

ANTOINE CLAUDET, A FIGURE OF PHOTOGRAPHY, 1839-1867

by

KAREN HELLMAN

A dissertation submitted to the Graduate Faculty in Art History in partial fulfillment of  
the requirements for the degree of Doctor of Philosophy, The City University of New  
York

2010

© 2010

KAREN HELLMAN

All Rights Reserved

This manuscript has been read and accepted for the  
Graduate Faculty in Art History in satisfaction of the  
dissertation requirement for the degree of Doctor of Philosophy.

8/24/10	Dr. Geoffrey Batchen
_____	_____
Date	Chair of Examining Committee
9/1/10	Dr. Kevin Murphy
_____	_____
Date	Executive Officer

Dr. Patricia Mainardi

\_\_\_\_\_

Dr. Antonella Pelizzari

\_\_\_\_\_

Russell Roberts

\_\_\_\_\_

Supervision Committee

THE CITY UNIVERSITY OF NEW YORK

## Abstract

## ANTOINE CLAUDET, A FIGURE OF PHOTOGRAPHY

by

Karen Hellman

Adviser: Professor Geoffrey Batchen

Up to now, the early decades of nineteenth-century photography have been narrated in terms of “great” individual achievements and have tended to characterize the histories of photography in England and France as separate but parallel chronological paths. Equally, scholars have usually split their object of study between two opposite disciplines: that of science and that of art. I propose instead a lateral approach that considers the ways in which both photography and individual photographers interconnected within an expanded network of international cultural forces, primarily commerce, technology, science, and art. I aim to do this through a close study of the career of Antoine-François-Jean Claudet (1797-1867), a French-born photographer operating a daguerreotype portrait studio in London from the early 1840s to the late 1860s.

As a commercial photographer interested in improving the technical as well as aesthetic possibilities of photography, as a prolific writer on the medium, and as a Frenchman living in England constantly in communication with photographers and scientists on both sides of the English Channel, Claudet intersected with these cultural

forces more directly than many of his contemporaries. By examining his pursuits laterally, across the multiple communities that they traversed in his time, this study will argue that a career like Claudet's is integral to any substantial understanding of the photographic medium's first decades, while also making a vital addition to how the history of photography is usually figured, one which acknowledges connection and collaboration as key to understanding more accurately the period of photography's invention and early development.

In order to account for Claudet's connective role as a photographic figure, I will look at the early decades of photographic history as a network of dialogues in the midst of an expanded web of inseparable cultural forces. Writing Claudet's career as dialogue allows for a re-picturing of photography's development as a process of successes and failures, knowns and unknowns, that produced a range of cross-disciplinary conversations. If we consider these correspondences as the latent images of photographic history, this approach is itself a photographic one. It exposes and then "develops out" these latent conversations.

## **Acknowledgments**

This dissertation came out of an interest that I have long held in the invention of photography. It is a process that never ceases to amaze me. Prior to coming to the Graduate Center, I had known of Antoine Claudet only by his daguerreotype portrait of William Henry Fox Talbot but I was officially introduced to him in Professor Batchen's nineteenth-century photography course. I am incredibly grateful for the enthusiastic advice of Professor Batchen who, when I went to ask him about a particular stereo-daguerreotype by Claudet, suggested that I take him up as a dissertation topic. He then generously opened up his file cabinets and gave me all of the research he had gathered on the daguerreotypist for me to look through. The more I got to know about Claudet, the more I realized that he was precisely the subject who could guide the kind of research into the invention of photography that I craved.

The bulk of research for this dissertation was conducted in Britain and I have many people to thank there. First and foremost I'd like to thank Michael Pritchard who was an incredibly resourceful contact from the moment I arrived in London in September of 2007. He also provided an excellent sounding board for my ideas about Claudet and our several conversations on this period in photography were crucial to the development of this project. I would also like to thank Brian Liddy at the National Media Museum who provided great assistance during my weeks of research in the museum's vast collection of British daguerreotypes. I spent one of my best days in an incredibly beautiful area at the home of Roger Taylor who spent several hours with me going through his library and research files on Claudet. I thank Bernard Heathcote whom I met in Nottingham and who gave me some of his own files and with whom I had a very

useful conversation about Richard Beard and Claudet. Another incredible week was spent in Edinburgh with Dr. Alison Morison Low and her assistant Chris Craig of the National Museum of Scotland looking through, while Chris photographed, the daguerreotype collection of the late collector Bernard Howarth Loomes. Although we were in a windowless storage area for a week, I will never forget the pleasure of opening up the individually wrapped photographic treasures that Mr. Howarth Loomes had acquired during his lifetime. Also in Edinburgh I was greatly helped by Sara Stevenson of the National Portrait Gallery who let me study the British portrait daguerreotypes in her collection over two days while also providing other research guidance. On the way from Edinburgh to London I spent a day in Newcastle to visit the recently discovered cache of full-plate daguerreotypes in the Robinson library at the University. Melanie Wood kindly arranged for me to view all of them.

I met many private collectors while in England. I would like to especially thank the generosity of Ken Jacobson and his wife Jenny for inviting me to their home and transporting me to and from the train station for a day of looking through daguerreotypes and books. After a bit of persistence on my end, Elena Vidal kindly fit me in to visit the extraordinary collection of Brian May and I was able to spend some time looking through his Claudet stereo-daguerreotypes. I would also like to thank Mr. Gwyn Nicholls who was both a lively host and an extraordinary eye opener for me as to how exquisite British daguerreotypes in mint condition can be. I also thank Howard Ricketts, Jason Wright, Graham Wood, and Shawn Caton for generously offering their time and parts of their collections to look through. There are also collectors and scholars that I have never met

but who have shared information and research with me. For this I particularly thank Mike Jacobs, Marcel Safier, Noel Channon, and Richard Morris.

In London there are several individuals I would like to thank. Bob Pullen, who has long been an enthusiast for Claudet and has probably conducted the most thorough research on the topic, provided a wealth of information and advice. At the British Library I would like to thank John Falconer for letting me visit the photographs collection on multiple occasions. At the National Portrait Gallery I thank Terence Pepper, Clare Freestone, and especially Juliet Simpson who made my visits to the Gallery's photographs collection very efficient. At the V&A I was warmly greeted and graciously helped by Martin Barnes and Marta Weiss. At the Wilson Center I would like to thank Violet Hamilton for making arrangements for my visit and Michael Wilson who sat with me while we looked through some of his Silvy albums. I would like to thank Mary Clemmey for hosting me at her house and sharing any information she had on her great ancestor George Houghton. Hope Kingsley made herself available to meet in London and shared parts of her own dissertation with me for which I am very grateful. I would also like to thank Sarah Jones, photographer and friend, without whom I would have spent several lonely evenings in London. Her interest in my project also made for some very inspiring discussions about photography, old and new.

Outside of London, I had the great honor of visiting the Royal Collection at Windsor and, with the help of Sophie Gordon and Lisa Heighway, I was able to view several daguerreotypes and albums. I also thank Tony Simcock at the Museum of the History of Science at Oxford who kindly greeted me and showed a few extremely impressive daguerreotypes held in the collection as well as some literature on the objects.

Roger Watson at Lacock Abbey accompanied me through a tour of Talbot's estate and was very helpful in advice for further research. I would especially like to thank Laura Claudet whom I met in Los Angeles when she came to visit the Getty Museum. It was a pleasure to get to meet her and to talk with her about her family (and to see that she has the same extraordinary features and eyes as her great ancestor).

With the help of a study trip grant while I was a Graduate Intern at the Getty Museum, I was able to go to Paris and conduct research on Claudet's Paris presence. I would especially like to thank Florence Greffe at the Archives de l'Académie des Sciences, Dominique de Font-Réaulx and Françoise Heilbrun at the Musée d'Orsay, Jacqueline Martinet at the Bibliothèque Nationale de France, and the staff at the Société Française de Photographie. I also made a day trip to the Niépce Museum in Chalon-sur-Saone and I would like to thank Kim Timby for setting me up to view their collection of portrait daguerreotypes.

In the United States there are also many people to thank. At the Getty Museum, Annie Lyden, Anne Lacoste, and Weston Naef all gave me extraordinary contacts to visit and while I was assisting Judith Keller with her exhibitions she and Virginia Heckert were very supportive of my research. At the Getty I especially thank Sarah Freeman who became both a good friend and, as a photographs conservator, provided me with support and insight into the material side of daguerreotypes. I also thank Sylvie Penichon who even though she had her own large project on color photographs to work on as a visiting scholar at the Getty, found time to meet with me about her work on Claudet.

In New York I would like to thank Nora Kennedy and Hanako Murata at the Metropolitan Museum of Art and Gawain Weaver. Nora's course on photographs

conservation has proven infinitely helpful in handling and recognizing aspects of photographs during my research. The course also reinforced my great interest in the processes of photography, which informs my dissertation on Claudet. I also thank Hans Kraus Jr. for his willingness to show me his collection of salted paper prints.

I received tremendous support in the form of fellowships, including a Chancellor's Fellowship and a Sponsored Dissertation fellowship from the Graduate Center. With the help of a Travel Fellowship in Art History from the Samuel Kress Foundation, I was able to travel to Britain for an extended period. My second and third trips to Europe and my research there were made possible in large part by the Yale Center for British Art. I would like to thank Amy Meyers and Eleanor Hughes at the Center. I also thank the Harry Ransom Center, UT Austin, for awarding me a Dissertation Fellowship, with which I gained access to their collection of British daguerreotypes as well as Helmut Gernsheim's extensive research files.

At the Graduate Center, I would like to thank Professor Patricia Mainardi and her course on the History of Prints. Professor Mainardi generously let me work on a project involving early photomechanical processes, which gave me a chance to conduct research on the period and some of the figures I returned to for this dissertation. I also thank Professor Harriet Senie who served on my orals committee and for whom I hold a great deal of admiration. I can't thank my advisor Geoffrey Batchen enough for his support of this project not just because of his enthusiasm for Claudet but also his willingness to read and discuss problems, and to respond quickly to my questions as they came about. He also gave me the opportunity to work with him on an exhibition on Claudet and Richard Beard at the Yale Center for British Art. Although the exhibition has been canceled, I

was honored that he invited me to work on it in the first place and throughout the process he respected my opinion and included me in all of the organizational meetings and at every stage of his planning for the exhibition. I would also like to thank several friends I met through the Graduate Center Art History program, particularly Allison Moore, Russell Lord, Sheila Gerami, Karen Shelby, Katie Hanson, Mitra Abbaspour, and Lise Kjaer, who have all in some way given me a great deal of support and advice both academically and otherwise. Outside of CUNY, I thank Karin Spitzer, Annie Heringer, and Irene Small for their friendships. I would also like to thank the friends I have made since my move to Los Angeles who, though recent, have become some of my closest confidants and friends. I thank Leslie Friedman, Rachel Rivenc, and Sarah Freeman most of all.

Finally, I thank my family, my parents Ted and Janice, my brother Ted, my sister-in-law Stephanie, and my sister Julia who have been as supportive yet unofficious during this dissertation process as I could have hoped for. I especially thank my twin, Anne, a very talented artist, who has been the greatest source of encouragement for me throughout my life and my studies in photography and in Art History. I dedicate this dissertation to her.

## Table of Contents

<b>List of Illustrations</b> .....	<b>x</b>
<b>Introduction</b> .....	<b>1</b>
I. Biography.....	2
II. Literature.....	9
III. Rationale.....	14
IV. Chapters.....	18
<b>Chapter 1: Commerce</b> .....	<b>23</b>
I. Claudet’s Invention of the Business of Photography.....	24
II. “French Glass Shades” Claudet and George Houghton.....	25
III. “Retained by some magic power” Claudet and Daguerre.....	28
IV. Daguerreotype Excursions: Claudet and Lerebours.....	36
V. Claudet and Miles Berry.....	40
VI. Claudet and Richard Beard.....	42
VII. Rooftops: Claudet and the Adelaide Gallery.....	46
VIII. First Portraits.....	51
IX. “ <i>The Art of Colouring the Daguerreotype</i> ” .....	58
X. Business Models.....	62
XI. Commissions.....	71
XII. Claudet and Hippolyte Fizeau.....	74
XIII. “On the means to make the process more profitable”: Claudet and Talbot.....	77
XIV. Cartes-de-visite.....	92
XV. Canada and 107 Regent Street, Francis and Henry.....	94
<b>Chapter 2: Science</b> .....	<b>96</b>
I. Portraits of Scientists.....	103
II. The Great Exhibition.....	109
III. Light, Claudet and Robert Hunt.....	113
IV. Lenses, Claudet and Brewster.....	120
V. Focus.....	126
VI. 2, 4, 8, 12.....	132
VII. “Approaching the perfection of the eye”.....	135
VIII. Equalizing Focus.....	138
<b>Chapter 3: The Stereograph, Photosculpture, and Moving Images</b> .....	<b>144</b>
I. Literature on Stereography.....	147
II. Claudet and the Stereoscope.....	148
III. The Phenomena of Relief.....	163
IV. Photosculpture, Claudet and François Willème.....	165
V. Moving Images.....	168
<b>Chapter 4: Art</b> .....	<b>176</b>
I. “Art”.....	178

II. “Paintings-in-little”.....	181
III. Limning Practice and Art Practice.....	182
IV. “A Perfect Likeness”.....	185
V. “The Daguerreotype Miniature”.....	188
VI. Portrait Paintings.....	196
VII. Color.....	197
VIII. Regent Street.....	201
IX. W.E. Kilburn (1818-1891).....	202
X. J. J. E. Mayall (1813-1901).....	209
XI. T.R. Williams (1824-1871).....	212
XII. Photography and Art.....	214
XIII. “The Photographic Artist”.....	223
XIV. The International Exhibition of 1862.....	226
XV. M. Claudet and M. Silvy.....	229
XVI. “What has all that to do with photography?”.....	237
<b>Chapter 5: Writing.....</b>	<b>240</b>
I. Writing as Practice.....	245
II. Correspondence.....	250
III. History and Practice.....	259
IV. “Un beau livre écrit sur la pierre”.....	266
<b>Conclusion.....</b>	<b>275</b>
<b>Appendix A: Antoine Claudet in Public Collections.....</b>	<b>280</b>
<b>Appendix B: The First Ten Years of the Daguerreotype in England.....</b>	<b>303</b>
<b>Bibliography.....</b>	<b>323</b>

## List of Illustrations

### Introduction

Figure I:1 Anon., “London in 1842,” *The Illustrated London News*

### Chapter 1

- Figure 1:1 Anon., 1820s Broadsheet, “French Glass Warehouse”
- Figure 1:2 Antoine Claudet, *George Houghton*, c. 1842-3
- Figure 1:3 Antoine Claudet, *George Houghton and Children*, c. 1842-3
- Figure 1:4 Anon., *Louis-Philippe Ier, Roi Des Français*, 1842-1846
- Figure 1:5 Antoine Claudet, *Portrait of Charles Darwin and his son William Erasmus*, 1842
- Figure 1:6 Mr. de Ste Croix, *View of Parliament Street from Trafalgar Square*, 1839
- Figure 1:7 Noël-Marie-Paymal Lerebours, *Campo Vacino à Rome*, c. 1840
- Figure 1:8 H. L. Pattinson, “The Horseshoe Falls” at Niagara
- Figure 1:9 Noël-Marie-Paymal Lerebours, *Niagara*, c. 1840
- Figure 1:10 Noël-Marie-Paymal Lerebours, *Saint Pierre et Château St. Ange à Rome*, c. 1840
- Figure 1:11 Noël-Marie-Paymal Lerebours, *Porte Ripetta à Rome*, c. 1840
- Figure 1:12 Noël-Marie-Paymal Lerebours, *Saint Pierre et Château St. Ange à Rome*, c. 1840
- Figure 1:13 Noël-Marie-Paymal Lerebours, *The Porte Ripetta*, c. 1840
- Figure 1:14 Anon., Lowther Arcade, “Gallery of Practical Science”
- Figure 1:15 Anon., The Royal Polytechnic Institution
- Figure 1:16 Antoine Claudet, *Portrait of Talbot*, ca. 1843-5
- Figure 1:17 Antoine Claudet, *Portrait of Talbot*, ca. 1843-5
- Figure 1:18 Antoine Claudet, *Portrait of Talbot*, ca. 1843-5
- Figure 1:19 Richard Beard, *Portrait of Talbot*, ca. 1842-3
- Figure 1:20 Richard Beard, *Portrait of Talbot*, ca. 1842-3
- Figure 1:21 Antoine Claudet, *Seated Young Woman with Backdrop of Ruined Castle*, c. 1843-5
- Figure 1:22 Antoine Claudet, *Seated Young Woman with Backdrop of Ruined Castle*, c. 1843-5
- Figure 1:23 Antoine Claudet, *Mary Llewelyn*, 1843
- Figure 1:24 Antoine Claudet, *Portrait of a Seated Man Turning to Right*, ca. 1845
- Figure 1:25 Antoine Claudet, *Portrait of a seated man turning to left*, ca. 1845
- Figure 1:26 Antoine Claudet, *Portrait of a Young Woman, (leaning elbow on a stack of books) and case*, ca. 1841-7
- Figure 1:27 Richard Beard studio, *Portrait of Maria Edgeworth*, 1841
- Figure 1:28 Richard Beard studio, *Portraits with hand coloring*, ca. 1840s
- Figure 1:29 Richard Beard studio, *Portraits with hand coloring*, ca. 1840s
- Figure 1:30 Antoine Claudet, *Portraits with hand coloring*, ca. 1845-1851

- Figure 1:31 Anon., *The Illustrated London News* (October 18, 1851): 508-509
- Figure 1:32 Antoine Claudet, *Portrait of Andrew Pritchard*, July 18, 1843
- Figure 1:33 Antoine Claudet, *Portrait of Mrs. Andrew Pritchard*, September 23, 1847
- Figure 1:34 Beard Patentee
- Figure 1:35 Henry Thomas Ryall, *Arthur Wellesley, 1st Duke of Wellington*, published by J. Watson, after Antoine Claudet, May 1, 1845, and *Duke of Wellington*, carte-de-visite from engraving
- Figure 1:36 Antoine Claudet, *Family Group*, ca. 1855
- Figure 1:37 Antoine Claudet, *Portrait of Nicolaas Henneman*, ca. 1843
- Figure 1:38 (left) Antoine Claudet, Professor Justus von Liebig, 1844
- Figure 1:39 (right) Antoine Claudet, *Young Woman Perusing an Album*, 1844
- Figure 1:40 (left) Antoine Claudet, *Seated Man, Looking at a Daguerreotype*, ca. 1840s
- Figure 1:41 (above) Antoine Claudet, *Portrait of Woman*, ca. 1844
- Figure 1:42 (left) Antoine Claudet, *Self Portrait Seated*, ca. 1840s
- Figure 1:43 Antoine Claudet *Entertaining Around a Table, Pouring Wine*, ca. 1844
- Figure 1:44 Antoine Claudet *Playing Cards*, ca. 1844
- Figure 1:45 Antoine Claudet, *Chess Players*, ca. 1843-4
- Figure 1:46 Antoine Claudet *Chess Players*, ca. 1843-4
- Figure 1:47 J. J. E. Mayall, *Prince Albert*, 1861
- Figure 1:48 Francis G. Claudet, *Portrait of a Young Man*, 1860s
- Figure 1:49 Henri Claudet, *Mdme. Claudet*, ca. 1860s

## Chapter 2

- Figure 2:1 Anon., *Portrait of François Arago*, Engraving after a daguerreotype by Claudet
- Figure 2:2 Antoine Claudet, *Portrait of Faraday*, ca. 1845-6
- Figure 2:3 Antoine Claudet, *Portrait of Charles Babbage*, ca. 1849
- Figure 2:4 J. J. E. Mayall, *The Crystal Palace at Hyde Park, London*, 1851
- Figure 2:5 Anon., "The Photographometer," *Art Journal* (March 1849): 96
- Figure 2:6 Antoine Claudet, *Claudet and Sons with Photographometer and Dynactinometer*, stereo-daguerreotype
- Figure 2:7 Antoine Claudet, *Stereoscopic Photograph (Daguerreotype) of Scientific Apparatus*, 1850s
- Figure 2:8 Antoine Claudet, *Portrait of Young Lady*, ca. 1843-1847
- Figure 2:9 Antoine Claudet, *Elderly woman ("Mr Bing's (sp) Aunt")*, *Mr. Claudet, and Mr. Alexander the famous Chess players*, n.d.
- Figure 2:10 Antoine Claudet, *Sketch Illustrating the Focimeter*, ca. 1850s
- Figure 2:11 Antoine Claudet, *Self-Portrait with Son Francis*, "4" ca. 1853
- Figure 2:12 Antoine Claudet, *Self-Portrait with Son Francis*, "8" ca. 1853
- Figure 2:13 Antoine Claudet, *Self-Portrait with Son Francis*, "12" ca. 1853
- Figure 2:14 Antoine Claudet, *Portrait of Brewster and Young Boy* ca. 1851
- Figure 2:15 Antoine Claudet, *Self-Portraits*, ca. 1860s
- Figure 2:16 Antoine Claudet, *Focimeter*, ca. 1860s

### Chapter 3

- Figure 3:1 Antoine Claudet, *Victorian Interior*, ca. 1851
- Figure 3:2 Anon., *The Illustrated London News Grand Panorama of the Great Exhibition of All Nations 1851*, 1852
- Figure 3:3 T. R. Williams, *Still life*, ca. 1854
- Figure 3:4 Antoine Claudet, *Charles Wheatstone and Family*, ca. 1855
- Figure 3:5 Antoine Claudet, *Empty Interior of the Great Exhibition, Crystal Palace*, 1852
- Figure 3:6 Antoine Claudet, *Venus at the Bath, Great Exhibition*, 1851
- Figure 3:7 Antoine Claudet, *Reproduction of Sculpture at Great Exhibition 1851 (Female nude removing thorn from foot)*, 1851
- Figure 3:8 Antoine Claudet, *Row of statues, 1851 exhibition*, 1851
- Figure 3:9 Antoine Claudet, *Stuffed Bird from Great Exhibition*, 1851
- Figure 3:10 Antoine Claudet, *Diamond Ring Presented to Claudet by Czar Nicholas*, ca. 1851-2
- Figure 3:11 “Stereoscopic Daguerreotypes,” Wood engraving from stereo-daguerreotype of diamond ring, *The Illustrated London News* 20, no. 552 (April 3, 1852): 277
- Figure 3:12 Antoine Claudet, *Drawing Illustrating Natural and Stereoscopic Vision*, ca. 1850-55
- Figure 3:13 Antoine Claudet, *Diagram of Stereoscopes*, ca. 1850-1855
- Figure 3:14 Antoine Claudet, *The Geography Lesson*, ca. 1853
- Figure 3:15 Antoine Claudet, *Self-Portrait with Son and Bird-cage*, ca. 1855
- Figure 3:16 Antoine Claudet, *Six Women and Mirror*, ca. 1855
- Figure 3:17 Antoine Claudet, *Two Girls, One Seated at Piano*, ca. 1850s
- Figure 3:18 Antoine Claudet, *Portrait of Woman in White Dress*, ca. 1850s
- Figure 3:19 Antoine Claudet, *Portrait of a Man*, ca. 1860s, stereo-daguerreotype and albumen stereograph
- Figure 3:20 Antoine Claudet, *Two Men Playing Chess, Woman Standing*, ca. 1850s
- Figure 3:21 Antoine Claudet, *The Chess Players*, ca. 1853
- Figure 3:22 Antoine Claudet, *Drawing Illustrating Photo-sculpture*, ca. 1860s
- Figure 3:23 Antoine Claudet, *Drawing Illustrating photo-sculpture*, ca. 1860s
- Figure 3:24 Antoine Claudet, attrib., *Two-Image Stroboscopic slides*, ca. 1850s
- Figure 3:25 Antoine Claudet, *Claudet’s Revolving Stereoscope*, 1855

### Chapter 4

- Figure 4:1 (left) Richard Cosway, *Portrait of a Young Lady*, ca. 1790
- Figure 4:2 (right) John Smart, *Robert, 1<sup>st</sup> Baron Clive of Plassey*, 1776
- Figure 4:3 George Engleheart (1753-1829), *Lady of the Blunt Family*, ca. 1795-1800
- Figure 4:4 “Photographic Phenomena, or the New School of Portrait Painting,” *George Cruikshank’s Omnibus*, 1842

- Figure 4:5 Richard Beard studio, *Portrait of an Elderly Man*, ca. 1841-42
- Figure 4:6 Antoine Claudet, *Portrait of a British Gentleman*, ca. 1843
- Figure 4:7 Antoine Claudet, *Portrait of a British Woman*, ca. 1845
- Figure 4:8 James Scouler, *Portrait of a Gentleman*, 1796
- Figure 4:9 Antoine Claudet, *Portrait of Ann Richomme, Relative of Claudet*, ca. 1851
- Figure 4:10 Andrew Robertson, *Portrait of 6<sup>th</sup> Duke of Roxburgh*, 1837
- Figure 4:11 Antoine Claudet, *Portrait of a Woman*, ca. 1844-1851
- Figure 4:12 Richard Beard studio, *Three Ninth-plate Daguerreotypes*, ca. 1845
- Figure 4:13 Andrew Robertson, *Lady Bective*
- Figure 4:14 Attributed to George Morland (1763-1804), *Self Portrait*
- Figure 4:15 Henry Bone, *Robert Cathcart, Esq.*, 1798
- Figure 4:16 Richard Beard Case
- Figure 4:17 Richard Beard studio, *Young Woman with Décolletage*, ca. 1845
- Figure 4:18 Joshua Reynolds, *Miss Mary Hickey*, 1770
- Figure 4:19 Joshua Reynolds, *Anne Seymour Damer*, 1773
- Figure 4:20 Thomas Gainsborough, *Mary Heberden*, ca. 1777
- Figure 4:21 Thomas Lawrence, *George James Welbore Agar-Ellis, later 1<sup>st</sup> Lord Dover*, ca. 1823-1824
- Figure 4:22 Mansion, *Portrait of a Lady*, ca. 1820
- Figure 4:23 Mansion, *Mrs. Mills (called)*, 1823
- Figure 4:24 Antoine Claudet, *Group Portrait*, 1850s
- Figure 4:25 Antoine Claudet, *Portrait of a Woman*, 1/6th plate daguerreotype NMS BernardHowarth Loomes Collection, and stereo-daguerreotype, National Media Museum, ca. 1850s
- Figure 4:26 W. E. Kilburn, *The Great Chartist Meeting at Kennington Common*, April 10, 1848
- Figure 4:27 W. E. Kilburn, *Queen Victoria, Pss. Royal, Prince of Wales, Pss. Helena, Pss. Alice, Prince Alfred*, Jan 17<sup>th</sup>, 1852
- Figure 4:28 W. E. Kilburn, *The Prince from Life*, 1848
- Figure 4:29 Antoine Claudet, *Queen Victoria and Her Children*, 1856
- Figure 4:30 Anon., “The Solicitor-General.—Sir Fitzroy Kelly.—From a Daguerreotype by Kilburn,” and “The Attorney General.—Sir Frederick Thesiger.—From a Daguerreotype by Claudet,” from *The Illustrated London News* 20, no. 550 (March 20, 1852): 225.
- Figure 4:31 W. E. Kilburn, *Seated woman Holding 1/9<sup>th</sup> plate daguerreotype*, ca. 1850s
- Figure 4:32 Antoine Claudet, *Seated Woman in Green Dress*, ca. 1851
- Figure 4:33 W. E. Kilburn, *Tinted young woman leaning on a chair in a striped dress*, 1852-1855
- Figure 4:34 Antoine Claudet, *Portrait of a Girl in Blue Dress*, ca. 1854
- Figure 4:35 W. E. Kilburn, *Portrait of Uniformed Soldier*, ca. 1855
- Figure 4:36 W. E. Kilburn, *Portrait of a Woman*, ca. 1855
- Figure 4:37 Antoine Claudet, *Mdme. Claudet and Mary Claudet*, ca. 1855
- Figure 4:38 Richard Beard, *Mrs. Holdsworth*, February 16, 1853
- Figure 4:39 Richard Beard, *Portrait of a Young Man Seated at a Table*, ca. 1852
- Figure 4:40 Richard Beard, *Portrait of Young Man*, ca. 1852

- Figure 4:41 Antoine Claudet, *Portrait of Mary Claudet*, ca. 1855  
 Figure 4:42 W. E. Kilburn, folding stereoscope, 1853  
 Figure 4:43 Antoine Claudet, folding stereoscope, ca. 1853  
 Figure 4:44 J. J. E. Mayall, Two folding stereoscopes, ca. 1850s  
 Figure 4:45 J. J. E. Mayall, *Portrait of Young Women and Two Children* ca. 1850s  
 Figure 4:46 Antoine Claudet, *Self-portrait with Wife and Daughter*, ca. 1855  
 Figure 4:47 T. R. Williams, *Opening of the Great Exhibition*, 1854  
 Figure 4:48 T. R. Williams, *Still Life*, stereo-daguerreotype, ca. 1854  
 Figure 4:49 T. R. Williams, *Portrait of a Woman*, ca. 1854  
 Figure 4:50 T. R. Williams, *Elaborately Decorated Dress*, ca. 1854  
 Figure 4:51 Antoine Claudet, *Two Carte-de-visite Portraits*  
 Figure 4:52 Camille Silvy, *Johann II, Prince of Liechtenstein; Princess Adelheid*, 1860

## Chapter 5

- Figure 5:1 Antoine Claudet, *Antoine Claudet Reading*, ca. 1845  
 Figure 5:2 Antoine Claudet, *Antoine Claudet*, ca. 1845  
 Figure 5:3 Antoine Claudet, *Self Portrait with Topaz Lens*, ca. 1865  
 Figure 5:4 Anon., 107 Regent Street, ca. 1900  
 Figure 5:5 “Sir Charles Barry, R.A., Architect of the New Houses of Parliament, From a Daguerreotype by Claudet,” *The Illustrated London News* 20, no. 546 (February 21, 1852): 16

## **Introduction**

Up to now, the early decades of nineteenth-century photography have been narrated in terms of “great” individual achievements and have tended to characterize the histories of photography in England and France as separate but parallel chronological paths.<sup>1</sup> Equally, scholars have usually split their object of study between two opposite disciplines: that of science and that of art.<sup>2</sup> I propose instead a lateral approach that considers the ways in which both photography and individual photographers interconnected within an expanded network of international cultural forces, primarily commerce, technology, science, and art. I aim to do this through a close study of the career of Antoine-François-Jean Claudet (1797-1867), a French-born photographer operating a daguerreotype portrait studio in London from the early 1840s to the late 1860s.

As a commercial photographer interested in improving the technical as well as aesthetic possibilities of photography, Claudet intersected with these cultural forces more directly than many of his contemporaries. Born in Lyon in 1797, he moved to London as representative of a French glass manufacturing company in 1829 and remained there until his death in 1867. After learning the daguerreotype process in Paris from Louis-Jacques-

---

<sup>1</sup> For example, as will be discussed, Helmut Gernsheim, *The Origins of Photography* (New York: Thames & Hudson, 1982), first published in 1969 as the first part of *The History of Photography from the Earliest Use of the Camera Obscura in the Eleventh Century up to 1914* (London: Oxford University Press, 1955; New York: McGraw Hill, 1969) and Beaumont Newhall, *The History of Photography* (New York: The Museum of Modern Art, 1982).

<sup>2</sup> One example can be found in the variant publications on William Henry Fox Talbot (1800-1877). See H. J. P. Arnold, *William Henry Fox Talbot: Pioneer of Photography and Man of Science* (London: Hutchinson Benham, Ltd., 1977) versus Larry Schaaf, *The Photographic Art of William Henry Fox Talbot* (Princeton and Oxford: Princeton University Press, 2000).

Mandé Daguerre (1787-1851) himself, he opened one of the first photographic portrait studios in London and was instrumental in improving the new process.

Claudet was interested in exploring the range of photography's possibilities as a medium by measuring and testing its primary elements—light, chemistry, the camera lens, vision—as well as a range of photographic processes, including daguerreotypy, calotypy and albumen printing. A study of Claudet is therefore also a study of the photographic medium itself, at a time when its capabilities were yet to be fully determined. As a technical innovator of photography as well as a prolific writer on the medium, and as a Frenchman living in England constantly in communication with photographers and scientists on both sides of the English Channel, he serves as an advantageous figure through which to re-examine the early decades of photography in Europe. To follow Claudet is to weave between spaces commercial and scholarly, between technological measurements and the painterly-pose of a sitter, between daguerreotypes, calotypes, stereographs and albumen prints, between Talbot and Daguerre, England and France, science and art. The early history of photography is this textile of connections.

## **Biography**

Claudet was born the second of six children at the Chateau-de-Rosay in Lyon. He was mostly raised by his mother, as his father died when he was ten years old.<sup>3</sup> Raised in an upper class, well-educated family, his first employment was in the bank of his uncle, Vital Roux, where he worked from 1818 to 1825. He then transferred to a managerial

---

<sup>3</sup> See Laura Claudet, "Claudet, Antoine-Francois-Jean (1797-1867)," in *Encyclopedia of Nineteenth-Century Photography*, ed. John Hannavy (London: Routledge, 2008), 302-304.

position in the glassworks of Choisy-le-Roi outside of Paris under the renowned director Georges Bontemps (1799-1884).<sup>4</sup> In 1821, Claudet traveled to London to marry Julia Bourdelain, whose family was French but lived in London.<sup>5</sup> When Bontemps decided to establish an outlet for Choisy-le-Roi glass in England, Claudet's contacts through his wife's family, as well as his facility with English, made him an advantageous representative across the Channel. Upon moving his family (his three children at this time were John, who would die in 1838, Anne Mary, and Justus Frederick) to London in 1829, Claudet established himself fairly quickly. Baptism records of the Parish at St. Andrews, Holborn, London, for Anne Mary and Justus Frederick (born in France in 1824 and 1826 respectively) state that the Claudets resided on High Holborn in 1829. The 1831 baptism record for Claudet's son George, born in 1830, states that Claudet was a "glass merchant" and their address was 89 High Holborn.<sup>6</sup> In 1833, Claudet invented a machine for cutting cylindrical glass (also called "cylindres de verre"), for which he would be awarded a

---

<sup>4</sup> The glassworks of Choisy-le-Roi was founded in 1821 by Ponce Grimblot. Bontemps was also the nephew of Claudet's wife Julia Bourdelain. An early article by Arthur Gill reproduces miniature paintings of Claudet's parents, presently in the family's collection, suggesting that they were of a class that could afford to commission such portraits. See Arthur Gill, "Antoine François Jean Claudet," *The Photographic Journal* no. 107 (December 1967): 405.

<sup>5</sup> Their marriage certificate states that they were married on August 30, 1821, in St. Mary's Church in Islington, London. "Marriages solemnized in the Parish of Islington in the County of Middlesex in the Year 1821," no. 188 (1821), 63. Their witnesses were "John Bourdelain, J. Bourdelain Jr., Louisa Augusta Darby and Georgiana Darby," and a "Caroline Davis Sam[unreadable]Sweet." The Bourdelains were a metal merchant family; J. Bourdelain & Co. were listed as "hardware and metal merchants" at 57 Grace-church Street, London, in *Street's Indian and Colonial Mercantile Directory for 1870* (London: G. Street, 1870), 416. Claudet could have been introduced to them through the glassmaking business as iron was used for making sheet glass. John Bourdelain Jr. would assist Claudet at his Adelaide Gallery. See Bourdelain to Talbot, London, July 21, 1843, in *The Correspondence of William Henry Fox Talbot*, ed. Larry Schaaf, Doc. No. 4847, <http://foxtalbot.dmu.ac.uk/letters/letters.html> (accessed May 3, 2010). [All of the letters to and from Talbot have been archived in this online project and hereafter will be referred to as *Talbot Correspondence*].

<sup>6</sup> "Baptisms solemnized in the Parish of St. Andrew, Holborn, London, and in the County of Middlesex, in the Year, 1831," (T. Lodder, Holborn). An advertisement in *The Times*, June 26, 1830 reads: "A Parisian Lady, many years accustomed to tuition, wishes to obtain a Situation as Resident Governess. She speaks her own language with elegance and accuracy, and would likewise instruct her pupils in Italian and the rudiments of Spanish and music, Address, post paid, to B.J. [most likely for "Bourdelain, Julia" or "Bourdelain, John"] at Mr. Claudet's, 89, High Holborn."

medal from the Royal Society in 1853.<sup>7</sup> Around this time and at least by 1837, Claudet had formed a partnership with George Houghton (1804-after 1878), an English businessman, and “Claudet & Houghton” established itself as a retailer of glass products in the shop on High Holborn.<sup>8</sup>

When the details of the daguerreotype process were announced to the French public in August of 1839, Claudet responded to a suggestion made by his friend Noël-Marie-Paymal Lerebours (1807-1873), a French optician and publisher, to travel to Paris and meet Daguerre. After visiting Daguerre at the *École des arts et metiers* and learning the process, he returned to London in the fall of 1839 with daguerreotype specimens that he advertised for sale through his High Holborn shop.<sup>9</sup> These specimens seem to have been obtained from Lerebours, who had commissioned several hundred daguerreotypes to be used as the basis for illustrations for his publication *Excursions daguériennes*. In March of 1840, Claudet approached members of the Royal Society regarding the organization of a subscription to purchase the patent for the daguerreotype from Daguerre’s English patent agent, Miles Berry. This was not successful and so, within the same month, he purchased an operator’s license from Berry for £200.<sup>10</sup> The license,

---

<sup>7</sup> See “Society of Arts,” *The Athenaeum* no. 1176 (May 1850): 507, for a brief description of how the machine worked.

<sup>8</sup> An early advertisement for the partnership appeared in *The Times*, February 28, 1838: “Strong Glass, for conservatories, manufactories, and first-rate buildings—Claudet and Houghton, 89, High Holborn . . .”

<sup>9</sup> See “A Chapter in the Early History of Photography,” *The Photographic News* 12 (August 21, 1868): 404-5. The author reports on a meeting of the photographic section of the American Institute in Philadelphia in 1868 in which a letter written in 1865 by Claudet to Peter Le Neve Foster, Secretary of the London Society of Arts, was read aloud.

<sup>10</sup> *The Times*, March 3, 1840: “Messrs. Claudet and Houghton, 89, High Holborn, beg leave to announce that having obtained a license from the patentee, they have on hand a collection of splendid specimens of this wonderful discovery, representing the most interesting monuments, ancient and modern, of Paris, Rome, and other cities, also panoramic views of these towns, landscapes, portraits taken from nature, &c.” A March 25th document states that Claudet was granted a license by Berry “to use a limited portion of the apparatus in consideration of the sum of 200 pounds.” See *The Times*, July 16, 1841. Claudet later claimed that he had been granted rights to practice the daguerreotype by Daguerre himself in 1839. Their legal

significantly cheaper than the patent, allotted Claudet a limited use of the process and equipment. By the spring of 1841, Claudet & Houghton had begun to import all equipment needed for making daguerreotypes, including cameras and plates, and sold them alongside their glass products and daguerreotype specimens.<sup>11</sup>

In June of 1841, Claudet opened the second daguerreotype portrait studio in Britain on the roof of “The Gallery of Practical Science,” also known as the Adelaide Gallery, which had opened near the Strand in central London in 1832. Immediately a legal dispute ensued with the ex-coal merchant Richard Beard (1801-1885), who had opened the first daguerreotype portrait studio in Britain three months prior in the attic of the Royal Polytechnic Institution.<sup>12</sup> Claiming that the Frenchman did not have the rights to the use of the daguerreotype process, Beard took out a court injunction against Claudet, an injunction that was at first upheld but then overturned a week later.<sup>13</sup> Around the time of the opening of the Adelaide Gallery studio, Claudet sent a report to the scientific communities in both London (Royal Society) and Paris (Académie des sciences), presenting his discovery of the increased sensitivity of the daguerreotype plate with the addition of chlorine to the iodine sensitizer, thus making portraiture more

---

dispute is documented in the Court of Chancery papers, currently housed in the National Archives, Kew London. See [W1841 B27]: *Beard v. Claudet: Bill and answer. Plaintiffs: Richard Beard. Defendants: Antoine Claudet* (July 1841), Court of Chancery: Six Clerks Office: Pleadings 1801-1842, Reference no. C13/435/19, National Archives; Also [W1842 B14]: *Beard v. Claudet: Bill and answer. Plaintiffs: Richard Beard. Defendants: Antoine Claudet*, Original bill: Trinity 1841, Court of Chancery: Six Clerks Office: Pleadings 1801-1842, Reference no. C 13/456/5, National Archives.

<sup>11</sup> Advertisements for daguerreotype equipment were placed in *The Times*, April 13, 1841: “. . . Claudet and Houghton beg to announce to the amateurs of this wonderful discovery, that they are now enabled to Supply all persons wishing to use the invention for amusement or experiment with complete apparatus, prepared plates, &c., at a very moderate price.”

<sup>12</sup> See Bernard and Pauline Heathcote, “Richard Beard: An Ingenious and Enterprising Patentee,” *History of Photography* 3, no. 4 (October 1979): 313-328. The article recounts Beard’s early establishment of his studio and his many legal disputes over the daguerreotype patent.

<sup>13</sup> It appears that Beard had not in fact purchased the full patent.

feasible.<sup>14</sup> In 1841 Claudet also patented two significant improvements to the portrait studio: the use of painted backdrops as well as the covering of lights in the developing room with red glass.<sup>15</sup>

Claudet contributed daguerreotypes to Charles Wheatstone's (1802-1875) stereoscope (an optical device that brought two drawings together in the viewer as one three-dimensional image) in 1842, the same year that he was involved in the production of a panorama of London for the recently established *The Illustrated London News*. In order to achieve this, Claudet climbed to a small balcony at the top of the Duke of York's Column and made consecutive daguerreotype views over a period of several days. The plates were transcribed into woodcut engravings over a period of two months. The panorama, or "Colosseum Print," was published as two extendable sheets, one of the North view and one of the South, and titled "London in 1842" in a supplement to *The Illustrated London News* of January 7, 1843 [Figure I:1].<sup>16</sup>

---

<sup>14</sup> "Early in 1841, I [Claudet] communicated to the Royal Society my discovery that chloride of iodine and chloride of bromine, added to the preparation of Daguerre (iodide of silver), was capable of rendering the original process one hundred times more sensitive, and from that moment I obtained instantaneous Daguerreotype pictures—as much so as with the present process of photography. My discovery made a great sensation in France, and every one took up the process, for which I had not taken out a patent." See "A Chapter in the Early History of Photography," (1868). An article reporting on a paper by Talbot published in the *Philosophical Magazine* recorded that an accelerating process "'discovered by A. Claudet in the beginning of May 1841' was communicated by the Marquis of Northampton, Pres. R.S." See "Mr. Talbot on Recent Improvements in Photography," *Philosophical Magazine and Journal of Science* 19, no. 122 (August 1841): 167.

<sup>15</sup> Antoine Claudet, Certain Improvements in the Process or Means of and Apparatus for Obtaining Images or Representations of Nature or Art, British Patent 9193, June 18, 1841.

<sup>16</sup> *Supplement to The Illustrated London News*, January 7, 1843: 545, subtitled "This Picture of the Metropolis of the British Empire is presented to the Subscribers of the Illustrated London News by the Proprietors," printed by Palmer & Clayton, No. 10 Crane-Court, Fleet-Street, London and published by W. Little, 198, Strand, London. An article accompanying the "key" to the "Colosseum Print" describes the process of its making along with the names of the principle artists, including Claudet. The daguerreotypes were first copied by an artist (in this case Mr. H. Anelay who sat at the top of the column with the plates and the drawings), then drawn onto approximately 60 blocks of imported boxwood from Turkey about six inches in diameter, by a Mr. Sargeant. The blocks were then engraved by Mr. E. Landells and "eighteen other engravers."

Returning to Paris in 1843, Claudet purchased the superior Petzval lens (newly imported from Germany) and collaborated with Lerebours on some daguerreotype experiments. He also enrolled the British Patent for Armand-Hippolyte-Louis Fizeau's (1819-1896) Electrotype process.<sup>17</sup> It was around this time that Claudet began communications with William Henry Fox Talbot (1800-1877) regarding a business partnership to improve the calotype process for commercial portraiture. After failing to make such a venture profitable, Claudet turned full attention to his daguerreotype portraiture. He expanded his studio starting in 1844 and by 1846 had changed the entrance to 18 King William Street, thus disassociating himself from the Adelaide Gallery, which had ceased to be a reputable scientific establishment and was veering more towards public entertainment. Claudet also opened a studio in the Colosseum in Regents Park, and by this time had employed a well-known French miniature painter André-Léon Larue, or "L. La Rue," more typically known as "Mansion" (1785-1870), to add color to his daguerreotype portraits.

In 1851, Claudet moved to his fourth and final studio at 107 Regent Street, where he would remain until his death in 1867. The studio included a Victorian interior setting for clients to pose in. The space was designed by the celebrated architect Sir Charles Barry (1795-1860) at the same time that his designs for the new Houses of Parliament were being constructed.<sup>18</sup> It was on Regent Street that Claudet began to produce stereo-daguerreotype portraits. His experiments in binocular vision and in expanding the pictorial space of the image led him to relationships with eminent scientists of his time, namely David Brewster (1781-1868) and Michael Faraday (1791-1867), and earned him

---

<sup>17</sup> Antoine Claudet, Printing from Daguerreotype Plates, British Patent 9957, May 21, 1843.

<sup>18</sup> See a review of the studio in *The Athenaeum* (August 30, 1856): 139-40.

a membership in the Royal Society in 1852. Claudet became a member of The Photographic Society at its inception in 1853 and was also an early member of the Société Française de Photographie, founded in Paris in 1854. He regularly wrote letters to editors of *The Journal of the Photographic Society* (later *The Photographic Journal*) as well as to Ernest Lacan, the editor of the French photographic journal *La Lumière*. He participated on the jury for the Great Exhibition of 1851, was awarded prizes for his exhibited photographs, and was a vocal advocate for the inclusion of photography among the “Fine Arts” sections of the 1862 International Exhibition in London.

Amidst the myriads of experiments he made with the photographic medium in the 1840s and 1850s, Claudet presented three new instruments for improving the taking of a daguerreotype portrait. The “Focimeter” (1844) helped determine the correct focal distance of the lens in use. The “Photographometer” (1848) measured the light sensitivity of the daguerreotype plate. The “Dynactinometer” (1851) measured the intensity of the “photogenic rays” in relation to the optical power of the lens in order to determine the length of exposure necessary. In the 1860s, Claudet continued to write about photography and also began to experiment with different materials for camera lenses, such as crystal and topaz, in order to best imitate the vision of the human eye. In 1863, Claudet took out a British patent on the French “Photosculpture” process invented by François Willème (1830-1905) and formulated plans (which were never executed) to be the director of a photosculpture business in England.<sup>19</sup>

Claudet’s 1853 patent, “Stereoscopes,” included a sliding mechanism that, when moved back and forth over two stereo images within the viewer, produced the illusion of

---

<sup>19</sup> Antoine Claudet, Photo-sculpture, British Patent 3107, December 14, 1864.

movement by depicting slight variations of a subject's gesture.<sup>20</sup> His paper, titled "On the Moving Photographic Figures, Illustrating some Phenomena of Vision Connected with the Combination of the Stereoscope and the Phenakistoscope by Means of Photography," outlined these experiments in 1865.<sup>21</sup> Claudet was also avidly working towards a method of equalizing the focus of the lens so that each plane of the daguerreotype image would be in definition, and he presented his findings to the British Association of Nottingham in 1866.<sup>22</sup> Although he experimented with a range of processes—he made ambrotype portraits, albumen stereo portraits, and cartes-de-visite—Claudet remained steadfastly devoted to the daguerreotype long past the arrival of the glass negative. Tragically, a fire in his Regent Street studio in early 1868, shortly after his death in December of 1867, destroyed any photographs and instruments Claudet had been working with, leaving a great deal unknown as to the extent of his research at that point.<sup>23</sup>

## Literature

What is revealed in this brief chronological account of Claudet's career is the diversity of his pursuits in the medium as well as the range of connections he held to the photographic and scientific realms of his time. Indeed, Claudet's was a career defined by

---

<sup>20</sup> Antoine Claudet, Improvements in Stereoscopes, British Patent 711, March 23, 1853. "Another improvement, which may be used in conjunction with the above, consists in the adaptation to the eye pieces of a sliding piece, which has holes or apertures made therein, and so arranged that first one eyepiece and then the other may be closed. The pictures, instead of being made simply stereoscopic in the well-known manner, are made so as to show various actions . . ."

<sup>21</sup> Claudet, "On Moving Photographic Figures, Illustrating Some Phenomena of Vision Connected With the Combination of the Stereoscope and the Phenakistoscope by Means of Photography," *The Photographic Journal* (September 15, 1865): 143-145. Also published in *Philosophical Magazine and Journal of Science* 30, no. 203 (1865): 271-6.

<sup>22</sup> Antoine Claudet, "Optics of Photography.--On a new Process for Equalizing the Definition of all the Planes of a Solid Figure Represented in a Photographic Picture," *Philosophical Magazine and Journal of Science* 32, no. 215 (1866): 212-219.

<sup>23</sup> The fire occurred in the evening of Thursday, January 23. "Serious Fire at Mr. Claudet's Studio in Regent Street," *The Photographic News* 11 (January 31, 1868): 51-2.

connectivity. As a consequence, his significance has not been adequately rendered in histories of photography. Two of the more prominent published histories—Helmut Gernsheim’s and Allison Gernsheim’s *The Origins of Photography* and Beaumont Newhall’s *The History of Photography*—provide examples of the various ways in which a photographer such as Claudet has traditionally been figured.<sup>24</sup> Importantly, these histories represent two different agendas and two different kinds of discourse. The Gernsheim account is written by German expatriate collectors while in exile in London. Therefore, their history is driven by the interests of previous German photography historians, such as Josef Maria Eder, who structured his *History of Photography* according to a chronological account of the prominent technological achievements in the medium’s history.<sup>25</sup> The Gernsheims similarly provide a chronological account of each photographer’s technological contributions to the medium in its first decades, illustrating their text primarily with their own collection of early photography. Claudet contributed a great deal technically to the medium and was active in London. As a result, *The Origins of Photography* devotes considerable space (about sixteen pages) to his life and career.<sup>26</sup> Five of his daguerreotypes are reproduced, two of them in color, but no one image is analyzed in any detail.

---

<sup>24</sup> Gernsheim, *The Origins of Photography* (1982); Newhall, *The History of Photography* (1982).

<sup>25</sup> Josef Maria Eder, *History of Photography* (New York: Columbia University Press, 1945), first published as *Geschichte der Photographie und der photomechanischen Verfahren in Osterreich* (Vienna: L. Weiss, 1898).

<sup>26</sup> Gernsheim, *The Origins of Photography* (1982), 141: “Claudet’s importance . . . lies not only in the field of photographic portraiture. His scientific attainments and his inventive genius were of a very high order. Indeed, few people are so closely identified with the progress of photography in its first three decades. There was not a single year between 1841 and his death in 1868 [sic] in which Claudet did not bring some valuable practical or scientific contribution to photography to the notice of the British Association, the Royal Society (which elected him a fellow in 1853), or some other scientific or photographic body, in Britain or in France.”

Beaumont Newhall was a photographer trained in art history, and his first history of photography was written for an exhibition he curated at the Museum of Modern Art in New York, where he first worked as a librarian, in 1937. Newhall was interested in providing an aesthetic assessment of the medium up to that point, and therefore Claudet was a less important figure.<sup>27</sup> In order to equate photography with painting as an artistic medium, Newhall reinforces the parallels between the painter and the photographer and asserts that inherent to both is “the desire to make pictures.”<sup>28</sup> Increasingly in each of the five versions of this book, non-aesthetic aspects of photography, such as scientific and technological advances, are included not as their own entities within photographic history but as material from which to determine significant pictorial achievements.<sup>29</sup> Newhall was inspired in this approach by the writing of the photographic historian Heinrich Schwarz.<sup>30</sup> His alliance with Schwarz, as well as his focused interest in the “aesthetics” of

---

<sup>27</sup> Claudet is not mentioned in the 1937 or 1938 versions. He is included in the 1949 publication, which, as the forward stated was re-written from the original and contained different illustrations. However Claudet’s only appearance is in the chapter “Prints from Paper,” in the caption of his 1844 daguerreotype portrait of Talbot, significantly cropped from the original. Newhall, *The History of Photography from 1839 to the Present Day* (New York: Museum of Modern Art: Distributed by Simon and Schuster, 1949). In the 1964 and 1982 versions he is included in the form of small reproductions of one of his portraits. The 1982 edition adds a brief mention of Claudet with a full-page illustration of one half of the stereo-daguerreotype, *Family Group*, ca. 1852, currently in the George Eastman House, Rochester, and in the form of a calotype portrait of him attributed to Talbot, c. 1845, now in the National Media Museum, Bradford.

<sup>28</sup> Newhall, *The History of Photography* (1937), 44. The author establishes two fundamental organizational tropes for photography. “Detail” was aligned with the daguerreotype, while “mass” was the territory of the calotype. For Newhall, the medium could be divided into these two divergent types yet also be united by a “Common Factor,” which was an overall design and arrangement of tone. This approach to the medium is re-examined by Douglas Nickel in “History of Photography: The State of Research,” *The Art Bulletin* 83, no. 3 (September 2001): 548-558.

<sup>29</sup> For example, X-rays are mentioned briefly as aesthetic inspiration for Laszlo Moholy Nagy, whose placement changes in each edition. Scientific photography is variously placed. In 1949, “Science” is part of “Experiments in Abstraction,” while in 1964 it bears a “peculiar beauty” in the chapter “The Quest for Form,” and it is all but gone in the 1982 chapter, “In Quest of Form.” Another example is Newhall’s changing treatment of Eugène Atget, who is moved from “Straight” photographer (1949) to “Documentary” (1964) and back to “Straight” in 1982. The genre of documentary photography also holds various positions in each edition.

<sup>30</sup> Nickel writes that the underlying story of Newhall’s text parallels that of Schwarz’s seminal text *David Octavius Hill—Der Meister der Photographie* (Leipzig: Insel, 1931).

photography, resulted in a history of photography that sought to emulate the values of a history of art.<sup>31</sup>

I mention these texts as typical examples of how Claudet has entered into the broader literature on the history of photography. These contexts, one a history produced by two European collectors, the other by an American art historian, produced discourses that either laud Claudet for particular technological improvements or barely include him at all. In both instances, the connective role he played in photography's early history is left latent, and with it a more comprehensive photographic history. This myopia has continued in more recent publications. In some instances, for example, Claudet's nationality is contingent on the national focus of a particular study. In the large-scale exhibition and catalogue of French daguerreotypes, *Le daguerreotype français: un objet photographique* (2003), the inclusion of a stereo-daguerreotype by Claudet implies that he is a French daguerreotypist, while Roger Taylor's extensively researched social history of the calotype, *Impressed by Light: British Photographs from Paper Negatives, 1840-1860*, 2007, assumes that Claudet is British (although none of his actual work is included).<sup>32</sup> His trans-nationality, like his connective role, has not been interwoven into one photographic story in these existing histories. Indeed, chronological, diachronic

---

<sup>31</sup> Newhall, *Photography: A Short Critical History* (New York: Museum of Modern Art, 1938), 9. The preface to this edition states: "The following pages are not intended to cover the purely technical history of photography. The scientific aspects are discussed only so far as they vitally affect the esthetic ends of the medium." The original introduction is expanded and divided thematically and chronologically, rather than by process or technique. The section on "The Basic Laws" is included in a separate chapter titled "Basic Esthetics of Photography," and the daguerreotype is mentioned in the chapter prior, "Primitive Photography." The 1949 edition is re-structured along the thematic outline that is still integral to our understanding of the history of the medium today. A version of the 1938 statement appears in the preface: "Photography is so linked to science that technical explanations are inevitable in any discussion of the esthetics of the camera. Although technical matters are taken up in the following pages, no attempt has been made to retell the scientific development of the photographic process."

<sup>32</sup> Quentin Bajac et Dominique de Font-Réaulx, *Le daguerreotype français: Un objet photographique* (Paris: Réunion des musées nationaux, 2003); Roger Taylor, *Impressed by Light: British Photographs from Paper Negatives, 1840-1860* (New Haven: Yale University Press, 2007).

accounts of the history of photography—such as those by Gernsheim and Newhall—or specifically focused accounts of a particular process—the daguerreotype or the calotype—are unable to offer a horizontal, synchronic view that would do justice to a Claudet, or to the complexity of the history of photography in general.

By examining his pursuits laterally, across the multiple communities that they traversed in his time, this study will argue that a career like Claudet’s is integral to any substantial understanding of the photographic medium’s first decades. A close analysis of the work and career of this less-celebrated figure will make a vital addition to how the history of photography is usually figured, one which acknowledges connection and collaboration as key to understanding more accurately the period of photography’s invention and early development.

Although under-appreciated in standard histories of photography, Claudet has been the subject of two monographic Master’s theses, *The Question of Style in Daguerreotype and Calotype Portraits by Antoine Claudet*, written in 1977 by Linda Vance Sevey, and *Antoine François Jean Claudet: Artist, Photographer, and Scientist*, written in 1985 by Joan Coke.<sup>33</sup> Although full of useful information, both adopt an art historical approach that again is unable to adequately account for the breadth of Claudet’s career. Sevey’s text is divided by his studio addresses and each is correlated to a different stage of stylistic development, from “formative,” to “transitional,” to “mature.”<sup>34</sup>

Similarly, Coke’s thesis seeks to place Claudet’s photographic work within the realm of

---

<sup>33</sup> Linda Vance Sevey, “The Question of Style in Daguerreotype and Calotype Portraits by Antoine Claudet,” Master of Fine Art thesis, Rochester Institute of Technology, 1977; Joan Coke, “Antoine François Jean Claudet: Artist, Photographer, and Scientist,” Master of Arts thesis, University of New Mexico, 1985. Coke was at one point the wife of the photographer, curator, and photo-historian Van Deren Coke (1921-2004).

<sup>34</sup> Sevey, “Question of Style,” (1977): iii.

fine-art photography. She writes in the preface that Claudet, “at forty-two years of age, with a career devoted to technology and commerce . . . embarked on a new career in photography, using it as a means of artistic expression, while insisting from the first that photography was a fine art, and should be recognized as such.”<sup>35</sup> One of the author’s advisors for this thesis was Beaumont Newhall, whose emphasis on aesthetic considerations over technical is evident in the text. In her conclusion, Coke writes: “[Claudet] always insisted on veracity in his own work, however difficult that was to obtain . . . Nevertheless, he did not allow technical proficiency to hold sway over aesthetic considerations.”<sup>36</sup> Both Sevey’s and Coke’s texts focus narrowly on Claudet’s life and career in order to determine the photographer as an artist and therefore neither emphasize interconnectedness as the basis of his contribution to the early decades of photography.

## **Rationale**

One study that includes Claudet’s work does at least hint at the potential richness of this interconnectedness. Joan Schwartz’s essay “The Geography Lesson: Photographs and the Construction of Imaginative Geographies,” published in *Journal of Historical Geography* in 1996, suggests an approach that places the 1852 stereo-daguerreotype *The Geography Lesson* at the intersection of multiple discourses—from photographic to geographic to pedagogical. Through descriptions of this daguerreotype’s content, title, medium, physical form, and institutional presence (within the Gernsheim collection), the author accesses a range of disciplines. Schwarz writes that “[t]he literary, artistic,

---

<sup>35</sup> Coke, “Antoine François Jean Claudet,” (1985): vi.

<sup>36</sup> Coke, “Antoine François Jean Claudet,” (1985): 114.

cartographic and photographic representations of *The Geography Lesson* suggest an intellectual ground upon which the contest of meaning is played out across the intertextuality of sources. Viewed as a visual embodiment of the process by which the nineteenth-century Western mind received, organized and constructed knowledge about the world, *The Geography Lesson* alerts us to the inextricability of written and visual representations.<sup>37</sup> Claudet, as photographer, is thereby stitched within a range of contemporary discourses.

I propose a similar approach. I will look at the early decades of photographic history as a network of dialogues in the midst of an expanded web of inseparable cultural forces, namely commerce, technology, science, and art. In order to account for Claudet's connective role as a photographic figure, this dissertation will also present an alternative form of monograph, indeed an alternative form of history for photography. As the photograph as an object confounds many of the principles that more traditional monographic studies (i.e. of a canonical painter) have been founded on—originality, authorship and the unique work of art—a photographic subject (such as the “typical” portrait that studios like Claudet's produced by the thousands) is particularly suited to testing out new possibilities for the monograph. I do not claim that my approach is a new one. This kind of lateral approach to the monographic subject within the history of photography has been explored in revisions of photography's history by scholars such as Anne McCauley and Robin Kelsey.<sup>38</sup> Like McCauley's and Kelsey's subjects, Claudet's involvement with the photographic medium blurs the binary oppositions—national,

---

<sup>37</sup> Joan Schwartz, “The Geography Lesson: Photographs and the Construction of Imaginative Geographies,” *Journal of Historical Geography* 22, no. 1 (1996): 16-45.

<sup>38</sup> Elizabeth Anne McCauley, *A.-A.-E. Disdéri and the Carte de Visite Photograph* (New Haven, CT: Yale University Press, 1985); Robin Kelsey, *Archive Style: Photographs and Illustrations for U.S. Surveys, 1850-1890* (Berkeley, CA: University of California Press, 2007).

technological, artistic—on which the history of photography has traditionally depended. As a consequence, his career can be understood only in terms of collaboration. Its study therefore necessitates the development of an historical method sensitive to the dynamics of this kind of relationship.

In taking a multivalent approach, I am inspired by monographs like Douglas Nickel's *Francis Frith in Egypt and Palestine: A Victorian Photographer Abroad*, which similarly seeks to locate its photographer in a complicated tapestry of social, cultural, and even political events.<sup>39</sup> Further, Frith's career is incorporated into a narrative that, as the author states, aims to look at the social history of photography and the art history of photography as "interrelated."<sup>40</sup> Rather than describing the uniqueness of his subject, Nickel looks for Frith's "typicalness," or, "the ways in which his work illuminates the cultural contexts from which he emerges."<sup>41</sup> However, Claudet is in many ways a more complex photographic figure even than Frith, not only for the fact that he was a Frenchman living and operating in the capital of his native country's historical rival, but also because he circulated within a broader range of nineteenth-century photographic production. Another example of an alternative monograph is Ann Stephen's *On Looking at Looking: The Art and Politics of Ian Burn*.<sup>42</sup> The author bases her approach to the career of the contemporary Australian artist Ian Burn on what she calls "dialogues." In order to "circumvent the inevitable individualism and chronology of biography,"

---

<sup>39</sup> Douglas Nickel, *Francis Frith in Egypt and Palestine: A Victorian Photographer Abroad* (Princeton and Oxford: Princeton University Press, 2004), 9. "Imagine for a moment a history of photography that, rather than tracing the medium's development through a series of technical innovations or through its stylistic ties to works in other media, sought instead to emphasize relationships between camera images, photographic discourse, and the broader patterns of Western thought in the last two hundred years."

<sup>40</sup> Nickel, *Francis Frith* (2004), 11.

<sup>41</sup> Nickel, *Francis Frith* (2004), 12.

<sup>42</sup> Ann Stephen, *On Looking at Looking: The Art and Politics of Ian Burn* (Melbourne: The Miegunyah Press, 2006).

Stephen's book is structured around connections between Burn's work and that of other artists with whom he had contact, with the understanding that, "[t]he dialogues encourage a view of art as a collaborative enterprise and, like conversations, are open-ended."<sup>43</sup> The roughly chronological chapters take up discussions with other artists and writers related to a particular theme (such as Mel Ramsden and "Art and Language" or Modernism and canonical figures like Mondrian and Leger). Although several chapters may begin with a single conversation, what is intriguing about this format is that each dialogue expands outward multi-directionally, beyond the works and shifts in the artist's life. Each chapter operates within its own "internal logic," in which the continuous flow of chronology is halted and interlaced with a dialogue that spreads out around itself.

Both Nickel and Stephen take as their subject a new form of monograph and, in their various approaches, show an interest in rethinking the nature of historical writing. "We are currently witnessing a move away from histories of abstract ideas to histories of practice—a reorientation implicit in the concept of 'discourse,'" Nickel writes. "In the case of Frith, this emphasis compels scrutiny not only of him as a maker of images but also of the mechanisms of publication, the sources of patronage, and the conditions of reception for his images—attention to Frith the author, but also to the interpenetration of his writings and photographs with other writings and images."<sup>44</sup> Similarly, Stephen's monograph on Burn encounters the artist's practice through his collaborations with others. As a result, it reveals art practice not as a fluid link between individual creativity and the production of a work of art, but as a process of open-ended collaboration, a dynamic of certainty and uncertainty.

