression. When an additional layer glass was added in the Sagot printing (either by flipping the plate or by adding an extra plate) the effect was more diffuse and in this case resulted in a pale impression.

The nineteenth century impression of Le Gué is rich, dark, bold. The trees, as if agitated by a strong wind, reach out, animated by the random horizontal strokes across the sky. Strong diagonals of the tree branch and the line of the cows increase the sense of momentum. The farmer herding his cows across the ford is barely visible. In this landscape the powerful forces of nature dominate.

The Sagot impression is weak. Deep tones have disappeared; scratchy lines remain, altering the original impact from one of nature's forceful display to an impression of barren tree limbs in winter. Even the cows and the slumped farmer seem to push themselves to motion where before the dark activity of the wind carried the action across the ford.

Some images from the Sagot edition are quite close to the nineteenth century printings; others lack the impact of the earlier impressions. Similarly varying impressions exist which were printed in the nineteenth century. Each cliché-verre stands as a unique image, its power in part dependent on the impression viewed.
To Cuvelier and other practitioners discussed, the cliché-verre held a variety of fascinations. Some were attracted to the process for its reproductive possibilities, as was Ehninger. Others, especially Corot, found the medium satisfying for its flexibility as a drawing surface. Delacroix undoubtedly was drawn to the cliché-verre because of its association with photography. But, from the conception of the cliché-verre method by the Havells and Willmore to the various efforts later in the nineteenth century, a similar basic attraction to the cliché-verre technique is apparent: it was a simple, flexible means of reproducing an autographic original.

There was nothing to master in terms of graver, knife, or acid. With a short introduction from the printer, the artist could begin to test the character of the coated glass surface. Few materials were needed and the lack of heavy equipment made the cliché-verre plates easily portable.

This novel technique has been viewed as a surrogate etching, but the cliché-verre is a photographic process. Interpretation of the negative is chemical, not physical or mechanical like the wiping and printing of a copper plate.

And yet, for so long the cliché-verre remained a step-child, finding its place neither in printmaking nor photography. William Ivins stated the problem succinctly in *Prints and Visual Communication*:

So far as the artist was concerned, it was a much more direct and simple process than etching. But because these prints were neither etchings nor lithographs, and because they were not actually photographs made with a camera, they never became popular among collectors or public. People simply could not adjust themselves to such shocking and novel technical ideas as were exemplified in
these prints. In this way, tradition won out over
the actual fact that here were some of the most
thoroughly original and indubitably artistic
prints of the century.17
ENDNOTES

CHAPTER V


7Barnard, "Clichés-Verre," p. 150


11Ehninger, Publisher's Preface to Autograph Etchings, n.p.


14 According to the Introduction of Quarante Clichés-Glace (Paris: Chez Maurice LeGarrec successor d'Edmond Sagot, 1921) plates went to the Louvre; Bibliotheque Nationale; Museum of Fine Arts, Boston; Detroit Institute of Art; Metropolitan Museum of Art.

15 Lugt, Supplément, no. 1766a; the prepublication price was advertised as 2,000 francs and after November 30, 1921, the date of issue, the price increased to 2,500 francs.

16 It is not known whether Cuvelier used commercially prepared paper or sensitized his own. William Ivins, in Prints and Visual Communication (Cambridge: Harvard University, 1953), p. 115, suggested that Cuvelier purchased commercially prepared sheets. Sean Thackrey ("Invention and Process," The R. E. Lewis Collection) proposed that both were used. The experience of this author confirms this; see discussion of Souvenir d'Ostie (Plates 26 and 27).

17 Ivins, Prints and Visual Communication, p. 115.
APPENDIX

The spelling and usage of the term "cliché-verre" varies with almost every author who mentions the process. The term is used as a simple noun and as a collective noun. The spelling ranges from "clichés-verre," "cliché-verres," "clichés-verres" to "cliché-verre." For consistency, the term is used as a collective noun throughout this paper; the spelling remains the same for both singular and plural usage. In addition, as "cliché-verre" has become the accepted English name for the process, this author has not retained italics for each mention.