---

<sup>43</sup> Stephen, *On Looking* (2006), 8.

<sup>44</sup> Nickel, *Francis Frith* (2004), 15-16.

I propose to re-tell the early decades of photography's history through the specificities of Claudet's practice. In order to do this, the narrative structure I adopt is less in line with that of Nickel, who provides a more or less chronological account of Frith's career, and closer to that employed by Stephen, in which each chapter takes up a particular theme that is explored through Claudet's dialogues with the various communities and forces in which he was situated. Each chapter is grounded in actual photographs, instruments, published papers and correspondence and each connects in a loose chronological manner with the chapter before and after, following a method that is both thematic and chronological yet not strictly tied to either. Writing Claudet's career as dialogue makes possible an understanding of the ways in which both photography and photographer interconnected with a broader network of cultural forces. It also allows for a re-picturing of photography's development as a process of successes and failures, knowns and unknowns, that produced a range of cross-disciplinary conversations. If we consider these correspondences as the latent images of photographic history, this approach is itself a photographic one. It exposes and then "develops out" these latent conversations.

## **Chapters**

Chapter One, "Commerce," is focused on Claudet's entrepreneurial goal to bring the daguerreotype to England, both legally and commercially. Claudet was an integral figure in each of these stages. The chapter begins with Claudet's early role in the transnational commerce of glass in the 1830s, followed by a similar role in the commerce of photography in the 1840s, based on his connections with Daguerre and Lerebours in

Paris. When Claudet first established his London portrait studio in 1841, he was immediately drawn into a legal battle with Richard Beard over the British patent rights to the daguerreotype. This argument, one of the well known “dialogues” in the photographer’s career, incorporates Daguerre’s patent agent, Berry, and, more broadly, the patenting of the daguerreotype in Britain. The legal contest with Beard also leads to an account of the founding and functioning of the first two portrait studios in Britain and the “scientific” institutions that supported them. It was studios like Claudet’s that commercialized the daguerreotype and established operational procedures, pricing, poses, settings, and formats for the daguerreotype portrait at large. Claudet was also involved with two (ultimately failed) enterprises—his early interest in Fizeau’s “Electrotype” process and his collaboration with Talbot to make the calotype process viable for commercial portraiture—that indicate the range of attempts to expand the medium commercially in its first decade. In short, this chapter will trace Claudet’s dialogue with capitalism and commerce.

Chapter Two, “Science,” focuses on photography’s circulation within technological and scientific realms in the 1850s and 1860s. Whereas Chapter One centers on the expansion of the medium into commercial ventures, this chapter is concerned with how it served a scientific interest in perfecting and extending the image itself. His integral role in this venture, as shown in his submissions to the Great Exhibition of 1851, led to communications with both the Royal Society and the Académie des sciences, as well as a number of prominent scientific luminaries in Britain and in France, namely Charles Wheatstone, David Brewster, Michael Faraday, and Robert Hunt (1807-1887). I explore this issue through Claudet’s queries into the rudiments of constructing a

photographic image, light, optics, instruments, focus. Claudet also measured and tested how the intensity of photogenic light, the varying foci of camera lenses, and the plate's sensitivity impacted the final photographic image. An example of this is an 1853 stereo-daguerreotype self-portrait with his son, one of a series of four stereos, each taken with an increasing distance in inches between the two cameras (either "2", "4," "8," or "12") [Figures 2:11-13]. Further, Claudet's persistent inquiries into the optical and material elements of the medium at the same time that he was corresponding with the scientific community around him, positions his work in multiple cross-disciplinary negotiations. This chapter, then, will offer a dialogue between Claudet and science.

Chapter Three, "The Stereograph, Photosculpture, and Moving Images," continues the dialogue between Claudet and science by focusing on three important experiments with the photographic medium, all which have something to do with constructing a different kind of photograph, based in three-dimensionality. First, he was particularly interested in the problem of photographically creating binocular vision. Increasingly, from the early 1850s onward, Claudet focused on interrogating the inside of the stereographic image to its furthest limits, prodding it as close as possible to "real" space. In the 1860s Claudet engaged in a cross-channel connection with the "Photo-Sculpture" process developed by the Frenchman François Willème (1830-1905) when he took out the British patent and planned for its implementation in Britain.<sup>45</sup> Finally, one of his last projects in photography was the making of moving photographic images. This chapter then offers a dialogue between Claudet and the three-dimensional image.

---

<sup>45</sup> "Photo-sculpture," patented by François Willème in 1860, was a process by which photographic portraits were projected onto a block of plaster and used to construct three-dimensional portrait sculptures.

Chapter Four, ““Art,”” examines photography’s relationship to fine art. His daguerreotype portraits can be formally compared with painted portraits, both miniatures and larger canvases, produced in Britain prior to and contemporary with photography.<sup>46</sup> In 1851, Claudet moved to a more elaborate studio on Regent Street, which placed him adjacent to several other daguerreotype portrait studios. A comparison of Claudet’s work with the portraits made by his contemporaries, including William Edward Kilburn (1818-1891), John Jabez Edwin Mayall (1813-1901), and T. R. Williams (1824-1871), will allow for an assessment of the types of daguerreotype portraits being produced in London at this time. The chapter also addresses photography’s place in the Great London Exposition of 1862 and the dialogues the medium provoked among practitioners, particularly the conversations between Claudet and his younger compatriot in London, Camille Silvy (1834-1910). Crucial to this chapter is the question of what photography’s “art,” at least according to Claudet, *was* in the 1840s through the 1860s, and in the context of rapidly changing art movements in both England and France. This chapter will therefore offer a dialogue between Claudet and art.

Between the time of the opening of his first portrait studio in 1841 and the year of his death in 1867, Claudet wrote extensively on the medium in both English and French, and regularly presented papers to photographic societies in both countries.<sup>47</sup> Chapter Five, “Writing,” aims to make an account of these papers, as well as numerous letters

---

<sup>46</sup> This also enables a consideration as to whether, as Claudet claimed, there is a “peculiar merit” that British artists and daguerreotypists imparted to their ivories, canvases, or silver plates. “Every country must necessarily impart to the art a peculiar merit of its own—a kind of superiority stamped by the character of local features, and by a certain individual mode of feeling.” “Photography in Its Relation to the Fine Arts,” presented to the Photographic Society of Scotland and reprinted in *The Photographic Journal* (June 15, 1860): 250-267.

<sup>47</sup> Some of his major papers include: “Researches on the Theory of the Principal Phaenomena of Photography in the Daguerreotype Process,” (1849), and “Du stéréoscope et de ses applications à la photographie,” (1853).

written to editors, to photographic societies and to journals, both scientific and artistic.<sup>48</sup> This chapter situates Claudet's texts in the context of other contemporary writing on photography. The journals he contributed to, including *Photographic Journal*, *Photographic News*, and *La Lumière* can serve as key artifacts themselves in that they provide a look at the various discourses surrounding photography in Claudet's own time – what he himself was reading and responding to. Further, a number of historical accounts of the medium appeared toward the end of this period. Claudet's historical essays on photography will be put in dialogue with these other accounts and indeed with writing as a practice.

In conclusion, each of these chapters addresses a particular theme in photography and its early history through the figure of Claudet. This allows my study of this one photographer to “develop out” a more complex understanding of the medium while also producing a new form of monograph. The end result is an alternative way of writing photography's early history.

---

<sup>48</sup> Letters include the *Antoine Claudet Letters to D. Hastings 1844-1854*, in the collection of The Getty Research Institute, Los Angeles, and those written to Ernest Lacan, editor of the photographic journal *La Lumière*. Societies include the Royal Photographic Society, the Société française de photographie, the Society of Arts, and the Royal Society. Journals include *The Art-Union*, *The Athenaeum*, *Photographic News*, *The British Journal of Photography*, and *The Illustrated London News*. Claudet sent several papers to the Académie des sciences, and published in *The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science*.

## **Chapter One: Commerce**

In 1867, the British photographer and inventor Thomas Sutton (1819-1875) recalled an exchange he had with Antoine Claudet in 1841 regarding the requirements needed to practice photography: “In some conversation with M. Claudet about the wonderful art which he practiced, he informed me, with the utmost gravity, that to achieve anything like success or eminence in it required the chemical knowledge of a Faraday, the optical knowledge of a Herschel, the artistic talent of a Reynolds or a Rembrandt, and the indomitable pluck and energy of a Hannibal; and under these circumstances he strongly dissuaded anyone from taking it up as an amusement.”<sup>49</sup> At the beginning of his photographic career, which was also the beginning of the daguerreotype, the French-born daguerreotypist acknowledged that photography was an unusual trade that required attributes not traditionally combined in one figure. To these attributes he might have also added “the commercial acumen of a Josiah Wedgwood (1730-1795),” the man who industrialized the production of pottery in the eighteenth century. Claudet’s immediate reaction to the announcement of the new process in 1839 was equally multi-faceted, and included the interests of a transnational businessman, a scientist and, eventually, a “photographic artist.” Photography was presented as a new technology in the late 1830s, however in order for its industrial potential to be fully exploited, it first had to be reinvented as a business. This was part of Claudet’s enterprise with the medium. In this chapter, I examine Claudet’s activities in the 1840s in order to explore photography’s

---

<sup>49</sup> Thomas Sutton, “Reminiscences of an Old Photographer,” *The British Journal of Photography* (August 30, 1867): 413.

commercial expansion in Britain during this period.

### *Claudet's Invention of the Business of Photography*

Claudet's initial involvement in the commerce of the daguerreotype, which had to be imported from across the English Channel, echoed his role as correspondent for the Choisy-le-Roi glassworks outside of Paris. By 1828, the director of Choisy-le-Roi, George Bontemps, aiming to establish an export business in Britain, came into contact with Robert Lucas Chance of the English glass manufacturers Chance Brothers & Co. "Chance Brothers" had recently expanded its glassworks outside of Birmingham and wanted to import, and eventually produce, French "sheet" glass, which was deemed of higher quality than English "crown" glass.<sup>50</sup> In 1829, Claudet was transferred to London and established a "French Glass Warehouse" at 89 High Holborn, where he sold the Choisy-le-Roi products, including sheet glass and glass shades of different sizes and shapes [Figure 1:1].

Chance Brothers was interested in manufacturing optical glass, another area of Bontemps's expertise. In 1828, Bontemps and Claudet presented to the Académie des sciences a method of making optical glass for which they had taken out a patent. The method had been developed by the Swiss clock and watch workman Pierre-Louis Guinand (1748-1824). Guinand had been experimenting with optical, also known as "flint," glass and observed that if the glass, in liquid form, was stirred with an iron rod, the threads and waves that typically appeared and interrupted the transparency of the

---

<sup>50</sup> Chance Brothers & Co. had opened in the 1790s and expanded with the purchase of the British Crown Glass Company in 1824. They were the preeminent glass manufacturers in England and would be the glass suppliers for the Crystal Palace in 1851, as well as the new Houses of Parliament, which would open in February of 1852.

glass were eliminated. Although he died before he could make his process known, his son Henri approached Bontemps through the Parisian optician Lerebours, who was a mutual acquaintance. Through negotiations with Claudet after the Frenchman had moved to London, Chance Brothers took out the English patent for Guinand's process in 1838.<sup>51</sup> Claudet's connection to the Guinand patent in both France and England had advantages for his later career. He benefitted financially, receiving part of the profits until 1855, and photographically, as it was most likely through Bontemps's negotiations that Claudet met Lerebours, who would be his connection to Daguerre in 1839.<sup>52</sup>

### ***“French Glass Shades,” Claudet and George Houghton***

Two sixth-plate daguerreotypes taken and cased in Claudet's Adelaide Gallery

---

<sup>51</sup> Robert Lucas Chance, British Patent 7596, March 19, 1838. See James Frederick Chance, *A History of Chance Brothers & Co.* (London: Spottiswoode, Ballantyne & Co. Ltd., 1919), 1-6, 172-3. “Proposing terms on which Chance Brothers & Co. could be instructed, Claudet intimated that he had himself a small interest in the undertaking, as agreed with Bontemps. It was arranged that the latter should receive for his instruction a premium of 3,000 francs, the sum that he had himself paid to Henri Guinand for the like service, and that of the net profits five-twelfths should be allotted to him, five to the firm, and two to Claudet; the 3,000 francs to be paid only when the firm had realized that amount of profit to itself. In September it was resolved to erect a small furnace and its appurtenances on the south side of No. 4 house, and in March 1838 Lucas Chance took out an English patent for Guinand's process.”

<sup>52</sup> In March of 1843, Claudet was in Paris “involved in fairly important experiments, on the Daguerreotype, which I began with Mr. Lerebours.” See Claudet to Talbot, London, March 14, 1843, in *Talbot Correspondence*, Doc. No. 4762. Claudet and Lerebours photographed King Louis-Philippe in 1843. See *The Athenaeum*, no. 814 (June 3, 1843), “Claudet's Daguerreotype Portraits taken daily at the Royal Adelaide Gallery . . . this improved process . . . drew forth the admiration of King Louis Philippe, when M. Claudet lately had the honour of taking His Majesty's portrait . . .” There is the extant daguerreotype portrait, *Daguerreotype Ovale Representant Louis-Philippe Ier, Roi Des Français*, which is not attributed to a photographer and is dated as “June 1845/January 1846.” See Christie's, *Succession de Feus Monseigneur le Comte de Paris et Madame la Comtesse de Paris*, Lot 228, Sale number 5547, (Paris: Christie's, October 14, 2008). **[Figure 1:4]**. This same daguerreotype, however is also suggested to be made by Lerebours and Claudet in “June or July, 1842.” See <http://www.marillier.nom.fr/collodions/PM> (accessed May 1, 2010). A quote included on the website by Lerebours from that time is included: “*Un exemple pris au château des Tuileries peut donner une idée de la différence de temps pour un portrait pris à l'intérieur et à l'extérieur. Lorsque nous fîmes admis, M. Claudet et moi, à faire le portrait du roi et d'une partie de la famille royale, le temps était voilé par des nuages blancs extrêmement lumineux. À deux mètres de distance des fenêtres immenses qui donnent sur le jardin (c'est-à-dire au couchant), il nous fallait avec les appareils 1/4 à double objectif, 85 secondes. Toutes les circonstances restant les mêmes, mais en plein air, sur la terrasse de Philibert de Lorme, 15 secondes nous suffisaient. Aussi produisîmes-nous, à cette exposition, plusieurs bons portraits en moins d'un quart d'heure.*”

studio, ca. 1842-3, depict a dark-haired man seated stiffly in front of a painted backdrop of bowing tree trunks and the stone terrace of a rural estate [Figure 1:2-3]. In one plate, he is depicted with his two young children.<sup>53</sup> The man, George Houghton, was registered as living at 89 High Holborn in 1829, at the same time that Claudet was establishing his glass warehouse.<sup>54</sup> Although it is not clear how the two were introduced, it may be that Claudet sought the aid of an Englishman who, either from his father's occupation (William Houghton, b. 1738, ran a drapery business in Tooting, South London) or by other means, had established himself as a respected businessman in London. Though registered as residing at 89 High Holborn, Houghton is not included on the broadsheet from the late 1820s, and therefore it is presumed that he was first given a position under Claudet before the partnership of "Claudet & Houghton" was formed in 1837.<sup>55</sup>

At 89 High Holborn, Claudet intersected not only with French and English glass manufacturers but also with a range of purchasers, from contractors of new buildings to glass buyers for retail shops and museum display. Early advertisements for the glass shop also stressed its innovative aspect as a place where their customers could obtain previously difficult to find glass products.

---

<sup>53</sup> The dating is due to the fact that the same background is used in a daguerreotype portrait of Charles Darwin and his son William Erasmus taken in August of 1842 (UCL Library Special Collections, London) [Figure 1:5]. The National Media Museum also houses a *Portrait of Grandma Houghton*, who was actually George Houghton's second wife, Harriet Flight; and *Aunty Smith*, Houghton's wife's aunt, who came to live with the family and raise the children when Houghton's first wife died in 1839.

<sup>54</sup> I have been unable to track down a death date for George Houghton, but it is recorded that in 1878 his son George and his family moved in with him in Hampstead.

<sup>55</sup> This information on George Houghton's whereabouts at this time was provided by Mary Clemmey, London, direct descendant of Houghton. As stated in the Introduction, "High Holborn" was given as the place of residence in the 1829 baptism records for Claudet's daughter Anne Mary and for his son Justus Frederick. In the same document Claudet was listed as "Merchant." In the 1831 baptism records for George Claudet, born in 1830, the address is "89 High Holborn" and Claudet is listed as "glass merchant." See *Baptisms Solemnized in the Parish of St. Andrew, Holborn, London, and in the County of Middlesex, in the Year 1829 and 1831*.

STRONG GLASS, for conservatories, manufactories, and first-rate buildings—CLAUDET and HOUGHTON, 89, High Holborn, beg to call the attention of noblemen, gentlemen, builders, and the public requiring glass for the above or any other purposes, to their SHEET GLASS, quite a new manufacture in this country, the price of which is very little higher than crown glass, although having more than double its strength.<sup>56</sup>

Some months later, various forms of sheet glass, both clear and colored, would also be advertised for windows in public and private structures.

Crown window glass of the most approved manufacture. Fluted glass, which serves as a blind, although it admits more light than any other sort of glass, suited for offices, skylights, interior and passage doors, &c. Painted glass, white opaque ornamented glass, ruby and every other coloured glass, for windows of churches, dwelling-houses, &c.<sup>57</sup>

Glass shades could also be used for the more private display of collectable items in the upper class Victorian home. “French Glass Shades, for the preservation of clocks, artificial flowers, busts, alabaster ornaments, birds, minerals, surgical models, &c.”<sup>58</sup>

Claudet & Houghton would also emphasize reductions in prices for their products. “The improvements and economy effected since the introduction of the manufacture of French Glass Shades in England have enabled Claudet and Houghton to offer them at a reduction of price averaging more than 15 per cent.”<sup>59</sup> Another advertisement from 1841 reads “Cheap Plate-Glass, Called Sheet Plate-Glass.—The Sheet Plate-Glass made by a newly-invented Patent process, is an article quite as good in quality as the British Plate-glass, with the important advantage of being considerably cheaper; affording the facility

---

<sup>56</sup> *The Times*, February 28, 1838: 1.

<sup>57</sup> *The Times*, August 17, 1838: 1.

<sup>58</sup> *The Times*, April 22, 1839: 8.

<sup>59</sup> *The Times*, July 4, 1839: 8.

of glazing dwelling-houses and public buildings with plate-glass at a moderate cost . . .<sup>60</sup> Such advertisements were published at a time of rapid industrial change in Britain, with a devastating impact on the working class. The growing market for manufactured goods (such as Chance Brothers's sheet glass), was quickly replacing the market for pre-industrial products made from local resources by skilled artisans. As a result of this shift from the handcrafted to the mass-produced, the working class was forced to move to urban centers. The overcrowded conditions of cities as well as work environments led to an environment of social unrest and economic decline in the 1830s and 1840s. At the same time that Claudet was negotiating between Choisy-le-Roi and Chance Brothers glassworks, the Chartist Movement was demonstrating for the passage of the People's Charter of 1838 that, among other demands, petitioned for voting rights for the working class. Claudet's shop, therefore, which sold a factory-made product to the new business class of "nobleman, gentlemen, builders," represented the new industries responsible for transforming the facades and structures of architecture in Britain while also changing the social and economic structures of urban centers and their inhabitants.

***"Retained by some magic power": Claudet and Daguerre***

For a study of Claudet's role in photography's migration from Paris to London and its establishment as a business, it is useful to first map out a business history for the daguerreotype. The daguerreotype was a one-of-a-kind image formed on a silver-coated copper plate which had been made sensitive to light by an exposure (in a light-tight box) to iodine vapor. After exposure in the camera obscura, the plate was "developed out" by

---

<sup>60</sup> *The Art-Union* (January 1841): 19.

suspending it in a box over heated mercury and then fixed with a salt bath. As the resulting daguerreotype image (when properly developed) was incredibly detailed, the process, named after its inventor Louis-Jacque-Mandé-Daguerre (1787-1851), was deemed valuable in multiple areas of French society, having utility for colonial and ethnographic expeditions and scientific advances. However, most importantly for this chapter, the daguerreotype, like other technologies presented at this time, coincided with the rise of industry and with it the emergence of entrepreneurial capitalism. Claudet, having ventured to England to expand his factory's production, could be seen as representative of this new entrepreneur. When he took up the daguerreotype, Claudet became one of the first to implement the new process in this expanding commercial sphere.

The first announcement of the daguerreotype to the Académie des sciences in Paris by François-Jean-Dominique Arago (1786-1853) on January 7, 1839, is well documented. However, the business history of photography begins before 1839, as Daguerre was trying, unsuccessfully in 1838, to attract private subscribers. As part of the final contract that Daguerre drew up for his partner, Isidore Niépce (1805-1868), son of Joseph-Nicéphore Niépce (d. 1833), the partners would, during a period of five months, offer, (through advertisements in the press), the daguerreotype process to those private citizens ("not to exceed four hundred"), provided they paid a fee of one thousand francs. The process would also not be made public until one hundred subscribers had been enlisted. The contract included a stipulation that if the process should be sold outright to a purchaser (Daguerre's original intention) prior to the opening up of the subscription, the price would be not lower than two hundred thousand francs. However, Daguerre did not

attempt to find subscribers as agreed upon in the contract until he had attempted to sell the daguerreotype process to various governments (“England, Russia, Prussia, and the United States”). Therefore, by this time the process had already become known enough to inhibit prospective subscribers who did not want to pay for knowledge of something that could be imminently acquired for free. Daguerre still attempted to enlist a second subscription, which resulted in an exhibition of daguerreotypes in early 1839. Daguerre approached several notable scientists, including Arago who, seeing the opportunities in the new process, particularly for the fields of science, as well as a nationalistic opportunity for France, persuaded Daguerre to sell the invention to the French Government in exchange for a guaranteed pension for the rest of his life. As is known, this latter option is the one that Daguerre took.<sup>61</sup>

On June 22, 1839, after the process was announced to the Académie des sciences, Daguerre assigned a monopoly of the manufacture and sale of his camera obscura in France and elsewhere, with the exception of England, to Alphonse Giroux et Compagnie, a company run by a relative of Madame Daguerre. Although the process was available to anyone (except in England), the equipment needed to make daguerreotypes had to be purchased through Giroux’s firm. Giroux et Compagnie was first founded in 1799 by Alphonse Giroux and then taken over and renamed Giroux & Cie by his sons, Alphonse-Gustave and André Giroux, in 1838. The company traditionally sold items unrelated to photography.<sup>62</sup>

---

<sup>61</sup> Daguerre’s efforts to sell his process to private subscribers as well as his search for a lump sum from other governments is summarized in Helmut and Allison Gernsheim, *L. J. M. Daguerre: The History of the Diorama and the Daguerreotype*, 2<sup>nd</sup> ed. (New York: Dover Publications, 1968), 75-82.

<sup>62</sup> An inventory of objects that would be found at Giroux’s shop is published in the exhibition catalogue: *Chefs-d’oeuvre des grands ébénistes 1760-1850 de G. Jacob à Giroux*, (Paris: Musée des arts décoratifs, 1951), 28. Giroux sold “a variety of marriage and baptism baskets, chests inlaid with wood, pupils desks,

On August 19, 1839, details of the daguerreotype process were made public at a joint meeting of the Académie des sciences and the Académie des Beaux-Arts.<sup>63</sup> By this announcement, Daguerre had not only established a monopoly on his camera obscura, but he had also established a presence in England, through the London patent agent Miles Berry. News of the daguerreotype had already traveled across the Channel earlier in the year. *The Art-Union* published an article on “Sun-paintings,” followed by a “New discovery in art;” however the specifics were not known.<sup>64</sup> A skeptical author wrote in a later issue of the same journal: “This is an invention of a lithographer, . . . [yet] the wonder-working Daguerreotype, which was to send a host of engravers to parish workhouses, we have of late heard nothing; and we fancy, for all that was said, they may not be justified in meeting starvation half-way.”<sup>65</sup> One Englishman who was shocked to hear the news from Paris in January of 1839 was Talbot, who had been developing his own form of photography at his Lacock Abbey estate to the west of London. He apparently was aware of the discovery as early as January 12, well ahead of the rest of the

---

small tasteful furniture, necessaries, writing desks, and paper-weights. He made small boudoir furniture: pedestals and planters.” [Tenait un assortiment de corbeilles de mariages et de baptêmes; coffres en tous bois avec incrustations, pupîtres, petits meubles de gout, nécessaires, écritaires et presse-papiers. Il faisait des petits meubles de boudoirs: guéridons et jardinières.] Though unrelated to the process, many of these kinds of items would soon appear as props in daguerreotype portraits.

<sup>63</sup> A. Donné, “Académie des sciences. Séance du 19 août. Exposition du daguerrotype [sic],” *Journal des débats politique et littéraires* (August 20, 1839). Donné remarked that “[i]t was a day of solemnity at the Institute . . .”

<sup>64</sup> “Sun-paintings,” *The Art-Union* (March 1839): 24; *The Art-Union* (July 1839): 106.

<sup>65</sup> “The Daguerreotype,” *Chambers Edinburgh Journal* 8 (August 24, 1839): 243, 327; “The Secret of Mr. Daguerre,” *The Art-Union* (September 1839): 132, 139, 143, which includes an advertisement that reads: “Daguerre Manual In the Press, and will be published in a few days, price three shillings. Daguerre’s process of Daguerreotype; or, Philographic Drawing. The only work written by M. Daguerre himself. With six plates, representing the entire process, for which a pension of 10,000 francs a year has just been settled by the French Government upon M. Daguerre. Persons wishing to secure early copies are recommended to give their orders immediately. London: W. Strange, Paternoster Row; and orders received by all booksellers.”

British public.<sup>66</sup> As is known, on January 25, Faraday announced Talbot's photogenic process, as well as the daguerreotype, to a large crowd at the Royal Institution's Friday evening lecture. Talbot also sent some examples to be put on display. Aware of the possibility that someone else had preempted his invention, Faraday read Talbot's paper *Some Account of The Art of Photogenic Drawing* before the Royal Society on January 31, 1839. John Herschel (1792-1871) would also send Talbot a letter describing the daguerreotypes he viewed when he visited Daguerre in May of 1839.<sup>67</sup> Talbot, who knew Arago and other French scientists from his time spent working at the Paris Observatory in 1825, began correspondence with Jean-Baptiste Biot (1774-1862), also a rival to Daguerre, in order to discern how similar the Frenchman's process was to his own. At the same time, the scientific community in England did not have the same nationalistic support from the government as in France. Inventions like Talbot's were presented periodically to an exclusive group, such as the Royal Society, that promoted scientific and industrial advances. Claudet would be one of the figures to change this.

Shortly after the August announcement of his process, Daguerre gave the first public demonstration of the daguerreotype to a large audience in Paris. This was documented briefly in *The Times* in London on September 10th and followed by a more detailed report in the *Morning Herald* on September 12th.<sup>68</sup> The first daguerreotype demonstration in London, according to newspaper reports, was conducted on September

---

<sup>66</sup> In an endnote, Larry Schaaf writes that Talbot could have seen the first published announcement of Daguerre's process in the *Literary Gazette* no. 1147 (January 12, 1839): 28. However, the details of the process were not disclosed and Talbot knew only that the images were on plates of copper. Larry Schaaf, *Out of the Shadows: Herschel, Talbot, & the Invention of Photography* (New Haven & London: Yale University Press, 1992), 173.

<sup>67</sup> Letter from John Herschel to Talbot, May 9, 1839, in *Talbot Correspondence*, Doc. No. 3875.

<sup>68</sup> *Morning Herald*, September 12, 1839.

13, 1839, by a “Monsieur St. Croix” at No. 7 Piccadilly, opposite Regent Street.<sup>69</sup> “Mr. St. Croix” was reported to have produced a daguerreotype of “a house, pathway and sky” with a twenty-minute exposure, which was compared to a mezzotint by a contemporary reviewer.<sup>70</sup> Another exhibit of the daguerreotype was reported on Monday, September 16, at “the Argyll Rooms” at 246 Regent Street. No name was given in the advertisement for this demonstration. However, it was noted that some views of London would be shown.<sup>71</sup> A daguerreotype in the Victoria & Albert Museum collection is attributed to Mr. de Ste Croix [Figure 1:6]. Titled *View of Parliament Street from Trafalgar Square* and dated 1839, the plate measures approximately five by seven inches and depicts a view down the shop fronts of a prominent London street. If this photograph was made by Ste. Croix, it is one of the earliest surviving daguerreotypes of London.

Beginning in early 1840, Claudet began to establish a business for photography modeled after his importation of other French products. Although quite different products,—one a frozen “view,” perhaps as seen out of a window, the other the window material itself—they were transported, displayed, and sold in the same way. Knowing his commercial position in London and his contacts in Paris at this time, it can reasonably be assumed that Claudet was familiar with these demonstrations as well as with the early commercial developments initiated by Daguerre in 1838 before he decided to begin his own photography business. Claudet took advantage of his position as a Frenchman and trans-national businessman to be instrumental in the importation of the new medium into England. He would then be instrumental in inventing photography as a business there.

---

<sup>69</sup> See R. Derek Wood, “Ste Croix in London,” *History of Photography* 17, no. 1 (Spring 1993): 101-7.

<sup>70</sup> *The Times*, September 14, 1839: 4.

<sup>71</sup> Wood, “Ste Croix in London,” (1993).

Through his connection with Lerebours, Claudet traveled to Paris sometime in the fall of 1839 to meet Daguerre and learned the daguerreotype process from the French inventor himself. In a letter to Peter Le Neve Foster, Secretary of the Royal Society of Arts, written in 1865, he stated that during this initial visit he purchased a license to use the process in England and “brought all the specimens I could procure—made by his pupils . . .” at the Conservatoire des arts et métiers, at the time a repository for inventions related to science and industry.<sup>72</sup> At the Conservatoire, Daguerre was giving presentations and training students in the daguerreotype process, “on Thursdays at 3 o’clock in the afternoon . . . at which he would give advice to all those who bring him their efforts.”<sup>73</sup> Upon Claudet’s return to London, the French process would have an increasingly public presence alongside the French glass in his shop. Claudet appears to have also purchased daguerreotypes from Lerebours as he advertised in early 1840 that he held views from outside of Paris.

THE DAGUERREOTYPE; or, Nature Delineated by Herself. This extraordinary discovery, for the use of which the French Government have paid the inventors so largely . . . is like the reflection of an Image seen in a mirror, and there retained by some magic power . . . [Claudet & Houghton] have on hand a collection of splendid specimens of this wonderful discovery, representing the most interesting monuments, ancient and modern, of Paris, Rome, and other cities, also panoramic views of these

---

<sup>72</sup> He wrote that he visited Daguerre there at one of these sessions. See “A Chapter in the Early History of Photography,” *The Photographic News* 12 (August 21, 1868): 404-5. “Immediately on the discovery of Daguerre, I went to Paris, saw him, and bought from him the first license to work out his process under the patent he had taken in England. I came back, brought all the specimens I could procure—made by his pupils, for he was attending once a week at the *Conservatoire des Artes et Metiers*—to instruct all the adepts and give them the information they wanted to master the process.”

<sup>73</sup> *Rapports des séances de l’Academie des sciences*, September 30, 1839; See Dominique de Font-Réaulx, “Splendeurs et mystères de la chambre noire: Le daguerreotype sous l’oeil des critiques” [The splendors and mysteries of the camera obscura: Critical reaction to the daguerreotype], in *Le daguerreotype français: Un objet photographique*, by Quentin Bajac and Dominique de Font-Réaulx, (Paris: Réunion des musées nationaux, 2003), 59.

towns, landscapes, portraits taken from nature.<sup>74</sup>

Thus, not long after Daguerre's demonstrations, the London public had the opportunity to see daguerreotypes at 89 High Holborn. The sale of French daguerreotypes and the importation of glass from France in Claudet's shop coincided with a loosening of strict trade laws previously established during the Napoleon era. In the 1830s and 1840s, Britain was moving more and more towards a system of free trade as tariffs on imported materials (such as glass) were lifted and previously established laws of commerce, such as the Corn Laws and the Navigation Laws, were repealed. In the months leading up to the opening of Claudet's first portrait studio, according to the advertisements placed in London newspapers and journals, Claudet & Houghton had both daguerreotype and glass products available.

Views of London Paris Rome, Naples, Venice, Florence, and other towns. Figures from the living model, and portraits from nature. Microscopic objects. Now exhibited for sale by Claudet and Houghton, at their warehouse for French glass shades, sheet, crown and painted window glass, 89 High Holborn. Small Daguerreotype specimens, from 10s. 6d. and upwards.<sup>75</sup>

By April, Claudet & Houghton was also selling the equipment needed to make daguerreotypes.

Claudet and Houghton beg to announce to the amateurs of this wonderful discovery that they are now enabled to supply all persons wishing to use the invention for amusement or experiment, with complete apparatus, prepared plates, &c. &c. at a very moderate price<sup>76</sup>

---

<sup>74</sup> *The Times*, March 3, 1840: 3.

<sup>75</sup> *The Art-Union* (January 1, 1841): 19.

<sup>76</sup> *The Art-Union* (April 15, 1841): 57.

### *Daguerreotype Excursions: Claudet and Lerebours*

Another French product that Claudet soon had for sale in his shop was his friend and countryman Lerebours's *Excursions daguerriennes*.<sup>77</sup> As editor, Lerebours commissioned several daguerreotypists, beginning in the fall of 1839, to travel throughout Europe and the Mediterranean regions and photograph ancient monuments and natural landmarks. Their full-plate daguerreotypes were brought back to Paris and transferred into engravings. These were then bound into two volumes, published in 1841 and 1842, and made available to subscribers. Claudet must have been one of the first subscribers, as he had copies to display and sell as early as January of 1841.

Just Published. THE DAGUERREOTYPE APPLIED TO ENGRAVING. A collection composed of the finest views obtained by the Daguerreotype, of the most remarkable monuments and places of the world, beautifully engraved by the best artists in Paris. The work will consist of twelve numbers, each containing four views, accompanied with text in French . . .<sup>78</sup>

Several of the silver-imaged plates that Claudet brought back from France were either variants of daguerreotypes used for *Excursions daguerriennes* or views commissioned but not published. One, titled "Campo Vacino à Rome," is a full plate daguerreotype of the western end of the Roman Forum **[Figure 1:7]**.<sup>79</sup> The arch of Septimius Severus is visible in the center of the image and the dome of "Santi Luca e

---

<sup>77</sup> *Excursions daguerriennes, vues et monuments les plus remarquables du globe*, 2 vols. (Paris: Rittner et Goupil, Lerebours, 1841-42).

<sup>78</sup> *The Art-Union* (January 1, 1841): 19. Claudet would also place an opened *Excursions Daguerriennes* (vol. 1) in the stereo-daguerreotype *The Geography Lesson*, ca. 1853 [Figure 3:14].

<sup>79</sup> This particular daguerreotype was given to the Royal Photographic Society by a descendant of Talbot's. A note on the lower section of the verso states: "Presented by Miss Talbot to the RPS July 8 1921, Lacock Abbey." Because of this it is presumed that the English inventor owned the plate and had either purchased it from Claudet or Claudet had sent it to him as a gift. The vista of "Campo Vacino" was a popular one. A painted version by Charles-Marie Bouton (1781-1853), Daguerre's partner in the Diorama, had been depicted in the London Diorama in Regent's park in 1835. See Gernsheim, *L. J. M. Daguerre* (1968), 39.

Martina” is visible to the left. Although this actual view does not appear in the published volumes, “Daguerréotype Lerebours à Paris” is inked on the front mat, signaling that it was indeed part of those daguerreotypes commissioned for the project. On the verso is affixed a “Claudet & Houghton” label that includes an inked signature in Claudet’s hand on the lower edge. The matted front connects Claudet to the optician Lerebours, who commissioned the daguerreotype, while the label on the back of the plate connects Claudet & Houghton with the cross-channel importation of daguerreotypes.<sup>80</sup> When the London census of 1841 listed Claudet as “Merchant,” by that time he was less a merchant of glass than a merchant of photography.<sup>81</sup>

Claudet’s photographic collaboration with Lerebours involved acting as intermediary between the optician’s commissioned daguerreotypes (and not, as we have seen, just those published in *Excursions*) and their display and sale in London. In at least one instance, it also worked in the other direction. Sometime after April and before December of 1840, the Englishman Hugh Lee Pattinson (1796-1858) visited Claudet’s shop bearing full-plate daguerreotypes of Niagara Falls that he had taken in April of that year while on a trip to America.<sup>82</sup> Pattinson was also a businessman in the metal industry and had discovered a way to extract silver from lead ore, thus creating a burst of lead mining in England and across the Atlantic. He was a manager of the lead works of Mr.

---

<sup>80</sup> The full label reads: “Claudet & Houghton Glass Shades Sheet & Crown Window Glass; WareHouse 89, High Holborn, Fluted Pointed Stained & Ornamented Glass Coated Glass; in Ruby and other Colours for Embossing and Engraving.”

<sup>81</sup> Census Records, 1841, New St. Milton, Gravesend, Kent; Public Record Office, Reference HO 107/460/7.

<sup>82</sup> The daguerreotypes were discovered in a box in the storage of the Newcastle University Library in 1997 and are currently housed in the library’s Special Collections. They are believed to have been delivered to the library in 1926 when Pattinson’s great granddaughter bequeathed her archive of photographs and manuscripts to the library. The daguerreotypes were in the possession of the family up to that point. See the Newcastle University Library website, <http://www.ncl.ac.uk/library/specialcollections/collections/daguerreotypes> (accessed April 14, 2010).

Wentworth Beaumont, and in 1833 he patented a method for extracting silver. Following this position, Pattinson went into partnership and established a chemical works at Felling, Gateshead, and later at Washington, south of Newcastle. His voyage to America in 1839-40, then, was instigated by an offer to speculate on a potential mining source. Pattinson apparently purchased the silver plates to make daguerreotypes in New York (where he also might have learned the photographic process just announced), as the plates are stamped with the name of “Courduan, Perkins & Co.” in “New York (30 Cherry Street).”

When he returned to London, Pattinson apparently visited Claudet’s shop, as one of the plates, signed “H.L. Pattinson April 1840,” a view of “The Horseshoe Falls” at Niagara, was eventually engraved and published as Plate 3 of Volume 1 of *Excursions Daguerriennes* (1841) [Figure 1:8-9].<sup>83</sup> A passage at the end of the text accompanying the engraved plate acknowledges the translation of Pattinson’s English text into French by “M. A. Claudet, our compatriot, who first introduced the discovery of Daguerre to London, and who today practices the art there with great success.”<sup>84</sup>

How Claudet sent the Pattinson Niagara image to Lerebours is not known. The actual daguerreotype could have been transported to Paris, or Claudet could have had a drawing made from the plate that was sent to Lerebours for engraving. Claudet was accustomed to sending and receiving packages to and from Lerebours. For instance, in an 1842 letter to Talbot, Claudet writes that he had received a Gaudin camera obscura from

---

<sup>83</sup> *Excursions Daguerriennes*, 1841. A full plate daguerreotype attributed to Pattinson and titled “Niagara” is recorded in the catalogue notes of the Royal Photographic Society Collection in the National Media Museum, Bradford, UK. There is no catalogue number recorded and it is dated ca. 1843. The notes also state that it was “Presented to the RPS in 1901 by Mr. Swan.” I was not able to view the plate in person when I visited in 2007.

<sup>84</sup> Plate 3, *Excursions Daguerriennes*, 1841. “Avis de l’éditeur—Nous devons l’épreuve daguerrienne du Niagara et la Notice qui à l’obligeance de M. H. L. Pattinson, de Newcastle-sur-Tyne . . . La notice anglaise de M. Pattinson a été traduite part M. A. Claudet, notre compatriote, qui a le premier introduit à Londres la découverte de Daguerre, et qui aujourd’hui y pratique cet art avec tant de succès.”

Lerebours that Talbot had asked him to order.<sup>85</sup> It is also certain that Pattinson visited Claudet's shop in 1840 as two plates discovered in the Newcastle group (which totals ten) are attributed to Lerebours.<sup>86</sup>

Both of these full-plate daguerreotypes, one titled *Saint Pierre et Château St. Ange à Rome*, the other *Porte Ripetta à Rome*, are in mats inked with "Daguerreotype Lerebours à Paris" on the front and stamped on the verso with the Claudet & Houghton label like that on the back of the *Campo Vacino* image [Figure 1:10-11]. The *Saint Pierre* image is fairly faithfully engraved as Plate 18 of *Excursions* Volume 2, from 1842, although the image is reversed laterally and it includes a small drawn-in figure of a shepherd and goats in the lower right corner [Figure 1:12]. The *Porte Ripetta* daguerreotype is less faithfully reproduced in its engraved version [Figure 1:13]. The façade of the foreground building as well as some of the buildings glimpsed along the horizon are visible in the engraving. However the boats and rugged docks in the photograph are artfully replaced by a tranquil promenade where figures lean and gaze across the water. What can be surmised from the group that ended up in the possession of Pattinson's family is that when Pattinson visited Claudet he must have purchased these two Lerebours daguerreotypes at 89 High Holborn around the time that Claudet sent (or transported himself) Pattinson's Niagara photograph to be engraved in Paris.<sup>87</sup>

---

<sup>85</sup> Claudet to Talbot, London, August 18, 1842 in *Talbot Correspondence*, Doc. No. 4581. Claudet writes in French. "J'ai reçu la chambre obscure (Système de Gaudin) que vous m'avez chargé de commander pour vous à Mr. Lerebours. Veuillez me dire si je dois l'envoyer chez vous." [I received the camera obscura (Gaudin's system) that you have charged me with asking Mr. Lerebours for you. Please tell me if I should send it to your house].

<sup>86</sup> Because he is known to have returned to Newcastle sometime in 1840 and to have given a presentation on December 1, 1840 to the Newcastle Literary and Philosophical Society in which the daguerreotypes were shown, it can be concluded that Pattinson went to 89 High Holborn sometime between April and December of 1840 on his return from America.

<sup>87</sup> The Museum of the History of Science at Oxford University collection also contains a box of ten "exposed but unfixed" quarter plate daguerreotype plates by Pattinson, dated 1845. The notes with this

### *Claudet and Miles Berry*

Although the daguerreotype process had been described in the London press in 1839, when the French announced that Daguerre's process was given free to the world, England (and her empire) was the one explicit exception. Daguerre had taken out a patent for the process in England just before his August 1839 announcement.<sup>88</sup> This was not overlooked by journalists, who reinforced the idea that the English public needed to have access to the French process. "The selfish policy of M. Daguerre appears to have all but put a stop to the practical application and improvement of his interesting discovery, by limiting its use to the wealthy."<sup>89</sup> The firm of Claudet & Houghton is mentioned as a place where the public could witness the rapid advancements being made in France. "This is the more to be regretted, as we every day see specimens more and more perfect. Messrs. Claudet & Houghton have lately received a selection, from Paris, quite unequalled, and well worth a visit; some of the specimens so perfect, that the water reflects the buildings; in others, inscriptions are legible through a magnifying glass, which cannot be read on the building itself with the naked eye."<sup>90</sup>

---

group state: "Purchased from John Egerton, London photographic supplier who was prosecuted by Beard in 1845 for selling dag materials to amateurs; Pattinson's photographs are of his family outdoors; The man is presumably Pattinson himself." The Oxford collection also holds two Lerebours whole plate daguerreotypes titled *Notre Dame* and *Chambre des Deputés, Paris*, both from 1840. Both have the frame dealer "Faubonne's" label on the verso. Oxford's pamphlet that accompanies the photographs collection (written by its curator, Tony Simcock) states that these daguerreotypes were used by Charles Daubeny, a renowned chemistry professor at Oxford, for his lecture courses in the 1840s, alongside two calotypes by Talbot (Talbot visited Oxford and made botanical calotypes). It is possible that these plates were acquired by Daubeny through Claudet's shop, however they do not have Claudet labels affixed to them. See Tony Simcock, *Photography 150: Images from the First Generation* (Oxford: Museum of the History of Science, 1989).

<sup>88</sup> The Daguerreotype Patent would expire in 1853; see Bernard V. and Pauline F. Heathcote, *A Faithful Likeness: The First Photographic Portrait Studios in the British Isles 1841-1855*, (Nottingham, 2002), 29.

<sup>89</sup> *The Athenaeum*, no. 650 (April 11, 1840): 294.

<sup>90</sup> *The Athenaeum*, no. 650 (April 11, 1840): 294.

The Patent Laws, the laws that protected an inventor and his product while also promoting competition, played a critical role in photography's commercial development in Britain. As has been mentioned in the Introduction, Daguerre's patent agent in England was Miles Berry of the London firm Newton & Berry. Through a representative sent by Daguerre, the agent was asked to apply for a British Royal Letters Patent for the daguerreotype process on behalf of the French inventor.<sup>91</sup> The patent established Berry as the sole patentee of the daguerreotype "within England, Wales, and the Town of Berwick-upon-Tweed, and in all Her Majesty's Colonies and Plantations abroad," and warned that "any person or persons who may make, use, exercise or vend this invention either in public or private, for his or her benefit or advantage, will be guilty of an infringement upon this patented right."<sup>92</sup> Daguerre's instructions to Berry were sent on July 15, 1839, and the patent was filed on August 14, 1839, just prior to the official announcement in France.<sup>93</sup> Daguerre had hoped that Berry would then sell the patent to the English government. Berry approached the Board of Treasury on March 30, 1840 to offer for purchase the rights of the daguerreotype and allow the process to be thrown "open in England for the benefit of the public and preventing this important discovery

---

<sup>91</sup> The French representative has been suggested to be E.D. Letault; see R. Derek Wood, "The Daguerreotype Patent, the British Government, and The Royal Society," *History of Photography* 4, no. 1 (January 1980): 53.

<sup>92</sup> Miles Berry, Obtaining Daguerreotype Portraits, A New or Improved Method of Obtaining the Spontaneous Reproductions of all the Images Received in the Focus of the Camera Obscura, British Patent 8194, August 14, 1839.

<sup>93</sup> The seventeen-page document provides an incredibly detailed description of the daguerreotype process (Berry proceeds to describe the daguerreotype process as a series of "five operations"--preparing, coating, exposure in the camera obscura, development, and fixation) within months of its first announcement to the public at the beginning of the year. It is notable that at this early moment the process cannot be defined as either invention or discovery but both. "I believe it to be the Invention or discovery of Messrs. Louis Jacques Maude [*sic*] Daguerre and Joseph Isidore Niepce, junior, both of the kingdom of France, from whom the French government have purchased the Invention, for the benefit of that country."

being fettered or limited by individual interest or exertion.”<sup>94</sup> This request was denied, “due to lack of funds,” and therefore, because it had been patented, the daguerreotype could only be (legally) practiced in England by those who could afford a license.<sup>95</sup>

### ***Claudet and Richard Beard***

When Claudet first established his London portrait studio in June 1841, he was served with a court injunction, applied for by Richard Beard, previously a coal merchant in London, who believed that he was the sole patentee of the British rights to the daguerreotype. “‘The whole story’ is too jumbled a mass to pass for history of ‘great interest,’ or contribution to the ‘History of Photography.’”<sup>96</sup> So wrote one author in the 1860s when recounting the legal intricacies around the daguerreotype patent in England. Though jumbled, it is an important event in Claudet’s career and useful to an exploration of photography’s stilted entrance into English commerce. Further, the dialogue over the legal establishment of the daguerreotype process was one that brought Claudet’s name to the forefront of commercial photography in London. It also illustrates how the French medium had to be negotiated through already established guidelines of commerce in England.

Prior to photography, both Beard and Claudet had shared advertising space for their respective businesses. An advertisement for Claudet and Houghton in *The Times* of August 1838 for “[f]luted glass” as well as “[p]ainted glass, white opaque ornamented glass, ruby and every other coloured glass,” is followed on a subsequent page by an

---

<sup>94</sup> Heathcote, *A Faithful Likeness*, 4.

<sup>95</sup> Heathcote, *A Faithful Likeness*, 4.

<sup>96</sup> “A Chapter in the Early History of Photography,” (1868): 404.

advertisement for Beard: “COALS.—Beard and Co.’s trade.”<sup>97</sup> Within a few years, both were claiming the legal right to use the daguerreotype. Claudet claimed to have purchased a license to use the process from Daguerre in the fall of 1839. Additionally, he had signed an Indenture for a license from Miles Berry on March 25, 1840, at the cost of 200 British pounds.<sup>98</sup> Claudet advertised that he had obtained the license from Berry to use a limited portion of the process and equipment, including the French camera obscura manufactured and sold through Giroux & Cie in Paris.<sup>99</sup>

In the same year, Beard filed a patent for the Wolcott Camera, named after its American inventor, the New York instrument maker Alexander Simon Wolcott (1804-1844). The patent was entered in June and was sealed in December of 1840. The Wolcott camera included a “Reflecting Apparatus,” a concave mirror that inverted the image correctly on the plate while also concentrating the light so that an image could be obtained with shorter exposures than those achieved by Daguerre. Wolcott had learned of Daguerre’s process from John Johnson (1813-1871), originally from Maine, who approached him in October of 1839 asking if he would make a daguerreotype camera. Once the camera was developed in March of 1840, Wolcott and Johnson opened a daguerreotype studio in New York. Meanwhile, in February, Johnson’s father, William S. Johnson, aiming to promote the Wolcott camera in England, had traveled to London and

---

<sup>97</sup> *The Times*, August 17, 1838: 1, 8.

<sup>98</sup> Wood, “The Daguerreotype Patent,” (1980): 55.

<sup>99</sup> *The Times*, March 3, 1840: 3; *The Times*, March 25, 1840. “The sole right of making, using, exercising, or vending this important discovery in England being secured by Her Majesty’s royal letters patent, granted to Mr. Miles Berry, of the Patent-office, Chancery-lane, Messrs. Claudet and Houghton, 89, High Holborn, beg leave to announce that having obtained a license from the patentee. . . . Injunctions will be taken against any person possessing apparatuses, making use of them, or selling proofs without license or the authority of the patentee.”

met Beard through the patent agent William Carpmael.<sup>100</sup> The patent included two other Wolcott and Johnson improvements developed in consultation with the eminent chemist at the Adelaide Gallery, John Frederick Goddard (1795-1866). Goddard, who had been approached by Wolcott and Johnson when they joined William Johnson in London, was experimenting with accelerators for the daguerreotype, namely the sensitizing of the plate by combining “iodine, nitric acid and water, or combining iodine with bromine or bromic acid” to quicken the process of obtaining images.<sup>101</sup>

When Berry’s proposal to the English government to purchase the daguerreotype patent was declined, he approached Claudet, as the license he had sold him stipulated that the Frenchman would be given the option to buy the full patent for £800. When the patent was offered, Houghton refused to use Claudet & Houghton funds to buy it, and therefore Claudet was forced to decline. Berry turned to Beard, and, as Claudet later wrote to Le Neve Foster, the “wide-awake speculator was too glad to accept the offer, particularly thinking that in buying the patent he could withdraw my license.”<sup>102</sup> When the injunction was served in 1841, Claudet contested it on the grounds that although Beard, as “patentee,” had an obligation to repurchase the license from him, he, Claudet, was not

---

<sup>100</sup> Beard had previously registered patents with Carpmael, including: Richard Beard, Printing Calicoes and Other Fabrics, British Patent 8109, June 17, 1839.

<sup>101</sup> Richard Beard, Improvements in Apparatus for Taking or Obtaining Likenesses and Representations of Nature and of Drawings and other Objects, British Patent 8546, June 13, 1840. See Robert B. Fisher, “The Beard Photographic Franchise in England,” in Peter E. Palmquist, ed., *The Daguerreian Annual* (The Daguerreian Society, 1992): 73-95 and Arthur T. Gill, “Wolcott’s Camera in England and the Bromine-Iodine Process,” *History of Photography* 1, no. 3 (July 1977): 215-218.

<sup>102</sup> “A Chapter in the Early History of Photography,” (1868): 404-405. “During the year after Beard had bought the patent, he sold licenses to all country towns to the amount of £36,000!! This I know as certain from Johnson, who was interested with Beard, having sold him part of his patent for the concave mirror, of which Johnson was the inventor. I have told you more than you probably wanted, but I could not help giving you the whole story. A.CLAUDET.”

obligated to sell it. The Court of Chancery's decision of July 15 sided with Beard.<sup>103</sup> A few days later Beard placed the following ad in *The Times*: "The Vice-Chancellor having granted an injunction, restraining the defendant, Antoine Claudet, from using the Daguerreotype apparatus, the public are respectfully informed, that DAGUERREOTYPE PORTRAITS can only be legally taken from this time at the Polytechnic Institution, Regent-street, by the patentee, Mr. RICHARD BEARD."<sup>104</sup>

However, with the argument that Beard's patent on the Wolcott camera did not automatically usurp Claudet's license, the Frenchman's appeal was upheld one week later, thus allowing him to continue to practice the daguerreotype at the Adelaide Gallery.<sup>105</sup> Claudet immediately advertised the court's decision: "The injunction obtained by Mr. Beard against Mons. Claudet having been dissolved by the Lord Chancellor, Mons. CLAUDET, the gentleman who first introduced the invention into this country under a licence from the original patentee, Mons. Daguerre, is now taking PORTRAITS and GROUPS of FIGURES, at this Institution, on a greatly improved plan."<sup>106</sup>

---

<sup>103</sup> "Beard v. Claudet," *The Times*, July 16, 1841: 7. Claudet's license, the article states, "contained a clause that if at any time during the continuance of the letters patent and the license any contract or arrangement should be entered into by or on behalf of Daguerre and Niépce . . . it should be compulsory on them to repurchase the interest of Claudet on paying him the amount of the consideration money originally paid. In June last Berry assigned the whole of the patent to the plaintiff Beard . . . and tendered [Claudet] 200£ . . . and called upon him to assign it to Beard. Claudet, however, refused, contending the clause did not make it compulsory upon him to resell his interest, though it imposed an obligation on the patentee to repurchase it in the event of assigning the whole."

<sup>104</sup> *The Times*, July 19, 1841: 3.

<sup>105</sup> *The Times*, July 23, 1841: 6.

<sup>106</sup> *The Times*, July 29, 1841: 3. Several articles have been written on this legal dispute, including Bernard Heathcote and Pauline Heathcote, "Richard Beard: An Enterprising Patentee," (1979); Bernard Heathcote and Pauline Heathcote, *A Faithful Likeness* (2002); Fisher, "The Beard Photographic Franchise," (1992); R. Derek Wood, "The Daguerreotype in England," (1980); R. Derek Wood, "Some Primary Material Relating to Beard's Lawsuits," *History of Photography* 3, no. 4 (1979): 305-9.

### ***Rooftops: Claudet and the Adelaide Gallery***

Another comparison of Claudet and Beard is possible if one looks at the institutions beneath each of their studios. Beard's was the first daguerreotype portrait studio to open in Britain, on March 23, 1841, in the attic floor of The Royal Polytechnic Institution at 309 Regent Street. Claudet opened his studio in the third week of June on the upper story of The Adelaide Gallery, also known as "The Society for the Illustration and Encouragement of Practical Science," on the Strand. Integral to the formation of both establishments, notably the sites of some of the first public exhibitions in Britain, was the fact that science itself had begun to take on a different societal role by this time.<sup>107</sup> Instead of an intangible, abstract truth, the discipline of science was increasingly seen as having the potential for practical and profitable application. As a result, the Adelaide Gallery and the Royal Polytechnic aimed to present science as more accessible and applicable to the lives of the general public. They were part of a broader interest, promoted by a rapidly developing manufacturing industry, in reinforcing national "industrial spirit" by making clear connections between industry and science. In addition to elite gatherings of the science community, spaces were added in which science's practical and functional ability to aid manufacturers could be demonstrated to a wide audience.<sup>108</sup> The rooftop photographic studio was also a space of exchange between the scientific and the industrial. The science of photography and the sale of it, both in their infancy in the 1840s, were negotiated in the making of a daguerreotype portrait.

---

<sup>107</sup> See Brian Gee: "The Spectacle of Science and Engineering in the Metropolis Part I: E.M. Clarke and the Early West End Exhibitions," *Bulletin of the Scientific Instrument Society* no. 58 (1998): 11-18; and "The Spectacle of Science and Engineering in the Metropolis Part II: E.M. Clarke and the Royal Panopticon of Science and Art," *Bulletin of the Scientific Instrument Society* no. 59 (1998): 6-13.

<sup>108</sup> Beginning in 1761, the Society of Arts (which had opened in 1754 as the "Society for the Encouragement of Arts, Manufactures and Commerce") hosted exhibitions of recent and noteworthy contributions to the mechanical arts; however, they were not intended for the general public.

Juxtaposed with each other as well as in light of the institutions they capped, the studios of Claudet and Beard offer another dialogue between photography and commerce in the 1840s. These institutions therefore deserve a close study.

At the end of 1827, George Agar-Ellis (1797-1833), a member of Parliament and Fellow of the Royal Society, proposed a “public” exhibition space in London, the “National Repository,” to be established at the site of the “Old King’s Mews” at Charing Cross. The location was also located across from the anticipated Trafalgar Square, a site under construction in the 1820s. Backed by his colleagues in Parliament and assured the patronage of King George IV, the “National Repository for the Purpose of Annually Exhibiting to the Public the New and Improved Products of Artisans and Manufactures of the United Kingdom” opened officially six months later on June 23, 1828.<sup>109</sup> In order to inspire “the industrious spirit,” The National Repository was structured around a competitive exhibition scheme in which presenters were judged by a “Committee of Inspection” comprising well known engineering and academic leaders. Tradesmen were given publicity for their products while the public could also browse through a range of British industry, from small to large-scale. Although this enterprise at first seemed favorably equal to or competitive with the French National Expositions of Industry begun by Napoleon in 1798, by the early 1830s, with the decline of the British economy, the Repository had lost relevance and was about to lose its building (as the Mews were scheduled for demolition).<sup>110</sup>

Its replacement, the “Society for the Illustration and Encouragement of Practical

---

<sup>109</sup> The Repository shared the building with the recently transported “Royal Menagerie” [“Dépôt of animated nature”].

<sup>110</sup> Gee, “The Spectacle of Science Part I,” (1998): 11-18.

Science,” opened on June 4, 1832, in a building recently designed by the well known architect John Nash (1752-1835) and centrally located on the Strand. Nash had been commissioned, beginning in 1818, by King George to design a new plan for a major section of central London that included Trafalgar Square, Charing Cross, the Royal Mews, Regent Street and Regents Park. The “Society’s” building, or the Royal Adelaide Gallery, was situated adjacent to the site for Trafalgar Square and bordered by Adelaide Street, Agar Street, and West Strand. It housed a classically inspired interior arcade capped with a vaulted and domed ceiling. At the Adelaide Street end of the arcade, called the Lowther Arcade, one could walk into the “Gallery of Practical Science” **[Figure 1:14]**. Organized by two engineers rather than members of Parliament, the Gallery was structured around a different mode of exhibition, one in which inventors would not only display their products but would also demonstrate them to the public, “blending instruction with amusement.”<sup>111</sup> The aim of the Society, as stated in the Gallery’s *Magazine of Popular Science and Journal of Useful Arts* was “(i) to promote the intercourse between the cultivators of abstract science, and the persons engaged in practical application; (ii) to illustrate scientific subjects in a manner at once interesting and instructive; and (iii) to afford to discoverers in philosophy, inventors, improvers of inventions, manufacturers, and individuals possessing objects of virtue, the opportunity to bring before the public their discoveries or works of art, in an attractive and inexpensive manner.”<sup>112</sup> Photography, made up of abstract science but also possessing clear practical applications, satisfied the Adelaide Gallery’s program at the same time that it helped the

---

<sup>111</sup> The founders were Thomas Telford (1757-1834), President of the Institute of Civil Engineers, and Francis Giles (1787-1847). See *Magazine of Popular Science & Journal of Useful Inventions* 1 (1836): 9.

<sup>112</sup> *Magazine of Popular Science & Journal of Useful Inventions* 1 (1836): 13. The Society created an emblematic motto, “From Union – Light,” significant also as it was to be the future pedestal for a photographic studio.

Gallery increase its attendance. Advertisements for Claudet's daguerreotype business in *The Art-Union* intermingled with announcements for other attractions.

Mr. Claudet is now taking Portraits and Groups of Figures at this Institution, upon a greatly improved plan. In addition to which, by a new application, Mr. Claudet is enabled, without any additional charge, to fix the Portraits, and render them so durable that they will not fade or turn black . . . A performance on the new musical instrument the Terpodion [a keyboard instrument]; Microscope, Pyreidotrope [also known as the "chromotrope" or "Chinese fireworks," functioning like a kaleidoscope made by two colored disks that overlapped], Steam Gun [steam-operated gun that could shoot hundreds of canon balls without the use and expense of gunpowder], Electric Eel [a species of fish that could cause electric shocks, found in South America], &c . . .<sup>113</sup>

In addition to the theatrical exhibits, the Gallery also hosted the London Electrical Society, founded by William Sturgeon (1783-1850), inventor of the electromagnet, in 1837. Charles Wheatstone, inventor of the stereoscope, and Faraday, a rival of Sturgeon's and a student of Humphry Davy's at the Royal Society, both lectured at the Adelaide Gallery. For his electrical experiments, the Adelaide Gallery gave Faraday access to a "Gymontus," a type of electric knifefish (advertised as the "Electric Eel") that had been imported from the Amazon in South America. Faraday's findings were presented to the Royal Society at the end of 1838.<sup>114</sup> As early as 1842, the Gallery announced the holding of art exhibitions on the premises. This plan was met with doubt by the writers in *The Art-Union*, who commented, "Wide as is the fame acquired we look with considerable doubt on the prospects of success held out to artist-exhibitors at this well-known

---

<sup>113</sup> *The Art-Union* no. 32 (September 1, 1841): 145.

<sup>114</sup> Read December 6, 1838. Published in *Philosophical Transactions of the Royal Society of London* 129 (1839): 1-12.

lounge.”<sup>115</sup> By hosting lively musical concerts and performances in the same grand hallway as more somber lectures by eminent scientists, the Adelaide Gallery fostered an atmosphere of pure amusement for a public eager for entertainment while also promoting the productive fusion of science and industry.

The Royal Polytechnic Institution, initially proposed by George Caley (1773-1857), one of the original founders of the Adelaide Gallery, was located in a different section of London at 309 Regent Street **[Figure 1:15]**.<sup>116</sup> Caley advocated for an institution that not only held demonstrations but also housed facilities in which the next generation of scientists could be trained. The institution included a laboratory that both experimentalists and patentees could pay a fee to use and also attend daily lectures and courses in natural philosophy and chemistry. Various inventions were displayed for the general public in the Great Hall. One *Catalogue* of 1845 reports that “. . . a typical display included a circulatory model for the heart and blood by the young Enrico Negretti [a maker yet unknown but later to make his mark with instruments in glass]; a ‘videoscope lens’ [an early reading aid by Chadburn Brothers of Sheffield] . . . a powerful magnet by Schmidt; and a voltaic battery by Andrew Crosse.”<sup>117</sup> Unlike the Adelaide Gallery, the Polytechnic was not adjacent to national art institutions but was situated on a major commercial thoroughfare in London (also the future site of a string of daguerreotype studios, including Claudet’s). Although a year prior to the opening of Beard’s studio the Polytechnic had advertised the display of daguerreotypes brought to London by Claudet, soon after this exhibition the Frenchman became associated with the

---

<sup>115</sup> “New Exhibition at the Adelaide Gallery,” *The Art-Union* (August 1842): 186.

<sup>116</sup> Gee, “The Spectacle of Science Part I,” (1998): 15-16.

<sup>117</sup> Gee, “The Spectacle of Science and Engineering in the Metropolis Part I,” (1998): 16.

Adelaide Gallery.<sup>118</sup>

This move also coincided with Beard's partnership with Wolcott and Johnson, who had established themselves at the Polytechnic.<sup>119</sup> Beard's operation moved in the reverse direction. Although Goddard's lectures and experiments had been at the Adelaide Gallery, the Johnsons rented rooms on High Holborn rather than using the spaces of the Adelaide Gallery. When Beard established his studio with the assistance of the Johnsons, Wolcott (who had come to London the previous fall) and Goddard, he did so not at the Adelaide Gallery but on the roof of the "other" scientific institution.<sup>120</sup>

### ***First Portraits***

After their legal battle over the daguerreotype patent, the studios of Claudet and Beard continued to distinguish themselves from the tops of these rival institutions. This argument was played out in the production of their photographic portraits as well as within the images themselves. The portraits produced in the first years of Claudet's and Beard's respective studios would also become part of a broader shaping of how the daguerreotype portrait was posed, propped, cased, and sold to the general public in London and beyond.

---

<sup>118</sup> "POLYTECHNIC INSTITUTION.—CONTINENTAL DAGUERREOTYPES of the first class, in 100 beautiful views taken in Greece, Italy, and France recently introduced into this country by Messrs Claudet and Houghton, (licensees and patentees) for the exhibition and sale of which a separate room has been exclusively appropriated." *The Times*, June 6, 1840: 1. Also L.L. Boscawen Ibbetson, *Prepared Fossils, engraved on a daguerreotype plate...with the apparatus at the Polytechnic Institution*, (1840). For an engraved reproduction of Ibbetson's *Fossils*, see *Westminster Review* 34, no. 2 (London, Baldwin, Cradock, and Joy, 1840): 460-461.

<sup>119</sup> Indeed it is one week later, on June 13, that Beard registered his patent. See Beard, *Improvements in Apparatus for Taking or Obtaining Likenesses*, British Patent 8546, June 13, 1840.

<sup>120</sup> Heathcote, *A Faithful Likeness*, 2002.

Talbot, very intrigued by the “other” process that had come out of France, had his daguerreotype portrait made by both Claudet and Beard (Beard’s studio, as Beard himself is not known to have ever actually taken a daguerreotype) shortly after the opening of their studios. Claudet made (at least) three sixth-plate portraits of the English inventor that date from about 1843 and are cased in velvet-lined Moroccan leather cases stamped with Claudet’s gilded “Adelaide Gallery” logo on the cover **[Figure 1:16-18]**. In all three, Talbot wears a black top hat and suit over a white waistcoat and is seated at a table with book in hand and spectacle glass hanging from a cord around his neck. He is presented in the clothing and surroundings of a highly educated English gentleman and sits in front of a painted backdrop depicting a river curving through a wooded landscape. Two of the Claudet portraits depict two slightly different moments. In one, Talbot’s jacket is buttoned up and his mouth is firmly closed, while in the other the same jacket is unbuttoned and the subject turns with his mouth open, as if in mid conversation.<sup>121</sup>

In contrast to Claudet’s, the Beard studio portraits are smaller ninth-plates (due to the size of plates that could be focused in the concave mirror of the Wolcott camera) that crop tightly around Talbot’s head and high-collared shoulders **[Figure 1:19-20]**. The decorative element of these portraits is not in the image, as it is in Claudet’s, but in the fanciful gilt frames edged with intricately designed birds or floral patterns. Their black lacquer mounts are meant to be hung on the wall by an ornate brass hook, rather than

---

<sup>121</sup> Claudet also made daguerreotype portraits of Talbot’s three daughters. They are in excellent condition, matted for hanging, and are currently in the collection of the British Library, London.

opened like a book, as in Claudet's case. At the lower edge of the frame is stamped "Beard Patentee," reinforcing Beard's status as patent-holder.<sup>122</sup>

A significant difference between Claudet's early portraits and those by Beard is the use of painted backdrops. A visitor to Claudet's studio in 1842 noted a new addition being placed behind the sitter: "painted on canvas, and . . . slid in grooves much in the same manner as the scenes at the theatre."<sup>123</sup> Claudet had actually patented the painted backgrounds as one of five "improvements" in 1841 and described them as "scenes representing objects which, by the various distances of their parts, could not otherwise be correctly introduced in a daguerreotype portrait on account of the different foci of the several objects combined."<sup>124</sup> In addition to technical assistance, he explained, the backgrounds could also add illustrative environments for the subject " . . . by applying behind the sitter some backgrounds of painted scenery representing landscapes, interiors of apartments, and other representations adapted to the taste and habits of the sitter or to his profession."<sup>125</sup> He also noted that these scenes added "an effect quite pictorial" to the portrait, and could be moved according to the clothing of the sitter, "against a dark or a light part of the subject painted upon the background scene."<sup>126</sup>

Claudet's portrait of George Houghton includes one of the more common backgrounds from 1842-1843, comprising a stone balcony and the trunks of leafy trees bowing into the frame **[Figure 1:2]**. Although the space created is shallow and stage-like, this initial interest in adding more focused depth to the daguerreotype portrait would

---

<sup>122</sup> Most ninth-plate Beard portraits are stamped with "Beard Patentee" on the lower edge of the frame, as he sold many licenses to operators outside of London.

<sup>123</sup> *The Times*, July 19, 1842: 6.

<sup>124</sup> Claudet, *Certain Improvements*, 1841.

<sup>125</sup> Claudet, *Certain Improvements*, 1841.

<sup>126</sup> Claudet, *Certain Improvements*, 1841.

recur years later in Claudet's stereo-daguerreotypes (to be discussed in Chapter Three). The added depth to the studio portrait also created more commercial space for the daguerreotype as such a device became increasingly desirable.<sup>127</sup>

Another early painted backdrop appeared in two consecutive portraits from about 1843 of a young girl wearing a white bonnet and dark shawl and seated in a high backed chair **[Figure 1:21-22]**. In both images, the painted background behind her depicts a vista of wooded valley beneath a cloud-filled sky. Over her shoulder is visible the silhouette of a ruined abbey or castle. True to the Romantic painting style of the early 1800s, the scene is loosely brushed in contrast to the delicate daguerreotyped features of the sitter.<sup>128</sup>

Where most often we are left with a single result, these portraits provide insight into the process of a daguerreotype portrait session. In one, the young girl's face is solemn, the white bow of her bonnet is neatly tied, and her arm is propped at an abrupt angle on the table next to her. In the other, the bonnet is untied at her neck and she raises her chin slightly and smiles. Two other Claudet portraits of a man from one sitting capture the client turned in one direction and then another, demonstrating an apparent interest in capturing both "sides" of the sitter simultaneously **[Figure 1:24-25]**.

Posing was essential to the making of a daguerreotype portrait and, in the case of Claudet's images, often mimicked poses established in painted miniatures and canvases

---

<sup>127</sup> "Daguerreotype Portraits," *The Art-Union* (April 1842): 84. "Viewing the discovery and its capabilities in the same light in which it appeared in its earliest state, the general complaint against these portraits has been their extreme coldness of tone: this defect however, M. Claudet has succeeded in obviating, by great improvement in the management of the background, which cannot fail to augment the popularity of these portraits."

<sup>128</sup> The date of 1843 is derived from the fact that the same backdrop appears in a series of portraits taken by Claudet of the Llewelyn family, including Mary Llewelyn (1816-1865) **[Figure 1:23]** who became a photographer in her own right. The Llewelyns are recorded as visiting Claudet's Adelaide Gallery studio in 1843, thus the dating of this anonymous portrait with the same backdrop. This information thanks to Noel Chanan, UK.

(which will be further discussed in Chapter Four). While the inclusion of a chair and table had the benefit of helping the sitter to hold still during exposure, it also made the new portraits look familiar to those used to sitting for their painted likeness. While these poses were derived from those of painting, they also established a standard for photographic portraiture in Britain that would be taken up by other photographers. An example of this can be found in *Portrait of a Young Woman*, c. 1845 [Figure 1:26]. The painted backdrop has been replaced by a dark cloth, which allows the sitter's face and hands to come forward in more definition and contrast. The subject takes up a common portrait pose, resting her elbow on a stack of books piled on the table next to her. The matting is also that commonly used in Adelaide gallery portraits and eventually copied by other studios. A gilt-covered paper curved to form a rounded square, or oval, is placed in the case underneath a piece of clear glass and fitted into another gilt frame pressed inside a leather-covered case. The exterior is red Moroccan leather (a "Morroccan case") and is hinged at the left, which meant that the client opened their portrait like a book in order to view it. The oval-shaped gold insignia on the cover reads "Adelaide Gallery Strand," ringed by "Claudet's Daguerreotype Process."<sup>129</sup> It is significant to view these details here, as the pose, cropping, matting, and casing developed by Claudet (derived from miniature portrait cases as we will see in Chapter Four) influenced the look and make of those sold by other portrait studios.

The issue of inversion was another factor that distinguished Beard's studio, which incorporated the Wolcott camera, from that of Claudet, who initially used the Giroux &

---

<sup>129</sup> At this time, a portrait was 10 shillings, 6 pence, a little more than the weekly wage of an unskilled laborer at that time. The old currency included 12 pence (pennies) in one shilling and 20 shillings in one pound. This information from Noel Chanan.

Cie model from Paris. “The method in practice at the Adelaide Gallery for taking pictures by the Daguerre process differs somewhat from that which we have before described as employed at the Polytechnic Institution. At the latter, the object is brought to the focus of the camera by reflection; at the former, by refraction.”<sup>130</sup> Unlike Daguerre’s camera, Wolcott’s “Reflecting Apparatus,” included in Beard’s 1840 patent, produced “non-inverted” portraits. A visitor to Beard’s studio recounted the experience of looking into the camera: “The individual to be limned is seated in a raised chair, the face towards the sun, the head being steadied by resting against a forceps-like framework; and opposite, on a level with the eye, is an open square box containing a reflector which presents the image of the sitter upside down.”<sup>131</sup>

Glass, the material that had brought Claudet to London over a decade prior, would continue to be a component of his photography business. Sutton, remembered that: “[t]here was on the roof of the building a studio of blue glass, the use of which had been abandoned because the blue glass was not found to shorten the exposure; so I was posed outside.” Both Claudet and Beard operated in a “blue glass” studio.<sup>132</sup> Claudet discussed the reasoning behind the use of different colored glass in his paper, “The Progress and Present State of the Daguerreotype Art,” given to the Society of Arts in 1843. He had long been experimenting with colored glass and had discovered, as he explained to the Society, that by “interposing a blue glass between the object and the image, the effect is

---

<sup>130</sup> *Literary Gazette and Journal of the Belles Letters* no. 1278 (July 17, 1841): 463.

<sup>131</sup> *Literary Gazette and Journal of the Belles Lettres* no. 1261 (March 20, 1841).

<sup>132</sup> Though Sutton was made to sit outside, other evidence reveals that Claudet had not abandoned the blue glass house by this time but rather chose the location of exposure depending on the weather or the inclination of the sitter. A review in *The Times* a year later, recounts that the blue glass was still in use at the Adelaide Gallery. “For those who can bear a full light, a seat in the open air on the roof of the gallery is the best situation for a likeness, but for those whose eyes are too weak for such endurance, a little room with blue glass windows is provided.” *The Times*, July 19, 1842: 6.

nearly as great as if there was no medium.”<sup>133</sup> Therefore, portraits taken in a room of blue glass used the same exposure time as outdoors, with less strain on the client’s eyes. For the customer, who had already ascended to the unfamiliar rooftop space, the blue light of the skylights added to the strangeness of the experience. One writer invited to a private preview of Beard’s studio held a few days before its official opening remarked that “[t]he visitor is introduced into an apartment lighted from above, and having a flat roof of blue glass, which subdues the glare of the sun’s rays without materially diminishing their luminous intensity; the livid paleness of complexion visible in the faces of the persons assembled, and the effect on the eye from the sudden change in the hue of light, cause a strange sensation, which after a while is agreeable.”<sup>134</sup>

One of the first known sitters for a daguerreotype portrait, Maria Edgeworth, in describing her visit to Beard’s studio in May of 1841, remarked that “[y]ou are taken from one room into another up stairs and down and you see various people whispering and hear them in neighbouring passages and rooms unseen and the whole apparatus and stool on high platform under a glass dome casting a *snapdragon blue* light making all look like specters and the men in black gliding about” **[Figure 1:27]**.<sup>135</sup>

Claudet’s 1841 patent also included an improvement that involved red-colored glass in the development stage of the daguerreotype plate. Claudet acknowledged the

---

<sup>133</sup> *Transactions of the Society of Arts, Manufactures and Commerce* 55 (1843-1844): 89-110. This volume also has Claudet listed as a “Contributing Member of the Society” and his address is “20 Park Terrace, Liverpool-Road; and Adelaide Gallery.”

<sup>134</sup> *The Spectator* (March 20, 1841): 283. See Beard, Improvements in Apparatus, British Patent 8546, 1840. The patent included a description of the blue light of the studio: “when the daylight is very bright, I prefer that the inclined glass roof A of the room should be glazed with blue glass, or otherwise, to soften the bright rays of light, in order that the person sitting to have a likeness taken may be as near as possible to the glass roof.”

<sup>135</sup> Maria Edgeworth to Fanny Wilson, May 23, 1841. Housed in the Special Collections of the Bodleian Library, Oxford University, as part of “Papers of Maria Edgeworth (1768-1849) and the Edgeworth Family.”

power of red light, or light transmitted through red glass, in stopping the action of light on the sensitive plate. The last Claudet & Houghton advertisement published in *The Times* before the announcement of the details of the daguerreotype in Paris reads: “PAINTED GLASS for WINDOWS.—Every description of PAINTED and ORNAMENTED GLASS for WINDOWS . . . Ruby and other coloured glass equal all respects to the ancient.”<sup>136</sup> As opposed to blue light, red light acted as if almost no, or very little, light was entering the room. Just as Claudet had found that blue glass acted similarly to clear glass, red glass, he discovered, prevented or greatly slowed the passage of light rays. The invention of “a room lighted through media of various colours, such as red, orange, green, and yellow,” is introduced, but Claudet specifies that red glass was preferred, in order for the operations of photographic development to be completed in a light-safe environment that the operator could also work in. Thus Claudet is credited with inventing the red light for the darkroom still used (in those that remain) today. He further noted that the properties of yellow light had an intermediate effect between the blue and red. The patent incorporated the mercury development of the exposed plate within the camera obscura that, fitted with a window of yellow glass, acted to accelerate the effect of the mercury while allowing the operator to safely watch the image develop on the plate.<sup>137</sup>

### ***“The Art of Colouring the Daguerreotype”***

Claudet and Beard were also rivals in regards to their particular methods of tinting their portraits. As early as 1842, Beard had taken out a patent for his technique for

---

<sup>136</sup> *The Times*, July 31, 1839: 8.

<sup>137</sup> Claudet, *Certain Improvements*, 1841.

coloring daguerreotypes which included a method of applying “various colours in the state of impalpable powders on different parts of the picture in succession, the outline and extent of each colour being regulated by a pattern or screen resembling a stencil plate.”<sup>138</sup>

A few examples of Beard’s early tinted daguerreotypes give a sense of the stencil-like application versus those from slightly later that begin to incorporate more a complex use of color [Figure 1:28-29]. By 1846, Claudet could advertise the superiority of his coloring “in the hands of an artist.”

Mr Claudet has also paid much attention to the art of Colouring the Daguerreotype and Talbotype Portraits, and this department in his establishment is in the hands of an artist of great talent, who can also from Photographic Portraits produce the most exquisite Painting on Ivory, having, with the exact truth of the Photograph, all the charm, colour, and life of a miniature.<sup>139</sup>

The “artist of great talent” refers to “Mansion.” Mansion was a French miniature painter who came from Paris to reside and work in London, and by 1844 was employed in Claudet’s studio to hand-tint daguerreotypes for Claudet, an occupation that many miniaturists would find themselves in once miniature painting’s popularity had receded. Claudet’s tinted daguerreotypes resemble miniatures in their simplicity of line and color [Figure 1:30]. Initially, Mansion’s name was not mentioned. By 1846, the artist had become so well known that his inclusion in advertisements was advantageous for the

---

<sup>138</sup> “Royal Polytechnic,” *The Art-Union* (August 1842): 186; see Richard Beard, Colouring Daguerreotype Pictures, British Patent 9292, September 10, 1842. “The Invention relates to modes of coloring the pictures produced by what is now well known as the daguerreotype process, whereby likenesses and representations of nature and other objects will be obtained in a more finished condition than can be effected by the simple process of Daguerre.

<sup>139</sup> *The Athenaeum* no. 963 (April 11, 1846): 361.

studio.<sup>140</sup> The announcement of Mansion's artistry also coincided with Claudet's official change in address to 18 King William Street. Claudet had begun to expand the studio in 1844 and, by April of 1846, he had closed the blue-glass structure on the roof, moved into quarters in the attic floor, and changed the address to around the corner at 18 King William Street.<sup>141</sup> The popularity of the Royal Adelaide Gallery had declined by this time, at which point it closed and reopened as "Laurent's Casino," losing any trace of its scientific roots.<sup>142</sup>

Another form in which the two studios were juxtaposed was in the woodcut engravings from daguerreotypes published in *The Illustrated London News* in October of 1851 during the closing of the Great Exhibition [**Figure 1:31**]. In this case the engraved version of the portraits removes any distinguishable differences between Claudet's and Beard's portraits.

In 1846, Claudet opened a second portrait studio in the Colosseum in Regent's Park. As initial advertisements claimed, this new studio was advantageous for the access

---

<sup>140</sup> *The Athenaeum* no. 978 (July 25, 1846): 745. "Claudet's Daguerreotype Portraits . . . all non-inverted and when coloured by Mr. Mansion, an artist of ability, are the most exquisite miniatures. Mr. Claudet operates himself, and never allows an inferior portrait to leave his establishment."

<sup>141</sup> *The Athenaeum* (May 24, 1845): 518; *The Athenaeum* no. 963 (April 11, 1846): 361. "The establishment has been considerably increased for all desirable accommodation and for the dispatch of business. A Private Room has been fitted up especially for Ladies, who can avail themselves of the attendance and attention of a respectable female. The operation can be performed in any weather, and the sunshine is not at all necessary, as the Portraits are always taken in the shade, in which persons can better preserve a natural and pleasing expression of countenance." The studio's address is described as "besides the entrance through the Adelaide Gallery, there is a free admission to the Photographic Rooms by the house, corner of Adelaide-street, and King William-street, Charing-cross."

<sup>142</sup> "Some time back - dates are dry things, so we need not care about the precise year - there existed in the neighbourhood of the Lowther Arcade an establishment called the Adelaide Gallery. It was at first devoted to the diffusion of knowledge . . . Then came a transition stage . . . oxy-hydrogen light was slyly applied to the comic magic-lantern; and laughing gas was made instead of carbonic acid. By degrees music stole in; then wizards; and lastly talented vocal foreigners from Ethiopia and the Pyrenees . . . during all this time a mania for dancing had been gradually coming on, and at last burst forth . . . As you enter, a polka is going on, and the *coup-d'oeil* from the gallery is well worth the visit. At first the *salle* exhibits a scene of moving confusion similar to that which the drop of water formerly showed in the microscope." Albert Smith, "Sketches of London Life and Character," 1849, in *A Dictionary of Victorian London* by Lee Jackson, (London; New York: Anthem Press, 2006), 26.

it afforded to light and clearer atmosphere.<sup>143</sup> It also made possible new commercial possibilities in terms of access to an expanded group of clientele. The move is visually evident in a comparison of Claudet's portraits of *Mr. Pritchard* and *Mrs. Pritchard*, the former made in the Adelaide Gallery in 1843 and the latter in the Colosseum studio in 1847 [Figure 1:32-33]. Andrew Pritchard's (1804-1882) portrait, an un-tinted, dynamic close up of the English optician's head in front of a plain dark background, differs from portraits dating slightly earlier that included painted backgrounds. The later portrait of Mrs. Pritchard, stamped with the Colosseum address, is intricately tinted and includes more of the figure, seated with an elbow resting on a table and a book on her lap. A lightly tinted sky is visible behind diamond-shaped panes of a window behind her. Whereas the earlier Adelaide gallery portrait is a direct, unelaborated view of the subject, the later daguerreotype incorporates props and color, increasing the sense of space around the figure and including more detailed forms in the image. In addition to the use of a new style of backdrop, Mrs. Pritchard's pose, her head and torso turning in a slightly different direction than the rest of her body, gives her figure more dimensionality and adds to the illusion of space in the image.

---

<sup>143</sup> "Mr. Claudet, whose name is so honourably associated with the Photographic Art, has recently opened an establishment at the Colosseum—a locality in all respects advantageous, infinitely more so than the crowded thoroughfares where even the light comes impregnated with vapour and smoke, and other impurities which very frequently baffle the skill of the photographic operator—evils which he will not have to contend against, for the atmosphere is at this height clear and pure." *The Art-Union* (1846): 182. Though it is not clear where Claudet's studio was situated in the Colosseum, the mention of "at this height" seems to suggest that it was an upper story of the cylindrical structure. See "Note," *The Athenaeum* no. 1025 (June 19, 1847): 652.

### ***Business Models***

Beyond their differences within the portrait image, the rivalry between Claudet and Beard is evident in their advertisements, often printed directly above or below the other. For instance, Claudet's 1841 announcement of the court's decision to overturn Beard's injunction appears under an advertisement for Beard's studio, which visually asserts its superiority on the page while also claiming superiority of the studio's products. "Richard Beard is possessed of two patents, by the combined operation of which he is enabled to produce portraits and other representations in a greater degree of perfection than can be produced by any other process. R. B. is the only person by whom licenses can be granted to use the patents in provincial towns."<sup>144</sup>

The legal contest between the first two commercial daguerreotype portrait studios in Britain allows for a comparison of two different business models in the medium's first decade. Where Claudet did not expand his practice beyond London, Beard, as his 1841 advertisement states, sold licenses to operators in several cities and towns in Britain (including Scotland).<sup>145</sup> In exchange for using the Wolcott camera and the daguerreotype process, these "patentees" were obligated to stamp the lower edge of the gilt matting placed over the portrait with the words "Beard Patentee," as in the portrait of Talbot [Figure 1:34]. In some cases, rather than remain anonymous, several of these "patentees" did include their names and addresses on the leather-covered daguerreotype case. Many would be involved in legal entanglements with Beard.<sup>146</sup>

---

<sup>144</sup> *The Times*, July 29, 1841: 3.

<sup>145</sup> John Hannavy, "Richard Beard (1801-1885)," in John Hannavy, ed., *Encyclopedia of Nineteenth-Century Photography* (London: Routledge, 2008), 126-127.

<sup>146</sup> See Heathcote, *A Faithful Likeness*, 2002.

The majority of “Beard Patentee” operators—and thousands of these daguerreotypes were made by such operators yearly—remain unknown. Beard’s system, similar to a franchise business today, spread his name across a swath of portrait production in London and beyond, while he himself is not known to have taken any of these portraits. The client that went to have his or her portrait taken at one of these Patentee studios walked away with a generic brand of daguerreotype, rather than a daguerreotype made by a particular photographer in a particular place. In this model, “Beard” takes the place of the individual photographer. The name is equated, not with a particular master photographer, but with a photographic portrait-making system. The word daguerreotype was from the beginning a name of an individual transformed into a generic name for a photographic process. Perhaps Beard’s aim was to become the “English” brand name. This was at least, perhaps, where his model was headed, until he went bankrupt in 1858.

Claudet, on the other hand, adopted a different business model than that used by Beard. Sutton’s description of having his portrait taken at the Adelaide Gallery includes the mention that “M. Claudet himself superintended the pose, and an assistant, a mere youth, prepared and developed the plate.”<sup>147</sup> The Frenchman was the photographer as well as the manager of the business of the studio and of the staff. Rather than a franchise, this system, at least in part, followed that of the artist’s studio, in which a “master,” whose name was known as maker and author, produced portraits for paying clients with the help of a hierarchical range of lower-level assistants. In contrast to a brand name that

---

<sup>147</sup> Sutton, “Reminiscences,” (1867): 413.

referenced an unfixed number of makers and studios, Claudet's name referred to a particular studio and a particular maker.

However, the artist-studio model was not the only one that Claudet adopted. Like the society of "Practical Science" beneath him, Claudet was also quick to capitalize on the premise of the inventor-scientist engaging with and performing for the visitor directly. The making of a daguerreotype portrait was such an act, one that edified the sitter (or sitters) through active engagement with a recent scientific discovery. A visitor's account aptly described a first viewing of the making of one's own daguerreotype as a mixture of science and magic, not unlike what was unveiled on the floors below: "It is truly magical, the performance of a few moments, most simple, and most scientific."<sup>148</sup> Claudet's client, then, witnessed and took part in two types of "performance"—that of the artist in a studio, and that of a scientist in a laboratory (both with assistants).

[I]n this box is placed the silvered plate covered with a thin pellicule of iodine, on which the rays of light act; and the sitter is invited to 'call up a look' of pleasurable animation, which has scarcely time to relapse into dullness when the operator announces that the picture is completed . . . Before the visitors have ceased wondering at the magical celerity of the process, the light-formed image has been fixed by chemical means, and the sitter enjoys the satisfaction of looking at his physiognomy reflected as in a darkened diminishing-glass: neat frames of various patterns being at hand, a person may walk away within five minutes from the time of entering the blue chamber, with an effigy that no miniature painter could rival in unflattering truth of

---

<sup>148</sup> *The Literary Gazette and Journal of the Belles Lettres*, no. 1261 (March 20, 1841). "A miniature plate of silver is scrupulously cleaned, and prepared with iodine. It is then put into a box, and the sitter's face reflected upon it, the head being fixed by supports in an easy and well-contrived chair; and this is the whole trouble! The plate is taken out, submitted to the vapour of mercury, washed in hypo-sulphate of soda, and dried—and there is a perfect likeness, ready to be enclosed in a frame, covered with glass, and kept, we presume, for any length of time. It is really a beautiful and extraordinary performance, and, we were told, could be executed for about a sovereign or a guinea: it is worth that sum to see it done."

character, or approach in force of effect and delicacy of execution, after repeated sittings and with laborious skill.<sup>149</sup>

Claudet's adoption of the roles of both scientist and portraitist corresponded with the Adelaide Gallery's geographic and cultural position within the city of London, as a scientific body located in close proximity to major art establishments. The Gallery was located within a short block from the recently chosen site for the National Gallery and the future National Portrait Gallery on Trafalgar Square, to open in 1845. Additionally, Claudet's artist/scientist studio/laboratory became a place where a client could, individually or as part of a group, re-enact scenes from bourgeois Victorian life and take these visions home with them. Within a few weeks of the opening of his studio, Claudet advertised that he could also take portraits of groups "of three to six persons" playing out various activities, "engaged at tea, cards, chess, or in conversation."<sup>150</sup> The process was, like the demonstrations in the Gallery of Practical Science, a combination of novelty and document. Indeed, Claudet's studio became commercially successful because it functioned as combination of artist's studio and scientific laboratory.

To get a picture of Claudet's business, it is important to get a sense of the studio in terms of numbers, particularly how many portraits he produced per day or week and how many assistants he employed. Between June 24<sup>th</sup>, 1841 (corresponding with the opening of his Adelaide Gallery studio) and July 16, 1842, Claudet reported making eighteen hundred and twelve portraits for a combined total of £1913 and 15 shillings, or one

---

<sup>149</sup> *The Literary Gazette* (March 20, 1841).

<sup>150</sup> "By this process also Pictures forming groups of three to six persons can be taken, either engaged at tea, cards, chess, or in conversation affording whole-length Family Portraits or of Friends, arranged in any manner most agreeable to the parties." "Claudet and Adelaide Gallery," *The Art-Union* (July 1, 1841): 113.

guinea (one pound and one shilling) each.<sup>151</sup> This number divides as approximately five portraits per day if divided by every day of the year.<sup>152</sup> It is also recorded that he sold four daguerreotype plates “imported after receiving impressions in Paris” for £4, 4 shillings.<sup>153</sup> Beneath this record, Claudet mentioned that the 1,812 portraits included about 200 items—“portraits and drawings or impressions made or taken as specimens” which the Frenchman gave to “various persons.” What was not given away was “used and exhibited by this Defendant as specimens of the effects he is able to produce.”<sup>154</sup> Claudet also submitted an account of how much he spent in setting up his studio. “For the building and the fitting up of rooms for the purpose of taking portraits there,” he paid just under £430.<sup>155</sup> Much of the studio operations could not, at the time, be valued in terms of pounds or shillings. “There are also on hand the materials of the room used in taking the portraits and sundry fittings up and implements and also sundry specimens of the impressions taken by the apparatus but the value of which this Defendant is unable to estimate.”<sup>156</sup> Claudet also listed the cost of the plates as well as cases used to package his product. The sum spent in a year “for Cases and Boxes” was £500, and the sum for

---

<sup>151</sup> A written account of payments Claudet received and paid in the first year of operating his portrait studio is recorded in the affidavit submitted to the Public Office, “Southampton Buildings,” Chancery Lane in July of 1842, during the injunction taken out against Claudet by Beard. In it the “Defendant” (Claudet) had to submit the cost and details of his business since it opened in June of 1841. Claudet also writes that a portrait was “typically one guinea” and a second portrait “of the same party 15 shillings” (or three quarters of a pound). See *Beard v. Claudet: Bill and answer*, (July 1841), Reference no. C13/435/19, National Archives, Kew, London and *Beard v. Claudet: Bill and answer*, (1841), Reference no. C 13/456/5, National Archives, Kew, London.

<sup>152</sup> This is assuming that Claudet’s studio was open every day. The Adelaide Gallery itself, according to advertisements from 1841, was “[o]pen daily from half-past ten till six o’clock.” See for example *The Art-Union* (September 1, 1841): 145. In 1846 Claudet’s studio (the 18 King William Street entrance) was “open from nine o’clock until dusk.” See *The Athenaeum* no. 963 (April 11, 1846): 361.

<sup>153</sup> *Beard v. Claudet: Bill and answer*, 1841.

<sup>154</sup> *Beard v. Claudet: Bill and answer*, 1841.

<sup>155</sup> *Beard v. Claudet: Bill and answer*, 1841.

<sup>156</sup> *Beard v. Claudet: Bill and answer*, 1841.

“metal and plates” was £425.<sup>157</sup>

The use of assistants was familiar to Claudet from his experience as a manager of a glass shop. According to the affidavit, Claudet paid approximately £330 for “salaries and wages for Assistants, Clerks, and Servants” (which was less than the total sum, listed above, for either cases and boxes or for metal and plates). On a separate line it is recorded that “a pupil” paid Claudet £100, presumably for training in making daguerreotype portraits.<sup>158</sup> As a result, Claudet’s Adelaide Gallery studio, and each thereafter, was not a quiet space where the sitter sat in solitude with the Frenchman, but one filled with a range of figures, from “pupils” who could afford to pay for their training, and assistants, who, like the one that Sutton observed, most likely handled the preparation and development of the plates. There were also the clerks who managed the appointment book, bills and clients’ receipts, and servants who were responsible for greeting clients and attending to them, and keeping the studio rooms in order. In addition, as already noted, Claudet employed a painter to color his daguerreotypes. Therefore, Claudet’s studio operation internalized the labor relations and division of labor enacted by British society at large.

The studio was also a micro-version of British society for the reason that it was a

---

<sup>157</sup> Beard v. Claudet: Bill and answer, 1841. According to a visitor to his studio a decade later, Claudet did not buy pre-made daguerreotype plates. See F.-A. de la Rivière, “Héliographie sur plaques métalliques. Une visite à M. Claudet,” *La Lumière* 1, no. 29 (August 24, 1851): 113-114. “M. Claudet n’achète point de plaques; il fait faire par un fabricant de doublé des feuilles semblables à celles qui sont destinées à orfèvrerie, exigeant seulement qu’elles soient au douzième, et que l’argent soit pur.” [M. Claudet does not buy [daguerreotype] plates; he has them fabricated in double sheets like those for the goldsmith, requiring only that they be [the twelfth] and that the silver is pure.” The author proceeds to describe the process of making the plates.

<sup>158</sup> The well known assistants to train with Claudet and become photographic “masters” in their own right were T. R. Williams, in the mid 1840s, and J. J. E. Mayall, in 1846, to be discussed in Chapter Four. As has been mentioned, John Bourdelain Jr., a relation of Claudet’s wife Julie, worked as Claudet’s assistant early on. See Bourdelain to Talbot, London, July 21, 1843, in *The Correspondence of William Henry Fox Talbot*, Doc. No. 4847: “I am requested by Mr. Claudet to address you a few lines to state, that as he is deprived of your letters in answer to his of the 4<sup>th</sup> inst, he is afraid the same has miscarried, & that you may not attribute his silence or any neglect of his, he will be most happy to hear from you whether you have or have not received his letter.”

space in which upper-class clients mingled with “capitalist” merchants who were in turn served by assistants, clerks, and servants. Further, the class of the client (the petit bourgeois and aristocratic classes) and the class of the photographer (in Claudet’s case, the petit bourgeois or “merchant class”) were interrelated at this time. In his book, *The Making of English Photography: Allegories*, Steve Edwards notes that the adjacency of photography and industry was not unusual and the “gentlemen amateurs” group was actually “intertwined” with that of “the industrialist capitalist.”<sup>159</sup>

Stemming from Edwards’s study, then, Claudet could be viewed as a figure that exemplified the amalgam of these two groups—the landed gentry (although he was of the French version) and the British industrial capitalist, the scientist and the businessman, the photographer and the artist. The commercial studio system was typical and also unique (as was Claudet) as it was similar to that of an artist’s studio but the production was far faster and the output was far more numerous. Furthermore, portraiture as a genre in Britain was both an art and a business. Claudet reconciled the mix of class with commerce by remaining active in multiple spheres at once. He ran a commercial business, and therefore connected to the industries necessary for its operation. At the same time, he contributed to discussions at the Society of Arts, the Royal Society and the Photographic Society and would become a member of the latter two in 1853. Further, although he was “in trade,” Claudet circulated among the educated classes and photographed a particular class of customers, which also created a particular persona for his studios. Many of his sitters, if they were not eminent scientists or their family members, were from the industrialist capitalist strata and above. The environment he

---

<sup>159</sup> Steve Edwards, *The Making of English Photography: Allegories* (University Park, PA: The Pennsylvania State University Press, 2006), 32.

created in his portraits, particularly in the Regent Street studio, was the interior that signified this class (for example in the luxurious interior as well as the painted vista of land that perhaps it is implied, the subject owned). He also often depicted himself in this setting, which in turn placed him visually (and later three-dimensionally, or “solidly”) in this sphere.

According to Quentin Bajac, the typical French portrait daguerreotype studio, after the business had become increasingly available to a wider group of operators and consumers, was more like a “craft workshop” and was most often a “family business,” operating on a modest income.<sup>160</sup> In general, the intake of daguerreotype portrait studios was on par with that of other small businesses, which means it was far below the profits of famous lithographers, such as Charles-Nicolas Lemercier (1797-1859), as well as that of “sculptors of bronze statuettes and engravers of cameos and semiprecious stones” in the same years.<sup>161</sup> However, this was less true of the industries related to daguerreotypes, such as camera and plate manufacturing. These areas of the daguerreotype industry, which required capital, machinery, and work forces on a grander scale than the portrait studios, had the largest economic profits. The establishment of the daguerreotype studio as a business enterprise also coincided with simultaneous developments in chemical industries, the intersection, as in Britain, of science and industry, and the increased use of machinery to replace laborers. As a whole, the daguerreotype industry “was typical of

---

<sup>160</sup> Quentin Bajac, “‘Une branche d’industrie assez importante’: L’économie du daguerreotype à Paris, 1839-1850” [‘An industrial sector of considerable size’: The economics of the daguerreotype in Paris, 1839-50], in *Le daguerréotype français* (2003), 49. “La structure de ces ateliers demeure artisanale, souvent même familiale.”

<sup>161</sup> Bajac, “Une branche d’industrie,” in *Le daguerréotype français* (2003), 49. Whereas daguerreotype portrait studios were reporting an annual number of 2,000 or 3,000 plates at a price of up to 10 francs for each plate, “Lemercier’s enterprise employed one hundred and twenty workers for a turnover of more than 200,000 francs.” [L’entreprise Lemercier emploie cent vingt ouvriers pour un chiffre d’affaires de plus de 200,000 francs].

economic and industrial development under the July Monarchy.”<sup>162</sup> The place of the daguerreotype in the Parisian exhibitions such as the “Exhibition of the Products of Members of the Academy of Industry,” or the “Public Exhibition of the Products of French Industry,” in the 1840s was a precursor to that of the later, British version at the Crystal Palace in 1851. Unlike in London, however, in the Paris National Expositions of Industry of 1844 and 1849 (the latter Bajac refers to as “the swan song of the daguerreotype and the emergence in France of photographs on paper”), daguerreotypes were given little attention by critics.<sup>163</sup>

The French translation of Claudet’s portrait business, with its sizeable number of employees and clientele from elite classes, was the small number of elite portrait studios that employed larger numbers and were less “craft” oriented. Claudet’s sons, particularly Francis, would assist him in his studio, and Henri would become a portrait photographer and would take over the Regent Street outfit after his death; however, their role was primarily as models for the pictures rather than as assistants. Although they appear in several daguerreotypes, there is no evidence that Mme Claudet or their daughter Anne Mary worked in the studio or aided, as was often done by women, in the tinting of the portraits.<sup>164</sup>

In comparison to urban American portrait studios, Claudet’s operated, perhaps,

---

<sup>162</sup> Bajac, “Une branche d’industrie,” in *Le daguerréotype français* (2003), 51. “Cette jeune industrie daguerrienne. . . est par bien des aspects emblématiques du développement économique et industriel de la monarchie de Juillet.”

<sup>163</sup> Bajac, “Une branche d’industrie,” in *Le daguerréotype français* (2003), 53. “Quant à l’exposition de 1849, elle représente le chant du cygne du daguerréotype et l’émergence en France de la photographie sur papier.”

<sup>164</sup> In her 1994 history of women photographers, Naomi Rosenblum writes that a “Miss Claudet” worked for Antoine Claudet. See Naomi Rosenblum, *A History of Women Photographers* (New York: Abbeville Press, 1994), 44. However, no reference for this information is included and I have not uncovered any sign of Claudet’s daughter Mary working in his studio.

most like that of Albert Sands Southworth and Josiah Hawes in Boston.<sup>165</sup> Interestingly, neither the French nor the American daguerreotype portrait studios adopted stereo-daguerreotype portraits to the degree that Claudet and his fellow Regent Street daguerreotypists did. This might be explained by the fact that by the end of the 1850s, the commercial daguerreotype portrait was largely superseded by paper-based albumen photography in both of these countries. When paper photography became commercially viable in about 1855, Claudet was still selling predominantly daguerreotype portraits, and most often stereo-daguerreotypes.

### ***Commissions***

To supplement his income from his portrait studio, Claudet took on commissions, not all of which were portrait commissions. As mentioned in the Introduction, in 1842 Claudet was involved in a monumental project commissioned by *The Illustrated London News*. “The Panorama of London,” photographed from the top of the Duke of York’s Column, resulted in a new vantage point over the city of London that had not been recorded in such detail [Figure I:1]. Claudet’s photographic panorama, as *The Illustrated London News* had hoped, was a compelling incentive for subscribers to continue their support of the newspaper. His early work for this paper, the first to incorporate wood engravings on a regular basis, would lead to further commissions for daguerreotype portraits to be transcribed into engravings in future editions. Additionally, because the column was situated at the south end of Regent Street and the north side of the Mall and St. James Park, the panorama captured a bird’s-eye view of the metropolis from the

---

<sup>165</sup> See a description of the daguerreotype industry in America from the 1840s to 1860 in Beaumont Newhall, *The Daguerreotype in America* (New York: Dover Publications, 1976).

center of both its national (encompassing Westminster Hall and Westminster Abbey, Buckingham Palace, and the unfinished Nelson's Column) and commercial (Regent Street, the river Thames) realms.<sup>166</sup>

In the early part of his career, Claudet also photographed Arthur Wellesley, the First Duke of Wellington (1769-1852) on the Duke's birthday, May 1, 1844, at the Adelaide Gallery.<sup>167</sup> The original daguerreotype is in the possession of the Wellington estate in Stratfield-Saye House, located just south of Reading and west of London.<sup>168</sup> Though the daguerreotype is kept privately, the image itself was widely known as shortly after it was taken it was reproduced as both a painting and engraving. "The result of the mechanical process was afterwards placed in the hands of Mr. Solomon, an artist of rising reputation, who painted from it an enlarged portrait, something beyond miniature size. Both the daguerreotype portrait and the oil painting were then handed over, by Mr. J. Watson, of Vere-street, the owner of them, to Mr. Ryall, who engraved a plate from the two, which has just been published by Mr. Watson."<sup>169</sup> The painting by Abraham Solomon remains to be located, however the engravings made by Henry Thomas Ryall (1811-1867), first published on May 1, 1845, became one of the most widely distributed

---

<sup>166</sup> At the center of the North View, the subscriber could gaze down Regent Street, a major commercial thoroughfare and future address of Claudet's third and final daguerreotype portrait studio. On either side the city spreads almost symmetrically, balanced by larger official buildings and two similarly manicured and gated parks in the foreground. Off to the right is the newly constructed dome and temple-like entrance to the National Gallery, which opened the same year. The south view turns toward Westminster Abbey in the center and Westminster Hall, behind which you can see the comparatively extensive construction of the new Houses of Parliament and the rooftop of Buckingham Palace. As the river was the major economic thoroughfare for the Empire at large, it is in the south view that one sees smokestacks from factories rising frequently against the engraved lines of the sky, while at the lower edge wisps of smoke from chimneys disrupt the regularity of rooftops.

<sup>167</sup> "Claudet's Portrait of the Duke of Wellington," *The English Gentleman*, no. 5 (1845): 76. "The portrait of the Duke of Wellington was taken on his grace's birth-day, May 1, 1844, at the Adelaide Gallery, by the rapid process of M. Claudet's daguerreotype."

<sup>168</sup> I contacted the curator of the estate who confirmed that the original portrait was there, however she was unable to procure a digital file of the original daguerreotype.

<sup>169</sup> "Claudet's Portrait of the Duke of Wellington," (1845): 76.

images of the 1<sup>st</sup> Duke of Wellington [Figure 1:35]. The “fidelity” of the engraving was praised and reviewers assured the public that it was “principally made from the daguerreotype portrait” and that the work of Solomon was used “to correct those defects which of necessity arise in all daguerreotype portraits.”<sup>170</sup> The path of this Claudet portrait is an example of the way in which a single portrait daguerreotype was spread through multiple media. A daguerreotype of the engraving is presently in the collection of the J. Paul Getty Museum, Los Angeles. Further, the Ryall engraving appears in the upper left corner of one of Claudet’s stereo-daguerreotypes from his Regent Street studio [Figure 1:36].<sup>171</sup>

An advertisement placed just one month after Claudet & Houghton’s first notice of the sale of daguerreotypes in March of 1840 claimed that Claudet was the first to sell a daguerreotype to the Queen and Prince Consort. “Her Majesty and Prince Albert having been graciously pleased to purchase some specimens produced by the DAGUERREOTYPE, and to express their highest admiration of this wonderful discovery, it is under such excited patronage that CLAUDET and HOUGHTON beg to announce that they have on hand for sale a collection of beautiful specimens.”<sup>172</sup> A few weeks prior on March 14, a “soirée” was hosted by the Marquis of Northampton, president of the Royal Society. Claudet submitted daguerreotype examples, most likely

---

<sup>170</sup> “Claudet’s Portrait of the Duke of Wellington,” (1845): 76. “Mr. Ryall has produced surpassing in fidelity both the original daguerreotype and the painted copy; in short, a likeness so true to nature and so complete a translation of the features, character, and very look of the illustrious duke, that nothing but the reflection of the face of his grace in a mirror can surpass it. Without praising or finding fault with the very many portraits of the Duke of Wellington which from time to time have been produced, it will require little prophetic power to predict that this portrait will supersede them all.”

<sup>171</sup> The Getty daguerreotype was presumably made later by Claudet as it is housed in a Regent Street case. Several copies are also in the collection of the National Portrait Gallery, London. One also hangs, framed, in the dining room of the Brontë Parsonage Museum in Haworth, UK.

<sup>172</sup> *The Times*, April 10, 1840: 2.

those specimens he had recently brought back from his visit to Daguerre at the Conservatoire des arts et métiers.<sup>173</sup> In the letter addressed to Peter Le Neve Foster in 1865, Claudet claimed that when he brought back the daguerreotypes from Paris he had “sent to the Royal Society’s soirées the best specimens, after having submitted a collection of them to the Queen, who kept the best of them.”<sup>174</sup> As of yet, these daguerreotypes have not been located.<sup>175</sup> Yet if Claudet’s claim is true, it reveals another significant event in the history of photography’s commercial introduction into England, an event in which Claudet played an integral role.<sup>176</sup> Indeed the British royal family went on to become enthusiastic patrons of photography and helped promote its acceptance in society and its proliferation among all classes.

### *Claudet and Hippolyte Fizeau*

While operating a daguerreotype portrait studio above the Adelaide Gallery, Claudet attempted to improve on two processes—one the “Electrotype” process developed in France, the other the calotype process invented in England—in order to make them commercially viable. Both enterprises ultimately failed, yet they indicate the range of photography’s commercial applications in England in its first decade. These

---

<sup>173</sup> See “The Papers of Sir John Lubbock,” Ref No JWL, The Royal Society, London, which contains correspondence between Claudet and John William Lubbock (1803-1865), astronomer, Treasurer and Vice-President of the Royal Society; also see Wood, “The Daguerreotype Patent” (1980).

<sup>174</sup> “A Chapter in the Early History of Photography,” (1868): 404-5; also see *The Art-Union* (August 1841): 139.

<sup>175</sup> Wood carefully documented his search for these daguerreotypes, including his correspondence with Helmut Gernsheim, who claimed to have seen the transaction recorded in one of the Queen’s diaries. He also corresponded with the Windsor Collection and confirmed that this entry does not exist. See Wood’s “Midley essays on the early history of early photography” website: <http://www.midley.co.uk> (accessed May 3, 2010).

<sup>176</sup> As will become clear, particularly in the Great Exhibition, the Royal Family was extremely supportive of photography. Claudet would be commissioned to take the family’s daguerreotype portrait. One of the Queen and her children from 1856 is presently in the Royal Collection, Windsor [Figure 4:29].

collaborations are also evidence that the medium developed in a more complex way than can be explained by a narrative content that traces separate national developments in terms of calotypists versus daguerreotypists. In 1843, Claudet applied for the British patent on Fizeau's "Electrotype" process, which made it possible to transform the daguerreotype plate into a printing plate.<sup>177</sup> The text in the patent describes the process as well as the materials needed to create a successful plate to print from. First an acid mixture was poured onto the plate that "bit" into the silver (or dark areas) of the daguerreotype image and created grooves in the form of a negative of the original image. If the acid alone was not strong enough, Fizeau's "electrotype process" was used to enhance the etching. The plate was inked with a "siccative [quick-drying] ink" and, after the "white" parts of the image had been polished, the plate was then gilded by electrotyping. A solution of ferrocyanide of potassium, one part chloride of gold, and water was deposited on the plate using a galvanic battery. The plate was periodically turned for an even coating, using a galvanic battery. The gold attached only to the parts that were not inked and so when the plate was re-submerged into the acid bath, the acid attacked only the inked lines. After the plate was etched, it was coated with a thin layer of copper in order to protect the image from wear during printing. When the copper layer began to show signs of wear, the copper could be removed and the plate coated with a new layer of copper and then prepared for further impressions. A similar process for gilding the daguerreotype plate by a voltaic battery had been presented to the London Electrical Society in 1841 by the inventor of the battery, W. R. Grove (1811-1896). However,

---

<sup>177</sup> Claudet, Printing from Daguerreotype Plates, British Patent 9957, May 21, 1843. "The process which I have to specify consists in rendering the daguerreotype picture susceptible of producing by printing a great number of proofs or copies, thereby transforming it into a complete engraved plate. The process is established upon the following facts, which have been discovered by the Inventor."

Claudet chose to patent the process of the Frenchman.<sup>178</sup>

Claudet acted as intermediary between Fizeau in Paris and Talbot in England. In an 1844 letter to Talbot, Claudet writes that he had received two proofs of Fizeau's engravings (from daguerreotypes) as Fizeau had asked Claudet to forward them on to Talbot.<sup>179</sup>

Prior to the 1843 patent, Claudet marketed Electrotpe copies of daguerreotypes in advertisements.<sup>180</sup> Although he offered the Electrotyped copies through his studio, as far as is known he did not sell many of these prints. However, Claudet did exhibit six "Impressions from Daguerreotype Plates, Etched by Fizeau's Process" in the 1845 British Association exhibition in Cambridge.<sup>181</sup> The Electrotpe business enterprise failed, as it did in both England and France, because it was a cumbersome process that did not produce as many prints as had originally been projected. Although the impressions came directly from a daguerreotype image, and therefore had the potential to make a more accurate result than those copied by an artist's hand, it could not produce, in quantity or in speed, the same amount of reproductions as wood or steel engravings or lithographs (which the electrotpe business would have been competing with in the market place) made after daguerreotypes. Although he was not successful at producing prints from his portraits with the patent on Fizeau's process (he let the patent run out), Claudet's portraits

---

<sup>178</sup> Fizeau had improved on the processes initiated by Alfred-François Donné (1801-1878) in Paris and W.R. Grove in London. See W. R. Grove, "Etching Daguerreotype Plates by a Voltaic Process," *The Literary Gazette and Journal of the Belles Lettres* (August 1841): 548-549.

<sup>179</sup> "I have received from Mr. Fizeau 2 proofs of his engraving with a letter addressed to you which I am enclosing here. I am sending you the little specimen which can be put in this parcel without any risk & I shall get the larger one to you on another occasion." Claudet to Talbot, London, August 28, 1844, in *Talbot Correspondence*, Doc. No. 5046.

<sup>180</sup> *The Athenaeum* (September 1841). "From the daguerreotype likeness, number of Electrotpe portraits can be produced as beautiful as the original."

<sup>181</sup> See Roger Taylor, *Photographic Exhibitions in Britain, 1839-1865*, <http://www.peib.dmu.ac.uk> (accessed May 3, 2010).

would, as I've already mentioned, often be published as woodcut engravings in *The Illustrated London News*. He also continued to have engravings made from his daguerreotypes, as he had with his portrait of Wellington.<sup>182</sup>

***“On the means to make the process more profitable”: Claudet and Talbot***

At the same time that he was working with Fizeau's electrotype process, Claudet was also exploring a business opportunity with Talbot's calotype.<sup>183</sup> An agreement was signed with Talbot in the spring of 1844, after several letters were exchanged over a period of approximately two years. Soon thereafter, Claudet embarked on experiments with the paper process in the midst of his daguerreotype studio at the Adelaide Gallery.

He was not the first person to approach an agreement with Talbot in such a venture. In 1842, Talbot was in communication with the Frenchman's rival, Richard Beard, regarding an exclusive license to use the calotype process in London and for some miles around. Through his agent/solicitor William Carpmael, Beard proposed that he would manage the business of finding licenses for Talbot's calotype patent and for this he would receive an exclusive percentage from these sales and license dues.<sup>184</sup> He also requested

---

<sup>182</sup> A copy of Fizeau's pamphlet *Procédé de gravure photographique* is currently in the collection of the George Eastman House and was given to the museum in 1949 by H. H. Claudet, a descendant. The pamphlet had been in Antoine Claudet's possession.

<sup>183</sup> Claudet first approached Talbot regarding a license for the calotype in April of 1842. See Claudet to Talbot, London, April 28, 1842, in *Talbot Correspondence*, Doc. No. 4496. Claudet wrote to Talbot from Paris in French, having arrived in Paris the day before (April 27, 1842).

<sup>184</sup> Beard to Talbot, January 14, 1842, in *Talbot Correspondence*, Doc. No. 4424. "I had the honour to receive your letter of the 30<sup>th</sup> Ultim and have since succeeded in obtaining an interview with Mr. Carpmael [*sic*] [Mr. Carpmael was also the link to Wolcott and Johnson in 1840] whose proposals in reference to your Calotype Patent I am desirous of entertaining as soon as he shall be prepared to place them in a tangible form; and upon its presenting a fair prospect of remuneration I beg to assure you that no effort should be wanting on my part to bring it into successful operation [*sic*]."

some of Talbot's paper to make trials with.<sup>185</sup> Beard was anxious to have the agreement drafted and signed and in his correspondence reveals an aggressive business approach that echoes his concurrent daguerreotype empires:

. . . allow me to suggest the importance of its being done if practicable before you take your departure for the Continent, in order that we may take advantage if possible of the whole of the ensuing Summer for bringing the invention into work in both Town and Country, this being completed I will place myself in communication with Mr. Collen [a miniature painter and the first licensed by Talbot to practice calotype portraiture, who had opened a studio in London] . . . since his License gives him the power to work in any and every Town in the Kingdom . . . . In reply to your enquiry I should beg respectfully to Submit I ought to be allowed to receive the percentage upon Every License which may be granted including that under which I may myself work here and elsewhere as well as any that you may dispose of. it [sic] may very possibly and I think not improbably happen that for such sale you may be indebted directly or indirectly to the efforts made by me in bringing the invention into general use for I expect in addition to my three Establishments in Town and two or three in the Country I should forthwith be the means of introducing it [illegible]

Like his portrait daguerreotype franchise, Beard was eager to immediately step beyond London with the calotype. He mentions Goddard, the eminent chemist, to Talbot as well, perhaps as a kind of validation of his proposal. Further, Beard also quibbled with Talbot over the amount of his percentage from the profits.<sup>186</sup>

---

<sup>185</sup> See Carpmael to Talbot, March 7, 1842, and March 26, 1842, in *Talbot Correspondence*, Doc. No. 4449 and Doc. No. 4467. Mr. Carpmael sent Talbot a draft of Beard's proposition for his signature, and also suggested that Talbot's Solicitor be given powers to grant licenses when Talbot was not available.

<sup>186</sup> Beard to Talbot, April 2, 1842, in *Talbot Correspondence*, Doc. No. 4478. "I propose sending down one of my most Competent assistants (Mr. Goddard) . . . Allow me to suggest whether provision may not be made for my Licensing County Establishments with an Exclusive [sic] Licence for such time as the percentage may amount to – sum to be computed according to population and their circumstances." Talbot agreed with Beard by letter as long as Beard allowed "Mr. G. [Goddard] to give you the instructions necessary first." See Talbot to Beard, April 28, 1842, Doc. No. 6743. This is interesting as it appears that Talbot was skeptical about Beard's abilities with the process and therefore requested that he visit someone knowledgeable about photo-chemistry.

Talbot wrote to his patentee Henry Collen regarding the pending agreement, assuring him that it would “not in any way affect the rights which you have acquired under the license . . .”<sup>187</sup> His aim seems to have been to try multiple avenues to ensure the maximum profitability of the calotype had potential to become profitable, and encouraged Collen to work with Beard. “I have no doubt that by cooperation great things might be achieved, but I can do no more than propose it, it will be for you to enter into the scheme or not as you may think most desirable . . .”<sup>188</sup> By May 6, Collen had written to Talbot explaining that he had had doubts about the discussions with Beard and that he had hesitated investing fully in the calotype portraiture business believing that if Beard joined in, his enterprise would cause greater competition and possible bankruptcy for his business.<sup>189</sup> In a letter dated a few months later, Collen reported to Talbot that he had taken a room on the second floor of the Polytechnic Institution (under the roof that housed Beard’s studio) but mentioned that the Polytechnic did not seem to be interested in funding work with the calotype. With this warning against Beard as well as a seeming reluctance to take on the endeavor himself, Collen seems to have dissuaded Talbot from working with either of them. Collen would try but fail to make money as a calotype portraitist, writing to Talbot in 1842: “the only thing I have to complain of now is want of enough to do, but I shall probably correct that by working elsewhere.”<sup>190</sup>

---

<sup>187</sup> Talbot to Henry Collen, March 31, 1842, in *Talbot Correspondence*, Doc. No. 4474. He mentions as well his consideration of Claudet (who by this time had approached him regarding a license, though this correspondence has not survived): “As to Claudet I can only recount that he spoke of a license once, and that in a casual mention. But suppose I had granted a License why should I not?”

<sup>188</sup> Talbot to Henry Collen, March 31, 1842.

<sup>189</sup> Collen to Talbot, May 6, 1842, in *Talbot Correspondence*, Doc. No. 4500. “Your treaty with Mr. Beard is a proof of the justice of the arguments used by those friends who dissuaded me from speculating more largely on Calotype portraiture, for the greater my success, the larger my number of portraits, the stronger his inclination would naturally be to become my rival.”

<sup>190</sup> Collen to Talbot, August 3, 1842, in *Talbot Correspondence*, Doc. No. 4559.

Therefore, when Claudet inquired as to a collaboration with Talbot and the calotype, he did so at an advantageous moment, when both of Talbot's other possibilities for collaboration seem to have faded. Claudet also offered prospects across the Channel. Shortly after Collen's last letter, Claudet contacted Talbot stating that he had received a camera obscura (Gaudin's system) from Lerebours in Paris.<sup>191</sup> Shortly after this correspondence, Lerebours wrote to Talbot inquiring after the possibility of obtaining an agreement from him for the use of the calotype in France, stating that it was only "just that you [Talbot] should be the first to profit from it [the calotype in France]."<sup>192</sup> Soon thereafter, Talbot contacted Claudet regarding a collaboration with the calotype.

As a "daguerreotype" specialist in London, perhaps Claudet did not present as much of a threat to Talbot in working on the paper process. As a Frenchman, Claudet's claim of loyalty to the daguerreotype process may have been more convincing to Talbot than Beard's. Further, his letters to Talbot were written in French as often if not more than in English. Beard was perhaps more of a threat, as he presented himself as strictly a business person, and a greedy one at that. Claudet stressed his photographic commitments outside of paper photography. "I have been so absorbed with my affairs since you left

---

<sup>191</sup> Claudet to Talbot, August 18, 1842, in *Talbot Correspondence*, Doc. No. 4581.

<sup>192</sup> In the same letter Lerebours asks as to why Claudet had not already purchased these rights from him. He also stresses that "[i]t would be indispensable, it seems to me, that the paper be manufactured in England." Lerebours to Talbot, August 24, 1842, in *Talbot Correspondence*, Doc. No. 4588. Claudet would also ask Talbot on behalf of Lerebours to make a similar arrangement with the Frenchman. See Claudet to Talbot, December 24, 1842, in *Talbot Correspondence*, Doc. No. 4679. Claudet also mentioned the interest of his friend and fellow countryman Lerebours in obtaining a similar license as Claudet's for the use of the calotype in France. Claudet wrote that "[s]ince there is no guarantee of success, he does not wish to deal with you under any other conditions than those which you have granted me." Claudet continued by suggesting a solution for such an agreement: "In order to resolve everything, you could let him have a licence like mine, & after a trial period of a year, Mr. Lerebours would have the option to buy your patent at a price agreed in advance or to continue to use the process under his license. I believe that it would be difficult for you to find a better arrangement. In France, there are so many paper processes & the Daguerreotype has already diminished to such an extent because of the competition, that I think you will find very few people who are prepared to risk investing their capital in this type of enterprise."

that I have not had any time to consider the question of an agreement with you to use your process. Nevertheless, I am still very willing to negotiate with you . . .”<sup>193</sup> Claudet reassured Talbot of his willingness to make this venture successful and stated “[I]f I obtained the right to use your process at this price, I assure you that I would devote myself wholeheartedly, and that your invention would receive the honour which it deserves.”<sup>194</sup>

Claudet stipulated that he preferred to work with the process on French paper rather than English, apparently to strike a business deal with a friend in France.<sup>195</sup> In addition to a financial interest, Claudet’s vision of the future of the calotype also seems to have involved a cross-pollination between an English process and French paper, a collaboration that would encourage the sharing of knowledge between photographers in both countries. “Furthermore, I would be interested in examining the various processes used by Mr. Bayard [(Hippolyte Bayard, 1807-1887)] & other people in order to know which aspects could be improved.”<sup>196</sup> Claudet positioned himself as a kind of emissary for Talbot in Paris, closing with the words that if he could “be at all useful to you [Talbot] during my stay in Paris, I will consider it a pleasure to receive your commissions.”<sup>197</sup> He also discussed the fact that he would act as promoter of Talbot’s

---

<sup>193</sup> Claudet to Talbot, December 24, 1842. He continued to discuss very directly the details as to payments: “. . . I admit that what put me off slightly was your condition that you receive a third of the gross takings. I consider (& I have the experience of the Daguerreotype) that 1/3 of the takings would be far more than ¾ of the profits.”

<sup>194</sup> Claudet to Talbot, December 24, 1842.

<sup>195</sup> Claudet to Talbot, November 19, 1842, in *Talbot Correspondence*, Doc. No. 4649. “One of the reasons I want to settle this matter while I am in Paris is that if we are going to deal with one another, I would like to come to an arrangement with a paper manufacturer, who is one of my friends, to produce suitable paper for the Calotype.”

<sup>196</sup> Claudet to Talbot, November 19, 1842.

<sup>197</sup> Claudet to Talbot, November 19, 1842.

process in France and would transport Talbot's samples to Paris.<sup>198</sup>

When in Paris, Claudet reported on the current status of paper photography in France. In one letter he remarked that he had not yet visited Bayard but would try to bring back some samples of his direct positives.<sup>199</sup> He also enclosed seven samples of paper with descriptions of each, from the French paper factory so that Talbot could make tests with him and report back to Claudet who would order larger quantities.<sup>200</sup> Thus, unlike Beard, Claudet came across less as a businessman eager for control of the patent and more as a collaborator devoted to the photographic medium and to assisting Talbot in whatever way that he could.

In negotiating pricing for the calotype, Claudet and Talbot agreed to not sell portraits "under 10/6 & other pictures under 5."<sup>201</sup> Claudet did not secure the sole license to subject matter other than portraits. However they did negotiate the type and

---

<sup>198</sup> Claudet to Talbot, November 19, 1842. Claudet wrote that he was returning "... the blotting case in which you had placed the Calotype samples which you were good enough to give me. I will show them to amateurs in Paris."

<sup>199</sup> Claudet to Talbot, November 19, 1842. "I have not yet seen any specimens of photography on Paper in Paris. I have an appointment with Mr. Bayard to examine his which are, as you know by a method different to yours, and which I am told are most inferior due to the time he requires in the camera obscura & and the lack of fixity in his proofs which fade in daylight. I think that nobody has yet dealt here with [illegible] seriously on paper & in any case I have seen nothing of this type nor have I heard tell of any proof produced by the Calotype. Should I learn anything in this respect I shall inform you. I shall try however to bring you some specimens produced by Mr. Bayard."

<sup>200</sup> Claudet to Talbot, March 14, 1843, in *Talbot Correspondence*, Doc. No. 4762. This is the correspondence mentioned earlier in the chapter, in which Claudet reported that he was working with Lerebours in Paris.

<sup>201</sup> Claudet to Talbot, November 19, 1842, Doc. No. 4649. Claudet agreed with Talbot's stipulation that he could not sell the negatives, as well as "prepared calotype paper" without Talbot's permission. Claudet also had another business idea in mind related to the calotype. He requested that he not be prevented from selling (unsensitized) calotype paper and mentions that he intended "to make arrangements with a French paper manufactory for producing a paper more fit for calotype operations than any others & in such a case I might be obliged to resell what I could not employ myself." In the process he also revealed the pricing of his daguerreotypes: "For the Daguerreotypes, I charge £1.1.0 & the sitter pays besides the price of the case which is from 2/6 to 15 & persons of wealth might require still more expensive mountings. For a case or frame we cannot charge a great deal more than the cost price."

manufacture of the paper.<sup>202</sup>

Although the negotiations between Claudet and Talbot seemed to be close to an official agreement at the end of 1842, it would not be until the spring of 1844 that an agreement was finally signed. The delay was likely due to the events of 1843, as it was in June of that year that Talbot took out his patent, “Photography,” which was (unreasonably) opposed both by Johnson and Wolcott and Claudet (however Claudet retracted).<sup>203</sup> Talbot received a letter from Poole & Carpmael (notably the agents that had represented Beard and who Claudet despised) informing him that his patent had been opposed by Johnson & Wolcott.<sup>204</sup> Further, Claudet did not wish to sign an agreement prepared by Talbot’s patent agents Carpmael and Co., London, as they also represented Richard Beard, his “competitor and fierce enemy . . . & these agents have acted throughout this affair as men who wish to contribute to my injustice & who employ all means in order to reach this end . . .”<sup>205</sup>

---

<sup>202</sup> “I would have preferred it if you had granted me an exclusive right for London, including the views of objects d’art, but if you persist in reserving the right to grant licences for views of monuments and objects d’art for yourself, I will waive this point . . . It is still understood that I will have the right to sell paper which I will have had made expressly for the Calotype, but which could be used as writing paper or for another purpose. As long as the paper has not been treated with any substance used in your process, it can only be regarded as ordinary paper.” Claudet to Talbot, December 24, 1842, in *Talbot Correspondence*, Doc. No. 4679. He had also received ingredients for preparing calotype paper from Talbot: “Thank you for the information which you have given me regarding the manufacture of paper. I will have several types of paper made, & I will submit them to you to try.”