Cliphé-verre has become, in the twentieth century, the accepted multi-lingual name for the technique. Nineteenth century practitioners and writers, however, varied widely in their name for the cliché-verre process. In fact, the situation became so confusing that the Congrès International de Photographie of 1889 assigned a panel to discuss the question of uniform designation for photographic processes. The Congress adapted two terms to distinguish between an original drawing created by the action of light on a sensitized surface, a "photocalque," and an image reproduced by the same method, a "photocopy." In either case, a photographic camera was not employed.1

"Photocalque" never entered popular usage and the delegates to the following Congress, held in 1891, re-examined the work of the 1889 participants, criticizing their terms as too cumbersome and
contrived. The debate ended, however, with no change or improved
terminology adapted.  

The Congress could have chosen any one of a number of terms
as each author writing on the cliché-verre process or cataloguing
efforts by various artists seem to have designated their own term.
For example, in patenting his process, Barthélemy Pont employed the
term "autographies photographiques," while Pont's contemporary
Adalbert Cuvelier names his results "dessins sur verre pour photo-
graphie."  

The cataloguer Henriet, in 1872, recorded Charles Daubigny's
"clichés-glaces."  
In 1921, Sagot and LeGarrec, publishing their
portfolio Quarante Clichés-Glace, borrowed Henriet's term. Another
famous cataloguer Henri Beraldi coined his own term for the same
technique; when writing in 1887 he referred to "croquis sur verre
bichromate."  However, in the same year, Alfred Lebrun described
Millet's work in the medium as "heliographie sur verre."  
According to Germain Hediard, "procédés sur verre" was the name most
widely used in 1903.  
Two years later Corot's cataloguer and friend,
Alfred Robaut referred to Corot's work in the medium as "procédés sur
verre."  The terms "etchings on glass" and "glass prints" were em-
ployed mainly in England. Joseph Cundall, in Electrophotography
wrote of his "etchings on glass," as did Arthur Hind.  
But these
terms were generally unsuccessful as they were confused with etchings
in glass, a different technique altogether.  

Loys Deltiel used "cliché-verre" in 1910 when describing these
prints in his extensive survey, Le Peintre-Graveur Illustre, and
perhaps it was the repeated and extensive usage by Deltiel that se-
cured the term in the current terminology. In 1923, Pierre Gussman
confirmed that "cliché-verre" was in vogue. However, Gussman, as so many before him, coined his own term and pronounced "cristallographie" or "cristallotypie" the most appropriate, adding yet another name to the long list of labels assigned to the cliché-verre.¹⁰
ENDNOTES

APPENDIX

1Congrès International de Photographie, Rapports et Documents (Paris: Gautier-Villars et fils, 1890), p. 44.

2Congrès International de Photographie, 1891, pp. 37, 84-5.

3Bulletin de la Société de la Photographie, 1855, 1856.


6Alfred Le Brun, The Etchings and Other Prints of Jean-François Millet, translated by Frederick Keppel (New York: Frederick Keppel and Co., 1887).

7Hediard, "Procédés," p. 408.

8Robaut, Corot.


PLATES
Plate 1. H. Fox Talbot. Photogenic Drawing of Lace, Feathers and Leaves, 1839.
Plate 5. George Cruikshank. Portrait of Peter Wickens Fry, 1851.
Plate 22. Armédée Pastelot. *In Vino Veritas*.
Plate 24. Camille Corot. Souvenir du Bas Bréau, from Quarante Clichés-Glace (1921), 1858.
Plate 32. Charles Daubigny, *Effet de Nuit*, from *Quarante Clichés-Glace* (1921), 1862.
Plate 34. Charles Daubigny. *Le Gué*, from *Quarante Clichés-Glace* (1921), 1862.
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