<sup>203</sup> Talbot, *Photography*, British Patent 9753, June 1, 1843.

<sup>204</sup> Poole and Carpmael to Talbot, May 2, 1843, in *Correspondence*, Doc. No. 4812. Apparently Claudet’s agents also opposed Talbot’s patent for the calotype, “Photographic Pictures,” British Patent 8842, February 8, 1841. “In addition to Mr. Claudet’s opposition, your Patent is opposed by Messrs Johnson & Wolcot [*sic*]. We think these gentlemen would withdraw upon you’re depositing with Mr. Attorney General the particulars of your Invention.” Yet in a later letter Claudet mentioned in a postscript that he had “instructed Messrs Newton and Sons to withdraw their opposition to your Patent. The declaration which you have made is quite sufficient.” Claudet to Talbot, May 6, 1843, in *Talbot Correspondence*, Doc. No. 4815. Johnson & Wolcott had taken out a patent “Photography and its Application to the Arts,” British Patent 9672, March 18, 1843.

<sup>205</sup> Claudet to Talbot, January 18, 1843 in *Talbot Correspondence*, Doc. No. 4700. “Further, I should have preferred that everything be terminated between you & me without Mr. Beard’s knowledge. I have no need for him to know what I do.” He asked Talbot to entrust the drafting of their agreement to other solicitors. Claudet’s request worked, as on the 23<sup>rd</sup> of January Talbot received a letter from another agent, Thomas

From a letter dated October 27, 1843, it appears that Claudet had been very busy with daguerreotype portraiture and had taken out a patent which Talbot had apparently not opposed.<sup>206</sup> Meanwhile, Claudet and Talbot discussed the need for Nicolaas Henneman (Talbot's valet and eventually photographic assistant and partner) to train Claudet in the calotype [Figure 1:37]. In January 1844, Talbot wrote that Hennemann had established himself at the Reading establishment and that he was willing to give Claudet full instruction. Talbot writes that it would most likely take three or four days to learn and that Hennemann could only teach from Reading as he has all of his materials there. In February Claudet had received a draft agreement from Talbot, granting him liberty to use the inventions and improvements mentioned in both his first and second patent, and by early April, an agreement had been signed.<sup>207</sup> Talbot's mother, Lady Elisabeth Fielding, who was very attentive to her son's photographic affairs, approved of Talbot taking on Claudet as a partner, writing to Talbot: "I shall always like M. Claudet, & patronise him with all my friends. Probably he is glad of a new home, it is more attractive to the multitude, & I think will answer to him & please all your real friends, all those who really care about you & your fame."<sup>208</sup>

The project seems to have gotten off to a good start as soon Claudet reported to Talbot that he had made progress in the process and had some "very beautiful

---

Day of Lincolns Inn Fields, London, regarding the draft of a license and wrote to Talbot that he had sent a communication to Claudet (still in Paris) through his partner (George Houghton).

<sup>206</sup> Claudet to Talbot, October 27, 1843, in *Correspondence*, Doc. No. 4884. "I am delighted to learn that you [Talbot] do not intend to oppose my new patent . . . The invention, to which I hope to have exclusive rights in England, can only be applied to the Daguerreotype and it has nothing to do with the Calotype." He reports that he has been "taking truly excellent portraits with great confidence. I am proving that it is not only possible to make life-like portraits, but also that they can be made to look pleasing."

<sup>207</sup> Claudet to Talbot, February 29, 1844, in *Talbot Correspondence*, Doc. No. 4953. The other patent was "Photography," British Patent 9753, June 1, 1843.

<sup>208</sup> Lady Elisabeth Feilding to Talbot, April 11 [1844-6], in *Talbot Correspondence*, Doc. No. 5842. She is most likely referring to Claudet's newly renovated studio at 18 King William Street.

specimens.”<sup>209</sup> However Claudet also reported failures with his Talbotype clientele. “The Hon. Stephen Spring Rice” [(1814-1865), deputy chairman of the Board of Customs] came to have his portrait taken and was not satisfied with the result, complaining about the long exposure.<sup>210</sup> Claudet retorted, to Talbot, that Mr. Spring Rice must have little scientific knowledge, otherwise he would not have been so “quick to judge between your 5. or 6. seconds & my 25 seconds.”<sup>211</sup> Correspondence regarding the incident is more important in what it reveals about the high standards Claudet held himself to as a businessman. He was particularly careful to maintain an honorable image in the eyes of Talbot. In correspondence he expressed concern that Mr. Spring Rice may have conveyed to the English inventor that Claudet was neglecting the Talbotype process while promoting the daguerreotype. It also reveals his aim for his studio to be a commercial space without the hustle of “a shop.”

If I had negotiated with you in order to suppress your  
process, it would be a shameful deed & never would base  
considerations of my own business induce me to abandon  
the honourable principles which I have followed

---

<sup>209</sup> He also mentioned that he “worked with the large objective 6 inc. camera and [had] obtained very clear and well defined figures on 8 ½ x 6 ½ sheets of paper” and described some of the sitters in the specimens he would be sending him. Claudet to Talbot, October 27, 1843, in *Talbot Correspondence*, Doc. No. 4884. “The portrait of the man with a sword & dressed as consul is of Pritchard [Andrew Pritchard]. He came to have his picture taken with the Daguerreotype & we took advantage of the opportunity to make a Talbotype . . . The Turk is from life & I think that you will be satisfied with it. I still hope that it will work well but we must have time to make a name for ourselves & above all to perfect the technique.” In a previous letter, Claudet wrote to Talbot informing him that he was working with Robert Murray (1798-1857), an Irish instrument maker based in London. See Claudet to Talbot, August 23, 1844, in *Correspondence*, Doc. No. 5039. It appears that the new process involved an “iron solution.” Claudet wrote of their experiments: “We cut a sheet of iodized paper in half. One half was prepared with the iron solution & the other with the old solution. We placed two pieces side by side in order to make a simultaneous impression of an engraving. The conditions were identical for the two pieces of paper, including the exposure in the camera obscura and the intensity of the light. We exposed them to light for 20 seconds.”

<sup>210</sup> Claudet to Talbot, August 23, 1844, in *Talbot Correspondence*, Doc. No. 5039. “We made three attempts. The first time, the light was good & since he could not abide the Sun, we waited for a cloud. Meanwhile, we took the picture and the exposure lasted for 25 seconds. As there were some marks on the negative, I invited Mr. Spring Rice to come back. . . . During this gentleman’s three visits, I treated him with great consideration and explained the difficulties of Photographic processes to him.”

<sup>211</sup> Claudet to Talbot, August 23, 1844.

throughout my life . . . I make a living from the art which I produce, but I want the public to buy from me without being importuned or harassed as so often happens in a shop. Nobody is to leave my premises feeling dissatisfied & regretting that they were pushed into spending more money than they had originally intended.<sup>212</sup>

In order to back his words with evidence and no doubt in compliance with the terms in their agreement, Claudet enclosed examples of his recent successes, which he reportedly had begun to display to the public in order to “make your process favourably known.”<sup>213</sup>

He claimed their superiority over the work being produced by Henneman at Reading. “I have not yet seen such perfect portraits from either Mr. Henneman or any other operator. These portraits have eyes & clothes, everything has come out.”<sup>214</sup> A subsequent letter from Claudet also critiqued the proofs from Reading as “very weak impressions,” compared to those that he had produced.<sup>215</sup> Although it was Henneman who had been responsible for training Claudet in the calotype process, it appears that Henneman was considered less adept at making adequate pictures and also at advertising the process. A letter from Talbot’s mother suggests that “there is no doubt that if you were an Artist instead of an Amateur your Art would be soon at the summit of perfection I hope you are thinking of some arrangement by which Nicole [Henneman] can spend a Month chez Claudet . . . Claudet having the stimulus of his own interest will spread your

---

<sup>212</sup> Claudet to Talbot, August 24, 1844, in *Talbot Correspondence*, Doc. No. 5042.

<sup>213</sup> Claudet to Talbot, August 24, 1844.

<sup>214</sup> Claudet to Talbot, August 24, 1844.

<sup>215</sup> Claudet to Talbot, August 28, 1844, in *Talbot Correspondence*, Doc. No. 5046. Claudet does note that the paper seemed better than his and asks Talbot for the recipe. “The best one is the large portrait of Mr. Henneman but generally we do as good a job, only his paper does not have any faults & seems better than ours.”

Fame by his success.”<sup>216</sup> This perhaps had to do with the class to which each photographer belonged. Henneman was originally an employee of Talbot and despite running Reading Establishment was still not considered a master photographer.

Claudet was also honest in his assessment of the prospects of the calotype versus the daguerreotype at this point in time.

Until we have succeeded in operating on a surface as even & as perfect as a silver plate, I will say that the Daguerreotype produces more delicate, better finished and more perfect images than the Talbotype. Until we have succeeded in making the Talbotype operate within a few seconds & as a quickly as the Daguerreotype, I will say that, in this respect, the Daguerreotype has an advantage when it comes to obtaining an acceptable impression. But I will also say that the Talbotype has charms which the other lacks, that the prints are more portable and can be circulated more easily, sent by post or put into albums &c.&c. Finally, an unlimited number of copies can be obtained, which is not possible with the Daguerreotype. Consequently, there is something to suit all uses & tastes.<sup>217</sup>

Such a statement, written at an early moment in photography’s history, importantly recognizes the inherent traits and limitations of each photographic process and their range of application for the general paying public.

Talbot must have depended on Claudet because the Frenchman repeatedly corresponded with him displaying great ambition for the calotype process. “As soon as the weather permits, I will demand that we work constantly. Murray is a little slow and he often needs to be pushed, but I will mould him to my system, which consists of working

---

<sup>216</sup> Lady Feilding to Talbot, September 13, 1844, in *Correspondence*, Doc. No. 5066.

<sup>217</sup> Claudet to Talbot, August 24, 1844.

without respite.”<sup>218</sup>

At this time, Claudet had also been devising a system aimed at improving the lack of contrast in the Talbotype while also improving visible flaws in the paper. By making a positive print through two negatives rather than one, he speculated that the blacks and whites would be more intense and “since no two sheets of paper have the same defects, they will be less evident on the copy . . .”<sup>219</sup> What is important to note is that, although Claudet admitted to the fact that he had yet to be successful with the idea, he conveyed enthusiasm to Talbot and a willingness to explore ideas without certainty that they would work. The key, as Claudet wrote, was that these experiments, though imperfect, were necessary for progress. “This first idea may lead me to other ideas of a similar nature.”<sup>220</sup>

As he had for his own studio, Claudet made sure that his work with the Talbotype was acknowledged by the press. A reviewer in the May 1845 issue of *The Art-Union* pronounced “The Talbotype.—We have called attention more than once, to the really wonderful results of Mr. Talbot’s invention, now known by the above name. The invention is applied to portraiture by M. Claudet, at the Royal Adelaide Gallery, who has arrived at a high degree of perfection and certainty in producing portraits by this process.”<sup>221</sup>

The following month, another wrote about “The improvements recently introduced by Mr. Claudet into the process of Calotype.” One of the improvements was the addition

---

<sup>218</sup> Claudet to Talbot, November 30, 1844, in *Talbot Correspondence*, Doc. No. 5118. “I make him tremble when I talk to him about taking 40 negatives a day, but as it is the only means of mastering the process, he must reach this number one of these days . . . The paper must be perfected so that we can picture smaller & more delicate objects, but until then I will recommend the large portraits. I already have a fairly large collection of them & I will be able to display them in many places before the spring. That will be the best advertisement to make us known.

<sup>219</sup> Claudet to Talbot, November 30, 1844.

<sup>220</sup> Claudet to Talbot, November 30, 1844.

<sup>221</sup> *The Art-Union* (May 1, 1845): 138.

of “touching up.”

Likenesses are now produced upon paper, which are then placed before a competent artist, who ‘touches them up,’ and makes of them PORTRAITS . . . examine the marvelous works thus produced, after they have been wrought upon by an accomplished miniature-painter, Mr. MANSION. No human hand has ever obtained such brilliant effects as these, which result from the combined labours of Nature and Art.<sup>222</sup>

David Brewster wrote to Talbot in the spring of 1845 regarding the Mansion’s work after he had visited Claudet’s studio in April of 1845 and sat for some calotype portraits. He called them “Mr. Mansion’s Talbotypes” and described them as “truly gems,” remarking that Mr. Mansion would make a “Jewel” of him, “which is but fair as I have so often performed the part of Matrix.”<sup>223</sup> The prints, one article wrote, “when stippled up with sepia, as is most beautifully done by M. Mansion . . . have a very good effect.”<sup>224</sup> The calotype portraits to be touched up with paint were often purposefully underexposed to allow for the additions. In several surviving calotype prints, the image itself has faded (they were also often underexposed in order to be painted over) and what remains are the sepia marks of Mansion’s brush [Figure 1:38-9].

A report from the Welsh calotypist and friend of Talbot, Calvert Richard Jones (1802-1877) conveyed disappointment in the result of a sitting at Claudet’s and hinted at the appearance of the Frenchman’s assistants. “Claudet’s ‘macons’ [“masons”] entirely failed in ‘exacting any perennial monument’ of me.”<sup>225</sup> Jones was responsible for assembling an album of paper photographs that today is an important document of

---

<sup>222</sup> *The Art-Union* (June 1, 1845): 171.

<sup>223</sup> David Brewster to Talbot, April 24, 1845, in *Talbot Correspondence*, Doc. No. 5210. He also reported that “Mr. Claudet has tried the two folds of Paper between the negative & Positive, and the effect which I saw is beautiful as in my expts.”

<sup>224</sup> *The Spectator* 19, no. 945 (August 8, 1846): 764.

<sup>225</sup> Calvert Jones to Talbot, July 19, 1845, in *Talbot Correspondence*, Doc. No. 5330.

Claudet's work outside of the daguerreotype. The album is comprised of calotypes by Talbot, followed by paper prints by Claudet and two direct positive prints by the Frenchman Hippolyte Bayard (1807-1887). In this album, Claudet is physically situated between the English and French. The Claudet portraits in this album are also examples of prints that have only the "enhancements" left while the portrait has faded.<sup>226</sup>

Claudet collaborated on several calotype portraits and group scenes with various people, including Henneman and Talbot, in his Adelaide Gallery studio. One portrait depicts a man looking at a daguerreotype **[Figure 1:40]**. Another paper negative was printed twice, one onto a waxed paper or perhaps a paper coated with a varnish, the other on salted paper **[Figure 1:41]**. This would correspond to Claudet's reports of trying different papers and techniques in his correspondence with Talbot. He also made self-portraits with the paper process **[Figure 1:42]**. In other instances Claudet depicts a scene where he and two others are entertaining themselves around a table, either pouring wine or playing cards **[Figure 1:43-44]**.

Chess was a frequent subject for Claudet's pictures. In *Chess Players*, c. 1843-4, a salted paper print made by Claudet, a game of chess is conducted between the bowed heads of the players **[Figure 1:45]**. Claudet sits opposite a top-hatted Englishman and gazes intently at the game-board on the table before him while he raises a pipe to his lips. The players sit in front of a plain cloth backdrop tightly choreographed in a shallow, minimally decorated space. A variant of *Chess Players* depicts Claudet on the opposite side and he sits and stares back at the camera, his chin propped in his hand **[Figure 1:46]**. Unlike the stereo-daguerreotypes of chess players that Claudet would produce later

---

<sup>226</sup> See *The Art-Union* (July 1846): 216.

(Chapter Three), Claudet made multiple prints of this image, all part of testing the commercial and mass-production possibilities of the calotype.

It is unclear whether these chess player images were intended for mass-production and sale or publication by the Reading establishment as both were produced in multiple quantities. In fact it is not clear what Claudet's relationship to the Reading operation was. He mentions the Reading productions in his correspondence with Talbot. However Claudet's license on the calotype agreed upon in 1844 actually impinged on Henneman's business opportunities at Reading. Claudet's studio was structured differently from the factory system put in place by Henneman, which operated on the industrial premise of mass production and division of labor. Rather than having a "master" artist on hand, the Reading Establishment functioned like a modern business, whose name became the "author" of the company's productions. Although he was present in some of these photographs and he himself photographed Henneman, Claudet seems to have not been very involved at Reading. Rather, he worked privately as a kind of independent contractor for Talbot while also maintaining his own daguerreotype business. Yet, although Claudet does not seem to have been involved in the day-to-day operations at Reading, the two were dependant on each other, as Henneman had to wait for Claudet to improve on the process in order for the Reading Establishment to produce quantities of prints at the speed intended.

Although Claudet and customers reported some success, by the end of 1844 the calotype venture still had not proven profitable. Claudet wrote to Talbot: "I think that, according to our license, I was supposed to send you an account for the last quarter, but since we have not done enough to make it worthwhile sending you a payment, I suggest

sending you the first account at the end of the year.”<sup>227</sup> A subsequent letter, written by Talbot to his wife Constance, reveals that the account sent at the end of the year was not very large.<sup>228</sup> A letter from later that year signals the end of the collaboration. “Since the total amount was £25.1.6, I have to pay you 25.0%, namely £6.5.4 ½. I am upset to have to inform you of such a poor result. So far, the Talbotype has brought me nothing but losses. The entire takings do not even cover an assistant’s salary. It is clear that this situation must be improved & I will be delighted to have the opportunity to see you as soon as possible so that we can agree on the means to make the process more profitable.”<sup>229</sup>

### *Carte-de-visite*

Another enterprise with paper photography that was a more successful business was the production of cartes-de-visite. Patented in France in 1854, this system of photography did not hit its stride in England until 1859. Like his neighbors on Regent Street, Claudet began producing cartes-de-visite in the 1860s, and produced a number of them while also working with the daguerreotype process. Edwards, in the section of his book titled “Cartomania,” writes that “the most direct comparison for this kind of economic activity is with those manufacturer-retailers who purveyed their commodities from a small outlet, such as tailors and shoemakers . . .”<sup>230</sup> Claudet made portraits of important British and French figures, including his portrait of “Marie Amelie Theres,

---

<sup>227</sup> Claudet to Talbot, November 30, 1844.

<sup>228</sup> William Talbot to Constance Talbot, January 29, 1845, in *Talbot Correspondence*, Doc. No. 5173. “A trifling sum shall likewise be yours which I have received from Claudet for the portraits he took last year – it is enough to buy something pretty with.”

<sup>229</sup> Claudet to Talbot, July 25, 1845, in *Talbot Correspondence*, Doc. No. 5326.

<sup>230</sup> Edwards, *The Making of English Photography*, 100.

Queen of France,” and wife of King Louis Phillipe, in carte-de-visite form. However, as far as we know, these images of political figures were not mass-produced on the scale of Mayall’s “celebrity” portrait of Prince Albert. Taken shortly before his death, this image sold over 80,000 copies [Figure 1:47]. Unfortunately, because of the fire in the Regent street studio shortly after Claudet’s death, the extent of his cartes-de-visite production cannot be determined with any certainty. The article published on the fire reported that “*upwards of 20,000 negatives are destroyed, many of them being those taken within the last two or three years,*” which gives a sense of the scope of his business practice in this format and signals that he was producing them on a scale, though perhaps not as large as Mayall’s, competitive with other studios.<sup>231</sup>

In Chapter Four I compare cartes-de-visite made by Claudet to those produced by the studio of Camille Silvy. There I will be concerned each studio’s business models in terms of how these models which, as I have explored in this chapter, are also linked to the figure of the studio owner himself, play out in the actual images produced.

Here it is important to stress that, although Claudet, like his contemporaries, seems to have been competitive in the cartes-de-visite market from its first moments in London, he was also distinguished from other studios in that he simultaneously pursued photography on multiple commercial and scientific levels. Claudet aimed to stand out above the business models of other studios and his positioning within but also outside of “cartomania” in the 1860s (he was focused more on binocular vision and experimenting with lenses) shows this.

---

<sup>231</sup> “Serious Fire at Mr. Claudet’s Studio in Regent Street,” *The Photographic News* 11 (January 31, 1868): 51-2.

### *Canada and 107 Regent Street, Francis and Henry*

In 1860, Claudet's youngest son, Francis (b. 1837), who often served as a model for his father's photographic studies, moved to Canada in search of gold and other mining opportunities. He ended up on the western end of Canada. He had secured an appointment to manage the assay office and mint at New Westminster, a Colony of British Columbia. In his new home, Francis also photographed, though as an amateur rather than for profit. He married Frances Fleury (1836-1899) in Victoria in 1863 and the two returned to London in 1873, where Francis would die in 1906. Francis had a son Frederic George Claudet who preserved many of his father's photographs, some of which are in the British Columbia Archives [Figure 1:48].

Meanwhile, Claudet's middle son Henri, who had already been working in his father's studio took over the next generation of the family business. The fire destroyed most of its contents, except the darkroom and some of the equipment.<sup>232</sup> When the fire occurred, Henri had been gathering many of his father's papers and photographs for a commemoration after the late photographer's death.<sup>233</sup> After renovating the studio, he would move back into the 107 Regent street location and continue the Claudet business. However he worked primarily with cartes-de-visite, some of which are presently in the collections of the National Media Museum in Bradford, and the National Portrait Gallery, London [Figure 1:49].<sup>234</sup>

---

<sup>232</sup> "Serious Fire," (1868): 51-2.

<sup>233</sup> "The Late M. Claudet," *The British Journal of Photography* (1868): 2-3.

<sup>234</sup> For further information on Francis Claudet, see Neal Harlow, *Introduction to 'Gold: Francis Claudet* (Vancouver B.C.: British Columbia Library Quarterly, 1960); Francis Claudet, *Gold, Its Properties, Modes of Extraction, Value, &c.* (New Westminster: Printed at the Office of the *Mainland Guardian*, 1871); Francis Claudet, *The Handbook of British Columbia, and emigrant's guide to the gold fields; with map and two illustrations, from photographs by M. Claudet* (London: W. Oliver, ca. 1862); David Mattison, *The*

Claudet's operation of four studios, along with his business successes and failures, reveals the photographer as a multifaceted figure in the commerce of photography in the 1840s. His view of photography was equally diverse. One vision he had of the medium from the outset was that it could, through hard work, become a profitable enterprise. Prior to knowing that the calotype venture would end badly, Claudet wrote to Talbot and stated that what was important was to work hard to improve, to make the process better and in so doing "[w]e must hope that things will be better, and if so, so much the better for everyone."<sup>235</sup> Arriving when it did both in the broader changes of industry and manufacture and the rise of entrepreneurial capitalism in Britain, and within Claudet's own career as a trans-national capitalist, photography experienced another phase of invention. Through the commercial portrait studio run by Claudet, photography was invented as a business.

---

*Claudets of British Columbia* (Victoria, B.C.: British Columbia Archives and Records Service, 1990); David Mattison, "The Claudets of British Columbia: Melting, Assaying and Photographing All Day," *History of photography* 14, no. 2 (April-June 1990): 135-153.

<sup>235</sup> Claudet to Talbot, October 27, 1843, in *Talbot Correspondence*, Doc. No. 4884.

## Chapter Two: Science

As soon as photography was officially announced, there was speculation about the potential usefulness of photography to science. One author in London wrote as early as March of 1839 about the news from Paris: “It is curious and interesting to hear of scientific men already seeking to apply the process to self-registers of thermometric, barometric, and magnetic variations. We shall watch with interest the new disclosures and applications of this suddenly noised abroad discovery.”<sup>236</sup> When Claudet presented “Progress of Photography” to the Royal Society of Arts close to a decade later, in 1847, he spoke about the photographic medium as a scientist. Photography, he posited, was a product of both knowable and unknowable causes, and therefore had to be approached like any other science:

It is with us as with the Naturalist, who, after a long and laborious course of observations and experiments in the culture of plants and trees, obtains some fine flowers and rare fruits; nevertheless, he is not permitted to understand the secret processes of nature, by which these phenomena are every instant developed before him. The photographer has similar labours, . . . That the principal Agent in Photography is an emanation from the sun there can be no doubt; yet it is not the light nor the heat; its rays are invisible, and the only proofs we have of their existence is the action they produce . . . the most skilful operator is but an empiric, who obtains his results without knowing the cause.<sup>237</sup>

Rather than addressing the aesthetic elements of a photograph, such as pose, props, and composition, here Claudet spoke about photography in terms of its most

---

<sup>236</sup> “Fine Arts—Photogenic Drawing,” *The Literary Gazette and Journal of the Belles Lettres* no. 1157 (March 1839): 187.

<sup>237</sup> Antoine Claudet, “Progress of Photography,” *Royal Society of Arts Transactions* 56 (1846-8): 197.

rudimentary elements. Like a geologist analyzing the strata in rock formations or an archaeologist uncovering an ancient temple, he approached the puzzles of each successive layer of the medium—from light, to chemistry, to focus—with the aim of understanding the true nature of the daguerreotype image. Four years earlier, Claudet had presented a similar paper about the state of the medium (then only a few years old) to the same Society. He spoke then about how photography could be applied to various scientific fields, such as the study of optics, light, and chemistry, and he summarized what still needed to be investigated.<sup>238</sup> In both papers, Claudet’s aim was to realize the potential of the photographic medium at a time when its full possibilities were unknown. With the positivist outlook of a scientist of his time, Claudet believed that the “laws of Photography” would be determined “as completely, as Newton has fixed those of Gravitation.”<sup>239</sup> And his contribution, like many of those involved in the medium at the time, would be less that of an inventor than an improver, an active participant in what he called the “cause of photography.”<sup>240</sup>

Whereas Chapter One has examined the commercial expansion of photography in the 1840s via the daguerreotype portrait studio, Chapter Two and Chapter Three address the extension of the photographic image itself through the various scientific methodologies applied to it in Britain. In Chapter Two I explore this intersection of science and photography through an account of Claudet’s investigations into photography’s “Laws,” including the sensitivity of the daguerreotype plate and the focus

---

<sup>238</sup> Antoine Claudet, “The Progress and Present State of the Daguerreotype Art,” *Royal Society of Arts Transactions* 55 (1843-44): 89-110.

<sup>239</sup> Claudet, “Progress of Photography,” (1847): 197.

<sup>240</sup> Antoine Claudet, “Progress of Photography,” *Art-Union Monthly Journal* 9 (March 1, 1847): 110. “Improvement multiplied difficulties; but difficulties would only nurse the energies of those who were earnest in the cause of photography.”

of the image. In Chapter Three, I explore this intersection through Claudet's study of stereographic vision. As the basic photographic properties that this photographer was interested in were also those elements that scientists were trying to fully understand, each of his inquiries led to dialogues with members of the scientific community (as embodied in The Royal Society), including David Brewster, Michael Faraday, John Herschel, Robert Hunt, and Charles Wheatstone.<sup>241</sup> Claudet acted at times as an intermediary, at others as a correspondent. In general, one could say that he served as a "medium" between science and photography, and between prominent scientists of his time.

As such a figure, Claudet has, somewhat surprisingly, not factored into many texts on the relationship between photography and science. A number of British scientists of the day have been included in discussions on this relationship, namely Charles Wheatstone, David Brewster, and Robert Hunt. Daguerre has repeatedly been referenced as an artist and businessman, but never a scientist. His role as inventor was backed by a partnership with the scientifically-trained Joseph-Nicéphore Niépce and was reinforced in the French scientific community by François Arago. In this case, although the science community and the photography community were interrelated in the first years of the medium's introduction to the world, the two have not often intersected in one figure. Aside from Talbot himself, who was a scientist among many other things, and Herschel, who has not been included for his particular photographs but for his scientific mind in service of photography, there has not been enough discussion around photographers who also worked in the interest of science. I propose that Claudet, as such a photographer,

---

<sup>241</sup> Claudet was a contributing member to the Society of Arts since the early 1840s. In 1852, he received a Society medal from Prince Albert for his 1833 invention of a machine for cutting cylindrical glass. In 1853, Claudet was elected a member of the Royal Society. Prior to this, he was presenting his findings to both Societies.

serves as a way to look slightly differently at the relationship between photography and science in Britain in this period.

Many excellent books have been written about the relationship of photography and science. As in the general histories of photography, Claudet figures into these texts differently depending on their overall premise. For instance, in *William Henry Fox Talbot: Pioneer of Photography and Man of Science*, H. J. P. Arnold focuses on Claudet's abilities and usefulness in working with the calotype process, as his knowledge of the Talbotype's "chief rival" (the daguerreotype) made him a useful judge of the possibilities for the paper process. The French photographer is described as "a happy union of the scientist and artist" who, aside from "producing some of the most artistically satisfying Daguerreotypes," was "a scientist—mathematician, chemist, and physicist."<sup>242</sup> This could be more accurately said of Talbot. Claudet was neither a "scientist" nor an "artist" (this term will be discussed in Chapter Four)—he was a photographer—and so his role in photography was actually quite different from that of Talbot.

Two prominent exhibition catalogues on photography and science published about a decade apart, *Beauty of Another Order: Photography in Science* (1997), and *Brought to Light: Photography and the Invisible 1840-1900* (2008), examine how photography has been applied to various scientific fields.<sup>243</sup> The former spans both the nineteenth and twentieth centuries and focuses primarily on the "scientific photographs" of particular photographers (Atkins, Muybridge, Abbott), and the emphasis is on

---

<sup>242</sup> H. J. P. Arnold, *William Henry Fox Talbot: Pioneer of Photography and Man of Science* (London: Hutchinson Benham, Ltd., 1977), 141.

<sup>243</sup> Ann Thomas, *Beauty of Another Order: Photography in Science* (New Haven: Yale University Press, in association with the National Gallery of Canada, Ottawa, 1997); Corey Keller, ed. *Brought to Light: Photography and the Invisible 1840-1900* (San Francisco: San Francisco Museum of Modern Art, in association with Yale University Press, 2008).

photographs that integrate the scientific with the aesthetic.<sup>244</sup> *Brought to Light* focuses on the use of the medium by nineteenth-century figures in the scientific realm who aimed to capture what the human eye could not see on its own. As exhibitions, both are careful to select images that visually appeal, whether aesthetically or in their content. Claudet's "scientific photographs," which sought an understanding of the medium's particular qualities, were about the phenomena of photography itself, rather than of other wonders—electricity, the moon, cellular structures. He produced less dynamic-looking images (he was working with the daguerreotype and not glass negatives) and as a result he did not appear in these kinds of studies and exhibitions.

An example of one of Claudet's "scientific" photographs is a daguerreotype, *La mesure de la lumière par le photographometer pendant l'éclipse* [The measure of light by the photographometer during the eclipse], taken on March 15, 1858, and currently housed in the collection of the *Société française de photographie*, Paris. Claudet presented it to the Société, as recorded in their *Bulletin* in April of 1858.<sup>245</sup> It is not reproduced here as it is nearly impossible to make out even in person. However, it is an extraordinary image nonetheless. It is actually two daguerreotype plates, packaged as a stereo-daguerreotype but having been "run" through the photographometer at the same time. Once the eyes have adjusted to the image, we are able to make out, on each plate, a grid of round "holes" exposed through the apparatus at different lengths of exposure. Claudet recorded that he made eight different exposures, which could mean that each plate represents four exposures (only four lines of holes are visible on each daguerreotype), opening a new line

---

<sup>244</sup> Thomas, *Beauty of Another Order*, 10. The author describes photography as a "marriage" of scientists and artist-entrepreneurs. She discusses Daguerre and Talbot but not Claudet.

<sup>245</sup> *Bulletin de la société française de photographie* 4 (April 1858): 96.

at approximately every fifteen minutes. As a result, the line exposed at “12h15” was exposed to light until “2h00,” and is the most visible—we can make out the gradual shift in tone from light grey to darker depending on length of exposure.

One recent example of a historical study of photography and science in nineteenth-century Britain is Jennifer Tucker’s *Nature Exposed: Photography as Eyewitness in Victorian Science*.<sup>246</sup> In her introduction, Tucker writes that her book “. . . maps out a different approach to the topic of photographic evidence by tracing the contests over scientific practice in photography across a range of disciplines and exchange networks . . .”<sup>247</sup> Tucker’s study is mostly focused after 1850, or after the Great Exhibition and the arrival of collodion photography. Her interest is in acknowledging how various communities of “photography-scientists” impacted the development of photography’s increasingly intricate relationship to science in the second half of the nineteenth century. Tucker asserts that the “idea that science stood to gain as much as it contributed was firmly a part of photographic discourse from the very beginning.”<sup>248</sup> “By the mid-1870s, people widely agreed that photography benefited science as much as science benefited photographers.”<sup>249</sup> However, the emphasis in this text is on discoveries of the previously unseen and the use of photographs as documents and scientific evidence, rather than on pure science.

Claudet, in accordance with the view of photography and science that Tucker describes, pursued photography in the interest of science as much as he pursued science

---

<sup>246</sup> Jennifer Tucker, *Nature Exposed: Photography as Eyewitness in Victorian Science* (Baltimore: The Johns Hopkins University Press, 2005).

<sup>247</sup> Tucker, *Nature Exposed*, 11.

<sup>248</sup> Tucker, *Nature Exposed*, 59. Tucker also looks into the photographic collections of scientific institutions.

<sup>249</sup> Tucker, *Nature Exposed*, 62-3.

in the interest of photography. However, his photographic science was about the abstract “pure science” of the medium, not the discovery of new “bacteria” or “star clusters.”<sup>250</sup> Photography was not just a commercial enterprise (although it was how he made his living) but could also be a vital contribution to pure science. At the same time that it produced daguerreotype images of individuals and families that would be handed down through generations, the process could equally hand to future generations a better understanding of the way that light traveled or how binocular vision worked.

*French Daguerreotypes*, Janet Buerger’s book on the collection at the George Eastman House includes a large amount of information on Claudet compared to other texts. In the chapter “Naturalism and Realism in Art,” Buerger writes that, although she is focused on the improvements that stereography gave to the “realism” of the medium, “[m]any of the names discussed in this chapter could easily have fitted into the chapter on science: . . . Wheatstone, Brewster, Claudet and Duboscq. Indeed, Duboscq and Claudet fall into a special category: the amateur – or pseudo-scientist” that “adopted the scientists’ problems as their own . . .”<sup>251</sup> In a later chapter, she includes a biography of Claudet and addresses the nationalistic question of Claudet’s place. Her book is on “French” daguerreotypes, not British, but she includes the photographer working in London. “His pictures, though tinted with Victorian Style, betray a French soul; he was considered French by the French and by himself.”<sup>252</sup> In 1858, Arago claimed that the French were responsible for the major refinements of the daguerreotype process and he

---

<sup>250</sup> Tucker, *Nature Exposed*, 63. Tucker ascribes these discoveries to the scientist-photographers.

<sup>251</sup> Janet E. Buerger, *French Daguerreotypes* (Chicago: University of Chicago Press, 1989), 95.

<sup>252</sup> Buerger, *French Daguerreotypes*, 122. Buerger also places Claudet as French in terms of his productivity with the daguerreotype, mentioning that “[l]ike many practitioners in France,” he made daguerreotypes into the 1860s, when British photographers had left the process behind.

included Claudet as one of those “Frenchmen.”<sup>253</sup> The editor of the photographic journal *La Lumière*, Ernest Lacan, in a review of an 1855 exhibition, remarked that Claudet had lived for many years in England, however, he did so “without . . . renouncing his French Quality.”<sup>254</sup>

As he was not strictly a scientist who used photography as a tool in his experiments, and because his tests did not result in aesthetically striking images, and because he worked in both the British and the French scientific and photographic communities, Claudet’s role in the relationship between photography and science has largely been neglected or, when examined, has been seen in a narrow way. It is the aim of this chapter to “bring to light” previously “invisible” correlations between photography and science in the mid-nineteenth century through the range of Claudet’s “purely scientific” studies of the photographic medium.

### ***Portraits of Scientists***

The display of French daguerreotypes and equipment in his glass shop and his contributions to soirees at the Royal Society, followed by the establishment of one of the first portrait daguerreotype studios in London, drew attention to Claudet as a locus for photography before the medium had been fully circulated in London. His position at the top of the Adelaide Gallery also gave him direct access to a part of the scientific community in London. The daguerreotypes of Talbot taken in the Adelaide Gallery studio, c. 1843-5, described in Chapter One, are some of the first taken by a well-known

---

<sup>253</sup> François-Jean-Dominique Arago, *Oeuvres complètes de François Arago* (Paris: Gide et J. Baudry, 1858), 4:516-7.

<sup>254</sup> Ernest Lacan, *Esquisses photographiques* (Paris: Grassart, 1856), 142.

scientist and inventor/photographer [Figure 1:16-18]. By 1845, Claudet had also traveled several times to Paris and had, during those visits, made portraits of French scientific figures who had a connection to photography. One of the most well known at the time was Arago, who Claudet photographed possibly during an 1843 visit to Paris.<sup>255</sup> An engraving by “C. Cook” after the daguerreotype depicts the French scientist as an engraved bust, and discards any background details [Figure 2:1]. As it was taken fairly early, it is likely that there had been a plain dark backdrop in the original portrait. Arago turns simply to one side as in many of Claudet’s early portraits.

These were some of the first in a series of portraits of distinguished scientists that Claudet would undertake for the rest of his career. In 1848, Claudet made a daguerreotype portrait of Faraday, who by that time was a celebrated member of the Royal Society for his work on electricity and electromagnetism [Figure 2:2].<sup>256</sup> Faraday also gave lectures on electricity at the Adelaide Gallery while the daguerreotype studio was open on the upper floors. In Claudet’s version of him, Faraday looks directly into the camera lens, his face and ruffled hair illuminated by light falling from above as if to accentuate the quality of scientific genius. Faraday’s portrait was exhibited by the photographer at the Royal Institution and, as one advertisement announced, was part of a series of daguerreotypes that Claudet intended to publish as lithographs.<sup>257</sup> Though not a

---

<sup>255</sup> See Claudet to Talbot, Paris, March 14, 1843, in *Talbot Correspondence*, Doc. No. 4762.

<sup>256</sup> Michael Faraday, “Experimental Researches in Electricity,” *Philosophical Transactions of the Royal Society of London* (January 1, 1832): 125-162.

<sup>257</sup> For advertisements for the portrait see “Professor Faraday’s Portrait,” *The Athenaeum* no. 113 (February 24, 1849): 185. The article advertises that Claudet’s portrait had been exhibited at the last soirée of the Royal Institution. Also see “Portrait of Faraday,” *The Art-Journal* 11 (May 1, 1849): “We understand Mr. Claudet intends from time to time to publish portraits of eminent scientific men from daguerreotype pictures in his possession. The reality of these productions is such, that the public will be certain of obtaining possession of the most faithful resemblances which can be secured of those whose genius and industry have secured them the world’s honour.”

photographer himself, Faraday was tangentially connected to photography. He began his scientific career as a young apprentice to Humphry Davy (1778-1829), who, in 1802, published the early photochemical experiments of himself and Thomas Wedgwood (1771-1805).<sup>258</sup> With Davy, Faraday worked with chlorine (the two would publish jointly on liquid chlorine), which Davy had first identified as an element, along with potassium and sodium, all elements that would be active ingredients in photography. Another intersection with Claudet included a presentation that Faraday gave to the Royal Society in 1829, the year after the Frenchman moved to England, in which he provided an extensive description of the process of making optical glass.<sup>259</sup> Faraday had collaborated on scientific experiments with William Henry Fox Talbot as early as 1827. It was Faraday who announced Talbot's invention of photogenic drawing to the Royal Institution in January and also read, in Talbot's absence, the inventor's paper "Some Account of the Art of Photogenic Drawing" to the assembled members of the Royal Society on January 31st of the same year. Therefore, Faraday was well acquainted with photography from its beginnings.

In 1847, Claudet would write to his friend David Hastings, reviewer for the *Morning Chronicle*, asking him to publicize the Faraday portrait and to direct the public's attention to his forthcoming publication of a set of engravings after his daguerreotypes titled a "Gallery of Portraits of Eminent Men."<sup>260</sup> The letter included a notice that Claudet

---

<sup>258</sup> Humphry Davy, "An Account of a Method of Copying Paintings upon Glass, and of Making Profiles, by the Agency of Light upon Nitrate of Silver. Invented by T. Wedgwood, Esq.," *Journal of the Royal Institution* (1802). David Brewster would also publish Davy and Wedgwood's article in the *Edinburgh Magazine* in December 1802.

<sup>259</sup> Michael Faraday, "On the Manufacture of Glass for Optical Purposes," *Philosophical Transactions of the Royal Society of London* 120 (1830): 1-57.

<sup>260</sup> Claudet to Hastings, February 21, 1847, *Antoine Claudet Letters to D. Hastings 1844-1854*, The Getty Research Institute, Los Angeles. A similar publication (among others) was published in 1830: William

wanted to show Hastings a portrait taken of “Professor Grove” (William Robert Grove, 1811-1896), inventor of an electric battery presented to the Royal Institution in 1840 and first Professor of Experimental Philosophy at the London Institution. In 1841, Grove presented a paper to the Electrical Society entitled “On a Voltaic Process for Etching Daguerreotype Plates.”<sup>261</sup> Claudet had corresponded with Grove at that time in his experiments with the electrotype process.<sup>262</sup>

It should be pointed out that, prior to photography, the British scientific community had already established a network of figures that would later be involved in the medium. Around the time of the Faraday portrait in 1847, in the refurbished studio now entered through 18 King William street, Claudet also photographed the mathematician Charles Babbage (1791-1871), whose “difference engine,” 1821, would prove to be one of the precursors to modern day computers [Figure 2:3]. Much like the portrait of Faraday, Babbage is presented from the front and lit from above, and he gazes directly out at the viewer, a hand resting on a table beside him. The Babbage portrait, like the others, is representative of Claudet’s mid-1840s portraits, after he discarded some of the painted backgrounds he first used. The dark cloth background that does not distract from the encounter with the sitter would have also been more conducive to translating the image into an engraving.

Babbage had presented papers to the Royal Society and published in the

---

Jerdan, *National Portrait Gallery of Illustrious and Eminent Persons of the Nineteenth Century* (London: Fisher, Son & Jackson, 1830), steel engravings, however not from daguerreotypes.

<sup>261</sup> W. R. Grove, “On a Voltaic Process for Etching Daguerreotype Plates,” 1841; discussed in “Fine Arts, ‘Etching Daguerreotype Plates by a Voltaic Process,’” *Literary Gazette* 1283 (August 1841): 548–9.

<sup>262</sup> Claudet to Hastings, February 21, 1847, *Antoine Claudet Letters to D. Hastings 1844-1854*, The Getty Research Institute, Los Angeles. He had also recently made a portrait of the “Marquis of Northampton” (trustee of the National Gallery) that he hoped to publish. He asked the reviewer to “put in a word of these two portraits in the Morning Herald.”

*Philosophical Transactions* next to Faraday's mentor Davy as well as Brewster and Herschel. While Davy's papers were concerned with electricity among other things (which he would pass on to Faraday), Babbage was introducing his studies "on the utility of an analogical reasoning in mathematical subjects," in which he looked at the "calculus of functions" in relation to other methods of calculation already in use.<sup>263</sup> In 1822, he introduced his "difference engine" to the same Society. Further, Babbage was one of the voices in the 1820s and 1830s that deplored the state of British science in comparison to that of France, who could claim the influential work of the mathematicians Joseph-Louis Lagrange (1736-1810) and Sylvester François Lacroix (1765-1843), as well as the renowned chemist Antoine-Laurant de Lavoisier (1746-1794). Along with Herschel, he had been one of the translators of Lacroix's *An Elementary Treatise on the Differential and Integral Calculus* (first edition 1797-8) in 1816.<sup>264</sup> Babbage and Herschel were also founding members of the Cambridge Analytical Society, founded in 1812, based on the work of Robert Woodhouse, professor of mathematics at Cambridge and author of *Principles of Analytical Calculation*, 1803. *Principles* advocated the continental system of mathematics, or the "differential" calculus rather than the "fluxional" calculus established by the "infinitesimal" calculus of Isaac Newton, in 1666.<sup>265</sup>

---

<sup>263</sup> Charles Babbage, "Observations on the Analogy which Subsists Between the Calculus of Functions and Other Branches of Analysis," *Philosophical Transactions of the Royal Society of London* 107 (1817): 197-216.

<sup>264</sup> S.-F. Lacroix, *An Elementary Treatise on the Differential and Integral Calculus* (Cambridge and London: Deighton and Sons, Law & Whittaker, 1816). Babbage translated the first part of the treatise, which involved the explanation of "Differential Calculus" and Herschel helped to translate the second part, on "Integral Calculus."

<sup>265</sup> See Arnold, *William Henry Fox Talbot*, 39, and Steve Edwards, *The Making of English Photography: Allegories* (University Park, PA: The Pennsylvania State University Press, 2006), 36. The Continental system was less cumbersome, and was based in a relational system between numbers within the same set. This could be related to Claudet's numbering system for measuring the time of exposure as well as the length of areas on the plate exposed in the photographometer—1, 2, 4, 8, 16, 32, 64. The same sequence was used in the dynactinometer. Both instruments will be discussed further on in the chapter.

In 1830, Babbage published *Reflections on the Decline of Science in England and on Some of Its Causes*, which pointed out that England was falling behind in its scientific rigorousness compared to France and Germany.<sup>266</sup> The preface included the words of Davy and Herschel. In speaking of the present state of British science, the former had written in his last publication that “[t]here are very few persons who pursue science with true dignity; it is followed more as connected with objects of profit than those of fame.”<sup>267</sup> Herschel admitted that the methods of the French scientific community were superior to those of his own country. After acknowledging that much of his paper on *Light* was drawn from the French scientific journal *Annales de Chimie et de Physique* (Paris, 1815-1914, followed *Annales de Chimie*, 1789), he claimed, “[w]hat author, indeed, but will write his best, when he knows that this work, if it have merit, will immediately be reported on by a committee [such as in France], who will enter into all its meaning . . . and, not content with *merely* understanding it, pursue the trains of thought to which it leads . . . and bring the whole of their knowledge of collateral subjects to bear upon it.”<sup>268</sup>

Appearing within a decade of Babbage’s critique, I suggest that photography was taken up by members of the Royal Society not just as a “scientific” study but also as a vital means for Britain to excel in the sciences. Babbage also had a close relationship with photography. Geoffrey Batchen points out that Babbage was a “close confidant” of Talbot, Herschel and a colleague of Davy, Arago, and Biot, who were all involved with

---

<sup>266</sup> Charles Babbage, *Reflections on the Decline of Science in England and on Some of its Causes* (London: B. Fellowes and J. Booth, 1830).

<sup>267</sup> Babbage, preface to *Reflections*, vii. He is quoting Humphry Davy, *Consolations in Travel, or, The Last Days of a Philosopher* (London: J. Murray, 1830).

<sup>268</sup> Babbage, preface to *Reflections*, vii-ix. He is quoting John Herschel, *Treatise on Sound*, vol. 4 of *Encyclopaedia Metropolitana or Universal Dictionary of Knowledge* (1817-1845), 747-824.

photography at an early stage.<sup>269</sup> Moreover, Claudet, as a Frenchman experimenting with the daguerreotype medium in Britain, bridged continental science and mathematics with his (British) interrogations of photography. I suggest that Claudet's early acceptance within the scientific community of his adopted country was in large part due to his nationality as well as to his application of scientific rigorousness to photography, a rigor that Babbage, Davy, and Herschel had noted as lacking in their own fields.

### ***The Great Exhibition***

Rather than use his studio solely to make portraits of prominent scientists and British intellectuals, as fellow daguerreotype studios would also do, Claudet connected to the scientific community through the medium itself. One place in which to look through the range of Claudet's "scientific" work with photography as well as his "photographic" work with science is his display of specimens at the "Great Exhibition" of 1851.<sup>270</sup> The "Exhibition of the Works of Industry of All Nations," instigated by Prince Albert, aimed to raise the standards of British industrial design. When he was appointed President of the Society of Arts (the "Royal Society for the Encouragement of Arts, Manufactures and Commerce") in 1843, the Prince Consort inaugurated the holding of exhibitions that promoted the greater application of science to industry. The success of these exhibitions, as well as the popularity of the displays at the more public and less exclusive Adelaide

---

<sup>269</sup> Geoffrey Batchen, *Each Wild Idea: Writing, Photography, History* (Cambridge, MA: MIT Press, 2001), 165-174. Talbot sent Babbage a copy of his 1839 *Account* along with eight prints which were displayed at one of Babbage's soirées. Babbage also sat for the first portrait taken for Wheatstone's stereoscope by Henry Collen.

<sup>270</sup> Faraday served as a juror for "Class I," "Mining, Quarrying, Metallurgical Operations, and Mineral Products." Unfortunately, however, it is not known which portraits were actually exhibited by Claudet, and so we are left with the description of them in the catalogues and the reports of the Juries.

Gallery and the Royal Polytechnic, led, in 1849, to the planning for an International Exhibition, which would promote competition between British manufacturers and other manufacturing countries.<sup>271</sup> The Exhibition brought together an international range of new industrial products and organized them according to country, material, and use. The exhibits were divided into thirty “Classes” grouped under three larger sections: “Raw Materials,” “Machinery,” and “Manufactures” **[Figure 2:4]**.<sup>272</sup>

One of the areas in which photography was included was “Class X” of the Machinery section, within “Philosophical Instruments and Processes Depending Upon Their Use.” This section comprised instruments relating to “Astronomy, Optics, Light, Heat, Electricity, Magnetism, Acoustics, Meteorology, &c.” The jurors for this class included Brewster, as Chairman and Reporter, and Herschel.<sup>273</sup> As it had been at the Adelaide Gallery and the Polytechnic Institution, the medium inhabited the same spaces as instruments designed to aid scientific inquiry (the telescope) and industry (the steam engine). A discussion of photography published in the *Report by the Juries*, which included daguerreotypes, calotypes (“Bayard, Henneman and Malone, Blanquart-Evrard”), “albumenized glass,” and “negative Talbotypes, on glass,” was squeezed in between texts on air pumps and magnets.<sup>274</sup>

Claudet’s roles as both glass merchant and photographer intersected with the Great Exhibition in multiple ways. The sheets of glass used to construct the “Crystal

---

<sup>271</sup> See woodcut prints from daguerreotypes by Claudet, Kilburn, and Beard published in *The Illustrated London News* (October 18, 1851): 508-509 **[Figure 2:31]**.

<sup>272</sup> See the *Official Descriptive and Illustrated Catalogue*, 3 vols. (London: Spicer Brothers, Wholesale Stationers; W. Clowes and Sons, 1851).

<sup>273</sup> *Exhibition of the Works of Industry of All Nations: Reports by the Jurors on The Subjects in the Thirty Classes into which the Exhibition was Divided* (London: William Clowes & Sons, Stamford Street and Charing Cross, 1852), 519.

<sup>274</sup> *Reports by the Jurors*, 519.

Palace” designed by Joseph Paxton (1803-1865) were manufactured by Claudet’s previous colleagues, Chance Brothers and Co., and were produced by the “cylinder process” that Claudet had invented and introduced to Robert Lucas Chance in 1832.<sup>275</sup> “Claudet and Houghton” also exhibited several glass products, including “[g]lass shades, of various large and small sizes, for covering clocks, alabaster ornaments, and any other articles which may require protection from dust or the impurity of the atmosphere,” in Class XXIV, “Glass,” which fell under the Section heading “Manufactures.”<sup>276</sup>

In Class X, Claudet was awarded the Council Medal for his “several inventions based upon experiments in the practice of photography.”<sup>277</sup> His photographic contributions, which could be found, as an advertisement in *The Times* directed, in “Class X., No. 296, on the north-west upper gallery, near the great organ, and above the carriage department,” included a range of items that spanned his research on the medium up to that point.<sup>278</sup> His submissions were diverse, from commercial portraiture to plates demonstrating the various chemical and optical experiments he had conducted over the previous decade. A journalist for the Paris photography journal *La Lumière*, in its inaugural year, recorded that Claudet exhibited a total of sixty-four portrait daguerreotypes—twenty-one uncolored and forty-three tinted. His portraits included those “taken by means of a prism placed before the object glass in order to obtain a non-

---

<sup>275</sup> See Tobin Andrews Sparling, *The Great Exhibition: A Question of Taste* (New Haven: Yale Center for British Art, 1982), 19. Chance and Co. also exhibited under “Photographic Glass” in “Class XXIV,” exhibiting “flint glass, in discs and in plates, adapted for the construction of object-glasses for Daguerreotype and Talbotype apparatus and cameras.” See *Reports by the Jurors*, 597.

<sup>276</sup> *Official Descriptive and Illustrated Catalogue*, 701. “Claudet & Houghton, 89 Holborn - Proprietors Exhibit in Class XXIV, ‘Glass,’ part of Section III, Manufactures, in the Central North Gallery.”

<sup>277</sup> *The Illustrated Exhibitor, A Tribute to the World’s Industrial Jubilee: Comprising Sketches, by Pen and Pencil, of the Principal Objects in the Great Exhibition of the Industry of all Nations 1851* (London: John Cassell, 1851), xix.

<sup>278</sup> *The Times*, June 25, 1851: 9. In the *Reports by The Juries*, 524-525, under “Daguerreotype Pictures,” Claudet was the first mentioned as having exhibited “a large collection of daguerreotype portraits, both plain and coloured.”

inverted picture,” as well as perhaps one of the most exceptional objects displayed, a wooden table inlaid with a circle of eight tinted daguerreotypes of women surrounding an inlaid daguerreotype portrait group of children.<sup>279</sup> An engraving of the inlaid table was included in *The Illustrated Exhibitor*.<sup>280</sup>

The display of such commercial pursuits was intermingled with scientific experiments. Claudet’s submission included several specimens used to test the effects of various light rays on daguerreotype plates and to determine the difference between the visual and photogenic “foci” in making a photographic image. One frame of images contained a daguerreotype exposed by the light of a candle, a “direct positive” daguerreotype of a statue in which the silver was combined with iodine and exposed without mercury, and a “Negative portrait” produced on a plate first exposed to light through yellow glass. The same grouping included an image of the sun made in clear atmosphere and through fog (“when it appears red”), and an image of the moon during a clear night. Another group of daguerreotypes displayed in one frame included two plates of the solar spectrum, one made with iodide of silver, the other with bromo-iodide, and a daguerreotype of clouds that the catalogue recommended as an “[i]nteresting study for artists.”<sup>281</sup> One Claudet specimen that may or may not have been exhibited but which relates to these tests was reported in the *Salem Gazette* of 1846 under “Scientific Discoveries.” A “London correspondent for the Boston area” reported on a particular object presented at “a scientific soirée”: “What seems to cause the greatest astonishment,

---

<sup>279</sup> J.-J. Arnoux, “Exposition Universelle,” *La Lumière* 1, no. 21 (June 29, 1851), 82. “Il ne faut pas oublier un petit meuble en palissandre orné de huit médaillons contenant des portraits de femmes colorées à la main, autour d’une plaque centrale représente également les enfants colorées à la main.” [Do not forget the little rosewood table ornamented with eight medallions containing portraits of hand-colored women, around a central plaque also representing hand-colored children].

<sup>280</sup> *The Illustrated Exhibitor*, 485.

<sup>281</sup> *Official Descriptive and Illustrated Catalogue*, 441.

is an impression of black lace upon a daguerreotype plate, by the *light of the stars!*”<sup>282</sup>  
 The result, after fifteen minutes of exposure, was a contact print of a piece of lace, not unlike the photogenic drawings by Talbot included in *The Pencil of Nature* two years before.<sup>283</sup> Whether or not this was exhibited in 1851, it provides a unique example of Claudet’s science and remains the only daguerreotype contact print recorded.

In honor of the royal patrons of the exhibition, Claudet included a “photogenic paradox,” which comprised a framed portrait of Queen Victoria and Prince Albert. The half of the image that included the Queen was covered with a yellow glass and the rest of the portrait, the half that depicted the Prince Consort, was covered with blue glass. The half that had been covered with yellow glass appeared undisturbed; however, the half covered with blue glass had turned dark, revealing that light continued to develop the image through blue glass but was prevented from affecting the plate through yellow glass.

### ***Light, Claudet and Robert Hunt***

Thus, for Claudet, photography was a mode of experimentation as much as an image-making system. His array of photographic specimens in 1851 represented, perhaps more than any other individual photographer’s contribution, the range of questions that the medium sparked in its first decade. One of his submissions that resonated with the broader scientific community was a framed piece of paper brushed with a watercolor

---

<sup>282</sup> “Scientific Discoveries,” *The Salem Gazette* 65, no. 35 (May 1, 1846): 1. “M. Claudet, in referring to this phenomenon, observed, that he considered it as proof of the chemical power of starlight. He said that he had prepared a plate in the usual manner, covered it with a piece of black lace, and exposed it to the then brightest part of the sky, the constellation Ursa Major, nearly at the zenith . . . for about fifteen minutes; which sufficed to impress the black lace upon the plate.”

<sup>283</sup> William Henry Fox Talbot, *The Pencil of Nature* (London: Longman, Brown, Green, & Longmans, 1844).

spectrum. This study aimed to use photography to help understand its main source, light. Next to it hung its daguerreotyped image showing how the various hues of watercolor had translated photographically. The tints on the blue and violet side of the spectrum produced white in the photograph while the other end of the spectrum turned black.<sup>284</sup>

For several years prior to 1851, Claudet had been working to detect the photogenic ray's difference from other rays and examined various parts of the spectrum in order to measure its photographic effects. In "The Progress and Present State of the Daguerreotype Art," presented to the Royal Society in 1843, he acknowledged, as the title indicates, the range of areas in which photography held future potential. Claudet mentioned the state of research on light at the time, particularly the "invisible" rays, then understood as those that had photogenic power.<sup>285</sup> After acknowledging Talbot's work with the calotype and Herschel's discovery of the "crysotype," Claudet pointed to the major evidence—that what caused the sensitive surface to change was not the visible light rays but another ray traveling with them. Further, the refrangibility of these invisible rays varied according to the power of the lens. In this earlier paper Claudet admitted that his work on the topic was not yet complete enough to provide answers. Yet within a few years the existence of a ray that operated differently from visual rays had been proven.<sup>286</sup> In "Progress of Photography," published in 1847, Claudet discussed his research into the various sensitivities of the plate depending on the distance from the speculum or prism.<sup>287</sup> By 1851, his discoveries of the photogenic powers of various rays and of the sensitivities

---

<sup>284</sup> Unfortunately, all of these experiments are no longer extant, presumably destroyed in the studio fire in 1868.

<sup>285</sup> Claudet, "The Progress and Present State of the Daguerreotype Art," (1843-44): 92.

<sup>286</sup> Antoine Claudet, "On Some Principles and Practical Facts in the Art of Photography," *The Athenaeum* no. 954 (February 7, 1846): 152.

<sup>287</sup> Claudet, "Progress of Photography," (1847): 109-110. He was also testing the various reactions to the chemistry used, whether iodine, bromine, or chlorine, in the sensitizer.

of the daguerreotype plate were widely known in the British and French scientific communities.<sup>288</sup>

Claudet's section in Class X of the Great Exhibition included several instruments that he had developed to fine tune the production of successful daguerreotypes. One, a "multiplying camera-obscura," used a system of racks and pinions to move the plate vertically and horizontally making it possible to record several pictures, either of the same person or different subjects, on the same plate.<sup>289</sup> A "Patent Photographic Camera-Obscura," could be fit with different "object glasses," depending on the kind of refractive power needed to successfully capture the image. The camera could also expose both silver-coated plates and sensitized paper. Other items on display included unprocessed daguerreotype plates and equipment used for processing—dark boxes for light-tight transport, brass frames to hold two plates face-to-face without allowing them to contact each other, a mercury box that could develop multiple plates of various sizes at once, an apparatus for cleaning and finishing a daguerreotype, and bromide of iodine, which, combined in Claudet's method, created the most sensitive plate possible.<sup>290</sup>

Claudet's research resonated with the broader study of light at the time. His 1843 paper on the progress of photography was published in the same year as the renowned scientist Robert Hunt's *Researches on Light* (1844).<sup>291</sup> Hunt had also taken an interest in

---

<sup>288</sup> Antoine Claudet, "Le foyer chimique et du foyer apparent dans les objectifs," *La Lumière* 1, no. 15 (May 18, 1851): 59; Antoine Claudet, "Du foyer chimique et du foyer apparent dans les objectifs," *La Lumière* 1, no. 18 (June 8, 1851): 71-2; Antoine Claudet, "Influence de la polarisation sur la variation des foyers," *La Lumière* 1, no. 22 (July 6, 1851): 87-8.

<sup>289</sup> The benefits of the apparatus included that "[a] sculptor being supplied with seven different aspects of the features of the same person, is enabled, without seeing that person, to make a perfect bust or model." This interest in the connection of photography and sculpture will return in the late 1850s in "Photo-Sculpture", for which Claudet would take out the British patent. I discuss this in Chapter Three.

<sup>290</sup> *Official Descriptive and Illustrated Catalogue*, 440-441.

<sup>291</sup> Robert Hunt, *Researches on Light: An Examination of All the Phenomena Connected with the Chemical and Molecular Changes Produced by the Influence of the Solar Rays, Embracing All the Known*

the daguerreotype when it was first announced and he published the first English treatise on photography, *A Popular Treatise on the Art of Photography*, in 1841.<sup>292</sup> Both texts are examples of the kinds of dialogues that photography necessarily fostered within the scientific community. Hunt also published a “Handbook” to the catalogues of the Great Exhibition in 1851.<sup>293</sup> In the section on Photography, he remarks that the “two *principal* divisions of photography,” the Talbotype and the daguerreotype, are “the most important applications of science made in our day.”<sup>294</sup> He includes a brief, though interesting, version of the history of the medium, which comes to the nationalistic conclusion that photography had “incontestably” originated in England. While he credits France with the daguerreotype, he claims that it was “perfected in England.”<sup>295</sup>

Hunt’s awareness of photography and Claudet’s devotion to science enabled a dialogue that was particularly relevant to both fields. Claudet’s discussion of the use of photography for determining the action of light rays and the effects of various parts of the spectrum paralleled the research that Hunt had been conducting. Part of Hunt’s book examined the impact of solar rays on different substances used in photography, and was divided into the various elements and compounds used to make the silver plate, as well as other photographic surfaces, sensitive to light. Claudet’s paper a few years later, “Researches, on the Theory of the Principal Phaenomena of Photography,” followed in

---

*Photographic Processes and New Discoveries in the Art* (London: Printed for Longman, Brown, Green, and Longmans, 1844).

<sup>292</sup> Robert Hunt, *A Popular Treatise on the Art of Photography: Including Daguerreotype and All the New Methods of Producing Pictures by the Chemical Agency of Light* (Glasgow: R. Griffin, 1841).

<sup>293</sup> Robert Hunt, *Hunt’s Handbook to the Official Catalogues* (London: Spicer Brothers and W. Clowes & Sons, 1851).

<sup>294</sup> Hunt, *Hunt’s Handbook*, 397.

<sup>295</sup> Hunt, *Hunt’s Handbook*, 399.

Hunt's footsteps. Like a scientist of his time setting out to solve a particular problem, he began by asking questions:

1. What is the action of light on the sensitive coating? 2. How does the mercurial vapour produce the Daguerreotype image? 3. Which are the particular rays of light that impart to the chemical surface the affinity for mercury? 4. What is the cause of the difference in achromatic lenses between the visual and photogenic foci? why do they constantly vary? 5. What are the means of measuring the photogenic rays, and of finding the true focus at which they produce the image?<sup>296</sup>

Claudet and Hunt developed similar instruments to answer some of these questions, particularly the measurement of the power of different rays. Hunt presented an instrument for measuring the photogenic rays at a meeting of the British Association at Cambridge in June of 1845. The "actinograph" consisted of two cylinders, one inside the other, with the outer one containing a triangular opening. Photographic paper was rolled around the inner cylinder and as the two cylinders were turned in opposite directions the opening on the exterior would expose a portion of the paper according to the intensity of the light at the time of exposure. When, in 1848, Claudet presented his own light-measuring instrument in the *Philosophical Magazine and Journal of Science*, he acknowledged Hunt's device and also mentioned that Herschel had constructed an instrument for a similar purpose in 1840.<sup>297</sup> However the Frenchman also disclosed two major deficiencies in these earlier instruments. They only measured the direct rays of the

---

<sup>296</sup> Antoine Claudet, "Researches on the Theory of the Principal Phaenomena of Photography," *Philosophical Magazine and Journal of Science* 35, no. 237 (November 1849): 374.

<sup>297</sup> Antoine Claudet, "Description of the Photographometer: An Instrument for Measuring the Intensity of the Chemical Action of the Rays of Light on All the Photographic Preparations, and for Comparing with Each Other the Sensitiveness of These Different Preparations. Invented by A. Claudet, London, September 1848," *The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science* 33, no. 223 (November 1848): 329-335. It is also noted that the same paper was communicated to the Académie des sciences, Paris, on October 9, 1848.

sun and did not measure the invisible “chemical” rays that Claudet claimed were the true makers of photographs. Further, Hunt’s and Herschel’s devices could only be used for paper prints.

It was Robert Hunt who presented the Frenchman’s “Photographometer” to the Society of Arts in 1849.<sup>298</sup> The March 1849 *Art-Journal* published an illustrated article on the instrument [Figure 2:5]. Although the whereabouts of an actual photographometer are unknown, the apparatus appears in at least two stereo-daguerreotypes. In one, Claudet sits at a table next to his sons Henri (center) and Francis (right) who stand in the setting of his Regent Street Studio [Figure 2:6]. On the table a photographometer is prominently displayed and Henri appears to be demonstrating the instrument. Francis stands to the right holding a portfolio. The white fan shape of a focimeter is visible in the lower right corner. When viewed properly in the stereoscope, the instrument, placed at an angle and propped by Henri in a way to demonstrate how it “moves” when in action, springs to life at the center, as if to suggest, in a still image, the action of putting the instrument to use. The photograph also allows a view of, and in this stereographic case “through,” a photograph most likely made with the exposure determined by the apparatus it depicts.

The photographometer measured the intensity of the “chemical” rays at the time of exposure as well as the sensitivity of the daguerreotype plate’s (or a piece of paper’s) preparation. The instrument included a metal plate incised with openings of different lengths according to a geometric progression. The plate was placed in a frame and suspended at the top of an inclined plane. As it was dropped from the top of the incline

---

<sup>298</sup> “Society of Arts,” *Literary Gazette and Journal of the Belles Lettres* no. 1673 (February 1849): 97. “Mr. Hunt read a paper by Mr. Claudet, on the photographometer . . . The effect being in proportion to the intensity of the light during a given space of time, it is necessary, for the success of the operation, to be able to ascertain the exact power of the light at any given moment.”

(Claudet claims that this drop provided a uniform length of time as the sliding plate would always fall at the same angle), it passed over sensitized daguerreotype plates framed in a separate carrier inserted at the base of the apparatus. The plates were covered by a thin piece of metal evenly punctured with circular holes. As the moveable plate fell, the sensitized plates were exposed according to the length of the opening. The geometric progression of the opening sizes was 1 mm, 2 mm, 4 mm, 8 mm, 16 mm, 32 mm, and 64 mm. What was recorded was a photographic impression of each length of exposure, from 1, to 2, to 4, 8, 16, 32, and 64 fractions of the time of the fall of the moveable plate. The correct exposure for a readable daguerreotype image corresponded to the fraction, determined in relation to the exposure left by the other openings.<sup>299</sup> In order to compare the sensitiveness of each plate, two daguerreotype plates prepared with different preparations of sensitizers (iodide, bromo-iodide, or chloro-iodide) could also be placed next to each other. Further, Claudet noted, each of the four rows of holes on the thin metal plate could be used to test four different coatings of different preparations, somewhat like a daguerreotype test strip.

By the end of 1849, Claudet had perfected the photographometer and presented his improvements in a paper read before the British Association of Birmingham and published in *Philosophical Magazine and Journal of Science*.<sup>300</sup> The improved

---

<sup>299</sup> Claudet, "Description of the Photographometer," (1849): 331-2.

<sup>300</sup> Claudet, "Researches," (1849): 374-385. These improvements included the ability to cover not just each row but individual holes in the metal plate so that he could continue the progression of measurement beyond the initial length for one plate and thus compare a larger range of intensities of light. From this increased number of "falls" with the photographometer, each conducted with a successive closing of a hole over the daguerreotype plate, Claudet could determine at what level of light's intensity solarization was produced, as well as at what point the plate began to develop a form of "decomposition," or "white precipitate," a problem that Claudet and others had observed. Claudet noted that at a certain point of exposure, a "white precipitate" manifested on the plate "without mercury" when the plate had been treated with iodide or bromo-iodide.

photographometer had the ability to measure the power of different colors of light by covering the same metal holes half way and testing light through red, orange, and yellow glasses. This was another way in which Claudet proved that the plate, during exposure and during the mercury development, was less sensitive to light at the red end of the spectrum.<sup>301</sup>

Hunt devotes part of a chapter of the 1854 edition of *A Manual of Photography* to Claudet's instruments. In discussing the photographometer, he quotes the inventor and includes a diagram and a fairly in-depth description of how the device worked.<sup>302</sup> He then describes the "Focimeter," which will be discussed later in the chapter, calling it "a very ingenious instrument."<sup>303</sup> His description of the "Dynactinometer" (also discussed further in this chapter) is very detailed and refers to Claudet as "the inventor."<sup>304</sup> Earlier in the text, when he mentions Claudet's work on increasing the sensitivity of the daguerreotype plate, Hunt claims his research to be "of considerable importance, particularly as being those of a thoroughly practical photographic artist."<sup>305</sup>

### ***Lenses, Claudet and Brewster***

The last two of Claudet's five questions in the opening of his "Researches" paper had to do with optics. "4. What is the cause of the difference in achromatic lenses between the visual and photogenic foci? why do they constantly vary? 5. What are the

---

<sup>301</sup> Claudet, "Researches," (1849): 380.

<sup>302</sup> Hunt, *Manual of Photography*, 4<sup>th</sup> ed. (London: J. J. Griffin, 1854), 136-8, 143.

<sup>303</sup> Hunt, *Manual of Photography*, 145-6.

<sup>304</sup> Hunt, *Manual of Photography*, 146. He makes the observation that the photographometer and the dynactinometer can be used together on the same plate. One exposure can be made on one half of the plate to test the sensitivity with the photographometer and the other half can test the lens with the dynactinometer.

<sup>305</sup> Hunt, *Manual of Photography*, 131.

means of measuring the photogenic rays, and of finding the true focus at which they produce the image?”<sup>306</sup> And in the same paper, Claudet described photography not just as a science but as an aid to science, particularly in the arena of optics. He wrote:

Photography is certainly one of the most important discoveries of our age. In relation to physics and chemistry, it has already been the means of elucidating many points which had not been investigated, or which were imperfectly known before. We may certainly expect that its study will prove of considerable use to the progress of these sciences. But it is in reference to optics that it opens a large field for research and discovery. Had Newton been acquainted with properties with which light is endowed in the phaenomena of photography, there is no doubt he would have left a more complete theory of light, and of the various rays which compose it.<sup>307</sup>

A stereo-daguerreotype, made ca. 1853, depicts numerous apparatus associated with photography, arranged like a seventeenth-century Dutch still life. **[Figure 2:7]** Bottles of chemicals, a balance, and some books are assembled on a desk in the background, in front of a plain dark backdrop and falling drapery. On a shorter table in front, a Brewster “lenticular stereoscope” (1849, to be discussed in Chapter Three), a magnet, prisms to be held in front of the object glass in order to invert the image, other kinds of stereoscopic viewers and stereoscopic drawings and a propped up copy of what appears to be the photographer’s own *Recherches sur la théorie des principaux phénomènes de photographie* (1849).<sup>308</sup> On the floor below another still life is assembled, including a candlestick, mortar and pestle, and various pots and dishes. Arranged around

---

<sup>306</sup> Claudet “Researches,” (1849): 374.

<sup>307</sup> Claudet, “Researches,” (1849): 381.

<sup>308</sup> Claudet, *Recherches sur la théorie des principaux phénomènes de photographie dans le procédé du daguerreotype* (Paris: G. Baillière, 1850). Because “De Photographie” is prominently visible and the French version of *Recherches* bears the same title, this is most likely the publication included. The paper was first presented in English at the British Association in 1849 as “Researches on the Theory and Principle Phenomena of Photography in the Daguerreotype Process,” so it is interesting that Claudet would choose to include the French translation.

these objects are larger instruments. In the upper left we see a [Ross] telescope (exhibited in 1851), while another hangs from the wall behind it. Next to it is a focimeter, which completes a ring of circular elements in the composition – its shape connects to the globe in the lower right, the clock-like faces of two dynactinometers on the floor, and the wheel of an instrument to the left.

Claudet’s “Dynactinometer” was also displayed in the Great Exhibition. Whereas the photographometer measured the chemical actions of light on the plate, the dynactinometer measured the actinic (photographic) intensity created by various lenses. With his background in the glass manufacturing industry, Claudet was well aware of the correlation between the molecular structure of glass and how that affected its performance in optical devices.<sup>309</sup> He was also learned in the range of possible deviations in the curvature of the lens and how that impacted its refractive power.

As described in a paper presented in 1850 to the British Association and published the year after, the dynactinometer was a box that had on its front a thin, black metal disc incised with a slit running from the disc’s center to its circumference and fixed over a white disc, with a similar slit, to an axis attached through the supporting box frame. The white disc was inscribed with two circles—a larger one divided into twenty pie-shaped sections, each numbered successively, and a smaller circle divided into eight sections, each numbered in “geometrical progression,” (again the numeral sequence of 1, 2, 4, 8, 16, 32, 64). The black (front) disc could then be turned clockwise, manually or by “clock-work” for anywhere between 1-64 seconds while the camera recorded the image.

---

<sup>309</sup> By this time, the British tax on optical glass was relieved in order to import it more cheaply, which in turn allowed the scientific community to be able to experiment with it more easily.

As the black disc turned, a new section of the white disc would be covered.<sup>310</sup> The last section on the white disc to be covered by the black would have been exposed twenty times more than the first. By this means, Claudet could determine at how many seconds, either in an arithmetical or geometrical progression, the plate was most successfully activated.<sup>311</sup> He could also compare the power of two different lenses by taking two exposures in two separate cameras. The sequence of numbers used in both the photophometer and the dynactinometer is striking, as it seems as though he consistently used mathematics to decipher the photographic medium, or at least to hold it up to some kind of constant in order to measure and test it. Edwards points out that the “Analytical Society of Cambridge,” founded in 1812, to which Babbage and Herschel belonged, embraced “continental mathematics” rather than the English, Newtonian “referential” math. The “continental” math “drew their value from internal positions in

---

<sup>310</sup> Antoine Claudet, “Description of the Dynactinometer: An Instrument for Measuring the Intensity of the Photogenic Rays and Comparing the Power of Object-Glasses; with Observations on the Difference Between the Visual and Photogenic Foci, and Their Constant Variation,” *Philosophical Magazine and Journal of Science* 1, no. 5 (May 1851): 478-491. This paper was read before the British Association on August 7, 1850 in the “Section of Mathematical and Physical Sciences.” It was also published as “On the Dynactinometer” in *Daguerreian Journal* 1, no. 3 (Dec. 2, 1850). The French account of the paper, “Dynactinomètre de M. Claudet,” *La Lumière* 1, no. 7 (March 23, 1851): 26, recounts Claudet’s presentation to the Académie des sciences on January 27, 1851.

<sup>311</sup> A writer for *La Lumière* reported on his visit to Claudet’s studio in 1851 and the demonstration of the dynactinometer. F.-A. de la Rivière, “Héliographie sur plaques métalliques. Une visite à M. Claudet,” *La Lumière* 1, no. 29 (August 24, 1851): 113-114. “M. Claudet . . . démontre victorieusement une série d’épreuves que j’ai vues, c’est qu’il y a une extraordinaire latitude dans la durée de l’exposition à la lumière. Il m’a donné comme prévue une quantité de plaques portant l’image d’un cercle divisé en segments numérotés, que la lumière a frappés successivement depuis une jusqu’à vingt secondes. Dans les conditions de plaque pure et de lumière égale, la différence entre l’impression des segments est à peine sensible de six secondes à vingt. Une autre série de plaques pour laquelle il a adopté la proportion de 2, 4, 8, 16, 32, et 64, rend la démonstration encore plus sensible.” [M. Claudet proved that there is an extraordinary latitude in the duration of exposure to light, as evident in the large number of plates he showed the author with an image of a circle divided in numbered segments, which light hit successively from one to 20 seconds. In the condition of a pure plate in equal light, the difference between impressions of segments is the most sensitive between six seconds and twenty. Another series of plates for which he used the proportion 2, 4, 8, 16, 32, and 64 made the demonstration even more sensible.] The author explains that Claudet exposed a plate of the Three Graces because the tone of the marble could more easily demonstrate the different tones of exposures, yet the experiment revealed no difference between 27, 22, and 17, and only a slight difference at 12.

the system.”<sup>312</sup> Claudet’s number progressions seem to follow this correlative approach to numbers. Claudet’s interest in making numerical standards for the preparation and exposure of daguerreotypes was part of a larger movement in the scientific as well as industrial communities to set standards for technologies so that they could have wider applicability. To standardize the medium of photography was to make it useable by a larger community and not just in Britain but across the Channel as well.<sup>313</sup>

In each presentation published and given to societies and in journals, depending on the particular photographic property in question, Claudet acknowledged the prior work and input of other scientists. In his paper on the “Dynactinometer,” he pointed to the suggestion of Lerebours in Paris as to how the photographic lens might be improved. His dialogue with others regarding his experiments was included in his paper. “Having mentioned this fact [his discovery that different parts of the same lens had different actinic powers], and particularly Mr. Malone [Thomas Malone (1823-1867) was also associated with Claudet’s work with the calotype] . . . they have stated to me that they had often met with the same anomaly in the Daguerreotype as well as in the Talbotype

---

<sup>312</sup> Edwards, *The Making of English Photography*, 36-37.

<sup>313</sup> I would like to thank Jennifer Tucker for pointing out the relationship between Claudet’s numerical systems for his instruments and the broader interest in standardization occurring in Britain in the eighteenth and nineteenth centuries. For mathematics history of the nineteenth century, see Joan L. Richards, “Rigor and Clarity: Foundations of Mathematics in France and England, 1800-1840,” *Science in Context* 4 (1991): 297-319; Richards, “The Probable and the Possible in Early Victorian England,” in Bernard Lightman ed. *Contexts of Victorian Science* (Chicago University Press, 1997); Richards, *Mathematical Visions: The Pursuit of Geometry in Victorian England* (Boston: Academic Press, 1988). The issue of “standards” in British science, as Tucker pointed out, is part of a focus and debate in the history of science since the 1980s. As Claudet was doing with his “meters” for photography, scientists and inventors at the time were also devising standardization and calibration of measuring instruments—hygrometers, barometers, etc. For standardization, see Simon Schaffer, “Astronomers Mark Time: Discipline and the Personal Equation,” *Science in Context* 2 (1988): 115-145 and Schaffer, “Glass Works: Newton’s Prisms and the Uses of Experiment,” in David Gooding, Trevor Pinch, and Simon Schaffer, eds. *The Uses of Experiment: Studies in the Natural Sciences* (1989); Lissa Roberts, Simon Schaffer, and Peter Dear, eds. *The Mindful Hand: Inquiry and Invention from the Late Renaissance to Early Industrialization* (Amsterdam: Koninklijke Nederlandse Akademie van Wetenschappen; Bristol: University Presses Marketing, distributor, 2007).

processes.”<sup>314</sup> Claudet tested the limits of the daguerreotype plate’s sensitivity, both to over-exposure and decomposition, while acting within a network of scientific inquiry.

“On the Dynactinometer” began with Herschel’s claim that non-achromatic lenses (having a further distance between foci and therefore not aligning with the red end of the spectrum) had greater photogenic power than achromatic lenses.<sup>315</sup> Next, Claudet acknowledged Lerebours’s affirmation of the impediments caused by the red and orange rays on photogenic action and included a mention of “Dr. Draper of New York, and Messrs. Fizeau and Foucault of Paris” as having also proved the blocking effect of red light.

Claudet’s research methods reveal the meticulous way in which he dissected each photographic problem he investigated. His paper on the dynactinometer explained his examination of the “photogenic power” of various parts of the spectrum. What he called the “photogenic space” of the spectrum spanned from the green ray to beyond the violet (the most photogenic) and changed in length according to the purity of the atmosphere. If the atmosphere was obscured, he claimed, the rays were gradually absorbed and extinguished, narrowing the photogenic space, which created a “refrangibility” closer to that of the visual rays (in other words, a less refrangible ray). Claudet described the absorption of the “refrangible” rays down to the specific order of most to least refrangible depending on the associated color in the prism—first violet, then indigo, then blue—in order to explain in the most extreme specificity how light was transmitted by the lens into

---

<sup>314</sup> Claudet, “Description of the Dynactinometer,” (1851): 484.

<sup>315</sup> Claudet, “Description of the Dynactinometer,” (1851): 481.

photogenic action. The shorter the length of the photogenic space, the more achromatised the spectrum.<sup>316</sup>

Further, the separation of the photogenic from the visual focus could follow different “laws” in different lenses, even those that appeared to be similar, depending on the achromatization and color of the glass. Claudet’s explanation of what he saw to be the cause of the difference between the two foci was a theory that he offered “more with a view to invite a useful and necessary controversy, than to decide the point in a positive manner.”<sup>317</sup> Opticians in the trade of constructing photographic lenses had to prepare the lenses differently than those intended for telescopes—less chromatically and spherically perfect—in order to make good photographic pictures. “[A] good telescope might produce a very bad photographic camera, and a good camera a very bad telescope.”<sup>318</sup> Whereas the optician of telescopes had to aim for the most perfect visual focus, the photographer was only concerned with the photogenic focus – the focus on the sensitized plate was more important than the focus on the ground glass.<sup>319</sup>

### ***Focus***

Based on the subjects of several of his papers as well as the instruments he developed from early on in his career as a photographer, it is clear that photographic focus was a vital subject for Claudet. From the beginnings in the Adelaide gallery and his competition with Richard Beard (who held the patent on the then-superior Wolcott camera, which allowed for shorter exposure times), Claudet’s frustrations with not being

---

<sup>316</sup> Claudet, “Description of the Dynactinometer,” (1851): 486.

<sup>317</sup> Claudet, “Description of the Dynactinometer,” (1851): 488.

<sup>318</sup> Claudet, “Description of the Dynactinometer,” (1851): 488.

<sup>319</sup> Also see Claudet, “On the Variation of the Foci of Lenses,” *British Journal of Photography* 5, no. 2 (January 15, 1858): 24-25.

able to produce adequately focused images led him to experiments with various lenses. In 1843 he traveled to Paris and there purchased a Petzval lens, designed by Joseph Petzval (1807-1891) in Vienna and likely produced by Peter Wilhelm Friedrich von Voigtländer (also in Vienna). The Petzval combined both flint and crown glass, had a wider aperture, and was more powerful, which reduced exposure times. The Petzval would possibly have been the lens that Claudet used for his *Portrait of Andrew Pritchard* from 1844 [Figure 1:32].<sup>320</sup>

By 1845, a critic from *The Athenaeum* could remark on the improvements in Claudet's portraits which, by this time, included the option of tinting: "Much of the unnatural character found in Photographic portraits, arising from the distortion by spherical aberration, has been removed, and thus a more agreeable picture ensured."<sup>321</sup> Rather than insert painted space behind the sitter, as he had with the backdrops of 1842-3, Claudet became more interested in developing the space around the sitter. One typical Claudet portrait from this period (post the 1843 purchase of the Petzval lens) is an untinted sixth-plate portrait of a young woman [Figure 2:8]. She sits serenely in a checkered dress in front of a dark, unpainted drapery while a soft light appears to fall on her from over her left shoulder. In addition to the contrast between her dress and the background, her pose also brings her forward in a suggestion of three-dimensionality. Her head turns diagonally to one side but her body twists (subtly) in the other direction while her left arm, propped on a table, stretches toward and out of the right edge of the image. To look at this image is to experience the sense of sitting in the space of this young

---

<sup>320</sup> He has also discarded the painted backdrops one sees in his earlier portraits of George Houghton and his children [Figure 2:3], as well as that of the ruined castle and river landscape [Figure 2:18][Figure 2:21]. Andrew Pritchard was a London optician and author known for his study of jewel microscopes constructed of diamond and sapphire.

<sup>321</sup> *The Athenaeum* (May 24, 1845): 518.

woman. She is not flattened rigidly against an artificial background (as in Claudet's earlier pictures of Houghton) but is shown elegantly turning, perhaps in mid thought, perhaps about to turn towards the viewer. She seems to be captured in the midst of natural, though slight, movement.

Although Claudet had not at this point begun to work with stereo-photography, his interest in a more three-dimensional depiction of the sitter is apparent in portraits such as these. Later Claudet would incorporate variations of a clouded sky background (a common attribute of British daguerreotype portraiture) in order to increase the sense of space around the viewer.

Claudet's interest in the dimensionality of the body of the sitter is also emphasized in pairs and group portraits. Consider the well-known daguerreotype by Claudet of a game of chess, in which the photographer sits at a table between an elderly woman and man intently staring and engaging in a chess game before them **[Figure 2:9]**. While Claudet stares straight ahead and back at the camera with his elbow on the table and his head propped in his hand, the bodies of his two companions are turned diagonally towards the viewer while their heads look down at the game in front of them. The gentleman on the right reaches his arm in front of Claudet and over the board to move one of his pieces while the chessboard is also turned at a slight angle so that the board appears to come forward in space and the chess pieces seem voluminous. As a result, with a seemingly simple construction of three people seated at a table, Claudet created a scene that approached three-dimensional space, so that we can perhaps even join him at the table.

Meanwhile, Claudet had also determined that the photogenic ray was not consistent in length, and was at times shorter and at times longer than the apparent ray, yet was always generated from the same point on the same lens. Therefore, the photogenic ray required a different method of focus. The focus for the camera had to be on a point in front or behind the face of the subject. A later article for *La Lumière* discussed Claudet's experiments in photographic focus from the period in which he was making the chess photograph and others.<sup>322</sup> To achieve his desired results, Claudet placed a white screen marked with black lines in front or behind the face of the sitter and focused on it. The writer quoted Claudet's own words about an experiment in which he discovered that the apparent focus on the ground glass did not coincide with the photogenic focus. Claudet had ". . . prepared many screens with fine black lines," then "placed them one in behind the other at different heights" in front of the camera obscura in order for them to be revealed on both the ground glass and the daguerreotype plate. Claudet focused on the middle of the screens. He continued:

and what surprised me then I learned that the daguerrienne image was confused with the screen that looked sharp on the glass with another that had not been focused on the glass! I repeated the experiment several times with different lenses and always found the same result. The experiment was conclusive – without a doubt in my mind there exists a focus of photogenic action that does not coincide with the apparent focus.

Claudet's instruments for measuring the correct exposure in particular lighting situations (the photographometer) and the sensitivity of the prepared plate and the refractive power of the lenses used (the dynactinometer), all pointed to the importance of

---

<sup>322</sup> M.-A. Gaudin, "Résumé général du daguerreotype: de la chambre obscure, des objectifs, de la mise au point, et du temps de l'exposition." *La Lumière* 2, no. 19 (May 1, 1852): 74.

shorter exposure times in order to allow for an increased focal length of the lens that in turn advanced the focal possibilities of the photographic image. The next problem was to reconcile the two key elements needed to achieve perfect focus—the curvature of the lens and the planar surface of the plate, a curved surface with a flat surface.<sup>323</sup> The most perfect picture had to be made as well as viewed much like the eye takes in and processes images of the outside world. The lens's relationship to the prepared plate was like that of the eye—a sphered surface through which an outside image passed onto a “flat” surface or image that is transmitted to the brain. “Since, then, we cannot adopt the spherical curve, we have no other alternative than of taking it on a plane surface.”<sup>324</sup> In order to make a photograph with the least amount of distortion, the medium, as well as the laws of optics, had to be bent towards each other.

Claudet saw the photographic image as a spatial problem, one in which the objects depicted needed to be approached correctly by the camera lens in order to access the “different planes” of the image.<sup>325</sup> A longer focal length allowed for light rays reflecting off the objects to travel in a more parallel course through (in the photographer's words) the “different planes in relation to the object glass” onto the photographic plate. It could then be determined whether or not the image was proportionately correct.<sup>326</sup> With a lens of shorter focal length, the objects would line up at sharper angles to the axis of the foci of the lens, and thus create distortion.

---

<sup>323</sup> Claudet, “Progress of Photography,” (1847): 200. “The curve of an image produced by an object glass is the segment of a sphere, the diameter of which, according to the curvature and density of the lens, is about equal to the focal length of that object glass. We can conceive, then, that the larger the image we take upon the curve, the less it will coincide with the flat surface of the plate, upon which it is to be represented. The object glass gives a distinct image only at its focus; beyond, or within this point, there is a confusion and enlargement of the proportions, resulting from the angle under which the object is represented.”

<sup>324</sup> Claudet, “Progress of Photography,” (1847): 200.

<sup>325</sup> Claudet would devote most of his later photographic output to stereo-daguerreotype portraiture.

<sup>326</sup> Claudet, “Progress of Photography,” (1847): 200.

He noted in 1847 that, coupled with the problem of correctly lining up the various elements within the focal range of the lens was the question of the discrepancy between what was seen on the ground glass of the camera and what was actually recorded on the daguerreotype plate. “I have been so struck with this difference between the result of the photographic and the visual image, that I have sought to discover the cause, and to find means of giving the Photographic Image the perfection of that which is represented upon the ground glass.”<sup>327</sup>

In 1844, Claudet developed an instrument he named the “Focimeter” to help solve this problem [**Figure 2:10**]. In *The Reports by the Juries* of the Great Exhibition, the only mention of a particular daguerreotype by Claudet was of an “uncoloured” plate representing “. . . various articles of virtu, pictures, &c., grouped together: the perfect focus of each part and general relief of the whole prove it to be a successful application of his focimeter.”<sup>328</sup> The device measured the focal length of the lens in order to determine the location of the most concentrated focus within the image. Viewed from the front, the device appeared to be a singular white disc. From an angle, however, the instrument actually consisted of eight pie-shaped pieces, numbered one to eight, separately attached about 1½ inches apart along a metal axis fixed to a vertical stand. Each of the eight triangular pieces was positioned in a spiral rotation from the front (no.

---

<sup>327</sup> Claudet, “Progress of Photography,” (1847): 207. In addition to the spatial configuring of the image, Claudet also recognized that there was a difference between the “instantaneous” effect of what the eye perceived and the duration of time that it took for a photographic image to be recorded. “Whatever may be the manner in which an object is illuminated by the light of the day, the eye perceives instantly all the points of the object . . . If we look at an object during one or a hundred seconds there always appears to us the same relation between the strong lights, the half-tints, and the shadows. But it is not so with the effect produced upon the Photographic Plate; the light operates gradually; at first the strong lights only are visible. If we stop at this point, the half-tints and shadows will be invisible; by continuing, the half-tints develop themselves . . . lastly, the shadows appear during the whole time the lights have been operating . . . There is nothing like this in the production of the visual image of the camera obscura; it remains always the same.”

<sup>328</sup> *Reports by the Juries* (1851), 600.

1) to the back (no. 8). The distance between the first piece and the last was twelve inches and the diameter of the whole device was 13 ½ inches.

**2, 4, 8, 12**

In a later study, rather than moving the lens in incremental distances from the focimeter, he moved the distance (and therefore the angle) between two cameras used to make a stereographic image. The focimeter was featured prominently in four stereo-daguerreotypes taken around 1853 in Claudet's final studio at 107 Regent Street [**Figures 2:11-13**]. In each image, Claudet sits at the center of the composition, leaning an elbow on the table next to him and holding a piece of paper over his crossed legs, and looks directly at the camera. His son Francis (aged 16 or 17 at the time) stands behind a table on which is displayed the focimeter. To the right side of the image a stuffed parrot is poised on a stand propped on a chair and looks over Claudet's shoulder. At the left of the frame is a roll-top letter writing desk with a pile of books and at the center of the scene is a decorative urn with a painted landscape on its front and containing a small plant or flower. Three of the four stereo-daguerreotypes have been accounted for, although they are separated into two private collections and one public—"8" is in the collection of the J. Paul Getty Museum, "4" and "12" are in private collections. A reproduction of "4" exists in a 1976 Sotheby's Auction catalogue. I was able to examine "8" and "12" in person.<sup>329</sup> They have not been seen sequentially, perhaps, since around the time of their making.

Taken as individual pictures, these stereographs could seem to be self-portraits of an inventor next to his invention in the company of his family. However, as Batchen

---

<sup>329</sup> Sotheby Parke Bernet, "Important 19<sup>th</sup> and 20<sup>th</sup> Century Photographs, Sale no. 3867, Lot 7," (May 4, 1976): 8.

argues, the four un-tinted stereo daguerreotypes should actually be seen as science, rather than portraiture or art.<sup>330</sup> Each pair was taken at incremental distances between the two camera lenses, from 2 inches, to 4 inches, to 8 inches, to 12 inches. A card at Claudet's feet displays each of these numbers while it also marks the distance from the camera to the focimeter ("22 feet"). When the two lenses were 2 inches apart, their angle was less abrupt than that at 12 inches. By increasing the angle at which the two lenses converged toward the focimeter, the volume of the scene, and the spaces between figures and objects, increased. In her Master's thesis, Linda Sevey claimed that when one looked at them as a sequence in the stereoscope, the effect was one of the studio expanding out before the viewer. "With the increased distance between lenses, space opens until, at the 12-inch distance, the room that once seemed closet-sized seems to have expanded to the proportions of a dance hall."<sup>331</sup> In the two that I have been able to view stereoscopically—the last two and thus the two most angled—one can perceive more space between the furnishings, particularly between Francis and the table with the focimeter, in "12" as opposed to "8." However, the distance is slightly more intimate than that of a "dance hall." Rather than a great increase in distance between the figures and the viewer (the camera) and the objects in the room, space between them increases, but less dramatically than what Sevey's description implies. The shift is also perceptible in that the volumes of objects appear to become more pronounced. Lighting also gains contrast as the angle increases, so that the light on Claudet's trousers in "12" which occupy the

---

<sup>330</sup> Geoffrey Batchen, "Light and Dark, The Daguerreotype and Art History," *The Art Bulletin* 86 (2004): 764-777.

<sup>331</sup> Linda Vance Sevey, "The Question of Style in Daguerreotype and Calotype Portraits by Antoine Claudet," Master's thesis, Rochester Institute of Technology, 1977: 43.

farthest points of the foreground, appear in harsher light than that of “8” and “4.” The contrast and depth of the focimeter also becomes heightened as the numbers increase.

At the same time, Francis’s pose changes in each pair. In “4,” one arm is tucked at his waist behind the focimeter while the other rests on the stand under the decorative vase behind his father’s shoulder. Between “8” and “12,” Francis’s arms move from being crossed (“8”) to one arm placed on the desk next to him. In sequence Francis would appear to be moving to cross and uncross his arms while Claudet’s pose remains the same, aside from a slight shift in the papers in his hand. Therefore, as the room expanded, the figure behind the focimeter would adjust his pose slightly, creating an effect of two kinds of action (the scene and space expanding) occurring simultaneously.

These observations were included in several of Claudet’s papers on the stereoscope and binocular vision. “On the Means of Increasing the Angle of Binocular Instruments, in Order to Obtain a Stereoscopic Effect in Proportion to Their Magnifying Power,” presented first in 1852 to the Society of Arts, and reprinted in 1860, described the effects of increasing and decreasing the angle of vision, in this case in opera glasses. The paper discussed the fact that regular opera glasses did not produce the best stereoscopic effect. Their angles had to be increased by the use of two reflective prisms that took the regular rays and exaggerated them within the glasses. The writer for the British Association that reprinted the paper in 1860 commented that “magnifying or diminishing the size of objects is the same thing as approaching them or receding from them. . .”<sup>332</sup> In Claudet’s four *Self-Portrait* series, the effect is of taking a few steps closer

---

<sup>332</sup> Antoine Claudet, “On the Means of Increasing the Angle of Binocular Instruments, in Order to Obtain a Stereoscopic Effect in Proportion to Their Magnifying Power,” *Proceedings of the British Association* (1860): 261-262; also published in *The Athenaeum* (July 1860).

or a few steps farther away, with forms becoming more or less volumetric as one moved.

In “The Stereoscope and its Photographic Applications,” presented to the Society of Arts in 1853, Claudet reiterated some of these findings and also claimed that Photography was the unique medium that could “produce two images perfectly identical to the images on the two retinae,” and therefore it was the most suitable to testing and improving the stereographic image. The reporter on the paper noted that Claudet had illustrated his lecture with a number of diagrams. The George Eastman House contains several diagrams by Claudet, including some that seem to illustrate the ideas presented in his 1853 paper [**Figures 3:12-13**]. Claudet’s paper, as well as his diagrams, argued that stereoscopic vision was a process of “gradual coalescence.”<sup>333</sup> No singular perspective could imitate the binocular vision of the human eye. In light of this argument, the purpose of the sequence of four stereos becomes clearer. Rather than simply an illustration of the expansion of space in the room and the change in distance of objects, the series also aimed to recreate the act of “gradual coalescence” in the eyes, the ability of our eyes to shift gradually into space in order to see volumes in space. We have become so accustomed to that we don’t notice. Photography, then, was a means of seeing this process slowed down.

### *Approaching “The perfection of the eye”*

Claudet’s research on photographic optics and his development of a method to enhance the focal possibilities of the photographic image drew on the studies of his contemporary, the Scottish scientist David Brewster [**Figure 2:14**]. Claudet’s interest in

---

<sup>333</sup> Antoine Claudet, “The Stereoscope and its Photographic Applications,” *Journal of the Society of Arts* 1 (1852-3): 97-99.

the way in which the construction of a lens, by its material make-up as well as its spherical aberration and achromatism, impacted the passage and power of photogenic light, correlated with Brewster's studies of the structure of the human eye and the polarization of light. The Scotsman also contributed to the construction of the lighthouse lens, invented the kaleidoscope, and wrote a biography of Isaac Newton, whose studies of light and particularly the prism were the foundation on which nineteenth-century scientists built their own theories. Brewster was also one of the prominent British scientists at this time who was very interested in photography, particularly in its connection to his research on binocular vision.<sup>334</sup>

While Claudet was presenting his papers on his focusing apparatus, claiming that “no artificial instrument can approach the perfection of the eye” to the Royal Society of London, Brewster was presenting his findings on the functioning of the eye and optical instruments to the Royal Society of Edinburgh.<sup>335</sup>

Despite the fact that one lived in London and the other in Edinburgh, Claudet and Brewster were in frequent communication. Their correspondence was not always one of support and agreement. In 1852, the two argued over the potential for the photograph to make a good portrait. In “Photographic and Binocular Portraits,” published in *The Times*, Brewster claimed that photography yielded a “monstrous representation of humanity,”

---

<sup>334</sup> Antoine Claudet, “On the Best Mode of Focusing the Photographic Apparatus,” *Journal of the Society of Arts* 1 (1852-3): 234-235. Brewster was also crucial to the introduction of the calotype to Scotland in the early 1840s.

<sup>335</sup> Claudet, “On Some Phenomena Produced by the Refractive Power of the Eye,” *Philosophical Magazine and Journal of Science* 26, no. 175 (October 1863): 324-326; David Brewster, “On the Optical Phenomena, Nature, and Locality of Muscae Volitantes; with Observations on the Structure of the Vitreous Humour, and on the Vision of Objects Placed Within the Eye,” *Philosophical Magazine and Journal of Science* 32, no. 212 (January 1848): viii; Brewster, “On the Distinctness of Vision Produced in Certain Cases by the Use of the Polarizing Apparatus in Microscopes,” *Philosophical Magazine and Journal of Science* 32, no. 214 (March 1848).

due to object glasses with large diameters. Claudet wrote a rebuttal declaring that, contrary to Brewster's belief, "[w]ith an object glass of 3 ½ inches aperture, portraits have been taken, not distinguishable from those taken by the same lens with an aperture of the size of the pupil."<sup>336</sup> Brewster replied claiming that Claudet, as "the oldest photographer" was "probably the most prejudiced." Claudet replied that the scientist had sat for his portrait several times and only a few years prior had made statements describing the "perfection" of his portraits and had been a part of the jury for the Great Exhibition that gave him a Council Medal.<sup>337</sup> Within the week after these published disagreements, the two attended the same Royal Society soirée at the house of the President of the Society.<sup>338</sup>

Over a decade later, Claudet had agreed to investigate Brewster's claim that the correct size of the lens was that of the human eye. In 1866, the two were engaged in a dialogue around the use of lenses made of topaz and crystal as opposed to glass [**Figure 2:15**]. At that point, Brewster had retired from his post as Vice-Chancellor of Edinburgh University and had served as President of the Royal Society of Edinburgh. Claudet made several cartes-de-visite self-portraits, now in the collection of the Société Française de Photographie in Paris, on which he recorded the type of object glass used, the length of exposure, the distance between himself and the lens, and the time and date of the photograph. On the self-portrait taken with a crystal lens, Claudet's hand recorded, "portrait made in two minutes on the 24<sup>th</sup> of April at 3 o'clock with a crystal lens of

---

<sup>336</sup> *The Times*, May 11, 1852: 4. "In placing the sitter at 10 or 12 feet from the camera obscura, the angle subtended by the whole aperture of the lens is not much more than the angle subtended by the size of the pupil when we look at an object or at a person 2 or 3 feet off."

<sup>337</sup> *The Times*, May 17, 1852: 5.

<sup>338</sup> "The Earl of Rosse's Soirée," *The Times*, May 24, 1852: 5. "There was a large exhibition of things of scientific interest. Among those present were . . . Sir D. Brewster, Sir John Herschel, . . . Messrs Faraday, . . . Grove, . . . Claudet, . . . Babbage . . . &c."

[illegible], 14 [illegible] focus at 11 feet of distance.”<sup>339</sup> Another is documented as having been taken with a Topaz lens. In both portraits, Claudet sits and stares back at the camera, hands in his lap or reaching for a monocle in his waistcoat. Although the two had disagreements on various topics, they continued to be on friendly terms. In a letter sent by Brewster to Claudet’s son Henri after the French photographer’s death in 1867 (and close to his own death), the renowned Scottish scientist thought highly of Claudet as a scientist, writing that “[h]is scientific acquirements and his inventive genius were of a very high order.”<sup>340</sup>

### ***Equalizing Focus***

Another means of “giving the Photographic Image the perfection of that which is represented upon the ground glass,” which he saw to be the same as the human eye, was to attempt to create the same all-over focus that the eye sees instantaneously. In 1866, Claudet presented a new method of focusing the object glass of the camera obscura. In a paper communicated to the British Association in Nottingham and titled “Optics of Photography.—On a new Process for Equalizing the Definition of all the Planes of a Solid Figure represented in a Photographic Picture,” he described the need for the focimeter in every photographic studio, as no “optical combination” was capable of bending or adjusting on its own to the variability of light.<sup>341</sup> Just as the eight pieces of the

---

<sup>339</sup> “Portrait fait en 2 minutes le 24 avril à 3h. avec une lentille de cristal de [unreadable], 14 [unreadable] foyer à 11 pieds de distance.”

<sup>340</sup> Brewster to Frederic Claudet, 1868. “His scientific acquirements and his inventive genius were of a very high order, and his kind nature and generous character will be acknowledged by all who had the pleasure of knowing him.”

<sup>341</sup> Antoine Claudet, “Optics of Photography.—On a New Process for Equalizing the Definition of all the Planes of a Solid Figure Represented in a Photographic Picture,” *Philosophical Magazine and Journal of Science* 32, no. 215 (September 1866): 212-219; Brewster, “The Optics of Photography,” *Art Journal*

focimeter correlated with a point of focus moving from the nearer objects to the farther, Claudet's new method proposed focusing a portrait by slowly rendering each plane in focus. The proposal for an "artificial optical instrument" that could imitate the human eye's ability to adjust its focus automatically involved a new kind of object glass made up of two lenses affixed to the ends of a long tube that ran through the camera. One lens was fixed in the front while the other, in the back, was moveable. The two could be slid closer together or further apart during exposure in order to consecutively focus each plane in the image. Claudet contended that since the unfocused parts of the image, when one plane is in focus, would be less strong, each of the successively focused planes would supersede the less focused parts, resulting in focus throughout.<sup>342</sup>

In the following year, Claudet offered an update to this double lens system, called the "Focus-Equalizer."<sup>343</sup> This was an improvement on the previous method made after he was provided with mathematical calculations of the possible distances needed between the lenses for certain arrangements of objects or subjects. In the "Focus-Equalizer," the lenses were moved in opposite directions according to these mathematically determined proportions. Two tubes, one inside the other, were affixed with two lenses, one on each exterior end. The tubes would be attached to a rack and pinion system that could be moved by a handle and their proportional distance measured along markings on an interior "sextant" (or arc to measure distance). Claudet had begun to share his research over a decade prior in the paper "On the Laws which Regulate the Conjugate Foci," in

---

(October 1866): 321. Also reviewed in *Scientific American* 15, no. 13 (September 22, 1866): 196.

<sup>342</sup> Claudet, "Optics of Photography," (1866): 218-219.

<sup>343</sup> Antoine Claudet, "Optics of Photography.--On a Self-Acting Focus-Equalizer, or the Means of Producing the Differential Movement of the Two Lenses of a Photographic Optical Combination. Which is Capable, During the Exposure, of Bringing Consecutively All the Planes of a Solid Figure into Focus, Without Altering the Size of the Various Images Superposed," *Proceedings of the Royal Society of London* 15 (1866-67): 455-459.

which he stated that the focal distance had to be measured not from the object glass but from “certain points” on both sides, depending on the curvature of the lens. Writing that he had found a solution that allowed every photographer to find the focal distance for any given distance, he claimed that “[b]y these examples we conceive what is meant by approaching the infinite and never reaching it.”<sup>344</sup>

Three small albumen prints of the focimeter (about 2 by 1 1/2 inches) made by Claudet, currently in the collection of the National Media Museum in Bradford, UK, were sent to Talbot with a letter in 1867 [Figure 2:16].<sup>345</sup> They were meant to demonstrate, as Claudet wrote to Talbot, an instrument that made it possible to “transmit to both lenses in the optical combination the opposite movement and with differential proportions, according to the formulae calculated by Mr. Sommer.” The images were affixed side by side to a card on which Claudet had written the crucial information as to what lens was used, the aperture, and the distance from the camera to the focimeter. In this case, a Voigtlander lens was used, (in the upper left corner one reads “objectif de Voigtlander”), with an aperture of “2 3/4” and the distance from the focimeter to the lens was eight feet from the number “8” on the focimeter and the focus was “7 in. 3/4 [difficult to read].” Each photograph, taken from the same frontal angle on the device and labeled “1.,” “2.,” and “3.,” represented a different action of the lens. In the left albumen image, “1.,” the 1 on the focimeter is focused but “8” is extremely blurred. In “2.” the focal length had increased, allowing for more focus in the “8.” The third image was, as Claudet claimed, “superior” as more of the pieces of the focimeter were in focus (indicating more depth of

---

<sup>344</sup> Antoine Claudet, “On the Laws which Regulate the Conjugate Foci,” *Photographic Journal* (March 1861).

<sup>345</sup> Claudet to Talbot, London, March 27, 1867, in *Talbot Correspondence*, Doc. No. 9210.

field) and the “8” was the clearest of the three. Claudet explained the three different processes that each image represented. No. 1 was photographed with a fixed focal distance (which he called the ordinary process). No. 2 was taken by moving the “inner/internal” lens of the lens construction (made of two lenses), which changed the focal distance. The third was made by moving the two lenses—the internal and the frontal—in opposite directions by  $2/3$  and  $1/3$  respectively. Although Claudet noted in his letter to Talbot, “one should never operate with the focimeter so close to the person as is mine,” as a group the pictures illustrated succinctly his argument for the usefulness of the “focus-equalizer.”<sup>346</sup>

From September through December, Claudet’s new focusing apparatus and theories caused a great deal of debate and continued to spark responses and critique from across the photographic field, particularly in the British photographic community. Claudet also mentioned this debate in a letter to Talbot. “Since the British Association at Nottingham I have found myself in a lively debate on the subject of my idea of equalizing the focus of different planes of a figure by moving the lens during the exposure [of the plate].”<sup>347</sup> The version of Claudet’s paper published in the August 1866 *British Journal of Photography* was translated for publication in the Société française *Bulletin* one month later.<sup>348</sup>

Interestingly, the French society did not appear to have the same response as that in

---

<sup>346</sup> Claudet to Talbot, March 27, 1867. The connection between Claudet’s letter and the card containing the three albumen prints has not been made prior. It is after looking at both objects that I have concluded that they belong together.

<sup>347</sup> Claudet to Talbot, January 9, 1867, in *Talbot Correspondence*, Doc. No. 9176. “Depuis l’association Britannique à Nottingham je me suis trouvé entraîné dans une vive polemique au Sujet de mon idée d’égaliser la definition des divers plans d’une figure en faisant mouvoir le foyer pendant l’exposition.”

<sup>348</sup> Antoine Claudet, “Sur un nouveau procédé pour donner une egale netteté a tous les plans d’un corps solide représenté dans une épreuve photographique,” *Bulletin de la Société Française de Photographie* 12 (September 1866): 225-231; also in *The British Journal of Photography* (August 31, 1866). Apparently the photographer J. B. Reade (1801-1870) had presented a similar apparatus to the Photographic Society in 1865.

England. They simply announce it. In the translated report published in the *Bulletin*, the editorial secretary mentioned the “very lively debate” initiated in England, on the subject of the priority of the discovery made by Claudet,” but it does not seem to have been heavily argued within the Société meeting.<sup>349</sup> The debates around this method of focus were preceded, as we will see in Chapter Four, by dialogues on photographic focus in connection to the legitimization of photography as fine art in the years prior to the 1862 International Exhibition.

This chapter has shown that, through Claudet, photography and science gained a wide-ranging relationship, one that has been neglected by scholars who pursue a seamless union or a sharp opposition of the two fields. I have explored the intersection of science and photography differently, by looking at the various scientific methodologies that Claudet applied to those explorations in connection with the broader scientific community in Britain at that time. Through his studies and improvements on the properties of light he came into contact with a figure like Robert Hunt. Through his interest in improving the photographer’s ability to control the focus within the photographic image, he communicated with David Brewster. His development and presentation of his focimeter, the photographometer, and dynactinometer were his version of scientific instruments meant to test a particular hypothesis. All of this was enacted in front of the backdrop, as I have shown, of changes within the scientific and mathematical fields in Britain. As I have discovered and demonstrated here, Claudet served as a “medium” between science and photography, and between prominent scientists of his time. In sum, the medium of photography fits more complexly within and around and as a

---

<sup>349</sup> Claudet, “Sur un nouveau procédé,” (1866): 225-231.

result of “science,” and a study of Claudet’s three decades of work in this area offers a way of accessing these complexities.

### **Chapter Three: The Stereograph, Photosculpture, and Moving Images**

One of the items for sale in Claudet's shop on High Holborn was the "French Glass Shade." The shades came in multiple sizes, were rounded, oval or square [Figure 1:1]. In Victorian homes of the 1840s, glass shades were used as display cases for objects to be looked at but not touched. As was advertised by Claudet & Houghton for their display in Class 24, "Glass," of the 1851 Great Exhibition, glass shades were "for covering clocks, alabaster ornaments, and any other articles which may require protection from dust or the impurity of the atmosphere."<sup>350</sup> Along with these "articles" a common display item was the miniature plaster cast of a Classic Greek statue (for instance, *Apollo of Belvedere*, the *Medici Venus*, *Laocoön*, *The Three Graces*), souvenirs, perhaps, of imaginary travel to unreachable parts of the globe (for most) at the time.<sup>351</sup> One stereo-daguerreotype in the Gernsheim Collection at the Harry Ransom Center, University of Texas, Austin, depicts a busy Victorian interior, including several statuary and plaster busts [Figure 3:1].<sup>352</sup> Along with private collections of casts, a market that would reach its height in the mid-nineteenth century, museums in Europe (including the South

---

<sup>350</sup> "Claudet & Houghton, 89 Holborn - Proprietors Exhibit in Class XXIV, 'Glass,' part of Section III, Manufactures, in the Central North Gallery;" see *Official Descriptive and Illustrated Catalogue*, 701.

<sup>351</sup> Casts were made in a range of sizes by using a "reducing machine" to make "piece molds." Casts were also frequent subjects of early photography, for their stillness and lightness, for example in Daguerre's *Artist's Studio*, 1837, Bayard's early direct positives, and Talbot's *Patroclus*. See Geoffrey Batchen, "Light and Dark: Photography and Art History," *Art Bulletin* 86, no. 4 (December 2004): 764-776, for a detailed discussion of this theme.

<sup>352</sup> A variant stereo-daguerreotype of this image with a woman standing in the center, is presently in the Victoria & Albert Museum. She stands leaning an elbow on the mantle of a fireplace in the center of the image and stares back at the camera. Both are attributed to Claudet.

Kensington Museum in the 1850s and 1860s) acquired casts to complement their own collections.

Glass shades *containing* casts and other objects were on display in the 1851 Great Exhibition. A series of colored woodcut engraving in *The Illustrated London News* from 1852 depicts a panorama of the interior of the Great Exhibition [Figure 3:2]. At the center of one of these panoramic engravings is depicted a display of statuettes covered in rounded glass shades. Another example of a statuette contained in the glass shade can be found in a stereo-daguerreotype still life by one of Claudet's protégés, T. R. Williams [Figure 3:3]. Amidst a collection of objects (including a guitar and a Brewster stereoscope) propped on a red tinted drapery, a plaster putti holding up a rounded vase containing colorfully tinted flowers is encapsulated inside the tall transparent arch of a round glass shade, perhaps from Claudet & Houghton.

As is evident in Claudet's stereo-daguerreotypes of the sculpture galleries in the Crystal Palace (to be discussed later), sculpture included in the exhibition fit the taste of the time for classical subjects. For the first experiments by Daguerre, Bayard, and Talbot, cast or sculpture served as a useful, still subject. Claudet also used these aspects of sculptures for his own photographic experiments. However he was also interested in them as a vital subject for three-dimensional representation. Once Claudet began to produce and advertise stereo-daguerreotype portraits of his clients, it is not surprising that reviewers described them like miniature statues come to life. One writer for *La Lumière* described his reaction to looking through a stereoscope at Claudet's studio:

We admire above all those stereoscopes that highlight the lines in magnificent relief: then photography possesses

throughout the value of statuary, rich color and a vivid expression. Art reaches its highest degree of imitation.<sup>353</sup>

For this writer, the stereo image of a sitter gave off the same impression and power of imitation as a statue he might have seen at the Great Exhibition. Further, the Victorian taste for plaster casts and for the protective dome of the glass shade could, I suggest, provide a visual equivalent to looking into one of Claudet's stereographic daguerreotypes. The figure sits in the round, in a space framed by an arched mat. He or she can be looked at but not touched, encased inside of a clear, luminous space. By the early 1850s, a majority of Claudet's daguerreotype output consisted of stereo-daguerreotypes tinted with pigment. Although they bear the stillness and volume of statuary, their pastel-tinted skin and clothing creates the effect of a living miniature, perhaps closer to a "Madame Toussaud" wax figure than a plaster cast.<sup>354</sup> Thus the stereo-daguerreotype, I suggest here, though novel in its technology and relatively recent in terms of the photographic process used, fit into a contemporary interest in recreating three-dimensional life-likeness, whether it was the recreation of a Greek statue or of a known historical figure.

A decade after his initial attempt with the stereograph, Claudet embarked on another venture in the making of a three-dimensional figure. The "Photosculpture" process, patented in France, was a process by which multiple photographs were taken at

---

<sup>353</sup> "Galerie photographique de M. Claudet," *La Lumière* 4, no. 29 (July 22, 1854): 115. "On admire surtout celles dont le stereoscope fait ressortir les lignes en magnifiques reliefs: la photographie possède alors toute le valeur de la statuaire, enrichie de la couleur et d'une expression vivante. L'art atteint ici son plus haut degré d'imitation." [One admires throughout above all those in which the stereoscope brings out the lines in magnificent relief: the photograph possesses then all of the value of statuary, enriched with the color of a living expression. Here art attains its highest degree of imitation.]

<sup>354</sup> Anne-Maria Toussaud (1761-1850) came to London from France in 1802 and, by the 1830s, established an exhibition of her collection of wax figures of well-known historical and contemporary French, English, and American figures. The museum, eventually located on Baker Street in London, was a popular attraction and profited from the public's taste for the three-dimensional imitation of a well-known figure just prior to photography and photographic stereographs.

the same time from equally spaced vantage points around a figure. The glass negatives were made into positive glass slides that were then projected onto a block and used as guidelines for carving out the bust. Both the stereoscope and photosculpture were based in an interest in photography's ability to create a "real," three-dimensional replica of a figure. Whereas in the stereographs Claudet was concerned with making more space, in expanding it around a figure, the aim of the Photosculpture process was to condense space into a solid form. As will be discussed later in this chapter, the latter process proved to be an unsuccessful venture. Nevertheless, these two forms of portraiture, one commercially successful, the other a failure, one a photograph, one a sculpture, offer particular case studies that illuminate Claudet's career.

### *Literature on Stereography*

Arthur Gill's essay "Early Stereoscopes" published in *The Photographic Journal* in 1969 provides some of the most detailed discussions of Claudet in relation to the history of stereography.<sup>355</sup> The essay is divided by "scientist," beginning with Charles Wheatstone, followed by Brewster and Claudet, and is concerned with placing Claudet's improvements and experiments in stereoscopy in the context of the other prominent (English and French) inventions in this field. William Darrah's book *The World of Stereographs*, although from 1977, is still a very useful and comprehensive history of the format. Claudet enters only on one page, however—in the chapter "The First Decade,

---

<sup>355</sup> Arthur Gill, "Early Stereoscopes," *The Photographic Journal* 109, no. 10 (October 1969): 546-559, continued in *The Photographic Journal* no. 11 (November 1969): 606-614 and *The Photographic Journal* no. 12 (December 1969): 641-651. Gill's earliest writing on Claudet can be found in his article, "Antoine Claudet," *Photographic Journal* 107 (December 1967): 405-9.

1851-1860,” and is just briefly mentioned among “Mayall, Negretti, and others.”<sup>356</sup> The focus of the book is paper stereographs, those that were mass-produced in the millions, rather than daguerreotypes, which explains, at least in part, why Claudet does not figure in this book. I have seen a handful of albumen stereographs by Claudet (in a private collection), one of which I will mention later in the chapter; however, those are the only ones that I know extant. Denis Pellerin’s book, *Photographie stéréoscopique sous le second empire*, written by a French author, recognizes Claudet; however, none of the photographer’s stereo-daguerreotypes are reproduced.<sup>357</sup> Offering a technical history of stereoscopes from their beginning in the nineteenth century, Paul Wing’s *Stereoscopes: The First One Hundred Years* actually includes several mentions of Claudet. However he is primarily associated with different versions of stereoscopic viewing devices.<sup>358</sup> The one exception is a reproduction of a stereo-daguerreotype of Brewster, taken by Claudet in 1856.<sup>359</sup> His multiple daguerreotype viewer is also mentioned in the context of similar designs around the same time.<sup>360</sup> In summary, not much of substance has been written about Claudet’s involvement in stereography, despite its central role in his career.

### ***Claudet and the Stereoscope***

As I have examined briefly in Chapter Two, Claudet’s interest in expanding the space within the photographic image had begun prior to the medium’s fusion with Wheatstone’s stereoscope. In the early 1840s, his portraits included painted backgrounds

---

<sup>356</sup> William C. Darrah, *The World of Stereographs* (Gettysburg, PA: William C. Darrah, 1977), 15.

<sup>357</sup> Denis Pellerin, *Photographie stéréoscopique sous le second empire* (Paris: Bibliothèque nationale de France, 1995). Also see John Jones, *Wonders of the Stereoscope* (New York: Knopf, distributed by Random House, 1976).

<sup>358</sup> Paul Wing, *Stereoscopes: The First One Hundred Years* (Nashua, N.H.: Transition Publishing, 1996).

<sup>359</sup> Wing, *Stereoscopes*, 42.

<sup>360</sup> Wing, *Stereoscopes*, 72.

that extended the space of the studio and with the Petzval lens he was able to slightly twist the poses of his sitters and keep them in focus. In the late 1840s, Claudet's studies and development of focusing instruments were influenced by his interest in visually increasing photography's possibilities. His connection with Brewster, whose work on binocular vision and stereography was being presented at the time, was also influential.<sup>361</sup> In 1856, Claudet would maintain the usefulness of the stereoscope even after his fellow Frenchmen seemed to have abandoned it. Just as the device offered an extension of the photographic image and ways to test out how binocular vision worked, it also, as he declared, expanded the commercial sphere:

It seems that in France the men of science have abandoned the stereoscope and that they disdain the interest in it . . . It hasn't been four years since the stereoscope was applied to photography and already it has become an important branch of commerce, giving life to a large number of industries . . .

<sup>362</sup>

By 1860, Claudet could claim with conviction that “[t]he stereoscope is the general panorama of the world . . .”<sup>363</sup> Following the 1851 exhibition, the stereograph would become a central focus for Claudet's scientific studies as well as a signature format for his commercial portraiture in the 1850s. His studio at 107 Regent Street developed into both a successful portrait establishment at the commercial heart of London as well as a laboratory for continued experiment and excavation of the photographic image.

---

<sup>361</sup> David Brewster, *The Stereoscope: Its History, Theory, and Construction, With its Application to the Fine and Useful Arts and to Education* (London: John Murray, 1856).

<sup>362</sup> Antoine Claudet, “Considérations sur le Stéréoscope,” *La Lumière* (January 26, 1856): 30-31, 34-35. “Il semble qu'en France les hommes de science aient abandonné le stereoscope et qu'ils dédaignent de s'en occuper. . . . Il n'y a que quatre ans que le stereoscope a été appliqué à la photographie, et déjà il est devenu une branche importante de commerce, donnant la vie à un grand nombre d'industries.”

<sup>363</sup> Antoine Claudet, “Photography in its Relation to the Fine Arts,” *The Photographic Journal* (June 15, 1860): 250-67.

The French-born photographer had been involved with the stereoscope at the beginning of his career, although he was not the first photographer to become involved. In December 1840, Talbot is reported to have made some pairs of photogenic drawings of statuettes for use in Wheatstone's reflecting stereoscope apparatus; these views of statues, with their sense of volume partially restored, are the earliest known stereo photographs.<sup>364</sup> In a paper presented to the Royal Society in 1852, Wheatstone, the inventor of the stereoscope in 1832, also mentioned Claudet's contribution of daguerreotypes for his stereoscope in 1842.<sup>365</sup>

M. Claudet prepared for me a number of Daguerreotypes of the same bust, taken at a variety of different angles, so that I was enabled to place in the stereoscope two pictures taken at any angular distance from 2° to 18°, the former corresponding with a distance of about 6 feet, and the latter with a distance of about 8 inches.<sup>366</sup>

The practice of making a sequence of daguerreotypes utilizing increasing angles and vantage points for Wheatstone's stereoscope would recur in at least two other points in Claudet's career. The four stereo-daguerreotype sequence from 1853 [**Figures 2:11-**

---

<sup>364</sup> An 1840 letter from Wheatstone to Talbot thanks the latter for making the photographs. "I thank you for the photographs you have made for the stereoscope; they do not exactly answer the purpose as the angle you have taken (47½°) is too large and the differences in the two pictures are consequently too great, but they are sufficient to show that the effect when properly produced would be very good. 25° would be a much better angle. There is one precaution necessary to be taken to ensure the proper result; the two pictures should not be taken at times when the shadows of the object fall differently; they should either be taken one immediately after the other or, which would perhaps be better, at the same time on two successive days. A bust will be a good binocular object, but a carriage or a piece of machinery would, I think have an excellent effect." See Wheatstone to Talbot, December 15, 1840, in *Talbot Correspondence*, Doc. No. 4172. Later, Wheatstone would write again, suggesting a more suitable size for the stereoscopic pictures. "8 inches by 7 will be too large for the Stereoscope pictures; I should prefer the size of those you have already sent me. I have recently seen some miniature portraits taken by the American process which are absolutely perfect; I could not have thought the expression of the features could be so excellently preserved." See Wheatstone to Talbot, February 24, 1841, Doc. 4198.

<sup>365</sup> Charles Wheatstone, "Contributions to the Physiology of Vision. Part the First. On Some Remarkable and Hitherto Unobserved, Phenomena of Binocular Vision," *Philosophical Transactions of the Royal Society* 128 (June 1838): 371-94.

<sup>366</sup> Charles Wheatstone, "On Some Remarkable and Hitherto Unobserved Phenomena of Binocular Vision," *Philosophical Transactions of the Royal Society of London* 142 (1852): 8.

**13]** measured the affect of incrementally increasing the angular distance of the two cameras on the stereoscopic picture. This was similar to the way he photographed Wheatstone's bust in increasing degrees. Claudet would also repeat the process of photographing "the same bust" from different angles in 1863 when he would take out the British patent for the "photosculpture" process.

Around the time of his 1852 paper presented to the Royal Society, Wheatstone sat with his family for a stereo-daguerreotype portrait in Claudet's studio on Regent Street **[Figure 3:4].**<sup>367</sup> The eminent scientist sits at a table across from his wife. Their three children are placed around them forming a tightly knit circular composition. Although this is a family portrait, it is also a portrait of a scientist and his experiments. While the rest of the family looks toward the camera, Wheatstone's attention is captured by his "wave model," developed c. 1840. The acceptance of the wave theory of light and recent discoveries in the phenomena of polarization revealed that light traveled in two transverse waves. As they moved in the same direction they also oscillated perpendicularly to each other. As this was a difficult concept to demonstrate, Wheatstone had developed his "wave model" to visualize the movements of these two waves. It consisted of a hollow metal box with eighty holes, each with a movable T-shaped wire running vertically and horizontally. Each tip of wire is capped with a white bead. When moved, the white line of beads undulates in the form of two light waves.<sup>368</sup> The stereo-daguerreotype, presently in the National Portrait Gallery, London, is un-tinted except for a slight line of silver along the tip of the wave machine, which was often done by scratching into the plate, rather

---

<sup>367</sup> Included in the portrait are Wheatstone's wife, Emma Wheatstone, née West (c. 1813-65) and their three children, Arthur William Frederick (b. 1848), Florence Caroline (b. 1850), and Charles Pablo (b. 1847).

<sup>368</sup> For a brief description of the wave model and an illustration, see E. M. Wray, *Historical Scientific Instruments from the Collection of the Department of Physics, University of St. Andrews* (St. Andrews: University of St. Andrews, 1984).

than tinting it with a brush. This lightning-like streak enhances the illusion of the line created by the wave machine's motions.

Although Wheatstone is credited as the inventor of the stereoscope, the instrument he devised did not work well with daguerreotypes, which were too reflective to be sufficiently visible. It was Brewster who developed a workable stereoscopic viewer for daguerreotypes. He presented his "lenticular stereoscope" before the Royal Scottish Society and the British Association Meeting at Birmingham in 1849.<sup>369</sup> The basic construction of the stereoscope involved the placement of two halves of a lens placed two and a half inches apart at one end of a box with open sides to let light in. On the other end of the box were placed two images of an object. Eventually the two sides were covered, the entire device wrapped in morrocan leather and a small flap was incorporated to let light in from the top. An author reporting on Brewster's stereoscope in the Great Exhibition described the instrument as looking similar to an "opera-glass."<sup>370</sup> The improved version of his instrument admitted light from a single direction which made it easier to view stereo-daguerreotypes. Brewster explained the purpose of the two lenses:

When we thus view two dissimilar drawings of a solid object, as it is seen by each eye separately, we are actually looking through two prisms, which produce a second image of each drawing; and when these second images unite, or coalesce, we see the solid object which they represent.<sup>371</sup>

As Arthur Gill recounted, Brewster had the assistance of a Mr. Loudon in Dundee, an optician who made some prototypes of the lenticular stereoscope that he sent

---

<sup>369</sup> David Brewster, "Description of Several New and Simple Stereoscopes," *Transactions of the Royal Scottish Society of Arts* 3 (1849): 247-264. Reprinted in *Philosophical Magazine* 3, no. 15 (January 1852): 16-31.

<sup>370</sup> "The Stereoscope," *The Athenaeum* no. 1260 (December 20, 1851): 1350. "By cutting a lens into halves, and placing each half so as to represent an eye—the distance between them being 2 ½ inches—has very beautifully imitated the mechanical conditions of the eye."

<sup>371</sup> Brewster, "Description," (1849).

out to instrument makers and manufacturers in Britain.<sup>372</sup> Receiving no interest there, Brewster traveled to Paris and met with the optician Louis-Jules Duboscq-Soleil (1817-1886). As Brewster recounted in his later book *The Stereoscope* (1856), Duboscq-Soleil “immediately saw the value of the instrument . . . [and] began to make the lenticular stereoscopes for sale, and executed a series of the most beautiful Daguerreotypes of living individuals, statues, bouquets of flowers, and objects of natural history.”<sup>373</sup> Brewster and Duboscq-Soleil’s stereoscope was exhibited at a Royal Society soirée, along with daguerreotypes, just prior to its inclusion in the Great Exhibition, where the device was first widely publicized.<sup>374</sup> With the help of Queen Victoria, who took great interest in the stereoscope and to whom Brewster gave one as a gift, stereo photography became increasingly popular and lucrative.

As a close colleague of Brewster, Claudet was inspired by the stereoscope and began to make his own around this time. One of his first subjects was the Crystal Palace. One interior view depicts an empty upper story from the vantage point of an adjacent balcony **[Figure 3:5]**. As if in honor of Claudet’s previous “medium” of manufacture and sale, the stereograph accentuates the vastness of the glass used to construct the building as well as the impressive linear perspective of its iron supports. Meanwhile, the crystal-clear detail of the daguerreotype process reinforces the luminousness created by its transparent walls and ceiling.

Claudet’s stereo-daguerreotypes of the Crystal Palace were reviewed in an issue

---

<sup>372</sup> Gill, “Early Stereoscopes,” (1969): 556-557.

<sup>373</sup> Brewster, *The Stereoscope*.

<sup>374</sup> Claudet, *Photographic Journal* (1860): 266. See David Brewster, “Photography,” *The Encyclopaedia Britannica, or Dictionary of Arts, Sciences and General Literature* 8th ed., Edinburgh, 17 (1859): 544-555; See Brewster on photography in *The North British Review* (February 1862), and reprinted in *Photographic Journal* (September 15, 1862): 124-8.

of *The Illustrated London News* in January of 1852.

They show not only solidity in single objects, but in perspective: M. Claudet has a number of views of the interior of the Exhibition, and though but about 2 ½ inches square, the vast exterior of the building, every column, girder, and article exhibited, can be seen standing out in its place, and with as perfect solidity and distinctness as the very Crystal Palace and things themselves. Every piece of sculpture is there as sculpture: the tree stands out and shows the glass beyond, between every branch and leaf; it seems no picture, but a model beyond belief for its wonderful accuracy and comprehensiveness of detail . . . In fact, instead of seeing the object itself, you see a miniature model of it brought close to the eyes; so that, in this instance, the stereoscopic Daguerreotypes actually surpass the reality.<sup>375</sup>

In his 1849 paper presenting his stereoscope, Brewster had also addressed advantages of the stereoscope, particularly for the sculptor who could:

virtually carry in his portfolio the mighty lions and bulls of Nineveh,--the gigantic sphinxes of Egypt, the Apollo and Venuses of Grecian art, and all the statuary and sculpture which adorns the galleries and museums of civilized nations.<sup>376</sup>

As if in response to this suggestion, Claudet also photographed the sculpture exhibits in the Crystal Palace. The added illusion of depth provided by the stereoscope made the stereo-image conducive to documenting a more “realistic” view of a three-dimensional object. In *Venus at the Bath, Great Exhibition 1851*, the viewer is confronted with a brilliantly white statue of the goddess who, propped on a pedestal for display, seems to be suspended above the gallery [Figure 3:6]. She dominates the foreground and even appears to lean forward into the viewer’s space, while behind her the room reaches

---

<sup>375</sup> “Perspective in the Stereoscope.—Claudet’s Views of the Exhibition, and Statuette Portrait Groups,” *The Illustrated London News* 20, no. 542 (January 24, 1852): 77-78.

<sup>376</sup> Brewster, “Description,” (1849).

back, dynamically intersected with the dark iron structure of the stairway to the upper floors and, further back, rows of sculpture immersed in diffused light angling in through the glass. In others, just the statue or cast is captured in front of a dark cloth, as in *Reproduction of Sculpture at Great Exhibition 1851 (Female Nude Removing Thorn from Foot)*, now in the collection of the George Eastman House [Figure 3:7]. The surface of the statue is so contrasted against the deep black of the background that the figure also seems to hover more forcibly in the space of the foreground, her up-turned foot balancing outward toward the viewer like a dancer. In *Row of Statues, 1851 Exhibition*, the visitor/viewer confronts a line up of sculpture that can be virtually perused in the viewer as if walking hypnotically by them in the actual display [Figure 3:8]. Claudet chose to document several of the preserved animal specimens on exhibition, such as *Stuffed Bird from Great Exhibition 1851*, in which a stuffed bird is poised as if in flight [Figure 3:9].

Some of Claudet's stereo views of the Exhibition were sent to the Emperor of Russia in St. Petersburg. In response, as the letter accompanying the gift stated, the Russian leader sent Claudet a diamond ring for enabling the Emperor to view "the marvelous phenomenon of plane surfaces producing representations of objects in perfect relief" in order to form "a perfect idea of the Great Exhibition."<sup>377</sup> Claudet made a stereo-daguerreotype of the ring, looking directly down at its shimmering faceted surface [Figure 3:10]. In the stereoscope the ring is enlarged (as the photograph cropped closely around the object) and in three-dimensions seems to jut into the space of the viewer. A

---

<sup>377</sup> *La Lumière* 2, no. 16 (April 10, 1852): 64. "Ce present est accompagné d'une lettre très-flatteuse [*sic*] dans laquelle S.M. dit que, grace à ces épreuves et à l'admirable phénomène qui permet à l'oeil de voir en relief les surfaces planes, elle a pu se faire 'une idée parfaite de l'Exposition Universelle.'"

wood engraving of one of the stereo images of the ring was published in an 1852 issue of *The Illustrated London News* [Figure 3:11].<sup>378</sup>

The Great Exhibition marked the beginning of his production of three-dimensional imagery; thus Claudet was in many ways exploring the making of stereographs as much as he was documenting the objects he depicted.

When stereoscopic portraits of “live” sitters were first viewed by the general public and reviewed in journals, they were compared to sculpture. One writer for *The Athenaeum* wrote of the resulting image in terms of its three-dimensionality:

In [Wheatstone’s] stereoscope we survey two images viewed at the angle of reflexion converted into a *solid* body,—that is, a body conveying to the mind an impression of *length, breadth, and thickness*.<sup>379</sup>

The same writer continued to observe that the result of looking into a “binocular stereoscope” like that presented by Brewster and encountering a portrait made by Claudet was “a mimic of reality of the most deceptive character.”<sup>380</sup> When describing Claudet’s views of the Crystal Palace, the “deceptive” solidity of the image was mentioned again:

Every object represented in three dimensions, groups of figures, statues, &c.—which have been copied by the daguerreotype, but copied at slightly different angles, to correspond with the difference between the two eyes,—and which, when looked at under ordinary conditions, present mere flat pictures, correct in perspective and light and shade. They become in the stereoscope beautifully raised, in the highest relief, standing out from the surface as *perfect solids* to the deceived sense.<sup>381</sup>

---

<sup>378</sup> “Stereoscopic Daguerreotypes,” *The Illustrated London News*, no. 552 (April 3, 1852): 277.

<sup>379</sup> “The Stereoscope,” *The Athenaeum* no. 1260 (December 20, 1851): 1350.

<sup>380</sup> “The Stereoscope,” (1851): 1350.

<sup>381</sup> “The Stereoscope,” (1851): 1350.

From this point, Claudet began applying stereoscopic photography to his commercial portraits. Like surveying a row of sculptures, the writer (above) noted that it was “curious to survey a group of portraits in the stereoscope--each one standing apart from every other, and all exhibiting the rotundity of life.”<sup>382</sup>

By early 1852, Claudet was advertising from his 107 Regent Street studio that he could provide “Stereoscopic Daguerreotype Portraits” to his customers. “No words can convey an idea of the marvelous effect of these portraits; when examined with the stereoscope they are no longer flat pictures, but they appear solid and real tangible models, and when coloured they are life itself.”<sup>383</sup> Later, a reviewer in *The Critic* wrote that “[i]n fact the stereoscope gives us two eyes to see pictures of distant objects.”<sup>384</sup>

Having read of Claudet’s interest in creating correctly focused space between the different planes of the daguerreotype image, it is not surprising that he became one of the forerunners in experiments with stereographs. His research in photographic space was rooted in a belief that the photograph, with proper measurements and instruments, could be pushed as close as possible to the depiction of “real” space. In one of his most widely published texts, “The Stereoscope and its Photographic Applications,” Claudet wrote: “Photography alone can produce two images perfectly identical to the images on the two retinae; and if we can place them, so that the right perspective is seen only by the right eye, and the left perspective only the left eye, we have on each retina the same representation we had from looking at the natural objects.”<sup>385</sup> At the same time he

---

<sup>382</sup> “The Stereoscope,” (1851): 1350.

<sup>383</sup> “‘Stereoscopic Daguerreotype Portraits’; New address 107 Regent Street, Quadrant, near Vigo street,” *The Athenaeum* no. 1852 (January 3, 1852): 2.

<sup>384</sup> “Stereoscope,” *The Critic* 21, no. 528 (August, 1860): 208.

<sup>385</sup> Antoine Claudet, “The Stereoscope and Its Photographic Applications,” *Journal of the Society of Arts* 1 (1852-3), 97-100. This is a summary of a paper given on January 19, 1853 to the Society of Arts. It was

envisioned the possibility of manipulating the three-dimensional vision of the stereoscopic image to augment natural human vision. Space could be expanded and the depth of the image extended if the angles by which the photograph was taken was greater than that of human vision. “The double images within and beyond the point of vision are more separated than in the natural vision; and from these two exaggerated effects, we conclude or feel that the objects are more separated than they are in nature, and that the distance or relief is greater.”<sup>386</sup>

Several diagrams in which Claudet draws out the potentials of stereoscopic vision as well as how it related graphically to that of human vision are presently in the collection of the George Eastman House, Rochester, New York **[Figure 3:12]** **[Figure 3:13]**.

Perhaps one of Claudet’s best known stereographs, because it has been frequently reproduced, is *The Geography Lesson*.<sup>387</sup> **[Figure 3:14]** Set in Claudet’s Regent Street Victorian interior, a tutor appears to be showing a group of young pupils a particular spot

---

also translated into French as *Du Stereoscope et de ses applications à la photographie* (F. Colas, Paris: Lerebours & Secretan, 1853). “But they do not coincide in all their parts, any more than the natural images for their various planes; and, as in natural vision, we are obliged, in surveying the stereoscopic pictures, to alter the convergence of the optical axes, according to the various places they represent. The act of altering the convergence for the various planes, gives the sensation of distance of these planes; and during that convergence, the objects nearer or behind are felt double on the two retinae; the double images on the right of one eye, and on the left of the other indicate near distances; and on the left or right, indicate far distances. Therefore, in the Stereoscope we have the same sensation of solidity and distance as we have with two eyes.”

<sup>386</sup> Claudet, “The Stereoscope,” (1853): 97-100. The article is followed by remarks on binocular vision by M. Harding, Smee, and Claudet’s responses. Claudet’s historical summary of this period was contested by Henry Collen. A March 20, 1854 letter from Collen published in *Photographic Journal* (April 1854): 200 stated, “Sir,-I beg permission to address a few words to your readers in correction of an error into which Mr. Claudet has fallen regarding the period at which stereoscopic portraits were first made . . . In 1841, when I was one of the very few who undertook to make use of Mr. Talbot’s process, Mr. Wheatstone not only had the idea of making photographic portraits for the stereoscope, but at his request, and under his direction, in August of that year, I made a pair of stereoscopic portraits of Mr. Babbage, in whose possession they still remain; and if I remember rightly, Mr. Wheatstone had previously obtained some daguerreotype portraits from Mr. Beard for the stereoscope.”

<sup>387</sup> See Joan Schwartz, “The Geography Lesson: Photographs and the Construction of Imaginative Geographies,” *Journal of Historical Geography* 22, no. 1 (1996): 16-45. It is also reproduced as a full stereo-daguerreotype in Mary Warner Marien, *Photography: A Cultural History* (London: Laurence King, 2002), 63.

on the globe. The spherical globe forms the center of the image, while the teacher and students circle around it. A number of spatial excursions occur simultaneously in this image. Behind the globe is placed a mirror, adding further dimension to the image while, as if to accentuate the theme of geography, each child is arranged to look in a different direction. The lesson is posed and photographed in London, but includes a volume of the French *Excursions Daguerriennes* open to an engraving of the ancient “Temple Carré” at Nîmes. The teacher appears to be pointing to this same spot on the globe.<sup>388</sup> Space is also extended by the inclusion of a painted landscape behind a pair of glass doors at the back of the room. *The Geography Lesson* points to spaces beyond the studio—between England and France, Claudet’s adopted and native countries that were also two geographic locations crucial to photography’s first decades. Therefore, the mixture of props, spacing, and gaze creates the sensation of space expanding not only in the well-crafted three-dimensional world of the *Lesson* but beyond it to the world outside.

Claudet often used the repetition of forms in his stereographs to reinforce the sensation of three-dimensionality. This is evident in the tinted stereo-daguerreotype entitled *Self-Portrait with Son and Bird-cage* [Figure 3:15]. Claudet sits to the left, his body twisted sideways to look at the camera. He holds his black top hat at his hip while his elbow leans next to an open book on the table beside him. To the right a dog sits on a chaise and attentively looks off to the left. Behind Claudet, at the back of the scene, his son Francis stands on a “balcony” beyond an opened glass door, his left hand touching the gold-tinted wire of a birdcage that contains a (presumably stuffed) bird, similar to those used in the four focimeter pictures. Everything in the image is there to accentuate

---

<sup>388</sup> Noël-Marie-Paymal Lerebours, *Excursions daguerriennes*, Plate 14 of Vol. 1, 1841.

the experience of three-dimensionality, from Claudet's crossed legs, his polished shoe that rests on a footstool in the foreground, and voluminous top hat in the lower left corner to the arc of the bird cage at the back. Further, the arched volume of the birdcage repeats the shape of the arched mat of the two stereo images. This could also be seen, as I suggested previously, to be a reference to the Frenchman's past trade in glass shades that functioned like birdcages in the sense that they preserved a beautiful or valuable object inside. Moreover, the shape of the pair of the arch-matted daguerreotypes, now made three-dimensional in the stereoscope, could also refer to the glass shade, a space for looking only rather than touching.

A recurring object in Claudet's stereo-daguerreotypes is a mirror. In *Six Women and Mirror* a group of ladies are posed, three standing and three sitting, in a circular formation around a round wooden table, on which is placed the birdcage and a square mirror **[Figure 3:16]**. The mirror picks up the reflection of the back of one sitter's head as well as the wrist of the woman standing behind her who reaches to touch the top of the birdcage. When viewed through the stereoscope, the effect could equally be one of a momentary group gathering as well as a metaphorical birdcage, each woman a colorfully tinted exotic bird.

Although several of Claudet's stereo-daguerreotypes involved elaborate propping, as in a portrait of two identically-dressed sisters at a piano **[Figure 3:17]**, the more typical commercial stereo-daguerreotype portrait depicted usually one or two figures seated on one of his low-backed chaises. Claudet's studio produced thousands of commercial stereo-daguerreotypes. *Portrait of Woman in White Dress*, c. 1850s, exemplifies the typical stereo-daguerreotype portrait **[Figure 3:18]**. The client sits at the

center and gazes out, gracefully leaning one arm on the side of the chaise while the other arm rests in her lap. At her throat is a photographic miniature of a man, most likely her fiancée or husband, clasped in an oval frame. The stereo effect is most visible in her dress which, when seen through the viewing device, becomes a voluminous mass of ruffled white and lavender fabric that spills outward toward and into the viewer's space. As is typical of Claudet, her torso is also slightly twisted and the angular shape formed by her leaning arm accentuates the depth of both her figure and the furniture on which she is posed. Rather than a painted backdrop of a wallpapered wall and draped window, here the dynamic, wax-figure quality of the sitter is unobtrusively countered by a plain wall and single drape falling at the right.

Claudet mostly worked with daguerreotypes. However he did make several albumen stereo portraits. In one case, he made both daguerreotypes and albumen prints of the same customer [Figure 3:19]. The difference in viewing the metal and paper image is striking. One presents the sharpness and darker light of the daguerreotype while the paper version contains a lighter looking, sepia-toned figure that also appears to be less rounded.

Two months after “The Stereoscope and its Photographic Applications” was presented, Claudet applied for patent number 711, “Improvements in Stereoscopes,” dated March 23, 1853, and sealed six months later. The patent, as the author stated, had “for its object, firstly, the producing of pleasing and novel optical illusions.”<sup>389</sup> Claudet had designed his own stereoscope, based on Brewster's. The difference is that Claudet's eyepieces are each attached to separate “arms” while Brewster's is more of a box construction. It included the patent for a leather case that contained the double

---

<sup>389</sup> Claudet, Improvements in Stereoscopes, British Patent 711, March 23, 1853.

daguerreotype as well as a viewer folded inside. Once the case was opened, the viewer could be extended to look at the daguerreotype it had traveled with. An example of this is the case and image of *Two Men Playing Chess, Woman Standing* [Figure 3:20]. Framed in Claudet's Regent Street studio setting, two men sit on either side of a chessboard, one making a move, the other contemplating his next, while a woman stands behind them. Again sitters gaze in different directions, while the game board comes to life in three-dimensions and the polished black shoe of the left-hand player pokes forward as it rests on an upholstered footstool at the lower edge (a common trope in Claudet's stereographs).

The chess game was a popular subject for many artists and particularly for Claudet's photography in both daguerreotype and paper processes (see Chapter One). Another stereo-daguerreotype example of the chess game is *The Chess Players*, c. 1853 [Figure 3:21]. In this image, the chess game, at the center, is one of several activities being displayed. A group of six young boys of various ages sit around the game, two are playing while two others look on. The construction is again a circular one, echoed as well in the globe propped behind the chess game, around which two boys gather, one studiously holding an open book while he points to a location on the globe. At the lower foreground an upturned riding top hat rests on a footstool and a cricket bat leans in against it. Various activities that young boys of a certain class were engaged in during the Victorian era are combined in one stereoscopic view, itself a kind of optical sport.<sup>390</sup>

---

<sup>390</sup> See "Stereoscopometer / Manifold Binocular Camera," *Humphrey's Journal* 4, no. 13 (Oct. 15, 1852): 204. The folding stereoscope was similar to other portable viewers developed by Claudet's commercial neighbors on Regent Street, including William Edward Kilburn who opened his portrait studio in 1846, and John Jabez Edwin Mayall, who, also in 1846, returned to London after an extended time in Philadelphia as a portrait photographer. Examples of work by these competitors will be discussed in Chapter Four.

### *The Phenomena of Relief*

A paper such as “On Various Phenomena of Refraction through Semi-lenses or Prisms, Producing Anomalies in the Illusion of Stereoscopic Images,” received by the Royal Society in April of 1856, reveals to what extent Claudet was aiming to achieve a perfected stereographic image. Claudet discussed the observation that flat surfaces in the stereoscope often appear concave or convex, rather than flat. In order to correct this “defect,” which Claudet attributed to the fact that the “semi-lenses” used in the Brewster stereoscope (a lens was split into two halves and each took the view of one eye) caused a convergence that accentuated this concavity. He suggested constructing a stereoscope using two full lenses through which the eyes look at the center. He also suggested that the taking of the two images by the two cameras could be done with semi-lenses that countered the direction of the two semi lenses of the stereoscope.<sup>391</sup> Another experiment the following year investigated the “phenomena” that the image on the ground glass of the camera obscura looked to be just as much in relief as the actual objects. He ascribed this to the fact that the glass (unlike a paper surface) acted like a prism or lens itself and therefore retrieved the angles of light through the lens in its multiple refractions, whereas a plain piece of paper would not.<sup>392</sup>

An exchange between Claudet and Brewster on the French photographer’s paper on the “Phenomena of Relief” is revealing of the fact that his experiments were not always met with unanimous approval from the science community. An 1857 paper presented by David Brewster to the Photographic Society of Scotland, “On the Optics of

---

<sup>391</sup> Antoine Claudet, “On Various Phenomena of Refraction Through Semi-lenses or Prisms, Producing Anomalies in the Illusion of Stereoscopic Images,” *Proceedings of the Royal Society of London* 8 (1856-1857): 104-110.

<sup>392</sup> Antoine Claudet, “On the Phenomenon of Relief of the Image Formed on the Ground Glass of the Camera Obscura,” *Proceedings of the Royal Society of London* 8 (1856-1857): 569-572.

Photography,” published in the November issue of the *Journal* roused Claudet from a holiday in France.<sup>393</sup> Brewster’s paper questioned some of the principles of Claudet’s “On the Phenomena of Relief of the Image of the Camera Obscura,” submitted to the Royal Society in June of that year. The Frenchman replied via the journal, and hoped to “prove to Sir D. Brewster, and the scientific world, that my paper does not contain any sophistical propositions, and is in conformity with the true principles of optics.”<sup>394</sup> He also defended the new stereoscope proposed in the paper as “only founded on theory, and merely a speculative idea; although I have not yet had the leisure of constructing it, I still hope to succeed.” Whether he succeeded or not, Claudet pointed out, it would be a useful experiment.<sup>395</sup>

By the following year, Claudet’s researches on the relief seen in the ground glass had led to another instrument related to photographic binocular vision, the “Stereomonoscope.”<sup>396</sup> In a paper presented to the Royal Society, which alluded to the fact that he also presented a prototype of the instrument, Claudet described the new kind of stereoscope as a camera obscura with two lenses. In front of the lenses were mounted

---

<sup>393</sup> Antoine Claudet, “To the Editor of the Photographic Journal. Château de La Roche, near Amboise. December 8, 1857,” *Journal of the Photographic Society* (December 21, 1857): 124-126. This is in response to Brewster, “On the Optics of Photography, But Particularly on the Character of the Images Formed Upon Opaque and Transparent Surfaces,” *Photographic Journal* (November 21, 1857): 83-6.

<sup>394</sup> Claudet, “To the Editor,” (1857): 124-126.

<sup>395</sup> Claudet, “To the Editor,” (1857): 126. “Whether I succeed or not in completing this instrument, does not in the least degree affect the truth of *the phaenomenon of relief of the image of the ground glass of the camera obscura*, which is the main and essential point of my paper, and which it is not possible to deny. *E pur si muove!*” His rebuttal was sandwiched between Niépce de St. Victor’s “Memoir on a New Action of Light,” submitted in France, and a letter from “T. Grubb” in Dublin, “Proposing standard rules for the Dimensions of Lenses.”

<sup>396</sup> In 1858, Claudet submitted papers on a range of research to the Society’s journal, including the foci of lenses and their variation, the “Stereomonoscope,” and the “Monostereoscope” among others. See Claudet, “On the Variation of the Foci of Lenses,” *Journal of the Photographic Society* 2, 2 (January 15, 1858): 24-5; Claudet, “The Stereomonoscope,” 2, no. 9 (May 1, 1858): 114-115; Claudet, “The Monostereoscope,” 2, no. 14 (July 15, 1858): 179; Claudet, “On the Stereomonoscope, a New Instrument by Which an *Apparently* Single Picture Produces the Stereoscopic Illusion,” (November 22, 1858): 78-9; Claudet, “On the Stereomonoscope, a New Instrument by Which an *Apparently* Single Picture Produces the Stereoscopic Illusion,” *The Philosophical Magazine and Journal of Science* 16, no. 109 (December 1858): 462-3.

two images and both lenses and the images could be moved horizontally by a sliding frame. A singular stereoscopic image was then projected on the ground glass of the camera obscura where the viewer's attention would be turned. Although he admitted that the instrument was still in a rough state, Claudet stated that he was presenting it "as the result of a first attempt, hoping that it will be found curious as illustrating a new and interesting scientific fact and producing an effect quite unexpected in optics."<sup>397</sup>

Claudet was involved with both the making of stereographic images as well as theoretical and scientific experimentation on how they should be made, perfected, and viewed. Thus in addition to the commercial profit from these types of portraits, many consumed by the upper class, Claudet also made diagrammed studies of his stereoscopic experiments to show the way that a set of eyes captured three-dimensional images. We have looked at two such drawings diagramming the relationship between human vision and camera vision. He also made diagrams that showed the way that the stereoscope captured three-dimensional images. Some of these can be found on the margins of papers sent to the French Académie des sciences and several were published in 1867, in a paper Claudet titled "Physiology of Binocular Vision, Stereoscopic and Pseudoscopic Illusions."<sup>398</sup>

### ***Photosculpture, Claudet and François Willème***

The basis for the naming of the stereoscope by Brewster, "Stereopsis," combines the ancient Greek "stereo," or "solid," and "opsis," or "sight." Thus the word describes

---

<sup>397</sup> Claudet, "On the Stereomonoscope," (December 1858): 463.

<sup>398</sup> Antoine Claudet, "Physiology of Binocular Vision, Stereoscopic and Pseudoscopic Illusions," *The Art-Journal* (February 1867): 49-51; Continued in *The Art-Journal* (March 1867): 73-5.

what early viewers felt the viewer gave them: “solid sight.” The vision of solidity within the stereoscope could also be discussed in relation to another enterprise that Claudet was involved with: “photosculpture.” The use of photographs to make three-dimensional sculptures, “photosculpture” was invented in 1859 and introduced to the Société Française de Photographie by François Willème in 1861.

Robert Sobieszek points out that there were in fact two photosculpture processes devised by Willème. The earlier one, invented in 1859, was called “mechanical sculpture.”<sup>399</sup> An example of this form is presently in the collection of the George Eastman House, Rochester, NY, and is a bust of a woman made up of one hundred pieces of shaped wood. “Mechanical Sculpture,” which was envisioned to produce multiple busts or casts from which portrait busts could be made on a far faster or larger scale than previously achieved, was never implemented. The second form, “photosculpture” was put into practice in 1863 after Willème had taken out two patents on the process. The process involved taking sequential photographs of a sitter in the round and then transferring the images by pantograph onto a block or surface that could then be traced and cut into a three-dimensional figurine. The profiles were later smoothed into a seamless whole and individual physiological details were added and adjusted. Whereas the stereo-daguerreotype carved out space within the image to create three-dimensional “busts” of his sitters, the Photosculpture process used the photographic image to carve the bust out of an actual block of wood or clay.<sup>400</sup> Photosculpture was also commented on in the

---

<sup>399</sup> Robert A. Sobieszek, “Sculpture as the Sum of Its Profiles: François Willème and Photosculpture in France, 1859-1868,” *The Art Bulletin* 62, no. 4 (December, 1980): 617-630.

<sup>400</sup> See Beaumont Newhall, “Photosculpture,” *Image* 7, no. 5 (May 1958): 100-105. Also see Philippe Sorel, “Photosculpture: The Fortunes of a Sculptural Process Based on Photography,” in François Reynaud ed., *Paris in 3D* (Paris: Paris Musées and Booth-Clibborn Editions, 2000), 80-89.

French photographic community. Lacan is recorded as stating that the photosculpture had “the immense advantage of true resemblance.”<sup>401</sup>

Between 1860 and 1863, Willème formed the “Société Générale de Photosculpture de France,” and opened a studio in Paris for production. In 1865, Claudet, who had visited Willème in November of 1863, took out a British patent for the process, calling it “plastimonographe.”<sup>402</sup> At this time, Claudet began a partnership with the Société Générale de Photosculpture in which he would send his glass negatives and the French company would send back sculptures. Claudet had taken portraits of David Brewster, Charles Eastlake, and Charles Lyell for this purpose. In fact Brewster was to head the company while Claudet was to run the art department as director at 600 pounds per year. The expected capital was 50,000 pounds.<sup>403</sup> In 1864, he founded a similar society in London named the “International Photosculpture Co. Ltd.” Claudet proposed some changes to Willème’s invention, including projecting the profile images directly onto the clay, or onto a vapor in front of the clay, which would get rid of the need for the cumbersome pantograph. He also devised the addition of a horizontal bar holding a carving tool that could be moved onto the block according to the projected image.<sup>404</sup>

While there is photographic documentation of Willème’s system (at the George Eastman House), Claudet’s experiments with the Photosculpture process remain only in

---

<sup>401</sup> “La photosculpture a l’immense avantage de la ressemblance vraie.” Ernest Lacan, “Exposition photographique,” *La revue photographique* 8 (1863): 144, in Jean-Luc Gall, “Photo/sculpture,” *Études photographiques* 3 (Novembre 1997), <http://etudesphotographiques.revues.org/index95.html> (accessed March 12, 2010).

<sup>402</sup> Claudet, Improvements to Photosculpture, British Patent 3207, June 1865.

<sup>403</sup> Sobieszek, 626. None of these glass negatives are known to be extant.

<sup>404</sup> Sobieszek, 626. See Claudet, “Photo-Sculpture,” *The British Journal of Photography* 11 (September 23, 1864): 366. His paper to the London Photographic Society is also published in “Photo-Sculpture,” *The Art Journal* (May 1864): 141. Also see “Editor’s Table: Photosculpture,” *Philadelphia Photographer* (August 1864): 127 and *Photographic Journal* (October 15, 1864): 122.

his drawings [Figure 3:22-23]. As he could never develop a practical and efficient process to mass-produce the sculptures which would make the business profitable enough to pursue, Claudet's "International Photosculpture Co. Ltd." eventually dissipated and Claudet, just a few years before his untimely death, let the patent go.

### *Moving Images*

Toward the end of his career Claudet was interested in producing moving photographic images far in advance of the official invention of film. Claudet applied for patent number 711, "Improvements in Stereoscopes," on March 23, 1853, and it was sealed six months later. The patent, as the author stated, had "for its object, firstly, the producing of pleasing and novel optical illusions."<sup>405</sup> It included incorporating a slightly different kind of stereographic image that necessitated the use of a "moving slide of the eye piece." Rather than two still images of the exact same scene at slightly divergent angles (as in an ordinary stereograph), Claudet's new stereoscope depicted two different moments of a singular gesture:

Another improvement . . . consists in the adaptation to the eye pieces of a sliding piece, which has holes or apertures made therein, and so arranged that first one eye piece and then the other may be closed. The pictures, instead of being made simply stereoscopic in the well-known manner, are made so as to shew various actions; for instance, to represent a man taking off and putting on his hat, one picture must be made with the hat on, and the other with the hat off and in the hand. Upon observing the two pictures together in the stereoscope, and moving the slide of the eye pieces backwards and forwards, the figure will appear as if he were taking off his hat. A variety of other

---

<sup>405</sup> Claudet, *Improvements in Stereoscopes*, March 23, 1853, sealed May 20, 1853.

illusions of moving figures, as dancing figures, athleoe  
[sic], boxing matches, &c. may be made.<sup>406</sup>

Rather than include several stages of movement, Claudet pointed out that, because of the property of persistence of vision, all that was needed was the beginning of the action and the end of it. By sliding the eyepiece back and forth continuously, the depicted gesture would perpetuate as long as the device was moved. Further, because the photograph would also be constructed as a stereograph, the figure also moved in three-dimensions.

The only known surviving example of this type of stereo-daguerreotype is a self-portrait of Claudet smoking a cigar. In the left image, Claudet holds the cigar slightly away from his face while in the right image he brings it to his lips. I was able to view this stereo in person, although not with the sliding eyepiece. Looking at it stereoscopically, with my own eyes, however, because the stereo has been well preserved and is in good condition, I could glean a sense of what the result would have looked like. Claudet is depicted from the waist up, dressed in dark jacket and waistcoat with white collar and shirt and a black top hat. The backdrop is a plain solid, and so the relief of his figure is more pronounced. As the eyepiece was shifted, Claudet's arm would move to and from his face, somewhat like the shifting movement of a hologram. As long as the eyepiece was moved back and forth, Claudet would appear to continue to smoke "naturally" (or as close as possible in a photograph at the time) and three-dimensionally in "real space" before the viewer.

I was able to view three "Two-Image Stroboscopic slides" in a private collection in Paris attributed to Claudet. They are described as hand-colored paper illustrations

---

<sup>406</sup> Claudet, *Improvements in Stereoscopes*, 2.

stretched over wood frames that measure slightly smaller than the size of a Claudet stereo-daguerreotype. The images depicted are a scene in a blacksmith's shop, a stonemason sawing a block of stone, and a fencing match between two gentlemen [Figure 3:24].<sup>407</sup> They are paper stereo-images in a similar format as Claudet's smoking daguerreotype.

When seen consecutively, the four stereo-daguerreotypes titled *Self Portrait with Son Francis*, c. 1853, particularly in the movement of Francis's gestures, would have appeared as a slowly moving scene in a (what we now understand as) film. One of the devices that Claudet developed to enable the viewing of several such stereo-daguerreotypes consecutively was what the English photo-historian Arthur Gill later named the "endless band stereoscope."<sup>408</sup> Although Gill noted that it was probably never constructed, Claudet did include in his stereoscope patent an idea for a viewer that combined both the sliding eyepiece and the rotating series of stereographs. His "Revolving Stereoscope," a large, table-top wood viewer elaborately decorated with inlaid shell and ivory, was exhibited at the 1855 Paris Exhibition [Figure 3:25]. When turned, the series of images, like film moving through a motion picture camera, would appear to the viewer as a duration of three-dimensional gestures.

An increased effect and great variety will be produced by combining a number of pictures together in the form of a cross, so arranged as to exhibit two pictures only together. Two series of pictures arranged in crosses must be employed, and the crosses so made are mounted on centres in the body of the stereoscope, and are actuated by the moving slide of the eye piece, which by means of a lever and click and ratchet wheels, will cause the crosses to turn

---

<sup>407</sup> They are reproduced in Christie's South Kensington, "The Ganz Collection of Magic Lanterns, Optical Toys & Pre-Cinema, Sale no. 5142, Lot 61 (January 22, 2007).

<sup>408</sup> See Gill, "Early Stereoscopes," (1969).

alternately, and present pictures of different figures, or the same figure in different positions. The moving parts may be actuated by clockwork, or other self-acting mechanism, so that the different changes in the attitude of the figures will take place without the assistance of the observer.<sup>409</sup>

As he would with stereography in general, Claudet saw photography as the most conducive medium for creating moving pictures that look like the natural version of an action. “[I]f a sufficient number of pictures represent that object in the various consecutive positions it has assumed during several stages of its motion, we experience on the retina the same sensation we have when we see the object itself while it is moving.”<sup>410</sup> This was stated in a paper presented in 1865 on “Moving Photographic Figures” to the meeting of the British Association for the Advancement of Science in Birmingham, a yearly gathering that brought scientists together to address and account for progress in science up to that point. In it Claudet summarized the developments of stereography in order to predict a future move toward moving images.

From the beginning of photography it must have struck many of those who were acquainted with the phenomenon illustrated by the phenakistoscope invented by Plateau, that photography could produce with advantage the series of pictures used in that instrument, on account of their possessing a greater degree of accuracy than when made by hand. At a later period, when the stereoscope had become popular from its application to photography, there must have been a still stronger incitement to make use of that process to produce binocular pictures for the

---

<sup>409</sup> Claudet, *Improvements in Stereoscopes*, 2. In a later version of this patent, dated September 23, 1853, the use of a kind of self-actuated “clockwork” of a lever attached to the moving slide was replaced by a “coiled spring.” “An increased effect and great variety will be produced by combining a number of pictures together in the form of a cross, so arranged as to exhibit alternately under each eye from different positions, so that the observer may, in succession, see eight different pictures, all in different attitudes . . . The two series of pictures arranged in crosses must be employed, and the crosses are mounted on centres in the body of the stereoscope, and are actuated by a coiled spring, which must be wound up occasionally for that purpose.” Claudet continues by explaining in detail how the device worked and included illustrations.

<sup>410</sup> Claudet, “On the Moving Photographic Figures, Illustrating Some Phenomena of Vision Connected with the Combination of the Stereoscope and the Phenakistoscope by Means of Photography,” *The Photographic Journal* (September 15, 1865): 143-145.

phenakistoscope, in order to combine the stereoscopic effect with the illusion of moving figures elicited in the phenakistoscope.<sup>411</sup>

The Phenakistoscope, presented in 1832 by the Belgian Joseph Plateau (1801-1883), was one of a series of optical toys that had developed in Europe in the nineteenth century. The device was a cylindrical instrument on a stand that had equally distanced slits around its side. The inside of the cylinder was lined with pictures depicting a series of movements—a dog running, a girl dancing. As the instrument was spun, the viewer looked through one of the slits and would observe the figure represented as if singular and moving before his or her eyes on the opposite side of the device’s interior. In his paper presented to the British Association, one of two papers presented on photography, Claudet included a summary of events leading up to his current research on the subject. He mentioned the pioneering work of Duboscq-Soleil, “the eminent optician of Paris,” with the incorporation of photographic images to the Phenakistoscope which had been exhibited at the Great Exhibition. For this submission Duboscq-Soleil also collaborated with Brewster.<sup>412</sup> The French optician was also experimenting with a similar apparatus at the end of 1852. He apparently sent pieces of his apparatus to Claudet in November of

---

<sup>411</sup> Claudet, “On the Moving Photographic Figures,” (1865). The article was also see: Antoine Claudet, “On the Moving Photographic Figures,” *Philosophical Magazine and Journal of Science* 30, no. 203 (October 1865): 271-276; Antoine Claudet, “Correspondence: Photography and the Phenakistoscope,” *The Photographic Journal* 12, no. 282 (September 29, 1865): 504-505. In 1867, Claudet presented a paper discussing the Victorian optical toy the Thaumatrope as another way in which to decipher more qualities of binocular vision, particularly its ability to decipher distances between objects, even infinitesimal ones. Antoine Claudet, “A New Fact Relating to Binocular Vision,” *Proceedings of the Royal Society of London* 15 (1866-1867): 424-429.

<sup>412</sup> Antoine Claudet, “On Moving Photographic Images,” *Photographic Journal* (September 15, 1860): 144. Claudet mentioned his own research undertaken shortly after that of his fellow Frenchman, Duboscq-Soleil, and explained that since he did not reach a satisfactory point in his pursuit to combine motion and relief, he did not publish it. He brought it to the attention of the British Association in 1865 in order to both let the scientific community know about his work and the research he intended to keep pursuing while also allowing that if he did not “succeed in solving the whole problem, [it] will at all events, perhaps call the attention of others to the subject, and induce them to try their hands and brains at its solution.”

1852.<sup>413</sup> This correspondence reveals Claudet's prior work on such an apparatus. Gill describes a further elaboration of this device (also mentioned in the patent) in which a series of pictures are placed "on the flats of two four-bladed paddle wheels which . . . rotated to bring the succeeding pictures in turn under one or other of the apertures."<sup>414</sup>

Though still a preliminary step, such studies occurred over two decades prior to the actual execution of moving pictures by Muybridge and Marey and, at the end of the century, the invention of cinema.

As before, Claudet presented his instrument as a scientific find. In describing the succession from the stereoscope to moving images, he asked, "[h]ow is it possible to be short when one principle of science irresistibly leads us to another?"<sup>415</sup> A letter that Claudet sent to the editor of *The Photographic Journal*, "On Stereoscopic Phenakistoscropy," was claimed as "a model of what letters in the polemics of science should be" without using words that might be received as offensive to others. "He shows that he is more interested in what others have done towards elucidating the question in hand than in magnifying his own earlier discovery and establishing his own originality."<sup>416</sup> While it described his own discoveries in the persistence of vision in relation to photography, is also conveyed, as the editor wrote, "how the same idea may occur independently and originally to a number of minds at different periods."<sup>417</sup>

---

<sup>413</sup> Arthur Gill, "The First Movie?" *The Photographic Journal* 109, no. 1 (1969): 26-29. This is documented in a letter (re-published in *The Photographic Journal* in 1865) dated 1852 in which the optician asks if he might compare it with his own device.

<sup>414</sup> Gill, "The First Movie?" (1969): 27. The author also lists some paddle-wheel types of devices introduced after Claudet's patent by Henry Mayhew in 1859, William Thomas Shaw in 1861, and Sir Charles Wheatstone.

<sup>415</sup> Claudet, "On Moving Photographic Images," (1860): 145.

<sup>416</sup> Antoine Claudet, "On Stereoscopic Phenakistoscropy," *The Photographic Journal* no. 163 (November 16, 1865): 189-190.

<sup>417</sup> Claudet, "On Stereoscopic Phenakistoscropy," (1865): 189-190.

Claudet often came to the defense of his colleagues. Responding to a correspondence published in the October 1865 issue in which Henry Mayhew claimed that he had also worked on this problem, Claudet explained the reason for the focus of his paper on Duboscq-Soleil's 1852 stereoscopic experiments. It was not because his French colleague was the only photographer working on applying the stereoscope to the phenakistoscope, but because it was the only published account that he was aware of. It also corresponded to the same year in which Claudet himself had been working on a similar instrument and, on Duboscq-Soleil's suggestion, the two sent each other examples of their devices to compare.<sup>418</sup> True to the editor's praise of his letter, Claudet concluded this reply to Mayhew with an encouraging tone towards one of Mayhew's ideas—that of simulating a moving landscape, such as the view out the window of a moving train—which could be claimed as “entirely original.” He ended with the positive, progressive message that he hoped that “Mr. Mayhew's idea on that subject will not be abandoned by him, and at the same time will be taken up by others, in order that what can be done to produce this new and curious illusion may be fairly tried.”<sup>419</sup> Therefore, Claudet's remarkably prescient exploration in three-dimensional photographic space combined with

---

<sup>418</sup> “M. Duboscq's apparatus was constructed and published in the last part of the year 1852, and my own was completed about the same time. These two facts are related in a letter of M. Duboscq, dated Paris, the 8<sup>th</sup> of November, 1852, in which, after having informed me he had just forwarded his new apparatus, he requested me to send him mine, in order that he might be able to compare it with his own.” Claudet, “On Stereoscopic Phenakistoscropy,” (1865): 189. Claudet pointed out that Mayhew's work came significantly later – seven years – but includes that “it is never too late to bring to light inventions made towards the solution of an interesting problem.” He wrote that he would be very interested to see his work at the next Photographic Society meeting as he admitted he had not yet perfected his own apparatus, particularly the changing of the pictures smoothly enough to not cause confusion in the viewer. “For it is absolutely necessary that one picture should, as it were, dissolve instantly into the next without the substitution or change being in the slightest way noticed by the observer, or else the effect would be spoiled and the whole illusion destroyed.” He acknowledges, perhaps not without a bit of accusation, wonderment at the fact that Mayhew had attempted the same subjects for his experiments, including the “act of bowing, taking off a hat, and bending the body, and that of a young lady kissing her hand to the spectator” that Claudet had also devised for his experiments. “I am sure Mr. Mayhew did not copy my idea; and if I relate the fact, it is merely to give another instance of strange coincidences so frequent in the general run of inventions.”

<sup>419</sup> Claudet, “On Stereoscopic Phenakistoscropy,” (1865): 190.

an image in making that space *move* was developed in a connective way, through correspondence and scientific presentation with others working on the same concept. Claudet embraced his connective role as a photographer and scientist corresponding with, and relying on, others, in order to solve the puzzles of the medium. In fact, Claudet seemed to work under the premise that connectivity was the only process by which photography could be adequately explored and understood.

## **Chapter Four: “Art”**

While arguing for photography’s scientific potential and measuring its technical “principles,” Claudet also asked what connection the new medium might have to the fine arts. By the 1860s, this was one of the most highly contested questions the medium had provoked since its invention. This chapter examines this question through Claudet’s visual and written dialogues with the photographic communities, particularly in Britain. Whereas Claudet could, via already established commercial avenues and scientific experiments, determine the business potential and the optical principles of photography, its possibility as an art form was less straightforward. Yet, as this chapter discusses, there were many reasons for photographers, including Claudet, to define the relationship between photography and art. Further, an exploration into this complex relationship makes possible a fuller understanding of this period in the medium’s history as well as of the medium itself.

First, I briefly discuss the broader high art context in Britain and France in the mid nineteenth century, and the shifts that were occurring in it, if only to sketch out the backdrop against which Claudet’s portrait daguerreotypes appeared. I also discuss the portrait daguerreotype product in relation to the painting tradition it was initially deemed closest to—that of the miniature. I compare a range of daguerreotypes I encountered in my research to portrait miniatures and portrait paintings produced in Britain prior to and contemporary with the daguerreotype. This allows for a consideration as to how the “daguerreotype miniature” both differed from and maintained previous portrait practices,

particularly in Britain. When Claudet moved to his studio on Regent Street, he moved into an expanding commercial photography community. I compare Claudet's work from this period to that of three other studios on this Street—those of William Edward Kilburn, John Jabez Edwin Mayall, and T. R. Williams. The “visual dialogues” between these studios will help to determine some characteristics of portrait daguerreotypes produced in London in the 1850s and early 1860s.

In describing the formal aspects of Claudet's daguerreotypes and those of his contemporaries, this chapter could follow the format of a traditional art historical monograph by dividing Claudet's work into categories of aesthetic progress, from less developed to more fully developed.<sup>420</sup> However, as the question of photography's relationship to high art (i.e. painting), particularly in these earlier decades, was less clear than its relationship to other disciplines, it necessitates a more complex approach that looks beyond stylistic or formal improvement. It calls for a discussion of the values associated with fine art and photography's perceived associations or disassociations with those values. Therefore, comparisons of Claudet's portraits will be looked at in light of the written dialogues being enacted around them. The second part of the chapter examines the arguments generated by the broader photography community in response to the planning of the 1862 Great Exhibition. I then focus on the exchange between Claudet and Camille Silvy, a fellow Frenchman and photographic portraitist in London (though of a younger generation), as to photography's status as a fine art. In this case study, I look at Claudet and Silvy's dialogue in order to determine how, if at all, these published arguments are borne out in the photographs themselves. By gathering both visual and

---

<sup>420</sup> This is the structure of Linda Sevey's informative MA thesis, “The Question of Style in Daguerreotype and Calotype Portraits by Antoine Claudet,” Rochester Institute of Technology, 1977.

conceptual data via the figure of Claudet, a more multi-faceted understanding of the issues surrounding the question of photography and art is possible. I argue that in order to understand more fully what Claudet's art could be, indeed what *photography's* art could be, we need to more accurately trace this photographer's dialogues with fine art in general at this time.

### ***“Art”***

Before drawing conclusions about what Claudet meant when he used the word “art” in referring to photography, I will first examine some of the possible connections that the words “art” and “artist” had at the time. This is inevitably a complex question and I deal with it in a very limited way in order to establish the general context in which Claudet was using the term. In his book *The Making of English Photography*, Steve Edwards writes that before 1861, the words “photographic art” and “art” referred to “the mechanical arts and trades, not to ‘Art.’”<sup>421</sup> Further, he claims that the deployment of descriptive terms such as “‘artistic,’ ‘art culture,’ ‘art refinement,’” meant that photographers could “learn taste from fine art without becoming artists or even ‘art-photographers.’”<sup>422</sup> It was only in the early 1860s that photographers began arguing that they should be considered “artists.” This context will be discussed in relation to Claudet's use of the term “art.” However, I also want to look briefly at the “fine artist's” (i.e. painter's) side in this context as that figure was also changing in Britain and in France during this period.

---

<sup>421</sup> Steve Edwards, *The Making of English Photography: Allegories* (University Park, PA: The Pennsylvania State University Press, 2006), 157.

<sup>422</sup> Edwards, *The Making of English Photography*, 157.

In *Burning with Desire*, Geoffrey Batchen discusses the philosophical, scientific, and artistic atmosphere in Britain in the decades prior to photography's invention.<sup>423</sup> One of the main artists focused on is John Constable (1776-1837), whose sketches "from nature" recording cloud formations, changes in the sky, and their effect on the landscape of his native Suffolk were part of a contemporary shift in focus, in art and in science, from the heavens to the earth, from intangible forces to tangible, observable natural facts. Constable would have a great influence on French painters, such as Eugène Delacroix (1798-1863). Around the same time, the portrait painter Thomas Lawrence (1769-1830) was the President of the Royal Academy (founded in 1768) from 1820 to 1830. His portrait paintings, influenced by his predecessors Gainsborough and Reynolds, established the more present tense, realistic portrait style that Claudet's daguerreotypes would later adopt. In the 1830s and 1840s, J. M. W. Turner (1775-1851), who gained entrance into the London Academy in 1790, was constructing paintings based on more recent events in addition to historical, mythological and biblical subjects.<sup>424</sup> Turner was also interested in the study of light, color, and optics that was capturing the interests of scientists of the day.<sup>425</sup> In the late 1840s, the Pre-Raphaelite Brotherhood formed, and contested both the Academic style of Reynolds and Mannerist, Raphael-inspired painting for more archaic, simplified subjects. Charles Lock Eastlake (1793-1865) would act as the first Keeper of the National Gallery in 1843 (while Claudet was running his studio

---

<sup>423</sup> Geoffrey Batchen, *Burning with Desire: The Conception of Photography* (Cambridge, MA: MIT Press, 1997).

<sup>424</sup> For example, J. M. W. Turner, *Burning of Parliament*, 1835; J. M. W. Turner, *The Fighting Temeraire, Tugged to Her Last Birth to Be Broken Up*, 1839; J. M. W. Turner, *The Slave Ship, Slavers Throwing Overboard the Dead and Dying – Typhoon Coming On*, 1840; J. M. W. Turner, *Rain, Steam, and Speed*, 1844.

<sup>425</sup> This interest is also evidenced in his painting *Light and Colour (Goethe's Theory)*, *Morning After the Deluge*, c. 1843, Collection of Tate Britain, London.

nearby) and then was made President of the Royal Academy from 1850-1865. Eastlake attacked the work of the Pre-Raphaelites and supported photography, so much so that he became the first President of the Photographic Society in 1853. He also served as the Director of the new National Gallery while Claudet was producing stereo-daguerreotypes on Regent Street and taking part in the debates around photography and art.

Meanwhile in Claudet's native France, the fine arts institutions (namely the Académie des Beaux-Arts, founded in 1648, over a century prior to the Royal Academy) were undergoing their own interrogations and revolutions. Indeed, if one looks at the same decades encompassing Claudet's career—the late 1830s to the late 1860s—in painting's history, remarkable shifts were occurring. Realism, as embodied for example in the work of its most famous painter Gustave Courbet, was rejecting the idealized studio portrait, as well as history painting, for a more direct look at the everyday. Shortly after the time that Claudet was corresponding with Camille Silvy in London, Édouard Manet's (1832-1883) pictures of modern life were being rejected by the Salon in Paris. In 1867, the year of Claudet's death in London, Monet was beginning to get recognition for his paintings and would take a brief refuge in London in 1870 (where he encountered the work of Constable). True to what would soon be a tenet of Impressionism, in London Monet continued his direct painting of nature's changes as they occurred before the eyes, as in the repeated studies of the Houses of Parliament and other vistas over the Thames.

All of this is to say that during Claudet's development as a photographer, the fine arts were being questioned and influenced by varieties of Realism and Naturalism and the term "artist" was similarly changing in definition and image. However, this background also throws into relief what was *not* occurring in the commercial photography realm.

Claudet and other daguerreotypists continued to adhere to a more academic approach to portraiture that conjured a certain stable status in the eyes of their clients. We will see that this was also a way to gain respectability as a profession. This effort will form the context of Claudet's dialogues in 1860-1862.

***“Paintings-in-little”***

Within this broader context of shifts within the Academies in both Britain and France, Claudet's daguerreotype portraits were also produced in response to a particular painting tradition—the portrait miniature. Rather than the large canvases by Reynolds, the miniature was the art form to which the photographic portrait was first compared. The daguerreotype portrait borrowed many of the poses, cropping, and eventually props and coloring, from the tradition of the painted miniature. Although miniatures were produced throughout Europe, in Britain miniature painting was regarded as a class of its own and praised as a unique art distinct from any other.<sup>426</sup> The art became synonymous with the term “Limning,” which derived, like “Illumination,” from the Latin term *luminare* or, “to give light.”<sup>427</sup> Like early photographers, sixteenth-century British limners were often transplants from vocations other than painting. Beginning in the late sixteenth century and continuing through the nineteenth, a technical discourse developed around limning in the form of numerous instruction manuals and books. Most manuals were organized in similar ways—beginning with preparing the materials for the portrait—the ground, the

---

<sup>426</sup> Graham Reynolds, in *British Portrait Miniatures* (Cambridge: Cambridge University Press, 1998), 167, also makes a strong nationalistic statement about British miniature painting: “Foreign artists might practice their art here and settle in the country, but they had little influence on the style of painting adopted by English miniaturists or favoured by English patrons. This self-sufficient momentum of the national school prevented it from reflecting any of the realistic portraiture of the school of David, which had a strengthening effect on the miniaturists of France, of Germany and on the Continent generally.”

<sup>427</sup> See Katherine Coombs, *The Portrait Miniature in England* (London: V&A Publications, 1998).

colors, the brushes, composition and proportion—and continuing with a description of what each successive sitting should entail. These manuals established guidelines which any limner followed in order to produce “true” miniatures.<sup>428</sup>

### ***Limning Practice and Art Practice***

Beyond the shared visual characteristics, the new medium of photography held certain aspects of practice in common with miniature painting. Nicholas Hilliard, a goldsmith who became Queen Elizabeth’s “Limner,” drafted *A Treatise Concerning the Arte of Limning* in 1598-99.<sup>429</sup> The treatise’s description of limning in some senses foreshadowed descriptions of the practice of photography over two hundred years later.

Hilliard wrote of his art: “it is a kind of gentle painting, of less subjection than any other .

---

<sup>428</sup> During my time as a Visiting Scholar at the Yale Center for British Art (January 2009), I looked through a number of the manuals for miniature painting, including Edward Norgate, *Miniatura; or The Art of Limning* [c. 1600] (Oxford: Clarendon press, 1919); Unknown author, *The School of Miniature, Erected for the Instruction of the Ignorant, the Improvement of Proficients, and the General Information of Such as are Pleased with Pictures in Small* (London: 1733), which begins with a description of the miniature: “1. It is in its Nature more delicate than any of the other sorts. 2. It requires to be beheld near at Hand. 3. It cannot well be executed but in small. 4. It is perform’d on Vellum or Ivory”; John Payne’s *The Art of Painting in Miniature, on Ivory: in the Manner at Present Practised by the Most Eminent Artists in that Profession* (London: Robert Laurie and James Whittle, 1812) included instructions as to particular hues for various parts of the body—for the face yellows such as gall-stone (very difficult to be had in London) were used while browns like burnt umber were only used for shadows under the nose and chin (6). “Drop Lake” red was apparently made from shearings of scarlet cloth and was useful for carnation tints in delicate subjects (8). Lamp Black was useful for marking the pupil of the eye, hair color, and draperies. To prepare the colors, pigments were first ground with an agate flag and muller, a few drops of water were added, and the pigment was put on the palette where gum water was added gradually. Hair pencils were also used (10). To prepare the ivory, earlier versions were made by cutting through the tusk, forming a circular shape or diameter depending on where the tusk was cut. Later it was discovered that cutting the tusk along the length and unrolling it made larger sections possible (12). As for setting the scene, Payne recommended that the sitter be placed about a yard and a half from the limner and that light should be northern and directed from a high window (17). Other widely known nineteenth-century miniature manuals include Arthur Parsey’s *The Art of Miniature Painting on Ivory* (London: Longman, Rees, Orme, Brown, and Green, 1831) and Henry Harrison’s *Instructions for the Mixture of Water-colours, Adapted to the Various Styles of Miniature Painting; and Also to Landscape, Flower, and Fruit Painting* (London: Souter and Law, 1843). Harrison stipulated: “[o]f all the parts of the face, that which contributes most to likeness is the nose; it is therefore essential that it should be drawn correctly.” Charles William Day’s *Art of Miniature Painting: Comprising Instructions Necessary for the Acquirement of That Art* (London: Winsor & Newton, 1852) was also a prominent manual.

<sup>429</sup> Nicholas Hilliard, *A Treatise Concerning the Arte of Limning* [1589-99] (Ashington: Mid Northumberland Arts Group in association with Carcanet New Press, 1981 and 1992).

. . . and it is a thing apart from all other painting or drawing, . . . And yet it excelleth all other painting whatsoever in sundry points, in giving the true lustre to pearl and precious stone, and worketh the metals gold or silver with themselves, which so enricheth and ennobleth the work that it seemeth to be the thing itself.”<sup>430</sup> A commonality between miniature painting and photography was an emphasis on the non-art or non-hand aspect in the construction of each. For Hilliard, the hand of the limner was as mechanical as that of the photographer—an instrument of “God” like the camera would be seen to be an instrument of the sun.<sup>431</sup>

The miniaturist Arthur Parsey, writing within a decade of photography’s introduction, recognized: “I am favourable to the strictest attention to nature, and whether we paint it or not, that it is well to know the minutiae. Suppose a picture painted in the best manner, and that it contain a vase, or some other accessory, and that it were possible, by optical illusion, to give a perfect reflection of it, on the part assigned, without painting it, every spectator, I have no doubt, would instantly notice that object, in disparity to the other parts of the picture. Persons who only know general forms, would look at it as they would at the real object; the connoisseur and artist would dwell on every particular.”<sup>432</sup> Parsey described the making of a miniature portrait in successive sittings, or layers of detail, like a photographic lens zooming-in towards the sitter. Three or four sittings were required for one miniature. “The picture at the first sitting should resemble the party as

---

<sup>430</sup> Hilliard, *A Treatise*, 63, 65. Hilliard also stipulated the lighting of an artist’s workplace, that it should allow the most open light as possible which, in medieval England, required an upper story. Hilliard tells the story of his first portrait of Queen Elizabeth which was made outdoors in a garden.

<sup>431</sup> Hilliard, *A Treatise*, 87. “Even the work of God and not of man: being fittest . . . for the imitation of the purest flowers and most beautiful creatures in the finest and purest colours which are chargeable; and is for the service of noble persons very meet, in small volumes, in private manner, for them to have the portraits and pictures of themselves, their peers, or any other foreign persons which are of interest to them.”

<sup>432</sup> Parsey, *Art of Miniature Painting*, 82-3.

seen at some distance; at the second sitting, as on nearer approach—and at this, as when near; and we can critically detect the nicest peculiarity.” The background should be worked in between the second and third sittings, which was also the time when shadows should be deepened, lips and eyes filled out, as if focusing with a camera lens.<sup>433</sup>

Several miniatures in the collection of the Yale Center for British Art provide visual evidence of these technical guidelines. One example is *Portrait of a Young Lady*, c. 1790, an oval miniature on a nearly palm-sized piece of ivory by Richard Cosway (1742-1821), one of the prominent British miniature painters preceding the daguerreotype era. Abiding by miniature painting standards, only the head and shoulders of the sitter are depicted while she turns toward the viewer with a slight smile [Figure 4:1].<sup>434</sup> Minimal touches of color are found in her blue eyes, the slight tints in the cheeks and lips and the blue ribbon of her veil. The sky is brushed quickly, impressionistically, in contrast to the penciled outline of the young woman’s face. Although many miniatures left the background featureless, the slightly clouded sky was also typical and would be picked up later in the daguerreotype portrait. The overall effect of the Cosway’s portrait is of a light and cloud-filled, ethereal space in which the sitter appears to float.<sup>435</sup>

---

<sup>433</sup> Parsey, *Art of Miniature Painting*, 162. Edward Norgate wrote that the order of sittings correlated to certain hues and densities of pigment. Norgate, *Miniatura or the Art of Limning*, 28, 66. The second sitting was longer in time than the first, the third sitting was a repetition of the second but included deeper shadows. Further, “[i]n a story, finish noe particular face, nor in a Face any one part alone, exactly or with perfection, but worke in all together dead-coloured before you begin to finish, otherwise you will never be able to discern the likenes, nor roundnes of your worke.”

<sup>434</sup> Cosway, who unlike many of his contemporaries was an early member of the Royal Academy (1771), distinctively used transparent washes of watercolor and left the ivory exposed in places. See Graham Reynolds, *English Portrait Miniatures* (Cambridge: Cambridge University Press, 1988), 127-130. Also see Audrey Linkman, *The Victorians Photographic Portraits* (London and New York: Tauris Parke Books, 1993), 16, who mentions that Cosway charged 25 to 30 guineas for a portrait “. . . and boasted as many as twelve sitters a day.” Claudet would charge 1 guinea for a daguerreotype portrait in a case. Linkman also mentions that “[l]ess eminent artists” charged less than Cosway.

<sup>435</sup> Unlike Cosway’s sketch-like depiction, his contemporary, miniaturist John Smart (1741-1811), painted his sitters in sharp detail and vibrant color. The brighter, more highly contrasted light of Smart’s portrait

***“A perfect likeness”***

Immediately upon the opening of his studio on the roof of the Adelaide Gallery, Claudet advertised his product, the daguerreotype portrait, as a “perfect likeness.”<sup>436</sup> However, for all of the descriptions of the photograph as a “faithful” representation, its actual abilities to be so, particularly in portraiture, were not immediately recognizable. The technical constraints of early daguerreotype portraiture made the immediacy conjured by the limner’s hand difficult to achieve. On the silvered plate the sitters seem to be more like sketched impressions than sharp depictions sitting in the space of the viewer. As in the painted predecessors, the sitter for Beard or Claudet in the early 1840s appeared in the daguerreotyped version in front of a nondescript backdrop (and in Beard’s studio they were actually suspended on a dais close to a glass ceiling) **[Figure 4:4]**. One early portrait made by a Richard Beard patentee shortly after Beard had opened his daguerreotype franchise in England shows this well.<sup>437</sup> The sitter’s face is blurred and his eyes are deeply shadowed **[Figure 4:5]**. One can discern only an impression of an expression from the dark surface of the mirror-like plate. In Thomas Sutton’s 1867 description of his own 1841 visit to Claudet’s Adelaide Gallery studio, the photographer describes his impression of his first photographic portrait: “My eyes were made to stare

---

reveals more realistically the sitter’s blushed face and wrinkles under the eyes and chin, as well as his colorful uniform, decorated with gilt tints on the jacket and on the buttons of his waistcoat **[Figure 4:2]**. A slightly later generation of miniaturists included George Engleheart (1753-1829), whose *Lady of the Blunt Family*, c. 1795-1800, with large expressive eyes and rounded features made up of richer volumes of color, looks almost caricatural **[Figure 4:3]**.

<sup>436</sup> Advertisement in *The Times*, June 24, 1841: 1. “Daguerreotype Portraits Are Taken Daily At The Gallery Of Practical Science, Adelaide-street, West Strand, by the improved process of Mr. A. Claudet, which requires but a few seconds to obtain a perfect likeness.”

<sup>437</sup> Claudet daguerreotypes prior to 1843 are difficult to find and if dated that early (for example portraits of Houghton or the Llewelyns) the dating is speculative, based on the backdrop used.

steadily at the light until the tears streamed from them and the portrait was, of course, a caricature.”<sup>438</sup> Indeed, early daguerreotypes were often compared to caricatures or sketches, unlike miniature paintings, that, in their time, were believed to provide a “faithful” (yet agreeable) likeness. Thus the “phenomenal” import from France was at first admired for its exceptional ability to record architecture and landscape, but not for its portrayal of people.<sup>439</sup>

Yet in spite of these difficulties, several journal articles that were published immediately after the daguerreotype’s appearance at the Polytechnic Institution, perhaps under the “spell” of photography’s scientific roots, praised the process for “its ingenuity and accuracy.” The process was described as “magical” and as having the ability to produce a “perfect likeness, ready to be enclosed in a frame, covered with glass, and kept, we presume, for any length of time.”<sup>440</sup> Another visitor reported that a sitter for a daguerreotype portrait could “walk away within five minutes from the time of entering the blue chamber, with an effigy that no miniature painter could rival in unflattering truth of character, or approach in force of effect and delicacy of execution, after repeated

---

<sup>438</sup> Thomas Sutton, “Reminiscences of an Old Photographer,” *The British Journal of Photography* (August 30, 1867): 413.

<sup>439</sup> *The Athenaeum* no. 650 (April 11, 1840): 294. One 1840 article in *The Athenaeum* publicized the daguerreotypes Claudet had brought back from France and had on display in his shop on High Holborn: “Messrs. Claudet & Houghton have lately received a selection, from Paris, quite unequalled, and well worth a visit; some of the specimens so perfect, that the water reflects the buildings; in others, inscriptions are legible through a magnifying glass, which cannot be read on the building itself with the naked eye.”

<sup>440</sup> “We have just returned from witnessing the experiment of portrait-taking by Mr. Wolcott’s patent reflecting apparatus at the Polytechnic Institution; and have been both delighted and astonished by its ingenuity and accuracy, It is truly magical, the performance of a few moments, most simple, and most scientific. A miniature plate of silver is scrupulously cleaned, and prepared with iodine. It is then put into a box, and the sitter’s face reflected upon it, the head being fixed by supports in an easy and well-contrived chair; and this is the whole trouble! The plate is taken out, submitted to the vapour of mercury, washed in hypo-sulphate of soda, and dried—and there is a perfect likeness, ready to be enclosed in a frame, covered with glass, and kept, we presume, for any length of time.” “Photographic Portraits,” *The Literary Gazette and Journal of the Belles Lettres* no. 1261 (March 20, 1841).

sittings and with laborious skill.”<sup>441</sup> The “effigy” that one walked away with was not, as is evident to the writer above, by nature flattering. Rather, it was the “truth.” The “faithfulness” of the copy, as well as the “force of effect and delicacy of execution,” were all traits carried over from the painted miniature. Until the daguerreotype came along, the miniature had been seen as one of the closest media to a true likeness of a person.<sup>442</sup> Now that the daguerreotype portrait had arrived, photographers, sitters, and reviewers relied on vocabulary used in discussing miniatures to describe what they were seeing. The alignment of the daguerreotype with the definition “faithful copy” will recur in the discussion of the debates around the 1862 Exhibition.

As we have seen, from early on demonstrations and papers were being presented that stressed the quality of “likeness” in the daguerreotype portrait and included it in their titles.<sup>443</sup> They also, like the writer for *The Spectator* above, stressed the swiftness of the “operation,” which replaced what was described as the onerous, “laborious skill” of the painter’s several stages. One writer recounted a lecture by John Frederick Goddard (1795-1866), the chemist working with Beard and the Johnsons at the Polytechnic on increasing the sensitivity of the daguerreotype plate. Goddard’s “On the Application of

---

<sup>441</sup> During the sitting, the client had to “‘call up a look’ of pleasurable animation, which has scarcely time to relapse into dullness when the operator announces that the picture is completed. Before the visitors have ceased wondering at the magical celerity of the process, the light-formed image has been fixed by chemical means, and the sitter enjoys the satisfaction of looking at his physiognomy reflected as in a darkened diminishing-glass: neat frames of various patterns being at hand,” *The Spectator* (March 20, 1841): 283.

<sup>442</sup> The eighteenth-century Physionotrace was another form, however the result was an engraving of the profile rather than a colorful frontal portrait.

<sup>443</sup> For example, John William Draper, “On the Process of Daguerreotype, and Its Application to Taking Portraits from the Life,” *The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science* 17 (September 1840) and “Royal Institution. Friday, 26<sup>th</sup> March—Mr. Goddard, ‘On the Application of the Daguerreotype to the Taking Likenesses from the Life,’” *The Literary Gazette and Journal of the Belles Lettres* no. 1263 (April 3, 1841). Goddard’s lecture was also published as “Lecture by Mr. J.F. Goddard at the Royal Institution, ‘On the Application of the Daguerreotype to the Taking of Likenesses from the Life,’” *The Polytechnic Journal* 4, nos. 1-6 (March 26, 1841): 248; *The Times*, March 24, 1841: 1, contained an advertisement for Beard’s studio at the Polytechnic.

the Daguerreotype to the Taking Likenesses from the Life” stressed both the faithful reproduction of the sitter and the subsuming of the long painting process. He wrote that, “facsimiles of the faces of so many of our fellow-beings are fixed from day to day” which resulted in “an admirable likeness at a single sitting” Goddard continued by invoking and defending the truthfulness of the portrait as part of its value as an accurate record that would not lie to future generations.

The metallic hue of the portrait is not becoming; nor is it possible for the truth-telling operating influences to flatter: but the face is there, wearing the very expression of the moment. This effect is the stamp of excellence to all who desire to perpetuate the looks of fond beings in the several stages of existence, or to catch and hold fast the features of those so dear, ere they flee away for ever.<sup>444</sup>

Goddard also pointed out that the daguerreotype portrait could be used as the accurate image from which painters could copy, thus rendering a painted portrait “nearest to life.”

Those who would more, and have the complexion too, can have the daguerreotype correctly copied. It is much more easy to imitate than to design, to copy a picture than to picture nature. By these means, then, an accurate likeness in oil or water-colours approaching nearest to life can be obtained, and without the long sittings tedious to most.<sup>445</sup>

### ***The “Daguerreotype Miniature”***

While not being able to compete with the portrait miniature in depicting color at this time, daguerreotype portraits did have the similar attribute of small size and thus of

---

<sup>444</sup> “Lecture by Mr. J. F. Goddard,” (1841): 248; also in “Royal Institution. Friday, 26<sup>th</sup> March—Mr. Goddard,” (1841).

<sup>445</sup> “Lecture by Mr. J. F. Goddard at the Royal Institution,” (1841).

portability. An anonymous eighteenth-century manual gave a definition of a miniature: “1. It is in its Nature more delicate than any of the other sorts. 2. It requires to be beheld near at Hand.”<sup>446</sup> Due to the limited capacities of the process in making fast enough exposures for portraiture, the first photographs of people were similarly small and often measured close to the palm-sized miniature. “Miniatures” were in fact not named for their size—the word miniature was derived from the Latin *miniare*, which was a method used by manuscript illuminators to color lettering or the decorative borders of the vellum pages of sacred texts with red lead paint. As book illuminations were relatively small and because later portrait miniatures were also smaller than the hand, the root of *miniare* was eventually blended with the latin *min* (small). Later, the name “Painters-in-little” would become synonymous with “miniature” painter.<sup>447</sup>

Like his reviewers in the British press, Claudet recognized the importance of creating a true likeness with the daguerreotype. However, he was also aware that in order to make an agreeable portrait, one needed to incorporate already familiar and understood attributes of portrait paintings.

In the early daguerreotype portrait, which had not yet acquired the painted backdrops, props and color of later images, it was the pose and cropping of miniatures that were most easily imitated. As we have seen in Chapter One, Claudet’s earliest daguerreotypes included a painted backdrop, as in those of his partner Houghton [Figure 2:2], those of Talbot, [Figure 2:18], and an anonymous young girl in front of a ruined castle scene [Figure 2:21]. However, as was mentioned in Chapter Two, after the

---

<sup>446</sup> *The School of Miniature, Erected for the Instruction of the Ignorant, the Improvement of Proficients, and the General Information of Such as are Pleased with Pictures in Small* (London: 1733).

<sup>447</sup> J. J. Foster, *Miniature Painters British and Foreign: With Some Account of Those Who Practiced in America in the Eighteenth Century* (London: Dickinsons; New York: E. P. Dutton, 1903).

acquisition of the Petzval lens, Claudet seems to have discarded the artificial scene for a brief period in the mid-1840s and focused on making more simplified bust portraits of his clients in the cropped-style of the miniature. After viewing many early Claudet and Beard examples in public and private collections (the largest being the National Media Museum in Bradford and the Bernard Howarth Loomes Collection currently housed in the National Museum of Scotland in Edinburgh), the most typical cropping from the early- and mid-1840s was a frontal or quarter-turned “bust” of the client, framed at the shoulders or waist.

Two portraits from Claudet’s Adelaide Gallery studio, both in the Gernsheim Collection at the Harry Ransom Center at the University of Texas, Austin, are good examples of the work of this period [Figure 4:6-7]. In the portrait of the young gentleman, the increased agility allowed with the new Petzval lens is clear as the subject sits in an upright yet natural-looking pose; his elbow rests on the corner of a table as he turns to look to his left with a slight smile. The cropping at the waist and the solid backdrop, with the suggestion of a drape behind it, is reminiscent of a late-eighteenth-century miniature in the collection of the Yale Center for British Art. The gentleman depicted in this miniature is seated in front of a plain-colored ground that situates him firmly in the foreground and accentuates the figure, as well as his blue coat and reddish cheeks [Figure 4:8]. Behind him, we catch a glimpse of a chair and the edge of red drapery hanging above. In both the daguerreotype and the miniature, the emphasis is on a quiet, simple moment with the subject. The subject of Claudet’s *Portrait of a British Woman*, who rests her elbow on a table edge and props her chin in her fingertips as if in

contemplation, also takes up a pose often used in miniatures.<sup>448</sup> Again the background is plain and unobtrusive, a shallow space in which the client is the primary subject. The same use of the propped chin appears in Claudet's portrait of *Andrew Pritchard*, 1844 [Figure 1:32], as well as *Young Woman (With Elbow Propped on Books)*, c. 1845, a pose that also derives from a portrait painting motif [Figure 1:26].<sup>449</sup>

A subject could be posed standing, as in Claudet's 1847 portrait of Ann Richomme, who was apparently a relative as well as a notable author [Figure 4:9].<sup>450</sup> Again the pose is familiar from miniature paintings, particularly those made closer to the time of photography. A similar pose is used, for example, in a miniature by Andrew Robertson (1777-1845), who arrived in London from Scotland in 1801 and aimed to imitate the qualities of oil paintings with the watercolor of his miniature portraits. For his *Portrait of 6<sup>th</sup> Duke of Roxburgh*, 1837, the larger piece of ivory deviated from the traditional oval and was instead placed in an arched mat and incorporated the pose of the life-size oil painting. The Duke stands leaning on a base of a stone column covered by a red drapery with a gold fringe [Figure 4:10].<sup>451</sup> Robertson's portrait was made within five years of Claudet's opening of his daguerreotype studio. It foreshadows the background elements that Claudet and his contemporaries would later adopt in their

---

<sup>448</sup> An example of this pose used in a miniature is Gervase Spencer (c. 1715-1763), *Elizabeth Bradshaw*, 1757 (Yale Center for British Art, B1974.2.103). This object also served as a brooch and is ringed with pearls, a common use of miniatures and, later, daguerreotype miniatures.

<sup>449</sup> An eighteenth-century example is a large oil portrait by John Hamilton Mortimer (1741-1779), *An Unknown Woman*, c. 1770 (Yale Center for British Art, B1981.25.465).

<sup>450</sup> Notes enclosed with the object include: "Mdme Richomme Aunt of F. G. Claudet, Sr. Taken about 1847." Also in pencil "Grandfather's sister." This could have been written by Claudet's grandson. A second handwritten note reads: "Aunt Fanny Richomme the authoress who had a prize from the Academy of France for her writings."

<sup>451</sup> See Reynolds, *British Portrait Miniatures*, 162-163. Reproduced in Daphne Foskett, *British Portrait Miniatures: A History* (London: The Hamlyn Publishing Group, Ltd., 1963).

daguerreotypes—the drape that falls into the frame from the left, the classical column, as well as the clouded sky and suggestion of green wooded landscape and waterway behind.

Claudet’s “daguerreotype miniatures” (the term initially used by the press as well as photographers to advertise their product) and those of his rival Beard, also imitated the matting and casing format of their ivory-based predecessors. Claudet’s portraits were often placed in oval and arched gilded mats. In one from Claudet’s second studio, the bust of a young woman, dated from about 1845, peeks out of an elegant oval mat [**Figure 4:11**]. Three ninth-plate daguerreotypes produced by Richard Beard’s London studio, one in an arched mat and two in oval formats, depict the same sitter in slightly different poses [**Figure 4:12**]. Multiple images of the same sitter also give us a sense of the process of a portrait sitting. Whereas in a miniature portrait the end result was one painting on a piece of ivory or vellum, in the daguerreotype portrait more than one portrait could be made in a sitting and different angles could be tried. Another example can be found in two early Claudet portraits of a man discussed in Chapter One, one in which he looks in one direction and one in which he looks in another, in front of a plain dark cloth and swooped drape [**Figure 2:24-25**]. The rounded square gilt mat frames the sitter’s head and shoulders as he leans on the table next to him.

Daguerreotypists also adopted the cases usually associated with miniature paintings. Andrew Robertson’s painting *Lady Bective* is set in an oval-shaped gilded window mat within an elaborate brass frame of dragon-like creatures interwoven with flower designs [**Figure 4:13**]. This style was adopted by Beard in his “fancy” designs for daguerreotype frames of the early-to mid-1840s. Another late-eighteenth-century miniature, attributed to George Morland (1763-1804), is set in a black lacquer frame with

an “acorn” clasp and ring at the top edge for wall hanging **[Figure 4:14]**. The miniature is set in an oval brass frame, and this is then set into the larger square lacquer. The subject, who is also the artist, turns and looks towards viewer, as if caught in the moment of drawing himself. Both the black lacquer and the acorn clasp are aspects adopted in early Beard daguerreotypes, as in the portraits of Talbot discussed in Chapter One **[See Figure 2:19]**.

An example of a case design that pre-dated yet influenced the daguerreotype case encloses a miniature by Henry Bone (1755-1834) **[Figure 4:15]**. The ivory is framed first in a brooch (also a common placement) and then placed in a Moroccan leather case lined with satin and velvet. The case and its clasp are ancestors to Richard Beard’s early, thick, leather cases for some of the ninth-plate daguerreotypes of 1841 and 1842 **[Figure 4:16]**. In addition to their small size and delicate nature, the painted miniature and the daguerreotype served similar functions. Both were treated as private mementos of a family member or loved ones and both were meant to be held in the palm and viewed up close **[Figure 4:17]**. The cases used to house the painted ivories accentuated the intimate viewing experience as well as the jewel-like preciousness of the portrait. Similar cases would be used for Claudet’s daguerreotype portraits.

Audrey Linkman writes that the larger ivory miniatures painted by Robertson as well as his student William Charles Ross (1794-1860) “had a marked influence on carte de visite portraiture.”<sup>452</sup> Although her focus is on cartes-de-visite, the author’s discussion of key elements of Victorian portrait-making is also applicable to daguerreotypes: “the range of expression evident in nineteenth-century photographic portraiture, and

---

<sup>452</sup> Linkman, *The Victorians*, 16.

particularly in the commercial sphere, was extremely limited. Following conventions honoured in painting, photographers usually elected to portray, and sitters usually felt it appropriate to assume, a quiet, serious and dignified expression.”<sup>453</sup> Further on she stresses the importance of the background used in the full-length cropping of the *carte-de-visite* in the 1860s. “The full length was felt to afford great scope for the introduction of appropriate accessories, drapery and background, and to achieve their pictorial effects photographers inevitably pillaged the repertoire used by painters in oil and miniature—landscape or interior settings, columns, pillars, balustrades, a swathe of curtain and elaborately carved tables and chairs. These were the recognized trappings of serious portraiture.”<sup>454</sup> Batchen and Edwards give alternative readings to these “trappings,” positioning them as props used to signal and reinforce class status, particularly the bourgeois class that most sitters belonged to, and raising the class identification of the photographer. However Batchen also argues that the poses and props in such portraits appear as “emptied signs, hollowed signifiers of a cultural economy now dead and gone or at least safely commodified.”<sup>455</sup>

In his patent enrolled just days prior to the Adelaide Gallery studio’s official opening in 1841, Claudet included the specification for painted “background scenes.”<sup>456</sup> In Chapter One, these backgrounds were discussed in light of their commercial impact. However, as Claudet himself explained, they also lent a pictorial benefit to his work. “The advantages of such background scenes is obvious, for they give to the portrait an

---

<sup>453</sup> Linkman, *The Victorians*, 43.

<sup>454</sup> Linkman, *The Victorians*, 52.

<sup>455</sup> Geoffrey Batchen, “Dreams of Ordinary Life: *Cartes-de-visite* and the Bourgeois Imagination,” In *Photography: Theoretical Snapshots*, in J. J. Lond, Andrea Noble and Edward Welch, eds. (London: Routledge, 2009), 80-97.

<sup>456</sup> Claudet, *Certain Improvements*, British Patent 9193, 1841.

effect quite pictorial. Besides, I can at will place the sitter, according to the colour of his dress, complexion, or hair, either against a dark or a light part of the subject painted upon the background scene.”<sup>457</sup> Within the year, such an “improvement” was met with positive reviews.<sup>458</sup> In Robertson’s *Portrait of 6<sup>th</sup> Duke of Roxburgh*, the open space beyond provides a background that accentuates and frames the outline of the figure.

Linkman also points out that there were two predominant themes used for backdrops (again, although she is talking about carte-de-visite backdrops, they were present in earlier daguerreotype portraits too), those being the Victorian drawing room interior “which sometimes came complete with wainscoting, French windows and flowing drapery,” and a rural setting of trees or parkland.<sup>459</sup> Claudet’s backdrops, both early and late, incorporate these two settings. In the early portrait of Houghton and Talbot, the setting was one of rural parkland and distant, somewhat fantastical (as in the ruined castle), landscape. The portraits from the mid-1840s to the early 1850s, prior to his turn to stereo-daguerreotype portraiture, mostly took up the suggestion of interior, drawing room settings—the cloth covered table, a stack of books, sometimes a fountain pen and paper, a chair, a small vase of flowers. His Regent Street portraits, as seen in Chapter Two and Three, combined the Victorian drawing room interior with the rural

---

<sup>457</sup> Claudet, *Certain Improvements*, British Patent 9193, 1841.

<sup>458</sup> *The Art-Union* 4 (April 1, 1842): 84. “Daguerreotype Portraits. – Unwearied experiment has astonishingly improved the knowledge of the application of the Daguerreotype to portraiture. We cannot help remarking this from some specimens publicly exhibited by M. Claudet; yet, viewing the discovery and its capabilities in the same light in which it appeared in its earliest state, the general complaint against these portraits has been their extreme coldness of tone: this defect, however, M. Claudet has succeeded in obviating, by great improvement in the management of the back ground, which cannot fail to augment the popularity of these portraits.” A front page advertisement in *The Athenaeum* no. 814 (June 3, 1843) declared: “Claudet’s Daguerreotype Portraits taken daily at the Royal Adelaide Gallery. The wonderful art by which perfect likenesses are taken in a few seconds, has lately received very important improvements and has arrived to such perfection, that former productions, however extraordinary they were, cannot be compared with the new specimens produced by M. Claudet, and which are exhibited at the Adelaide Gallery.

<sup>459</sup> Linkman, *The Victorians*, 42.

landscape, including a clouded, sunset sky, often visible beyond the panes of the glass doors and balcony at the back of the set.

### ***Portrait Paintings***

It is beyond the scope of this study to compare in any great detail daguerreotype portraits and the larger canvases that pre-dated photography. However, as the discussion later in this chapter will involve an examination of Claudet's argument for photography in relation to the "Fine Arts," it is important to point to a few examples of those portrait painters considered fine artists in Britain in the early part of the nineteenth century. The greatest names were those associated with the Royal Academy, namely Joshua Reynolds (1723-1792), Thomas Gainsborough (1727-1788), and, closer to the time of Claudet, Thomas Lawrence (1769-1830). Reynolds's portrait of *Miss Mary Hickey* (1770), presents an up-close encounter with a well-dressed woman who looks directly at the viewer, her face partly shaded by her elegant hat, while behind her is the brushed suggestion of a blue sky which does not compete with the detail and proximity of the subject [Figure 4:18]. As Claudet's early portraits would repeat, one elbow rests on a stone block next to her that just peeks out in the lower right corner. In his portrait of *Anne Seymour Damer* (1773), Reynolds incorporates a background that is half interior and half exterior, a setting that for early daguerreotype portraiture was impossible to actually recreate. Nevertheless it provided a prototype for the painted studio backdrop [Figure 4:19]. Gainsborough's portrait of *Mary Heberden* (c. 1777), cropped below the shoulders, includes a painted oval frame, like an enlarged oval matted miniature [Figure 4:20]. Lawrence's portrait of *George Agar-Ellis* (1823) depicts the member of Parliament

mentioned briefly in Chapter One in connection to the revitalization of the area around the Adelaide Gallery [Figure 4:21]. Agar-Ellis (1797-1833) would also become known as the person responsible for allotting funds to purchase the art collection of merchant John Julius Angerstein (1732-1823), who had also sat for Lawrence, and whose collection poised the basis for the National Gallery. In the portrait, which measures 36 by 29 inches, Agar-Ellis is seated, posed in an interior setting, elbow resting next to books on a cloth covered table, and framed much like the hand-sized daguerreotypes that a studio like Claudet's would produce.

### *Color*

Although color photography was not yet a reality in photography's earliest years, some viewers, like John Robison, Secretary to the Royal Society of Edinburgh, who had the opportunity to visit Daguerre's studio in 1839, noted that even though they were not able to show color, he found that "much of the effect which we attribute to color is preserved in the picture, although it consist only in light and shade."<sup>460</sup> Viewing the "interiors with still life" he noted that different materials, a plaster cast versus a marble statuette for instance, picked up light differently, and therefore emitted different tones onto the plate. For Robison, the suggestion of tone was a satisfying equivalent to the pigment applied by Cosway or Scouler. Claudet also seems to have agreed with this description of photographic tone as in his patent for the painted background he described

---

<sup>460</sup> Sir John Robison, "Part III. Perfection of the Art, as Stated in 'Notes on Daguerre's Photograph,'" *The American Journal of Science and Arts* 37, no. 1 (July 1839): 183-5.

one of its advantages as being adaptable to “the colour of [the sitter’s] dress, complexion, or hair.”<sup>461</sup>

As has been mentioned in Chapter One, soon after Beard opened his studio at 85 King William Street in 1841, he filed a patent for hand-coloring daguerreotype plates in order to render “the warmth and truth of a miniature painting.”<sup>462</sup> Claudet was advertising “colouring” in 1843.<sup>463</sup> In Chapter One I also introduced the miniature painter who was directly associated with Claudet. In the 1840s, “Mansion” was an artist known not for his paintings on ivory but for his coloring of daguerreotypes and calotype touch-ups.

Like Claudet, Mansion was a Frenchman. He was the son of a portrait painter, Jacques Larue (who also went by the name of Mansion, or J. Mansion) and studied with the French portraitist and miniaturist Jean-Baptiste Isabey (1767-1855). He had also been employed at the Sèvres porcelain factory in France from 1804 to 1834.<sup>464</sup> In 1822 Mansion published *Letters Upon the Art of Miniature Painting*, in which a miniaturist and a pupil correspond about the craft.<sup>465</sup> Sometime after this publication, Mansion traveled to London, and exhibited at the Royal Academy in 1829 and 1831.<sup>466</sup> When the Royal Academy was founded in 1768, miniatures, as a British art, were placed in the

---

<sup>461</sup> Claudet, Certain Improvements, British Patent 9193, 1841.

<sup>462</sup> *Bath and Cheltenham Gazette* (April 5, 1842): 4; Beard, Colouring Daguerreotype Pictures, British Patent 9292, 1842. See for example Figure 2:29.

<sup>463</sup> “Claudet’s Daguerreotype Portraits taken daily at the Royal Adelaide Gallery . . . Price of a single Portrait, 1 Guinea, upon plates 3 1/4 by 2 3/4 inches; and 5 guineas upon plates 8 1/2 by 6 1/2 inches; intermediate sizes in proportion. Colouring from 5s. to 10s.” *The Athenaeum* no. 814 (June 3, 1843).

<sup>464</sup> Joan Coke, “Antoine François Jean Claudet: Artist, Photographer, and Scientist,” Master’s thesis, University of New Mexico, 1985. This may in fact be how Mansion was introduced to Claudet as the Sèvres and Choisy-le-Roi factories were in communication.

<sup>465</sup> L. Mansion, *Letters Upon the Art of Miniature Painting* (London: R. Ackermann, Paris: L. Janet, 1822). Mansion’s address at the time was 10 Rue des Fossés, Montmartre, Paris.

<sup>466</sup> The move was possibly a result of the fall of the Restoration King Charles X to the July Monarchy King Louis-Phillipe, Charles having been a patron of his teacher Isabey.

main exhibition room.<sup>467</sup> Mansion's *Portrait of a Lady* (c. 1820), or *Mrs. Mills, (called)* (1823), (Wallace Collection, London) both watercolor on ivory, look forward to the composition but particularly the color palette of Claudet's portraits **[Figure 4:22-23]**. After 1834, Mansion is not known to have exhibited any further miniatures.<sup>468</sup>

By 1846, Claudet's studios, in King William Street and the Colisseum, were informing the public that Mr. Mansion had developed a new method of coloring the metal plate. A review in *The Art-Union* described the "ingenious process." After the photograph was taken, the portrait was traced "on a material prepared by M. Mansion." The tracing was then "painted on." The material, superimposed on the plate, must have functioned like a stencil that provided more visible outlines and the "material" appears to have taken the pigment more easily than the silver surface.<sup>469</sup>

Two stereo-daguerreotypes of the same group portrait, taken at 107 Regent Street, give a good sense of what the same image looked like in both tinted and untinted versions **[Figure 4:24]**. This is important to note as often clients did not walk away from Claudet's studio with just one photographic portrait or format. My research also uncovered two daguerreotypes of the same sitter, one a single portrait and one a stereo image taken within the same sitting yet currently housed in two different collections **[Figure 4:25]**. Although today we most often encounter singular Claudet portraits of

---

<sup>467</sup> Coombs, *The Portrait Miniature*, 12.

<sup>468</sup> I have not been able to find a record of Mansion between 1834 and 1844, although he might have stayed in London and eventually met Claudet. An advertisement for Mansion appeared in the *Photographic Journal* (June 15, 1859) for new colours & varnishes. In 1861, Mansion was listed as an artist living at 35 Nichols Square, Hackney Road, Shoreditch. He died in 1870. This biographical information can be found on the very useful *PhotoLondon* website. See <http://www.photolondon.org.uk/>.

<sup>469</sup> "Photographic Miniatures," *The Art-Union* 8 (January 1, 1846): 19-20. "The portrait, having been taken in the usual manner by the camera, is afterwards traced on a material prepared by M. Mansion, which may then be painted on, both expeditiously and easily." The same article notes that the "well-known picture" of the Duke of Wellington had been colored in this way, giving it "all the appearance of a highly-finished miniature."

anonymous individuals, it was likely that many clients chose to take away multiple versions of themselves.

Mansion's coloring received praise from critics in art and photographic journals and Claudet's daguerreotype portraits were described as "highly-finished miniatures."

We confess we had no idea of the possibility of producing anything so artistic and elegant on a metal plate. These pictures can scarcely be distinguished from the most highly finished miniatures for delicacy and effect, while, with regard to the accuracy of representation, they, of course, far surpass the most successful efforts of the pencil alone. "They are, truly and undoubtedly, *works of Art*, or we should rather characterize them as the beautiful results of Nature and Art combined."<sup>470</sup>

It is notable that this author in 1846 did not hesitate to call these portraits "works of art." Fifteen years later, as we will see, this attribution of a photograph would be a question of debate amongst the photographic community. Similar language is used in describing Claudet's submissions to the Great Exhibition. In the *Reports by the Juries* Claudet's "coloured specimens . . . are distinguished by careful and harmonious colouring, the focus having been so judiciously selected, that most of them present an artistic and natural appearance, seldom hitherto obtained by daguerreotypists."<sup>471</sup> An 1845 advertisement for Claudet's and Mansion's work with the Talbotype was titled

---

<sup>470</sup> "Daguerreotype Portraits," *The Art-Union* 8 (July 1, 1846): 216. The same visitor to Claudet's studio noted the way that Claudet "screened" the light during the sitting. "By an ingenious contrivance in screening the light during the time of sitting for the picture, M. Claudet is enabled to modify various effects of light and shade on the face, by this means displaying the features in their natural relief."

<sup>471</sup> "Daguerreotype Pictures," *Reports by the Juries*, 600. The following paragraph actually proposed that "[p]hotography may be said to be too faithfully exact in its results for the purposes of art." However, the author used Claudet as an example of how a photographer could "know the proportions in which art and science should intermingle so as to be subservient to each other." Because in 1851 it was generally allowed that photography was new, both as a science and an art, its argument as "high art" was not applicable. For this author the comingling of art and science is unproblematic and Claudet himself will continue to argue for this trait of photography as grounds for its art. Ten years later the "science" aspect would prove an obstacle to its allowance as a Fine Art.

“Fine Arts: Talbotypes.”<sup>472</sup> Where in the 1845 *Literary Gazette* it went unnoticed, in 1860 the term “Fine Art” was something that, according to the Commissioners of the 1862 exhibition, photography was excluded from.

### ***Regent Street***

I will use the application of color as a point of comparison between Claudet and his contemporaries on Regent Street. The colors used, derived from those used by British miniaturists, will also be noted in order to determine if we can distinguish a certain “British” quality to the portrait daguerreotypes produced in London’s commercial photography studios. “Every country must necessarily impart to the art a peculiar merit of its own—a kind of superiority stamped by the character of local features, and by a certain individual mode of feeling.”<sup>473</sup> By the time Claudet stated this in his paper on photography’s relation to the fine arts in 1860, he had established himself as one of the preeminent portrait daguerreotypists in London. Although after viewing numerous (numbering in the hundreds) Claudet daguerreotype and stereo-daguerreotype portraits in public and private collections, I can easily recognize Claudet’s portraits as having features peculiar to the photographer, my interest here is more in their relation to the work produced by three other daguerreotype studios on the same street. These are the studios of W. E. Kilburn at 234 Regent Street, J. J. E. Mayall at 224, and T. R. Williams at 236. I would like to briefly compare Claudet’s later, Regent Street portraits to those being made by his contemporaries in order to establish some of the attributes of a British

---

<sup>472</sup> “Fine Arts: Talbotypes,” *Literary Gazette, and Journal of the Belles Lettres* no. 1477 (May 10, 1845): 300.

<sup>473</sup> Antoine Claudet, “Photography in its Relation to the Fine Arts,” presented to the Photographic Society of Scotland and reprinted in *The Photographic Journal* (June 15, 1860): 250-267; 260.

commercial daguerreotype portrait in the 1850s. I also examine Claudet's statement regarding the "peculiar merit" that every country imparts "to the art" (photography) and suggest some possible motives behind such a statement from the pen of a French expatriot living in London. This will further provide a visual context for Claudet's contest with Camille Silvy in future pages.

### ***W. E. Kilburn (1818-1891)***

The first portrait studio I look at is that of Kilburn, established at 234 Regent Street since 1845, prior to Claudet's move. He operated until July of 1855, at which point he moved to 277 Regent Street, where he would stay until 1863.<sup>474</sup> Kilburn's training in photography is unknown, although his grandfather, William Kilburn, was an artist and a well-known calico printer. His father, Thomas Kilburn, died in 1831, and a number of the family worked as traders for the East India Company. In the 1841 census, Kilburn is listed as "an accountant."<sup>475</sup> By 1847, advertisements for his photographic studio were published in *The Times*, *The Athenaeum*, and *The Illustrated London News*.

In 1848, Kilburn photographed the Chartist Rally in London, a major gathering in favor of the third petition to the Legislature to vote in favor of the "Peoples Charter." Taken from a high vantage point, the two quarter-plate daguerreotypes he produced record the masses attending the rally [**Figure 4:26**]. These early "photojournalistic" photographs granted him the attention of Prince Albert, who acquired them, and this led to portrait commissions from the Prince Consort and Queen Victoria. I viewed those

---

<sup>474</sup> For basic biographical information, see *PhotoLondon, The Database of 19th Century Photographers and Allied Trades in London: 1841-1901*, <http://www.photolondon.org.uk/>.

<sup>475</sup> This from Marcel Safier, who is in the midst of researching W. E. Kilburn. He told me he has not yet come up with any information as to how or when Kilburn came to photography.

housed in the Royal Collection at Windsor Castle, including a daguerreotype portrait of the Queen surrounded by her children and a hand-tinted portrait of Prince Albert [Figure 4:27-28]. These portraits established Kilburn as one of Claudet's major competitors for the Queen's commissions (the Windsor collection also houses a portrait of the Queen and children by Claudet) [Figure 4:29]. Kilburn's advertisements for his studio appeared next to or near those for Claudet's.<sup>476</sup>

Claudet and Kilburn also vocalized debate on their methods for improving the daguerreotype image in *The Athenaeum* during the course of the Great Exhibition in 1851.<sup>477</sup> The next year, their daguerreotype portraits of the prosecuting Solicitors in the "Achilli" trial of 1852 were transcribed side by side as wood engravings on the cover of an 1852 edition of *The Illustrated London News* [Figure 4:30].<sup>478</sup> The juxtaposition of the two photographers was perhaps instigated shortly after Kilburn opened his studio at 234 Regent Street when they were engaged in a dialogue in regards to coloring daguerreotype portraits. In early 1847, Kilburn presented some of his "coloured daguerreotypes," (for which he had also employed M. Mansion), to the Society of Arts. He claimed to present them in response to Claudet's paper "The Progress and Present State of the Daguerreotype," in which he stated (though he was misrepresenting the text), that Claudet had negated any new advances in the art of photography in the past year.<sup>479</sup>

---

<sup>476</sup> For example, an advertisement for Claudet's establishment at the Colosseum in the *The Athenaeum* (April 10, 1847) appears next to Kilburn's.

<sup>477</sup> Antoine Claudet, "Letter," *The Athenaeum* no. 1224 (April 12, 1851): 410. Claudet wrote in response to both Kilburn and J. J. E. Mayall regarding the idea of using a whitened camera.

<sup>478</sup> "The Solicitor-General.—Sir Fitzroy Kelly.—From a Daguerreotype by Kilburn," and "The Attorney General.—Sir Frederick Thesiger.—From a Daguerreotype by Claudet," *The Illustrated London News* 20, no. 550 (March 20, 1852): 225. The prosecution was charging a Roman Catholic priest, John Henry Newman (1801-1890), with libel against an Italian Roman Catholic Priest turned Evangelical Protestant, Giovanni Giacinto Achilli (1803-1860).

<sup>479</sup> "Mr. Kilburn on Photography," *Extracts from the Minutes of the Society of Arts* (February 2, 1847) accompanied a number of specimens of coloured photographs. "Mr. Kilburn stated, 'that in consequence of

Kilburn presented his portraits as “new.” “The specimens exhibited had a miniature background composed of sky and landscape, this the author state (sic) is entirely new and gives great effect to the portrait by throwing the figure forward, destroying much of metallic reflection and admitting of great variety as the subjects may require.”<sup>480</sup> He also presented his own coloring process.<sup>481</sup> As has been mentioned, however, by 1847, Claudet had already been (with Mansion) tinting his daguerreotypes for a few years and he had also begun to incorporate the sky and landscape background. However, regardless of who first incorporated what Kilburn claimed to be “entirely new” in 1847, what is important for this study is the visual relationship between these two photographers.

A mention in *The Art-Union* of 1846 says that Claudet and Mansion were “improving” their daguerreotype portraits.<sup>482</sup> “Improvement” included the addition of color, which could both dilute the (as Kilburn described it) “metallic reflection” as well as the oft-described ugliness of the daguerreotype’s “truth” effect. A comparison of a daguerreotype portrait with applied color from Kilburn’s first Regent Street studio (c. 1847-1855) with a portrait made in Claudet’s Regent Street studio from around the same time (c. 1854), demonstrates the differences and correspondences of these two studios. Kilburn’s portrait depicts a young woman seated at a cloth-covered table, dressed in hat, gloves, and shawl over her everyday dress as if ready for an outing [Figure 4:31]. She

---

Mr. Claudet having sufficiently proved in the paper read by him at the last meeting that no important advance had been made in the art of Photography during the past year, he [Kilburn] could only exhibit the specimens on the table as taken with a view to lend as much as possible to the colouring, by obtaining first a vigorous impression with the whites of the picture pure, and the blacks deep in colour, at the same time carefully avoiding solarization. The specimens exhibited had all been executed by himself, and coloured by Mr. Mansion, whose improvements in this branch of art are already well known.”

<sup>480</sup> “Mr. Kilburn on Photography,” (1847).

<sup>481</sup> “Mr. Kilburn on Photography,” (1847). “The colours are employed in the form of an impalpable powder which is made to adhere to the plates by amalgamation with the Mercury composing the picture, and by being finer than the grain of that deposit.”

<sup>482</sup> “Topics of the Month: Photographic Miniatures,” *The Art-Union* 1 (January 1846): 19-20.

holds a ninth-plate daguerreotype in one hand but looks up and off to the right. Behind her is a painted backdrop of a stone column and cloud-speckled sky. In Claudet's portrait, a young woman is seated in a similar setting—she sits leaning one elbow on a table in front of a clouded backdrop [Figure 4:32]. She also wears her bonnet, though it is untied and she does not wear gloves.

Although at first sight both daguerreotypes bear a great deal in common, further examination reveals that they are fairly distinct from each other, particularly in their coloring and pose. The tinting in the Kilburn portrait is more smooth and refined, applied consistently and evenly within the sharp, daguerreotyped lines of the figure and the props around her. The result is a stunning, jewel-like image. Yet because of the heavy tinting and use of sharp outlines, the overall portrait appears less natural and looks more like a miniature painting than a photograph. The tinting in Claudet's portrait is more textured, allowing for more of the daguerreotype's surface to remain visible. Claudet's palette is also brighter than Kilburn's. Because of the looser application of pigment, his portraits in general appear softer in color as well as in outline. They are characteristically more natural looking, his sitters seem caught in mid-gesture or look.

Crucial to this comparison is also their differences in posing. For example, in the Kilburn the young woman sits with her whole body facing in one direction out of the frame to the right. In the Claudet, however, the woman in the green dress is twisted – her chair aims her body in the direction to the left side of the frame while she turns to look over her shoulder to the right. Another detail to compare is the placement of the hands. Both are arranged somewhat similarly – the hand of the propped arm suspended above the arm resting in the sitter's lap. However in the Kilburn the sitter's white-gloved hands

seem staid and propped, while in the Claudet the hands are more active and less supported by both table and lap, leaving their free fingers to curl delicately in line with the folds of the sitter's gown.

Another comparison of a Kilburn daguerreotype with a Claudet shows that although both photographers incorporated the clouded backdrop, each used it in a slightly different way. Kilburn's portraits often included a larger expanse of open sky, accentuated by the fact that the horizon line is placed lower in the image than in Claudet's, making the sitter appear larger and raised up **[Figure 4:33]**. Claudet's clouded backdrop, though prominent, was often balanced by a higher horizon of either painted balcony or furniture **[Figure 4:34]**.

In terms of the stereo-daguerreotype portrait business, Kilburn was one of Claudet's major competitors. Mayall and Williams, who both apprenticed with Claudet before founding their own studios, produced far fewer stereo portraits. Nevertheless, as in their single daguerreotypes, the two photographers differed from each other in constructing the three-dimensional portrait. I compare a stereo-daguerreotype by Kilburn to one by Claudet, both taken in their studios on Regent Street and around the same time. When seen through a stereo viewer, Kilburn's portrait of a uniformed soldier (and here it should be noted that this figure, perhaps because of his ornate uniform, is tinted with more vibrant color than usually found in a Kilburn), appears to be made of a series of flattened planes that project forward in front of the back wall **[Figure 4:35]**. The effect is similar to witnessing the shallow space of a miniature stage. In Claudet's portrait of a woman in a white dress, the three dimensional effect is quite different **[Figure 3:18]**. Here the figure in the viewer appears in much more rounded form—her face and figure

seem to be solid, almost a “waxed-figure.” The furniture she rests on seems rounded and full. The frills of her white and lavender tinted dress gracefully come forward into the viewer’s space, not as a flat screen but in the sculptural way that folds of fabric can form. Another difference can be found in their matting styles for the stereo-daguerreotype. Kilburn’s matting was of a slightly different shape—his arched mats tend to be slightly narrower than those of Claudet’s and slightly closer together [Figure 4:36]. Where Kilburn, like most of the studios, used black card as a mat to frame the two images under the glass, Claudet used a black paint [Figure 4:37].

True to the meticulous way that he constructed the stereo-daguerreotype, something less visible but equally meticulous was the way that Claudet put his stereo-daguerreotype portraits together for the client to take away.<sup>483</sup> The back of the covering glass (the side turned toward the daguerreotype plates) was first painted with black varnish or tar, perhaps made of something like Bitumen of Judea, in an arched format that framed the two images. Next a layer of plaster was put down on the black varnish. The plaster would come into contact with the mat supporting the daguerreotypes. In Claudet’s stereos, the two images were first placed in a sink mat unique to Claudet and made of one piece of cardstock cut out to match the exact size of the two stereo plates. Then the back was taped in three horizontal strips (again unique to Claudet) that completely covered and sealed that side. The stereo constructions of Kilburn, Mayall, and Williams were less consistent; the tape was more often placed around the edges and not in uniform strips. Next, a backboard would be attached with the studio’s label and finally a thin black tape

---

<sup>483</sup> I thank Silvie Penichon, Conservator of Photographs at the Amon Carter Museum in Fort Worth, Texas, for letting me view some of her documentation photographs of stereo-daguerreotypes that she had restored.

(in Claudet's case it was four pieces – two long sides and two short) was adhered around the edge in order to seal the glass, plates, and backing in one piece.

I want briefly to compare Claudet's later portraits to those of Beard, as the latter's London studios continued to make portraits that developed similarly in format to Claudet's in the early 1850s. The portraits of *Mrs. Holdsworth* and *Portrait of a Young Man Seated at a Table* are two colored daguerreotypes by Beard's studio [Figure 4:38-39]. Both sitters are placed next to tables and in front of painted backgrounds. Similar to Kilburn's portraits, both are turned to face one direction. In the portrait of the boy, the color is somewhat gentle and simplified while the portrait of "Mrs. Holdsworth" includes touches of various colors of pigments. She appears more like a sharply painted miniature than a photographic subject. I have uncovered only one Beard stereo daguerreotype. When seen in three dimensions it appears, as in those of Kilburn, more rigid in pose than one finds in Claudet's portraits [Figure 4:40]. Compare the stereo by Beard to one by Claudet [Figure 4:41]. In the Claudet, the model (in this case his daughter Mary) stands next to a chair on which she leans her elbow and turns to gaze off to the left. In both a single figure is the subject, and yet Beard's more solid use of color (particularly on the head and face of the sitter) accentuates flatness even as the figure moves forward in the viewer. The Claudet stereo of his daughter is less densely colored and her pose is freer, as if caught in mid movement. Further, through her father's detailed studies of stereoscopic photography, her form is more convincingly rounded in the viewer. The rareness of Beard stereo-daguerreotypes may explain the studio's lack of investment in improving the stereo-daguerreotype.

Kilburn and Claudet would both introduce their own folding stereoscopes in 1853.<sup>484</sup> Kilburn's design was a kind of pop-up box that one could unfold from a regular Moroccan leather case approximately the size of a quarter plate. If one looked through the front that contained the eyepiece, the daguerreotype appeared stereoscopically [Figure 4:42]. Claudet designed a folding stereoscope that included a case that echoed the dimensions of the stereo-daguerreotype [Figure 4:43]. When unclasped, the portrait was positioned in the upper part of the case while the lower part unfolded accordion-like into a leather-covered eyepiece. Kilburn stopped making daguerreotypes in 1856, most likely because they were going out of style, at which point he photographed primarily with collodion negatives, what was rapidly becoming the standard for commercial studios (aside from Claudet's).

### ***J. J. E. Mayall (1813-1901)***

Another daguerreotypist who advertised alongside of Kilburn and who was a neighbor of Claudet's studio on the Strand and on Regent Street also put forward his own folding stereoscopes similar to those described above. This was John Jabez Edwin Mayall. Mayall was unusual on Regent Street as he acquired his daguerreotype training in America.<sup>485</sup> In 1842, he traveled across the Atlantic and, upon his arrival in Philadelphia

---

<sup>484</sup> Kilburn registered a folding stereoscope on January 12, 1853, and published an advertisement for it in the *Photographic Journal*. See *Photographic Journal* (April 1, 1853). "Mr. Kilburn's new registered folding stereoscope, forming in one the case for the photographic miniatures and binocular instrument. It can be supplied with the operator's name stamped on the case if desired. Moran and Quin, sole manufacturers." Two months later, Claudet introduced a similar device. Later Kilburn would also be interested in the Solar Camera, which Claudet would also research and work with. "Enlarged Photograph by Woodward Solar Camera," *The Illustrated London News* (August 27, 1859). The article mentions a visit to Kilburn's studio to see its operation.

<sup>485</sup> Articles on Mayall's studio appeared alongside those for Kilburn, as both established their studios around the same time. "Daguerréotype Studies, Messrs. Kilburn and Highschool," *The Athenaeum* no. 1016 (April 17, 1847): 416-417.

he immediately took up photography as a business. Mayall studied the daguerreotype process under Paul Beck Goddard (1811-1866) and Professor Martin Boye (1812-1907) and opened and operated a daguerreotype portrait studio in Philadelphia until 1846.<sup>486</sup> Upon his return to London in 1846, Mayall initially apprenticed with Claudet before establishing his own studio at 433 West Strand in the late 1840s.

Mayall advertised his first studio as an “American” daguerreotype institution. The insignia on his cases from this period read “Daguerreotype Institution,” “American,” or “American School.” He also went by the name of “Professor Highschool,” a name he borrowed from Boye, who was on the chemistry faculty of the “Philadelphia Central Highschool.” This naming distinguished him from the other studios and capitalized on the popular opinion that American daguerreotypes were superior to those across the Atlantic. This distinction would also pervade the reviews of the Great Exhibition.<sup>487</sup> Nevertheless, Mayall’s portraits from this studio, based on those that I have seen in public and private collections, still adopted the settings, poses, tinting, case designs and gilt insignias of other London studios. These “British” aspects of his portraits reveal his training with Claudet. His apprenticeship at 18 King William Street in 1846 gained him training in making daguerreotypes that matched the pose, props, and coloring of those that were selling in London at the time. The added mark of “American” suggested superiority in the quality of the silver-plated image.

In 1852, Mayall moved to 224 Regent Street, at which time he changed the gilt stamp on the cover of his cases to a stylized sun with the name “J. J. E. Mayall.” Unlike

---

<sup>486</sup> Prior to photography he had worked in his father’s trade of dye works and as a proprietor of an inn.

<sup>487</sup> “Let us now turn our attention to the collection before us, in which for daguerreotype portraits, America stands prominently forward.” *The Illustrated Exhibitor, A Tribute to the World’s Industrial Jubilee: Comprising Sketches, by Pen and Pencil, of the Principal Objects in the Great Exhibition of the Industry of all Nations 1851* (London: Printed and Published by John Cassell, 1851).

Claudet's softly-brushed style or Kilburn's more stark coloring, Mayall's tinting is often more vibrant in hue [Figure 4:44-46]. The dresses and bonnet bows of his female sitters were sometimes covered in heavily saturated pinks and blues. His backdrops often depicted dramatically colored sunsets in bright pinks and oranges. Mayall always stated his profession as "artist" in census records, which might explain his more creative use of color as well as his choice of design for his cases.<sup>488</sup> Further, unlike the other studios, Mayall, in both Philadelphia and London, made several series of allegorical photographs.<sup>489</sup>

In 1853, Mayall patented a method for taking portraits he called "Crayon Daguerreotypes."<sup>490</sup> The process involved a contraption that was a disk, its center cut out in a star shape that was placed between the lens and the sitter and could be turned during the exposure. The result was a blurring of the edges of the image, creating the effect of being drawn by a soft "crayon" rather than the sun's harsher pencil. This was viewed as advantageous by reviewers who felt that the daguerreotype's sharp details kept the viewer from taking in a harmonious whole "at a glance."<sup>491</sup> This "drawback" of the

---

<sup>488</sup> He published two articles on light and shade in daguerreotypes in *The Athenaeum* (April 1847).

<sup>489</sup> I have viewed a few collodion-on-glass stereotypes that depict "mythical scenes" in a private collection. One is titled "Bath of Apollo" and is labeled as "Mayall Photographer, 224 Regent Street" in white lettering on the surface of the glass.

<sup>490</sup> "Crayon Daguerreotypes," *The Practical Mechanics Journal* (February 1853): 45. "This invention relates to an ingenious mechanical arrangement for carrying out Mr. Mayall's beautiful "crayon" process of stopping out, or softening off, portions of photographic pictures . . . [the apparatus] consists of a slowly revolving disc, A, arranged on a support somewhat like a fire-screen, and having a central opening in the form of a large star . . . This apparatus is interposed between the object, or sitter, and the camera; and the central portion of the star is made large enough to admit the rays from that part of the object which is to be shown in strong light, whilst the rays from those parts which are to be gradually shaded off to a dark background, are partially intercepted by the points of the star. In this way, the intensity of the light is gradually destroyed, and the softened-off "crayon" effect is produced. The apparatus is applicable to every description of camera, and by placing it nearer to, or further from the lens, any portions of the image may be so softened off."

<sup>491</sup> *The Athenaeum* no. 1203 (November 1850): 1193-4. "The peculiarity of the new process consists in the production of an oval margin by means . . . of an oval piece of blackened zinc gummed on a piece of plate glass, the centre of the oval to coincide with the centre of the image . . . the light will . . . obliterate every

daguerreotype would recur in the debates surrounding Claudet's "Focus-Equalizer" and the status of photography in the 1862 exhibition. From 1858 to 1866 Mayall operated a studio at 15 Argyll Place, Regent Street, and from 1881-1885 at 164 New Bond Street. After filing for bankruptcy, this studio was succeeded by Maull & Co.<sup>492</sup> From 1863 until his death in 1901, Mayall lived and worked primarily in Brighton.

### ***T. R. Williams (1824-1871)***

The third daguerreotypist on Regent Street worth mentioning is Thomas Richard Williams. Like Mayall, Williams apprenticed with Claudet in the 1840s where he learned both the daguerreotype process as well as the making of stereo images.<sup>493</sup> In 1851, Williams contributed to the Great Exhibition and also photographed the opening of the 1854 Great exhibition, the year he established his own studio next to that of Kilburn at 236 Regent Street [Figure 4:47].

Unlike the other three daguerreotype studios, that of Williams produced numerous still-life stereo-daguerreotypes. In one is arranged the objects—a skull, a candlestick, an open book—that would have been recognizable elements from the Dutch still life tradition [Figure 4:48]. In another, Williams places a plaster sculpture inside of a glass shade, perhaps the kind he could have found at Claudet's 89 High Holborn Shop [Figure

---

trace of the image from every part of the plate except that which is covered with the blackened zinc . . . It has in itself an interesting and somewhat mystical appearance . . . This is the principal drawback on the daguerreotype process itself; for, however beautifully the image may be caught on the plate by such superior processes as Messrs. Mayall, Kilburn, and others . . . there is always this great disadvantage, that the aggregate of the separate details of the image . . . the general effect—can never be seen at a glance."

<sup>492</sup> *London Gazette* (August 15, 1885): 3878.

<sup>493</sup> See Brian May and Elena Vidal, <http://www.londonstereo.com/trwilliams/biography.html> (accessed March 14, 2010). According to the biography on this website, Williams's father ran a coach service between London and Reading, which may have been how he was introduced to Claudet through Claudet's associations with Talbot as well as Henneman and the Reading Establishment.

**3:3]**. A drape hangs behind the sparsely arranged objects while their placement enhances the sculptural quality of the still life and the drapery when seen through a viewer.

Like his neighboring studios, Williams did make stereo-daguerreotype portraits for his client, although not in the same quantity. I have not seen a Williams stereo portrait that incorporated a painted backdrop and his portraits tended to be more simply composed in that the client often sits in a sparsely decorated space [**Figure 4:49**]. Though simple in composition, the portraits often display an elaborate use of color. An example of Williams's more intricate applications of color is represented in a stereo-daguerreotype of a woman donning a dress in *Elaborately Decorated Dress* [**Figure 4:50**].

When viewed side by side, the daguerreotype portraits of these four studios appear both distinct and similar. Claudet “stands out” from his neighbors in creating a more dynamic moment in the portrait. One of the greatest distinctions of Claudet's stereo-daguerreotype output versus the other studios is the fact that in many of his photographs the viewer is pushed back from sitters. Rather than an up-close moment with an individual, in these images the room (his studio at 107 Regent Street) is expanded to present a whole environment, often including couples or groups of up to six or seven figures [**Figure 1:36**]. Rather than abiding by the formula of the seated portrait in a shallow space, these stereos depict a Victorian day-to-day setting, and show the sitters engaged in domestic activities (piano, chess, writing).<sup>494</sup>

With all of these distinctions, however, it is also important to point out that these studios, including Claudet's, contributed to the establishment of a particular “British” code of daguerreotype portraiture. The seated pose next to a table on which a pile of

---

<sup>494</sup> These daguerreotypes, rather than taking their cue from miniatures or portrait paintings, align themselves with the Victorian genre of the “conversation piece.”

books or vase of flowers rest, the enclosed space with a glimpse of landscape, the Moroccan leather casing, and undecorated gilded matting, all make up aspects that are more commonly found in British portrait daguerreotypes than those from France or America. Claudet's statement regarding the "peculiar merit" that every country imparts "to the art," then, did correlate with his genre of daguerreotypy that in turn emulated the broader field of "British" portraiture. The issue here is what could have been his motive in declaring this in a lecture on the relationship between photography and art. As will be discussed in the rest of the chapter, for Claudet's business to claim a "national character" helped to legitimize his work as a French expatriate in his adopted country while also establishing for the medium of photography a place in the realm of British art.

### ***Photography and Art***

In order to claim a place for photography among the fine arts at this time, however, the artistic value of some of its inherent traits (its mechanical roots) had to be justified. This was further complicated by the daguerreotype portrait's affinity to its closest "artistic" relative (the miniature). In a chapter devoted to art, it is important to try to accurately picture the photographic portrait's complex place in relation to the divergent "classes" of "miniature" versus "Academic painting" at this time. The photograph's relationship to the miniature is intricate, as the photographic and the painted miniature practices and products were seen as both similar and different from each other. Like the daguerreotype, the painted miniature's small size enforced an air of delicacy in the rendering of the sitter. Just as the daguerreotype process, upon introduction, was praised for its ability to produce such fine detail, the limner, as the seventeenth-century

miniaturist Norgate had decreed, and as nineteenth-century miniaturists like Cosway continued, required the ability to paint, in an extremely reduced size, the delicate features of a human face. In this sense the miniaturist could be compared to the mechanical hand that photography would replace. And yet, in order to copy faithfully, the miniature also held other “truthful” advantages that the daguerreotype could not compete with at that point, such as color and the potential to capture a fleeting “expression” of the individual before them. Another author, writing around the same time, commented on the inherent differences, or two “truths,” of a photographic portrait versus a painted one.

It is true that a photographic portrait is a most perfect icon of the sitter, inasmuch as it is a most faithful reflection; but . . . [t]he fidelity of a Daguerreotype reflection has by no means the effect of robbing an artist of that truth for which his hand and eye have been already distinguished; and it does not follow that because the person itself is thus truly reflected that an oil or other picture is to be unfortunately wanting in resemblance. There is a wide field of difference between a portrait thus procured and one manually executed, it matters little in what style; the charm of colour cannot be imparted to it, it cannot receive any of the innumerable graces which a judicious artist throws into his work, and it cannot be altered to suit the whim of the sitter or friends.<sup>495</sup>

For this writer, the quality of making a “faithful reflection” was still different from the “manually executed,” even though the work of both the photographer and the limner was, unlike that of the Fine Artist (painter), deemed to be forms of “copying.” Although miniature painters “manually executed” their craft and were honored as having certain “artistic” skills, they were also not quite “fine” artists. To be a “fine artist,” as Edwards discusses, meant being an artist who painted from the “mind,” rather than one

---

<sup>495</sup> “Photographic Portraits,” *The Art-Union* (April 15, 1841): 65.

who copied what was in front of him.<sup>496</sup> Thus miniature painters held a precarious middle ground between high art (i.e. painting) and mere copying (photography). Photography, entering on the heels of the miniature, imitating it stylistically yet also surpassing it in the function of “copy,” was then positioned in an even murkier relationship with fine art than its painted relative. This only served to destabilize an already unfixed identity and fertilize the ground for debate and dialogue.

By the time of the 1857 Art Treasures Exhibition in Manchester, the photographs made by Claudet, alongside those of other London-based photographers, were being compared to the work of painters.

Photography is steadily advancing towards the higher arts. This week we have been favoured with a view of two sets of exemplars—which are on their way to Manchester—of the recent progress in this delightful art; portraits by Mr. Claudet, and elaborate compositions by Mr. Rejlander. In both the artists have left mere photography far behind. Mr. Claudet is gradually changing his sun-shades into brilliant pictures:--pictures of all degrees of finish, from the collodion portrait ‘touched’ with a shading pencil to the sparkling miniature produced upon a photographic groundwork by the hand of M. Mansion. Mr. Claudet is the Vandyke of photography: his sitters become persons of distinction.<sup>497</sup>

However, when the next International Exhibition of 1862 was being planned, this praise seems to have been drowned out by the question of whether photography could be on par with painting or whether a figure like Claudet could be the photographic equivalent of a fine artist like the seventeenth-century Flemish painter Anthony VanDyke (1599-1641). Up to this point, I have been comparing the two media, photography and miniature painting, based primarily on how each form of portraiture “looked” to the

---

<sup>496</sup> Edwards, *The Making of English Photography*.

<sup>497</sup> *The Athenaeum* no. 1539 (April 25, 1857): 538-9.

viewer. By the late 1850s and early 1860s, less was being argued about the level of the “look” of the image than about the process of how it came to be made. Claudet made “likenesses” as a commercial portraitist but also became a photographer who sought to legitimize (at least in his dialogues) photography as its own artistic process. Therefore he is a useful figure to follow in a study of the dialogues around the medium’s relationship to art in its first decades.

As has been well documented, the announcement of photography in 1839 to both the scientific and fine art academies in Paris was met with a range of responses. While at the scientific end there appeared to be no negative side effects to the invention, for the artists the response was less assured, though many (for example the painter Paul Delaroche) reassured artists that the new medium would only help them. By 1859, Baudelaire was contributing his well-known critique of photography at the Paris Exposition, warning that the medium would lessen and cheapen art by convincing artists that the only art was an exact replication of nature rather than a seeking of the ideal. Meanwhile, photography would also create a crazed mass of “new sun-worshippers.”<sup>498</sup>

“Nineteenth-century photographic writers were obsessed with art,” Edwards writes.<sup>499</sup> As a consequence of this and the intricate way in which “art” played into the commercial photography sphere at this time, he argues that photographic history cannot be completely separated from art history. Whether photographers were arguing for

---

<sup>498</sup> Charles Baudelaire, “Salon of 1859,” first published in *Révue Française* (June 10 – July 20, 1859). “And now the faithful says to himself: ‘Since photography gives us every guarantee of exactitude that we could desire (they really believe that, the mad fools!), then photography and Art are the same thing.’ From that moment our squalid society rushed, Narcissus to a man, to gaze at its trivial image on a scrap of metal. A madness, an extraordinary fanaticism took possession of all these new sun-worshippers.”

<sup>499</sup> Edwards, *The Making of English Photography*, 119.

photography as an art, or scientists were defining the merits of photography by its quality of objectivity, both drew from the vocabulary of art theory to make their points.<sup>500</sup>

Baudelaire's warning was that art would eventually stoop to the level of photography, and that both would become indistinguishable. In 1860, Claudet presented a topical paper entitled "Photography in Its Relation to the Fine Arts."<sup>501</sup> Written one year after Baudelaire's critique, the French-born daguerreotypist's words seem to be partly in response to the French poet and critic.

It has often been said that photography will have the infurious effect of deterring many from devoting their talents to the cultivation of the fine arts, because it is feared that the public, being supplied with cheap and innumerable photographic productions, will no longer be in want of the more expensive works of the artists. Such a fear is entirely unfounded, and may be called ridiculous. The fine arts spring from the mind only; they do more than copy nature—they transform, embellish, create, by the power of aesthetic aspiration and intellectual conception. They are to photography what poetry is to rhetoric. Photography cannot take their place . . . The poetical art has a power which does not belong to photography; one creates, the other copies.<sup>502</sup>

In this passage, Claudet appears to be aligning himself with the Academic art theory, or as Edwards discusses in his book, the "Reynoldsian antinomy between art and mechanical work."<sup>503</sup> Joshua Reynolds, the famed English portrait painter and first

---

<sup>500</sup> Edwards, *The Making of English Photography*, 120. Edwards finds an example of a scientist using art vocabulary in Robert Hunt, who argued that the photograph combined, in his words, "infinitely minute detail with that which we technically call 'breadth of effect.'" Hunt distinguished the photograph from the work of the Pre-Raphaelite painters. Edwards quotes: "'Although we have a thousand objects faithfully represented, there is no sense of littleness, such as meets us in looking at many of our Pre-Raphaelite pictures.'" To merely copy a photograph was not art. "In copying from a photograph, he claimed, the artist represented only 'nature dead.'" Further, Edwards asks "[w]hat other resources were available, except art theory, for thinking about the photographic *image*?"

<sup>501</sup> Claudet, "Photography in Its Relation to the Fine Arts," (1860): 250-267.

<sup>502</sup> Claudet, "Photography in Its Relation to the Fine Arts," (1860): 261.

<sup>503</sup> Edwards, *The Making of English Photography*, 136-153. Particularly through the writing of William Lake Price (1810-1891) who in 1860 (the same year as Claudet's "Photography in Its Relation to the Fine Arts") published a series of articles, "On Composition and Chiar-oscuro" in *The Photographic News*. This

president of the Royal Academy, had founded the art institution on the principles that “high art” (i.e. painting) was necessarily created through the mind of the artist, and therefore had to be forcibly distinguished from the “mindless” copy that was merely mechanical work. This division kept the value of fine art high as opposed to its opposite, therefore granting “true” artists a superior class status.<sup>504</sup> Like Baudelaire a century later, this polarity was also constructed out of fear that art was in danger of being pulled down to a “vulgar,” tasteless level by the mechanical form.

Claudet’s definition of the difference between photography and art seems to support Reynolds’s premise: “The fine arts spring from the mind only; they do more than copy nature.”<sup>505</sup> And yet later in the paper, he seems to argue that the principle of photography had always been a part of making art. He gives the example of the transitory reflection in the artist’s eye in looking at a landscape. “In nature a landscape does not always present the same aspect.” It varied according to season or angle of light. Claudet then argues that the eye of the artist was by nature a camera, and therefore fine art was always conceived through a kind of “photography,” or mechanics of the eye. He claimed that when one is struck by the work of a “great master” who has captured nature convincingly it was difficult to imagine that they did not use “some photographic representation.”

---

was also true in the Science realm, as the Royal Society members distinguished themselves as natural philosophers as opposed to “rude mechanicals.” This “antinomy” also had a long history that stretched back at least to the Italian Renaissance, the moment when artists emerged as individual “geniuses.” Distinctions had to be drawn “between general and particular representations, broad effects and mindless details, elevated art and base mechanical copies.”

<sup>504</sup> Edwards, *The Making of English Photography*, 139. “What we call ‘art’ is a relational category. The values we associate with this key social form are established through a contrast with some other practice deemed mechanical, vulgar, and ‘mindless.’”

<sup>505</sup> Claudet, “Photography in Its Relation to the Fine Arts,” (1860): 261.

And has not this really been the case? If they did not employ the camera obscura, because it was not invented, did they not make use of the most delicate and sensitive photographic tablet, the retina, upon which has been momentarily delineated the very image they have copied? Therefore, strictly speaking, the fine arts have never been independent of what is equivalent to photography, although it was only for the very few, endowed with the most delicate senses of memory, perception, and imitation.<sup>506</sup>

Here Claudet appears to have taken a different path from either Reynolds's antinomy or the argument that his fellow photographers were making at the time—that photography and fine art should be treated equally. His version of “art” was one that existed within the ambit of a select few artists, whether they be painters or photographers. Rather than being defined as either artistic creation or detailed copy, their difference was defined by the possession of “delicate senses,” which could be applied to either “memory” or “imitation.” This “sense” is therefore key to Claudet's vision of photography in its relation to fine art and, indeed, his vision of photography in general. As with the Academic artist, it comes from the “mind” of the maker, yet it can be applied more variously than to a single work of art. It acts as a source for making whatever form this (rare) figure calls his “art.” In this way I compare this “sense” as a source for Claudet's own vision of photography, which declared that the medium was always there in, and was inevitably the source for, the making of art.

When Claudet invokes the image of a “delicate and sensitive photographic tablet” as the artist's retina he also invokes the concept of the photograph as a mirroring of nature. For the nineteenth-century miniaturist Arthur Parsey, the student of miniature

---

<sup>506</sup> Claudet, “Photography in Its Relation to the Fine Arts,” (1860): 261; Robert Hunt, in his *Handbook to the Great Exhibition*, made a similar statement about photography when he attributed the idea of “substituting for the lens of the human eye and its sensitive nervous structure, the retina, an eye of glass and a chemical surface” to Wedgwood and Davy. See Hunt, *Handbook*, 398.

painting had to look at the sitter in front of him as if looking at a reflection in the mirror. Taking in *all* at once, like a mirror and (as Claudet might say) like a camera, the student “must look attentively at every countenance, observe the various structures, the peculiarities, length, breadth, &c. the *tout ensemble* should be impressed on the mind, and the particulars noticed.”<sup>507</sup> A decade later, another miniaturist wrote about the difficulties of painting like a mirror, of capturing an all-over instant of the sitter. “Few students are sufficiently careful in taking a likeness to put the whole well together: sometimes the mouth is smiling and the eyes are sad; at other times the eyes are cheerful and the cheeks languid, which gives the portrait an unnatural appearance.”<sup>508</sup>

Claudet lauded the mirror quality of photography as the way in which it could aid the painter. “Is not photography the mirror of nature? and when the painter has to imitate nature, what can be more profitable to him than to consult that unerring mirror in which truth is so minutely delineated, drawing so perfect, and perspective so correct?”<sup>509</sup> However, he also praised this attribute as what made the medium unique, what made it, as I suggested above, the “source” of any art (when used by a “delicate mind”). It was, after all, a form of sight. “Photography is nothing but the image of natural objects as they are depicted on our retina; and if that image is only transitory, still it is capable of leaving

---

<sup>507</sup> Parsey, *Art of Miniature Painting*, 89: “observe the various ways the eye-lids collapse, while the features are in a state of rest, or moved by the passions; continue the same observations on the mouth and nostrils, and other parts of the face. It is necessary to form a good idea of the bony structure generally—to gain, by every means, acquaintance with the manner it is covered with muscles, flesh, and skin. We must court, by the most active intercourse, a general knowledge of disposition, character and talent—to arrive at the true and various ways they have an influence on the expressions.”

<sup>508</sup> Harrison, *Instructions for the Mixture of Water-Colours*, 11.

<sup>509</sup> Claudet, “Photography in Its Relation to the Fine Arts,” (1860): 262.

in gifted minds an impression susceptible of being continually recalled by the power of memory.”<sup>510</sup>

Therefore, when he appeased the “fine artists” in his audience (who more likely would be reading his paper in a journal) by defining photography as a kind of un-poetic counter to the poetry of art, he was also situating photography as the source that no art could live without. Where photography could exist without art, art could not exist without photography. And so he states, “[The fine arts] are to photography what poetry is to rhetoric.”<sup>511</sup> And further on he declares, “Photography is to the fine arts what logarithms are to mathematics,” and “Photography is for the artist a vocabulary which guides him in his translation of the language of nature, a sketch-book in which he always finds fresh ideas and new inspirations.”<sup>512</sup> And finally: “If photography has produced such advantageous results both in an artistical and mercantile point of view, it has also exercised a considerable influence in the diffusion of scientific knowledge . . . Henceforth chemistry, optics, and constitution and properties of light, will form an essential part of knowledge, and become as common as geography, grammar, and arithmetic.”<sup>513</sup>

In Claudet’s words, photography served the same function as rhetoric, logarithm, and sketchbook. It served to make common knowledge what was previously known only to select scholars. But what is the function of rhetoric, logarithm, the artist’s sketchbook, common knowledge, if it is not also the basis for what could be created out of it? These basic resources that Claudet uses as metaphors for the photographic medium, are always there to draw from. Further, he includes that photography’s own source—the sun—

---

<sup>510</sup> Claudet, “Photography in Its Relation to the Fine Arts,” (1860): 262.

<sup>511</sup> Claudet, “Photography in Its Relation to the Fine Arts,” (1860): 261.

<sup>512</sup> Claudet, “Photography in Its Relation to the Fine Arts,” (1860): 262.

<sup>513</sup> Claudet, “Photography in Its Relation to the Fine Arts,” (1860): 265.

(without which it would not have existed at that point), was the limitless source of life itself. “What is the cause of such wonderful results? It is that inexhaustible emanation of the sun, the source of animal and vegetable life.”<sup>514</sup>

Thus, when Claudet wrote about the question of photography’s relation to the fine arts he was also unraveling another facet of what he understood the medium to be. Photography was equivalent to the process of seeing—and the photograph was equal to an imprint on the retina. The reflection (or photographic image) in the eye was not fixed, yet it could be recalled and brought back as an image. Photography was not only the practice that had recently been introduced to the world but was also a manifestation of sight itself. In this sense photography had existed as long as the human eye and, as a reflective muse in the artist’s eye, had always been a part of making art.

It is from this “definition” of the “art” of photography that I will continue to discuss Claudet’s dialogues with the photographic community on the subject.

### ***The “Photographic Artist”***

When Edwards writes about the terms “art” and “artist” as used by practicing photographers in the late 1850s and early 1860s, he points to the conundrum that photographers found themselves in. As I have mentioned, “high art” was associated with the Royal Academy and with the artistic mind. Photographers, who technically belonged to the petit-bourgeois class but were constantly threatened with falling into the “working-class,” needed to use the term “art” in order to establish respectability and social status.<sup>515</sup> They also had to downplay their ties to the mechanical copy or the “labourer” part of

---

<sup>514</sup> Claudet, “Photography in Its Relation to the Fine Arts,” (1860): 266.

<sup>515</sup> Edwards, *The Making of English Photography*, 115.

photography in order to remain economically viable. Edwards points out that resentment towards the working class can be found throughout the pages of the *Photographic News*. “The dialogue that takes place throughout this writing is with this worker–other, who at every moment, has to be separated out from the self.”<sup>516</sup> He asserts that, in the context of the economic downturns of the 1840s and the mid-1860s, any labor strike or violent outbreak fed those fears so that “[e]very criticism of photography was met with a pathological assertion of decency.”<sup>517</sup> Interestingly, this despising language was not necessarily linked to the threat of the economy. Edwards notices that the appearance of the working class in the photographic journals lingered into the early 1861-2 period when the economy had improved. Therefore, the primary impetus for photographers to align themselves with art and art theory at the time, as much as they could, was ultimately out of a need for social recognition and respectability.<sup>518</sup>

The question of photography’s identity in relation to art, although Claudet seems to have his own definition, was a crucial one not just philosophically for Claudet but also commercially. By instilling the same “delicate senses” in the photographer as in an artist, by allowing for the possibility for photographic vision to be turned into “artistic vision,” the value of photography, and therefore of its maker, could be elevated in the eyes of the public. The market, then, could become more selective, dominated by photographers with

---

<sup>516</sup> Edwards, *The Making of English Photography*, 116.

<sup>517</sup> Edwards, *The Making of English Photography*, 116.

<sup>518</sup> Edwards, *The Making of English Photography*, 124. It should also be pointed out that those who ventured to claim themselves “artists” in order to separate their work from that of craftsmen was not a new movement in the mid-nineteenth century. These photographers were following a similar tradition to those painters who banded together in fifteenth-century Italy to form the Academy in order to separate from, and therefore gain a different status than, those in the guilds. It is also important to recognize that photographers were not the only ones claiming a distinction from the stigma of the “mechanical.” In fact the debates about photography’s status were occurring within the context of similar debates about the status of printmaking—for example the “machine-made” lithograph versus the “artist-created” etching or painting—in this same period.

“taste” who could charge higher prices for their products. Claudet, in his papers, his dialogues and his portraits, aimed to be this photographer.

One way in which the art claim by photographers played out in their photographs is revealed in the dialogue around the focus of the image. In order to cover over the mechanical, hard line of the “mirror,” some photographers argued that the photograph should be made slightly softer.<sup>519</sup> However these debates on how to manipulate a “sharp copy” were, as Edwards states, themselves somewhat fuzzy, as there was no consensus about how focus might be used as a determining factor for art photography.<sup>520</sup>

Claudet saw the eye as an apparatus that the artist always carried with him. What does this mean for the “artist photographer” then? As we have seen in Chapter Two, Claudet developed several instruments designed to aid the photographer. These instruments—the photophometer, focimeter, dynacimeter, and “Focus Equalizer”—were posited not as mere mechanical contraptions that usurped artistic sensibility in the photographer but as devices that could draw out what Claudet called the medium’s “principles.” Thus these devices required their own kind of “mastery” of the medium’s peculiarities in order to use them. While positing that photography as “art” necessitated this kind of technical mastery, he was also, as we will see, negotiating photography’s relationship to both the conventions of high art and its class associations. I use Claudet’s

---

<sup>519</sup> Edwards, *The Making of English Photography*, 154. William Newton, founding member and vice president of the Photographic Society wrote in the first issue of the *Journal of the Photographic Society* that the photograph “is better obtained by the whole subject being a little *out of focus*.” While by its nature it was an autogenic process the sun being the active subject rather than the photographer, photography’s fundamental quality of detail did not provide the overall natural tone, the ‘broad effect’ that artists needed. Of course this issue would become even more prevalent in the 1880s with Peter Henry Emerson’s (1856-1936) theory of “Naturalistic Photography.”

<sup>520</sup> Edwards, *The Making of English Photography*, 156. “A critical reading of the nineteenth-century photographic press makes it apparent that there was no such consensus. Focus was a primary organizing category that allowed things to be said. It was not just a question of mathematical and practical optics; it was also a matter of importance for ‘the art of photography.’”

argument for photography's association with Fine Art, indeed as foundational for art, as the backdrop to his dialogue with Camille Silvy preceding the International Exhibition of 1862.

### ***The International Exhibition of 1862***

In an 1857 dialogue with Claudet about the possibility of making beautiful portraits, Brewster wrote of his view of the truthfulness of the photographic portrait. He described them as “monstrous representations” and claimed that, in general, many were “hideous portraits.” Nevertheless, he recognized what he called “the terrible faithfulness” as belonging to the medium’s “art.”<sup>521</sup> In discussing the placement of photography in the Exhibition of 1862, a few years later, however, the Scottish scientist seems to have raised his view of the medium slightly higher. “That photography is entirely a mechanical art, though it is so with many of those who practise it, we cannot admit. That it is entitled to the same rank as painting and sculpture we will not maintain; but we think it will be fully entitled to rank above engraving when its processes have become more sensitive, and its instruments and methods of operations more perfect.”<sup>522</sup> In other words, photography’s mechanical nature, what the Exhibition’s Commissioners argued as the reason for including photography with machinery, was what Brewster claimed to be the

---

<sup>521</sup> David Brewster, “On the Optics of Photography, but Particularly on the Character of the Images Formed Upon Opaque and Transparent Surfaces,” *Photographic Journal* (November 21, 1857): 83-6, read before the Photographic Society of Scotland, November 10, 1857. “It will, I presume, be universally admitted, that a photographic portrait is not a favourable representation of the sitter. It will be generally admitted that many of these are “hideous portraits”; and there are some who maintain that the photographic patient, male or female, often ceases to be human. Without noticing the error of transferring to the sitter the blame which belongs to the art, we may accept as true the character of Sun-portraits, as involved in an expression used by the editor of the ‘Times’ who speaks of the terrible faithfulness of photography.” Another article in *The Times*, Oct. 10, 1857, stated: “Most portraits rather surprise the original at first sight, and the terrible faithfulness of photography has disgusted many a would-be Narcissus.”

<sup>522</sup> David Brewster, “Photography,” as reprinted and excerpted in the *Photographic Journal* 15 (September 1862): 124-8.

photograph's "art." In this he seems to have been inspired by his friend Claudet.

"[A]bsolute truth in the portrait, compensating, we think, the idealism of the painter. Who would not prefer an absolutely true portrait of Cicero and Demosthenes, of Paul and Luther, of Milton and Newton, to the finest representations of them that time may have spared?"<sup>523</sup>

Though unique in that it was coming from a highly esteemed scientist, Brewster's voice was also part of a larger, louder discussion in the early 1860s revolving around the relationship between photography and art. Unlike the placement of photography in the 1851 exhibition, in which its position among "Philosophical Instruments" was unquestioned, by the time of the next International Exhibition of 1862, more photographic figures and communities had established a voice for photography as an art. When the Commissioners published their plan for the exhibition, which was to be divided into four large sections, photography was placed in the second section, under "No. 14, Photographic Apparatus and Photography." Authors in the *Photographic Journal* voiced their disagreement with this decision.

We are at a loss to conceive why photography should be thus unceremoniously ousted out of its proper section, which we consider to be No. 4. Why should photography be placed among 'Railway plant, locomotive engines and carriages, agricultural and horticultural machines and implements,' and things of this class? Why should not photography, the youngest sister of art, be represented in Section 4, which is to contain paintings in oil and water colours, drawings, sculpture, models, . . . etchings and engravings?<sup>524</sup>

---

<sup>523</sup> Brewster, "Photography," (1862).

<sup>524</sup> *The Photographic Journal* no. 108 (April 15, 1861): 149-150. "[W]e need only point out the fact that if a photographer were to send untouched photographs, they would go among the ploughs, harrows, and watering-cans! And if he were to send coloured photographs, they would go into Section 4, with the objects of art above enumerated . . . do photographers desire to be brought to the level of mere mechanics? We think and hope not."

The Commissioners responded to the complaints and explained that in order to “do the utmost honour to the exhibition of Photography, and the scientific instruments essential to the practice of that art,” they had decided to place the medium in its own separate class.<sup>525</sup> The Photographic Council, however, wanted actual photographs to be displayed in a separate place from the cameras and instruments that made them.

As a science, Photography, like every other science, is incapable of being exhibited. But when embodied in the artistic results with which every one is more or less familiar Photography as an art is capable of contributing to an exhibition matters of the greatest and most universal interest, embracing every variety of object which can gratify curiosity and afford pleasures. It would be most painful to the Council to have blended with these results, the mere apparatus which they use as tools—neither could throw any light upon the other.<sup>526</sup>

The Secretary of the Photographic Society, Dr. Lyon Playfair, also argued for the separation of instrument and print.

Cameras belong to the general class of ‘Philosophical Instruments,’ and have no more title to a separate class in machinery than telescopes, microscopes, electrical or surveying instruments, all of which are sections of one class. . . . But the mixing up of the Photographic pictures with the instruments employed to produce them, when the art has developed in magnitude so as to entitle it to special exhibition, is a gross philosophical error. With equal ignorance, the works of the sculptor and engraver might have been appended to cutlery and edge-tools, or the works of painters to the classes which include brushes made from hair, or to chemical products.<sup>527</sup>

---

<sup>525</sup> F. R. Sandford, Her Majesty’s Commissioners, letter to Frederick Pollock, Council of the Photographic Society, published in *The Photographic Journal* no. 110 (June 15, 1861): 196.

<sup>526</sup> Frederick Pollock letter to F. R. Sandford, secretary, Her Majesty’s Commissioners, reprinted in *The Photographic Journal* (June 15, 1861): 196. “We cannot see how, by any contrivance of arrangement, objects belonging to two sections so distinctly marked as Section II. and Section IV. can possibly be brought into juxtaposition.” *The Photographic Journal* no. 110 (June 15, 1861): 195.

<sup>527</sup> Dr. Lyon Playfair to the Secretary of the Photographic Society, *The Photographic Journal* no. 110 (June 15, 1861): 197. He warns of the disgrace this would bring to England compared to the other countries

Another author suggested establishing a separate exhibition for photography, outside of the 1862 exhibition grounds: “I think it would be quite worthy of the London Photographic Society, in case their just claim should not be granted by the Commissioners, to take the lead and open a Special and Universal Photographic Exhibition at the very doors of the International Exhibition for 1862 . . . It would stand as a protest against the want of consideration evinced toward the *new art*.”<sup>528</sup>

### ***M. Claudet and M. Silvy***

This separate exhibition never occurred and Claudet himself would submit a number of photographic portraits, both daguerreotypes and collodion.<sup>529</sup> However, the more important issue here is not what Claudet eventually contributed but his involvement in the discussions prior to the exhibition. I discuss Claudet’s position by focusing on his public debate with the photographer Camille Silvy (1834-1910), a fellow London portrait photographer and Frenchman, in the summer and fall of 1861. Through their exchange of letters, Claudet’s views on the art of photography can be further elucidated. Camille-Léon-Louis Silvy came from a well-to-do “distinguished French family,” that had been

---

(France, Germany, America). “We can imagine a commission composed of men having no more acquaintance with photography than can be gained by looking into shop windows, placing a photograph in the third class by the side of woven fabrics, lace and embroidery, . . . the ‘tea-board’ style of art exhibited in some photographic perpetrations being about as artistic as the ornamental design on a papier-maché tray; but what possible confusion of ideas in the minds of the Commissioners could have led them to class a photograph as a *tool*? In any case it is a *result*, and as such the Commissioners are bound by their own classification to place it along with the other results of machines acting upon the raw material, even if they refuse to give it admission among the Fine Arts.” “Photography and the Commissioners for the Exhibition of 1862,” *The Photographic Journal* no. 110 (June 15, 1861): 205. Also see “Fair Play for Photography,” *Punch* (June 1, 1861); reprinted in *The Photographic Journal* no. 110 (June 15, 1861): 204-5.

<sup>528</sup> Adolphe Beau, “Photography as a Fine Art,” *The Photographic Journal* no. 112 (August 15, 1861): 255.

<sup>529</sup> See Roger Taylor, *Photographs Exhibited in Britain 1839-1865: A Compendium of Photographers and Their Work* (Ottawa: National Gallery of Canada, 2002).

important figures in their area as judicial or municipal magistrates.<sup>530</sup> He moved to Paris in the mid-1830s and took up photography after first studying drawing with a professor at the École Polytechnique. Silvy was not a full-time student at the Polytechnique (which was the top training school for engineers); rather he studied law and took up a diplomatic position in the 1850s.<sup>531</sup> He began photographing on a trip to Algeria in 1857, and in 1858 he joined the Société Française de Photographie. When Silvy moved to London in 1859, the debates about photography and art were just getting underway in the photographic journals. He established himself as a portrait photographer after acquiring (a signal of his upper class association) the studio of Caldesi and Montecchi, one of the most luxurious studios in London.

Silvy began his business with the carte-de-visite format with which he would make his signature style portraits. At the time of his move to London, the carte-de-visite, which had already exploded commercially in Paris, had not quite taken off in London. Silvy saw this opportunity and quickly became one of London's most successful carte-de-visite photographers. He also, as Haworth-Booth points out, had "a gift for publicity," and within two and a half years had produced seven thousand portraits.<sup>532</sup> A visitor to his studio in the very beginning of 1862 commented on the largeness and grandness of the establishment, noting that the "photographic rooms are full of choice works of art in endless number" in order to give the client options as to props and backgrounds. The same visitor noted that Silvy took "every negative with his own hand."<sup>533</sup> This last observation has recently been countered (and realistically it makes sense) as Silvy was

---

<sup>530</sup> Mark Haworth-Booth, *Camille Silvy: River Scene, France* (Malibu: J. Paul Getty Museum, 1992), 38.

<sup>531</sup> Haworth-Booth, *Camille Silvy*, 42.

<sup>532</sup> Haworth-Booth, *Camille Silvy*, 73-75.

<sup>533</sup> A. Wynter, "Cartes de Visite," *Once a Week* (January 25, 1862): 137.

often absent from the studio, leaving the photographs to be taken by his staff and, for a period, his partner, when he had a partnership with Mr. A. Renoult.<sup>534</sup>

How did the businesses of Claudet and Silvy, both Frenchmen in London, one well established, one just arrived, one senior and one younger, compare to each other? I look at this question through a comparison of some photographs. I compare two cartes-de-visite portraits taken by Claudet, presently housed in the National Media Museum, with two cartes by Silvy, presently in the National Portrait Gallery, London [Figure 4:51-52]. The portraits by Claudet, both of women, one seated and one standing, incorporate the same simplicity of pose and space that were used in his daguerreotypes. The same chaise and pillows, drapery, and balustrade used in the metal plates make up the background in Claudet's paper prints. In comparison to the portraits by Silvy, one of a Prince and the other of a Princess (1860), Claudet's portraits are more simple and straightforward. In both portraits the clients are shown in full figure (as was common with the carte-de-visite format), displaying the fullness of their dresses. Silvy's albumen prints are deeper in color, almost to the point of purple, while Claudet's are less dense in tone. The younger photographer also created a more complex setting for his sitters. In Silvy's portraits, the clients stand in elaborately decorated sets, often in the middle of some kind of activity. In Claudet's portraits, the subject is not doing anything besides posing for the camera.

Paul Frecker's recent article on Silvy offers some insight into the public presence of the Silvy studio which makes a comparison with that of his elder possible. Claudet, as we have seen, continually advertised his studios and their products in *The Times*, *The*

---

<sup>534</sup> See Paul Frecker, "Camille Silvy and the English Press," *History of Photography* 33, no. 4 (November, 2009): 324-345.

*Athenaeum*, and *The Art-Union*, letting the public know about any new developments or changes in address (the few times that that occurred). Silvy also placed ads, apparently in larger quantities and with more frequency than Claudet. However, he also announced when he would and would not be present at the studio and even when he was coming and going from London. Whereas Claudet necessarily put his name with his studio, he did not emphasize his role as photographer in the same way as Silvy, who seems to have taken on a kind of celebrity persona in the press. Although it is difficult to draw conclusive lineages between these biographical facts and the portraits themselves, it is possible to suggest that Claudet's sparsely and elegantly posed cartes-de-visite, fewer in overall output, represent a commitment to the photographic medium in both process and in final product. Silvy's rich prints, elaborate settings and props, visually and commercially suggest a contrasting commitment to the public image of the photographer and studio rather than the medium.

It is also important to note that, whereas Claudet made daguerreotypes while also making cartes-de-visite, Silvy made exclusively paper prints. Further, Silvy ended his photographic career after less than ten years. In 1868, Silvy moved away from London but stayed in England as a "consular agent" for France, before returning to his native country. Meanwhile, Claudet practiced photography until the end of his life and did not take up another occupation.

This comparison of the two French-born photographers is illuminating when reading through their published dialogue on the placement of photography in the 1862 Exhibition. It also sheds light on Claudet's position in the over-arching debate not only on whether photography was or was not an art but what that art *was*. One year after

Claudet's presentation of "Photography in Its Relation to the Fine Arts" to the Photographic Society of Scotland in 1860, he and Silvy engaged in a correspondence published in the London Photography Society's journal concerning the reasoning behind photography's place within the exhibition. Responding to an article published in *The Photographic Journal*, Silvy argued for his photography to be included in the mechanical section.<sup>535</sup> In his letter, he explained that

[h]owever interested I may be in seeing photographic productions (to which I have been long devoted) highly estimated, still I cannot hide from myself that the chief merit is produced by the wonderful means that science has placed in our hands.<sup>536</sup>

He continued by threatening to withdraw from the Society if it disagreed with the decision of the exhibition's commissioners.<sup>537</sup> Claudet responded in support of the Photographic Society's position, claiming that he believed that photography deserved to be placed and judged among the fine arts.<sup>538</sup> He responded to Silvy, referring to him as "the unhappy exception" of photographers, "who has the pretension to be an artist, [yet] has thought to distinguish himself by calling his art an entire mechanical work."<sup>539</sup> While criticizing the younger photographer for his disagreement that, as he suggested, was

---

<sup>535</sup> Silvy was responding to "Photography and the Commissioners for the Exhibition of 1862," *The Photographic Journal* 7, no. 110 (June 15, 1861): 205.

<sup>536</sup> "[A]nd since I am in a country renowned for its horses, allow me a comparison which, I think, develops my idea:--Would the contractors of locomotives be right to enter their engines for the Derby in order to compete with thoroughbred horses? Such an idea has never been thought of, and I consider that the genius of photography will suffer no disparagement in being placed amongst the most wonderful machines which this era has yet produced."

<sup>537</sup> Camille Silvy, "Letter to the Editor of the Photographic Journal," *The Photographic Journal* 7, no. 111 (July 15, 1861): 226. "Should the members of the Society determine to send a collective note claiming another place than that indicated by the Commissioners, I regret much that, not having the same opinion, I shall feel obliged to withdraw myself from a Society of which, till now, I have had the honour to be a member."

<sup>538</sup> Antoine Claudet, "On the Classification of the International Exhibition of 1862 as Regards Photography," *The Photographic Journal* 7, no. 112 (August 15, 1861): 241-244.

<sup>539</sup> Claudet, "On the Classification," (1861).

purely for publicity, Claudet invoked his own experience which, he pointed out, was “as old as photography itself.” He argued that the medium deserved the “Fine Art” classification because it was just as difficult to produce a photograph “deserving to be looked at” as any other kind of image and it required “thought, taste, judgment and refinement” to be successful at photography:

[I]f it is acknowledged that a photographer of talent and refined mind can impart to his works a peculiar character, can compose pictures with taste and feeling; if, on the other hand ignorant and vulgar persons, with the same appliances, produce nothing but disgusting representations,--is not this a proof that there is something more in photography than the use of a mere machine?<sup>540</sup>

He then agreed with Adolphe Beau, who had published a request to establish a separate photographic exhibition and proposed that an “Annual Exhibition of the Photographic Society” run concurrent with the International Exhibition. Invoking his international heritage, Claudet also made the case that the fact that different countries produced different photographic productions proved that the medium shared an affinity with fine art, as it was not contested that different nations, including Britain, produced different and identifiable artistic styles.

In the various photographic exhibitions which have taken place during the last ten years, have we not seen that each

---

<sup>540</sup> Claudet, “On the Classification,” (1861). “The same photographer has asked this very funny question:-- *Would the constructors of locomotives have the right to enter the engines for the Derby in order to compete with thoroughbred horses?* He might, with the same propriety, have asked, why asses should not have also the right to compete with both; for photography has its asses, as well as its horses and its engines. But let us not complicate the question; is not the comparison very strange, coming from a photographer? Its defect is, that it signifies nothing, and is not in the least to the point. For my part, I object to be compared to a horse as strongly as to be compared to an engine. The horse runs in proportion to his bodily agility and vigour and his spirit is excited by the spurs of its rider; but I do not think that the horse who has run the fastest has proved to have elicited more genius, more mind, than those he has left behind in the course. Both the horse and the engine may indeed be classified among the machines; and at all events the horse will not enter his protest. When the race is over, he will be more sensitive to a feed of oats than to the praises and admiration of those who have witnessed his velocity on the racecourse. Let us hope that in photographic aspiration there may be something more aesthetic than a *piestin d’avoine*.”

country has a particular stamp and different style for its photographic productions, so distinct that, without looking at the catalogue, one may distinguish at once which pictures belong to the English, French, German, or American artists, and moreover, who are the artists in each country that are the authors of such and such pictures.<sup>541</sup>

However, although he notes that different countries produced different photographic styles, in order to reinforce his argument Claudet equally argued for the possibility of finding a commonality among all photographers *as* photographers regardless of their nationality. Claudet claimed that the medium was best served by its makers joining together as a separate entity, not as fine art or as mechanical product but as Photography.

If all photographers, English and foreign, were actuated by a *proper* feeling of the honour of their profession, they might strike in a body and abstain from joining the Great Exhibition. The Great Exhibition would not suffer in the least degree by the absence of photography, and photography might flourish, progress and thrive without being mixed with the Great Exhibition . . . The experiment of an International Exhibition exclusively for photography might do more for the prosperity of the art than if we were to submit to be classified in the *mechanical department* of the Great Exhibition.<sup>542</sup>

Silvy's (long) response the following month addressed Claudet in French.<sup>543</sup> He emphasized his newness to the London photographic sphere, pointing out that he had been in England only two years versus Claudet's many. Standing by his previous claim for photography's place in the 1862 Exhibition, Silvy countered Claudet's previous rebuttal of photography as a purely mechanical art. He made the admission that it

---

<sup>541</sup> Claudet, "On the Classification," (1861).

<sup>542</sup> Claudet, "On the Classification," (1861).

<sup>543</sup> Camille Silvy, "À Monsieur Claudet," *The Photographic Journal* 7, no. 113 (September 10, 1861): 267-271.

required taste and refinement to make good photographs, yet argued that there was still a vast gulf between photography and the fine arts. The gulf between them, he claimed, was structured by the definition of “genius”: “Fine Arts create. Photography copies.”<sup>544</sup>

Photography, in Silvy’s mind, could not be “genius.”

Although Claudet made a similar-sounding statement in 1860, his claim still allowed for the possibility that photography, in addition to its copying powers, could be created out of “genius” in a different sense. In his reply the following month, addressed “À Monsieur Silvy,” he wrote that Silvy, in differentiating photography from fine arts, had actually proved photography to be an art.<sup>545</sup> He responded to the younger photographer’s definition of genius by writing, “I say that genius is as much indispensable to photography as to any other of the Fine Arts.”<sup>546</sup>

Why was the distinction of genius so important for Claudet? Perhaps because its definition (“mental power or faculties”) struck at the heart of what he was trying to claim for the medium and for himself as a photographer. As I have suggested, what was at stake for Claudet in this debate on the status of photography as a fine art was the photographer’s status. To not call it art, and to call it mechanical as Silvy did (someone who would leave the business anyway six years later), Claudet would have had to admit to less respectability for his profession. In other words, the argument had mercantile as

---

<sup>544</sup> Silvy, “À Monsieur Claudet,” (September 1861): 268.

<sup>545</sup> Antoine Claudet, “Photography as Fine Art, À Monsieur Silvy,” *The Photographic Journal* 7, no. 114 (October 15, 1861): 280-282.

<sup>546</sup> Claudet, “Photography as Fine Art,” (October 1861): 281. He cites the dictionary definition of genius. “Therefore . . . the photographer who has a certain amount of mental power or faculties—a disposition of nature by which he is qualified for the peculiar employment of his art—that photographer has the quality of genius of which you make exception. If genius is what Johnson explains, will you say that genius—mental power of faculties—. . . are not indispensable to the photographer who, according to your own admission, can merit the name of artist for his talent, ability, taste, and sentiment?” Also see Claudet, “Is Photography a Fine Art? À Monsieur Silvy,” *The British Journal of Photography* 8 (November 1, 1861).

well aesthetic implications. In addition, and probably for Claudet more importantly, he would be dismissing years of research and work on the medium. His image as a soldier for the “cause of photography” would be tarnished, along with the medium itself.

***“[W]hat has all that to do with photography?”***

Claudet’s ideas about the “art” of photography (as different from fine art) were also revealed the next year in a response to a published critique of the “caricatures” produced in the photographic studios of Regent Street: “I have no doubt that the critic of the *London Review* has seen such hideous photographs, and has not exaggerated their defects for the mere pleasure of appearing witty; but what has all that to do with photography?”<sup>547</sup> He then goes on, accentuating that there was “nothing like” photography:

Photography represents people as they are, and painting as they ought to be, or as they would like to be. The last may be more agreeable to the persons represented; but the first is more satisfactory to those who want the truth, and do not care for the fiction of poetical treatment. In description there is nothing like good, plain intelligible prose. For truth there is nothing like a mirror. And is there anything more resembling a mirror than the camera of the photographer?<sup>548</sup>

---

<sup>547</sup> Antoine Claudet, “The New Picture Galleries,” *The British Journal of Photography* 9 (May 1, 1862): 168. “If, after a walk along Regent Street, you had chosen to describe the strange diversity of the perambulating multitude, would you have found much to say in praise of the refined expression of countenance of every one you had met—of the beauty of form of every individual, male and female—of the distinction of their bearing, the elegance of their manners, and the taste of their dress? I rather think that you would have returned home very little charmed with your physiological study. Among those who had passed before your eyes, judging only from their external appearance, might you not perchance have mistaken a nobleman for a farmer, a legislator for a publican, a bishop for a schoolmaster, a clergyman for a waiter, a Russian prince for a commercial traveler, a banker for a tea-dealer, an eminent writer for a toast-master? . . . In plain truth, photography caricatures because it represents too faithfully the individuality, and because too many individualities are nothing but caricatures of mankind.”

<sup>548</sup> Claudet, “The New Picture Galleries,” (1862), 168.

Once again, the “art” of photography is its “truth” to nature rather than its ability to idealize the sitter. He also re-states a version of his 1860 thesis, in which he allied the camera with the eye and the daguerreotype plate with the retina.

We see the forms of all the works of creation by the light they reflect. The rays being refracted through a lens that nature has placed in front of that wonderful instrument called the eye, form on the delicate membrane of the retina the image of all external objects. The eye in reality is a camera obscura, and photography is nothing else.<sup>549</sup>

Which brings Claudet to the question of photography itself. He asks the critic,

[h]ave you ever understood what is photography? Have you studied the beautiful and unerring principles upon which it is based? If you had, the most imperfect photographic production would be a source of admiration to you.<sup>550</sup>

As stated at the beginning of this chapter, the “art” question for photography was inextricably linked with deciphering what the medium *was*. What his dialogue with Silvy makes clear is that Claudet saw it necessary to claim that photography was as respectable as painting, deserving of exhibition space in the Fine Arts section or its equivalent, and that it was also worthy of respect not only as a faithful copy but as its own unique medium. Rather than simply arguing for photography as something that was similar to painting, Claudet spoke for a photographic art that was particular to photography, based on “beautiful and unerring principles.” These basic tenets of the medium incorporated both artistic “taste” and “true” likenesses. By distinguishing the photographer as capable of both artistic vision and binocular/optical recreations, Claudet argued for a unique status for the profession. By keeping it separate, it also maintained its own value.

---

<sup>549</sup> Claudet, “The New Picture Galleries,” (1862), 168.

<sup>550</sup> Claudet, “The New Picture Galleries,” (1862), 168.

Claudet was not the only vocal participant in the dialogue around photography's relationship to art, as this question arose in various guises from the early 1840s and into the 1860s. However, as a daguerreotypist who worked in the crossroads between portraiture, commerce, and science, he makes possible a more multi-faceted view of the "art" of photography in its first decades. Compared to a stylistic development of the medium, I argue that Claudet's dialogues (visual and written) in the context of a broader discussion of the relationship between the medium and fine art provide a better understanding of photography's art and, therefore, of photography itself. Indeed, Claudet adds to the traditional narrative about art and photography a more complex story of how photography was initially negotiated with the fine arts. As a result, Claudet, a lesser-known figure in the literature on photography, offers a more integrated art history of photography that is less about *art* and more about *photography*.

## **Chapter Five: Writing**

Amidst the thousands of portraits of his clients, Claudet made several self-portraits, using both the daguerreotype and the calotype process, posing himself as a well-to-do intellectual and businessman. In the series of four stereo-daguerreotypes that comprise *Self-Portrait with Son Francis*, c. 1853, for example, he holds a folded paper in his lap while leaning towards his invention, the focimeter. In an earlier paper portrait, Claudet peers through bifocals into an open book [Figure 5:1]. In another, he sits with his hand tucked into his waistcoat [Figure 5:2]. A late carte-de-visite portrait depicts him pulling a pocket watch from his jacket [Figure 5:3]. The pose he adopts in his self-portraits makes him appear to be of the same class as many of his clients, and this was an important means of reinforcing his status as a scientist and as a professional photographer.

Another way in which Claudet promoted his self-image was through his prolific writings on photography. His essays and letters appeared so frequently in journals and newspapers that he became a representative voice for the new medium of photography at that time. Indeed, his writing served him as much as it also served the medium. It reinforced his legitimacy within British society at the same time that it helped to shape the contemporary dialogue on photography. Moreover, it is important to recognize that Claudet wrote in two languages, the two that claim the invention of the medium, often publishing the same paper in both English and French photographic journals. Correspondence reveals that Claudet was conscious of the fact that his writing was not

that of a native Englishman (although he was practically fluent) and that he sought to improve it. As he wrote to a reviewer for the London *Morning Herald* in 1847, “I have put down a few ideas which, if properly expressed in good English, might answer the purpose, but my pen is foreign, of a very hard metal, it does not run easy, as you have one of a better make, soft and elegant - would you lend it to me for the occasion? . . . I send you my sketch, & if you have the time to correct it to improve it, I would be very much obliged.”<sup>551</sup>

While he was aware of the need to improve his English in order to promote his studio to the London public, Claudet never let go of his “foreign pen” (indeed, the majority of his letters to Talbot were written in French, the language of science and diplomacy). The articles he published in British journals, such as the *Photographic Journal*, *Philosophical Transactions of the Royal Society*, *Art-Journal*, and *Photographic News*, also appeared in similar publications in France – *La Lumière*, *Comptes rendus de l’académie des sciences*, and the *Bulletin de la société française de photographie*. Writing, then, was a means of communicating with his native country and contributing to the development of his beloved medium there. As far as he was concerned, the more awareness each country had for the other in terms of photography, the faster the medium would reach its full potential.

In a letter written in 1851 to the French photographic journal *La Lumière*, Claudet made clear his views on how best to advance photography. “To M. Editor of *La Lumière*: Sir, Photography needs a center of action, to provide a potent remedy of

---

551 Claudet to Hastings, London, July 21, 1847, *Antoine Claudet Letters to D. Hastings*, The Getty Research Institute, Los Angeles.

discoveries and perfections that are necessary to complete this new science. It is such a happy and fertile idea that led to the establishment of the journal *La Lumière*, and it belonged to France to conceive it, to execute it. But this example will be useful, I hope, and soon followed by England; and then the two countries will each have their own forum, where they will go to discuss questions of photographic art and science.”<sup>552</sup>

Claudet envisioned photography’s advancement through a “forum” of discussion and debate. Indeed, as this chapter will show, many of Claudet’s letters to editors published in journals were part of a dialogue with other photographers. He contributed some of the first articles on photography and engaged in some of the first debates in the 1840s. Due to the fact that so much was unknown about the medium at this time, his articles, as well as those of others, appeared in publications, such as the *Literary Gazette, and Journal of Belles Lettres, Arts, Sciences, etc.* (London, 1836-1856) and *The Athenaeum* (London, 1830-1921) that covered varied items of interest literary, artistic, and scientific. In the early 1850s, with the Great Exhibition and the rapid increase in commercial photographic studios in London (and on Regent Street alone), more consistent dialogues occurred between practicing photographers. This led to the establishment of journals devoted specifically to the medium of photography. The articles

---

552 Claudet, “Correspondance,” *La Lumière* (March 9, 1851). “Un de nos abonnés de Londres nous écrit la lettre suivante: ‘A M. Le Rédacteur de la Lumière: Monsieur, La photographie avait besoin d’un centre d’action, pour donner une infusion vigoureuse aux découvertes et aux perfectionnements qui doivent compléter cette nouvelle science. C’est donc une idée heureuse et féconde que celle qui a présidé à l’établissement du journal la Lumière, et il appartenait à la France de la concevoir, de l’exécuter. Mais cet exemple utile sera, je l’espère, bientôt suivi par l’Angleterre; et alors les deux pays auront chacun leur tribune, où viendront se discuter les questions de l’art et de la science photographiques.’”

published in journals and newspapers are key to accessing the range of the initial experiments with the medium.<sup>553</sup>

“The discovery of a new art founded upon some startling facts in science, however perfect it may appear at the beginning, and little subject to improvement, rarely remains long stationary; and still more rarely can we foresee all its useful applications.”<sup>554</sup> Within a few short years of its “discovery,” photography, as Claudet stated to the Society of Arts in 1843, was still a “new art” despite the rapid developments already achieved. Its simultaneous advancement and ambiguity, not fully allied to any one technological entity, nor to art or science, called for further experimentation with the process.

Taking Claudet’s texts as case studies, it is evident that writing about photography in the 1840s through the 1860s was also a way of practicing it. In these pages, through writing, the practice of photography was explored, improved, and argued. Without a clear vision of the outcome of their pursuits, photographers such as Claudet responded to the moment and to each other. As the photographic literature of this period is vast and extensive, I will look at a few of Claudet’s articles and what they were responding to, as well as noting what they were reproduced next to. Claudet’s multiple roles—as

---

<sup>553</sup> Steve Edwards, *The Making of English Photography: Allegories* (University Park, PA: The Pennsylvania State University Press, 2006) and Jennifer Tucker, *Nature Exposed: Photography as Eyewitness in Victorian Science* (Baltimore: Johns Hopkins University Press, 2005), both make a case for using photographic journals as key source material.

<sup>554</sup> Antoine Claudet, “The Progress and Present State of the Daguerreotype Art,” *Transactions of the Society of Arts, Manufactures, and Commerce* 55 (1843-1844): 89-110. It is important to note that this paper on “Progress” is published in *Transactions of the Society of Arts, Manufactures, and Commerce*, a journal representing a society, as discussed in Chapter One, founded on the interests in interrelating new scientific developments with industry in order to promote national economic progress. For a history of the press in the UK, especially the establishment of new newspapers and journals in this period, eg. *The Illustrated London News*—which would become a useful source of income for Claudet—see James Ryan, “Images and Impressions: Printing, Reproduction and Photography,” in John M. Mackenzie ed., *The Victorian Vision: Inventing New Britain* (London: V & A, 2001), 215-222.

commercial photographer, as scientist, and as “photographic artist”—were all conveyed to the public through writing, and his papers ranged from broader statements about the medium’s “progress” to specific “principles” of photography.<sup>555</sup> As a consequence, Claudet’s writing reflects the broad range of voices and discourse surrounding photographic practice in its first three decades.

At the same time that the photographic journals were forming in the 1850s and 1860s to discuss photography’s progress, several “histories” of photography were also being produced. They often made up the first chapter of the many practical manuals on the medium in order to briefly summarize the discoveries and improvements that had led up to the author-photographer’s present moment. These histories, multiplied in the manuals, formed the background to the dialogue to which Claudet and his contemporaries were contributing. In this chapter I examine how these histories of the medium, as histories in process, in the making, mirrored the multi-directional way in which the medium was being developed. Therefore, Chapter Five follows Claudet’s writing within the network of dialogues proliferating around the new medium (in order to witness the practice of photography in motion). I then examine a sample of the kinds of histories found in practical photographic manuals. Claudet’s Regent Street studio, his “Temple to Photography,” will then be looked at as a kind of writing on the history of photography that also represented it as a process. All of these explorations aim to “read” the

---

555 Claudet, “The Progress and Present State,” (1843-1844); Antoine Claudet, “On the Progress of Photography,” read by Claudet to the Society of Arts on January 22, 1845, and announced in *The Athenaeum* no. 901 (February 1, 1845): 124; Antoine Claudet, “Progress of Photography,” *Royal Society of Arts Transactions* 56 (1846-8); “Photographic Phaenomena Referring to the Various Actions of the Red and Yellow Rays on Daguerreotype Plates When They Have Been Affected by Daylight,” *Philosophical Magazine and Journal of Science* 32, no. 214 (March 1848): 199-201.

photographic process, in both the practical manual and the historical text, seeking to discover the photographic as something “developed out” through writing.

### *Writing as Practice*

Claudet engaged in photographic discourse from the outset of his career. In the 1840s, while he was contributing writing to more exclusive scientific publications, Claudet’s articles also appeared in printed spaces where a variety of interests were covered.<sup>556</sup> An early correspondence sent to the editors of the *Literary Gazette and Journal of Belles Lettres* in 1841 and excerpted by an anonymous reviewer provides a sense of how Claudet typically presented himself on the printed page. He wrote both to acknowledge his gratitude to the editor for his report on Claudet’s new method of acceleration in the daguerreotype process and to make a public record of his achievement.<sup>557</sup> Claudet’s connection to France and to the scientific community in Paris, which he made clear in his letter, gave him added authority on the French process. The letter also conveyed Claudet’s scientific knowledge, through his detailed descriptions of the mysteries of the recently announced “Electrotype” process. “Allow me to explain to

---

556 Antoine Claudet, “On Some Principles and Practical Facts in the Art of Photography,” read to the Society of Artson January 28, 1846 and announced in *The Athenaeum* no. 954 (February 7, 1846): 152; Antoine Claudet, “Researches on the Theory of the Principal Phaenomena of Photography in the Daguerreotype Process.” *Philosophical Magazine and Journal of Science* 35, no. 237 (November 1849): 374-385, read before the British Association at Birmingham (1849); also published in *Art Journal* (1849): 358-60, and later in *Photographic Art Journal* 2, no. 1 (1851): 37-50. Also see Antoine Claudet, “The Stereoscope and its Photographic Applications,” reviewed in “Society of Arts Seventh Ordinary Meeting,” *Journal of the Society of Arts* 1 (January 21, 1853): 97-100, and Antoine Claudet, *Du stéréoscope et de ses applications à la photographie par A. Claudet; Derniers perfectionnements apportés au daguerreotype par F. Colas* (Paris: Lerebours & Secretan, 1853).

557 “Daguerréotype and Electrotype,” *The Literary Gazette, and Journal of the Belles Lettres* no. 1301 (December 25, 1841): 838. “Sir,—You have been so kind as to notice, in your number of the 13<sup>th</sup> inst., the application I have successfully made at the Adelaide Gallery, to the daguerreotype portraits, of the chemical compound which has been made known in Paris to the Académie des sciences by my friend M. Gaudin [Marc-Antoine-Auguste Gaudin (1804-1880)].”

you here the theory by which I am enabled, after a great many microscopic observations, to demonstrate the cause of the phenomenon.”<sup>558</sup> With the air of an empiricist, he reassured the editor and the public that, if examined down to its basic elements, the mysterious daguerreotype could be fully understood. Yet, according to the writer reporting on the letter, he modestly concluded with an admission that his “theory may be wrong in some details; but it appears to him to explain the effect pretty clearly.”<sup>559</sup> Thus in one letter, Claudet established a record of his discovery while he also placed himself in the public’s mind as an early expert on photography. Not insignificantly, Claudet linked the daguerreotype to another body of science—astronomy. The reviewer wrote, “[h]e compares the daguerreotype surface, when viewed through a powerful microscope—to the darker parts to the starless heavens; the gradations of tints to the constellations and stars, . . . and the brighter portions, composed of a multitude of globular molecules of mercury, to the milky way, thickly studded with myriads of luminaries.”<sup>560</sup> The photographer-scientist, faced with the new process, stares into its depths and sees something as ungraspable as The Milky Way. Claudet’s vision of the cosmos in the microscope echoes the contemporary view that photography still needed to be explored and explained.<sup>561</sup>

---

558 “Daguerréotype and Electrottype,” (1841): 838.

559 “Daguerréotype and Electrottype,” (1841): 838.

560 “Daguerréotype and Electrottype,” (1841): 838.

561 It was not uncommon in the scientific community at this time to compare results of experiments with natural phenomena. This is a massive topic that cannot be fully examined here, but Claudet’s comparison of something chemical and manmade (the daguerreotype) to the natural patterns of the stars mirrors the viewpoint of the “Romantic scientist.” In mid nineteenth-century Britain, in the age when natural wonders were being pulled down to earth and interrogated, such a Romantic/Academic figure was prevalent. For example, Humphrey Davy assisted his poet and friend William Wordsworth (1770-1850) with his poetry and often gave lectures at the Royal Society that incorporated Romantic language and poetic inspiration to explain his points. Astronomy in Britain at the time was equated with the name William Herschel (1738-1822), the father of John Herschel, one of the pre-eminent British scientists working on photography in this period.

With the early 1850s came the founding of the first Photographic Societies in London and in Paris. The London Photographic Society was founded in 1853 at 21 Regent Street (close to Claudet's 107 Regent street studio), with the aim of creating, as the inaugural issue of its journal in March of 1853 stated, "the Interchange of thought and experience among Photographers."<sup>562</sup> The Society established the first photography journal in Britain, *The Journal of the Photographic Society*. Unlike previous printed realms where photography abutted other topics, scientific, literary or artistic, now articles on photography were juxtaposed with each other. As a result, these journals can serve as artifacts of the various conversations on and around the medium at this time.<sup>563</sup>

An early correspondence submitted by Claudet to the Photographic Society, "On the Introduction of Mercurial Vapour into the Camera in Daguerreotypy," appeared in the October 1853 issue of *The Photographic Journal* next to a paper describing the construction of a "Portable Dark Tent" to protect the interior of the camera from light.<sup>564</sup> Claudet's paper was responding to a letter to the editor published in the previous issue. W. H. Crawford, a correspondent based in Bombay, had proposed to the Society a technique that Claudet had already attempted.<sup>565</sup> Claudet's response pointed out that "after repeated experiments," he decided the technique did not work and he doubted Crawford's results. Claudet's tone was argumentative. However he concluded with an explanation for his attack on his colleague in India. "In discussing, or rather opposing,

---

562 "Introductory Address," *The Journal of the Photographic Society* no. 1 (March 3, 1853): 1.

<sup>563</sup> Edwards, *The Making of English Photography* (2006).

564 Antoine Claudet, "On the Introduction of Mercurial Vapour into the Camera in Daguerreotypy," *The Journal of the Photographic Society* no. 10 (October 21, 1853): 117-119; "On a Portable Dark Tent," *The Journal of the Photographic Society* no. 10 (October 21, 1853): 119. A description of Claudet's studio around this time mentions that the photographer used a similar apparatus.

565 The development technique, which was included in Claudet's 1841 patent, involved the application of the mercury vapor at the same time as the plate was exposed in the camera obscura.

Mr. Crawford's theories, I am only actuated by the wish of serving the art of Photography. I submit to photographers the results of my own experience in order to give them data in their researches, if they are inclined to try the plan. Those who have time, and the enthusiasm of their art, will do well to make some experiments [on mercury and light in development of the daguerreotype image] . . . for as yet we know very little of the subject."<sup>566</sup>

Alternatively, if one views a year of articles within the same journal, one gains access to the diverse arenas of dialogue in which Claudet spoke. For example, in *The Photographic Journal* in 1860, he presented his theories on photography's relationship to the "Fine Arts" while also actively contributing to scientific gatherings at Oxford.<sup>567</sup> When "On Photography in Its Relation to the Fine Arts" appeared in print, it appeared between an article titled "On the Influence of Light & Heat in Changing the Properties of Bodies," and an article on the "Fothergill Process."<sup>568</sup> Following Claudet's two papers presented at the British Association Oxford meeting was a paper by Henry Draper, "On a Reflecting Telescope for Celestial Photography, Erected at Hastings, near NY."<sup>569</sup> Thus papers on one photographic topic found themselves next to diverse subjects under the

---

<sup>566</sup> Claudet, "On the Introduction of Mercurial Vapour," (1853): 118. Crawford replied to Claudet in the December issue, defended his process, and concluded that if other experiments were "met in the same spirit which Mr. Claudet has manifested . . . it will deter many from communicating information, which probably, in very many instances, would be of the first and greatest importance to science." W. H. Crawford, "On the Daguerreotype," *Journal of the Photographic Society* 12 (December 21, 1853): 167-168.

<sup>567</sup> "On Photography in its Relation to the Fine Arts," *British Journal of Photography* 7, no. 118 (May 15, 1860): 146-147; For the 1860 British Association Oxford Meeting Claudet read "On the Principles of the Solar Camera" and "On the Means of Increasing the Angle of Binocular Instruments, in Order to Obtain a Stereoscopic Effect in Proportion to Their Magnifying Power," *British Journal of Photography* no. 122 (July 16, 1860): 207-9.

<sup>568</sup> J. Kibble, "On the Influence of Light & Heat in Changing the Properties of Bodies," *Photographic Journal* (1860): 144-146; Alfred Keene, "The Fothergill Process," *Photographic Journal* (1860): 147. The process was a method of mixing the albumen and nitrate of silver mixture by diluting it on the surface of the plate with the collodion so that the albumen did not coagulate.

<sup>569</sup> Henry Draper, "On a Reflecting Telescope for Celestial Photography, Erected at Hastings, Near NY," (1860): 209.

major subset of photography. These juxtapositions make visible the efforts towards understanding and improving the medium in multiple directions.

Two years later, a meeting of the Photographic Society featured a presentation by Claudet on the “Enlargement of Photographs.”<sup>570</sup> Surrounding it was a text by the lens manufacturer John Henry Dallmeyer (1830-1883) on his new “instantaneous shutter” that, along with Claudet’s examples of photographic enlargements, was concurrently on exhibit in the 1862 International Exhibition. Claudet demonstrated his enlarging techniques and explained to the group their benefits to both artists and photographers. He also included his theories as to how to mathematically calculate the correct focal distance for the enlargement of a negative in the camera, including a “Table of Proportions and Distances on Both Sides of Lenses from the Point which is the Zero of Measurement.”<sup>571</sup> The mathematical chart showed how to determine the correct distance for the chosen size of enlargement. He then demonstrated his theory to the group by setting up a camera on a table in “magic-lantern fashion” with a “gas-jet behind the condenser” in order to illustrate the various amounts of amplification produced by various distances. A discussion amongst society members ensued and was published in the journal. Claudet’s results were compared to those of an English photographer, Vernon Heath (1820-1895). Heath claimed that he could make enlargements with an ordinary camera and did not require sunlight. He had asked Claudet, in “a spirit of friendly rivalry,” to supply him

---

570 Antoine Claudet, “Enlargement of Photographs,” which included his “Rule for Finding at Once Both the Distances of Negative and Sensitive Surface for Any Degree of Enlargement, and Vice Versa,” *The Photographic Journal* no. 122 (June 16, 1862): 62-68.

571 Claudet, “Enlargement of Photographs,” (1862): 65-66. The “zero” point, Claudet contended, was not the front of the lens but was in fact a point between two points on either side of the lens – one the closest possible to the outside of the lens that could produce the largest projected image, the other a point behind the lens where parallel rays produce the smallest image possible. From this point, the distance of the negative from the lens and the distance of the object from the lens was calculated in parts, or percentages, of 100.

with a negative from which he would make an enlargement with his method and compare it to an enlargement that Claudet had made with the solar camera. The prints (Claudet's were salted paper while Heath's were albumen) were passed around and compared.<sup>572</sup> John Jabez Edwin Mayall (1813-1901), who had also been working with photographic enlargements, was present and spoke in defense of the solar camera method of Claudet, his former employer. He claimed that Claudet's paper prints were superior to Heath's albumens, though softer.<sup>573</sup> After a reply by Heath, and a mention by Dallmeyer, the discussion was concluded by the Chairman, Charles Blacker Vignoles.<sup>574</sup>

It is worth looking directly at this nexus of articles and discussion as published in the Photographic Society's journal because, as a set of printed pages, it represents the fluctuating arena of debate around the photographic medium, in which Claudet's voice was mixed with those of other photographers. He clearly wanted to be recognized for his achievements, yet his main object was to push photography forward, based on its "principles" as he and others had discovered them, rather than get pulled backwards with experiments that had already been tested. These interchanges are also indicative of how the Society interacted and exchanged information. It underscores the fact that the methods and theories surrounding the medium (including those that Claudet constantly presented) required mathematical and physical correctness in addition to producing

---

572 Claudet, "Enlargement of Photographs," (1862): 66-67.

573 Claudet, "Enlargement of Photographs," (1862): 67-68. Henneman appears to have left Mayall's at this time but was employed by Claudet at 107 Regent Street. A letter by John Henry Bolton to Talbot, January 23, 1862, in *Talbot Correspondence*, Doc. 8513 writes "Henneman, I find, has left Mayall's employment but is with Claudet."

574 Claudet, "Enlargement of Photographs," (1862): 68. Vignoles (1793-1875) was the civil engineer and founding member of the Photographic Society who had employed Roger Fenton in 1852 to take pictures of the Tsar Nicholas I Chain Bridge he constructed in Kiev. He claimed Claudet's mathematical focusing chart, which had been disputed, to be correct, stating, "I am a mathematician, and on my responsibility as a mathematician I state the method to be mathematically correct."

aesthetically pleasing results. Therefore photography had to be discussed differently and held up to standards unlike those for painting or other media.

Another major outlet for photographic discussion was the *Photographic News*, founded in 1858 under the direction of the chemist William Crookes (1832-1919). The *Photographic News* was different than the *Photographic Journal* as it was not tied to a photographic society. It was also a weekly publication rather than monthly. As a result, articles were authored by a much more diverse group of professional and amateur photographers. Their object, as stated in the paper's inaugural issue of September 10, 1858, was to make "photography a subject of interest to the public generally."<sup>575</sup> Claudet's article on the "Stereomonoscope" appeared in the same issue, as well as in the two following issues.<sup>576</sup> In the first, Claudet's essay follows an article on "How to Choose a Lens" and precedes "Photography and the Microscope," both by unknown authors.<sup>577</sup> In the second issue, the "Stereomonoscope" was juxtaposed with an article by the French photographer and former miniature painter Joseph Auguste Belloc (c. 1800-c. 1868), titled "The Future of Photography."<sup>578</sup> In 1859, Claudet's response to a paper given to the "French Photographic Society" regarding the stereoscope with "parallel

---

<sup>575</sup> *Photographic News* 1, no. 1 (September 10, 1858). Jennifer Tucker, in *Nature Exposed* (2005), discusses the *Photographic News* as a locus of interchange between scientists and states that the editors advocated the sharing of information and a collective atmosphere in which photographs and advice could be exchanged freely.

<sup>576</sup> Claudet, "The Stereomonoscope," *Photographic News* 1, no. 1-3 (September 10-September 24, 1858): 3-4, 14-15, 26-27.

<sup>577</sup> "How to Choose a Lens," and "Photography and the Microscope," *Photographic News* 1, no. 1 (September 10, 1858): 2.

<sup>578</sup> Auguste Belloc, "The Future of Photography," *Photographic News* (September 17, 1858): 13-14, in *Revue Photographique*: "In all future time the photographic art, in its numerous varieties, and under its manifold forms, will rank among the grand discoveries which render illustrious the nineteenth century. Railways which abridge space, and the electric telegraph, which annihilates it, are those marvelous applications of science . . . It is when science shows itself in works, which all of a sudden change and ameliorate the conditions of human existence, that the world realizes all the grandeur of the discovery, and compensates for its disdain by unlimited gratitude." "Is it after all an art? Is it a science? It participates of both; it is the conciliation, and almost 'the fusion' of the two. It is art identified with nature, --it is 'applied science.'"

lenses” criticized it for the fact that it was written “in ignorance of [his own] previous labours.”<sup>579</sup> In 1860, when editorship of the *Photographic News* was transferred to George Wharton Simpson, Claudet’s articles on the stereoscope and the solar camera could be found near articles on “New Processes of Photographic Engraving” and “Colour in Relation to Photography” and “Transferring Collodion Negatives in Waxed Paper,” and finally “Polarisation of the light of the Lunar Corona in Total Darkness” and “Spots on the Sun.”<sup>580</sup> If this list of titles and authors seems tedious and random, it is meant to suggest precisely that – that photography was concocted through process, through multiple voices speaking to and over each other. One article does not predict the next.

Claudet’s writing often criss-crossed the Channel. His papers written for an English audience were often translated into French for photographic publications in that country at the same time that some of his French correspondence was translated for English publications. In Paris, the first publication devoted to photography, *La Lumière*, was established in 1851 to coincide with the founding of the *Société héliographique*. In 1854, several of its members broke away to found the *Société française de photographie*. The group was primarily devoted to art and was against commercialism in photography, which would be evident in papers that appeared in their journal, the *Bulletin de la Société française de photographie*, first published in January of 1855. Claudet’s name frequently appeared in *La Lumière* in articles received from London or in letters to the journal’s editor, Ernest Lacan. An early issue contained two articles by Claudet—one warning of

---

579 Antoine Claudet, “The Stereoscope,” *The Photographic News* 11, no. 40 (June 10, 1859).

580 Antoine Claudet, “On the Principles of the Solar Camera,” *Photographic News* 4, no. 96 (July 6, 1860): 110-111; “Mr. Claudet on the Stereoscopic Angle,” *Photographic News* 4, no. 97 (July 13, 1860): 125 was found next to M. Berchtold, “New Processes of Photographic Engraving,” (June 10, 1859): 158; Charles Martel, “Colour in Relation to Photography,” (July 6, 1860): 109-110; “Transferring Collodion Negatives in Waxed Paper”; “Polarisation of the Light of the Lunar Corona in Total Darkness” (July 13, 1860): 124-5; “Spots on the Sun” (July 13, 1860): 125-6.

the dangers of using mercury, the other an article comparing the chemical ray versus the light ray as transferred by the lens—published in London a few weeks prior.<sup>581</sup> The articles appeared between “Nouvelles diverses” and a paper reporting on photographic reproductions of engravings, drawings, and prints by Claude-Félix-Abel-Niépce de Saint-Victor (1805-1879), a cousin of Joseph Nicéphore Niépce.

Claudet also wrote responses to other photographers’ published experiments on both sides of the channel. An 1856 issue of *La Lumière* published a reply sent by Claudet from London in French to a letter on photographing ancient books and manuscripts written by the chemist Farnham Maxwell Lyte (1828-1906), an Englishman living and photographing in the Pyrenees and a founding member of the *Société française de photographie*. He addressed Maxwell Lyte’s observation that blue inked manuscripts or ancient texts did not reproduce photographically and concurred by sharing his own experience of a few years prior (again asserting his precedence) as he had made a photographic copy of the document of signatures admitting him into the Royal Society in 1853. The signatures written in blue ink did not reproduce photographically.<sup>582</sup>

While contributing to *La Lumière*, Claudet was also submitting articles to its rival publication, the *Bulletin of the société française de photographie*. His first articles appeared in 1858 and included his work on the stereomonoscope as well as a description of the photophometer and his experiments with testing the exposure during a solar eclipse.<sup>583</sup> As he did in British journals, Claudet also engaged in arguments with his

---

581 Antoine Claudet, “Sur les dangers resultant de l’emploi de mercure,” and “Du foyer chimique et du foyer apparent dans les objectifs,” *La Lumière* 1, no. 15 (May 18, 1851): 59.

582 Antoine Claudet, “Letter,” *La Lumière* 6, no. 4 (January 26, 1856): 29.

583 *Bulletin de la société française de photographie* 4 (April 1858): 96. “M. Claudet nous a montré une experience assez intéressante qu’il a pu faire à Londres . . . Il s’était prepare pour mesurer, au moyen de son *photophometre*, l’intensité des rayons photogéniques pendant les diverses phases de l’éclipse.” [M.

French colleagues. In a later issue of the *Bulletin*, Claudet addressed his text to a particular member, M. Hermagis, who had countered Claudet's theories on the stereoscope. "My titles on this invention have been so evident and incontestable, that M. Hermagis cannot respond and has had to submit to the law of priority that guarantees inventors and prevents any confusion in the history of the progress of science."<sup>584</sup> Aside from the daguerreotype he left after demonstrating his photophometer in 1858, Claudet also gave two albumen photographs of the jury for the photographic section in the 1862 London Universal Exhibition to the *Société Française de Photographie*.<sup>585</sup>

One of Claudet's papers, "On a New Process to Give Equal Focus to All Planes of a Solid Body Represented in the Photograph," presented to the British Association in Nottingham in 1866 and published in the Photographic Society's journal (now named the *British Journal of Photography*) incited a great deal of debate among the Society's members. The version published in the August 1866 *British Journal* was translated for publication in the French society's *Bulletin*.<sup>586</sup> From September through December,

---

Claudet showed us a very interesting experiment that he had made in London . . . He attempted to measure, using his *photophometer*, the intensity of the photogenic rays during the different phases of the eclipse.] A resulting stereo-daguerreotype was presented to the *Société Française de Photographie* at the same time that this article was published and it is still in the collection. "Mesure de la lumière par la photophomètre pendant l'éclipse," stereo daguerreotype, Collection of the Société Française de Photographie, Paris (cat. no. 79.15). "Le lendemain de l'éclipse, M. Claudet nous a montré la plaque représentant les divers résultats de son expérience." [The day after the eclipse, M. Claudet showed us the plate representing the different results of his experiment.]

584 Antoine Claudet, "Notice sur le Stéréoscope," *Bulletin de la société française de photographie* 5 (April 1859): 97-104. "Mes titres à cette invention étaient tellement évidents et incontestables, que M. Hermagis n'a rien pu répondre et qu'il a dû se soumettre à cette loi de priorité qui fait la garantie des inventeurs et empêche toute confusion dans l'histoire des progrès de la science."

585 "M. Claudet fait hommage à la Société de deux grandes épreuves, dont l'une représente le groupe des Jurés de la section photographique à l'exposition universelle de Londres." "Procès-verbal de la séance du 26 Décembre, 1862," *Bulletin de la société française de photographie* 8 (December 1862): 313-314. These photographs are also still in the collection of the Société Française de Photographie, Paris.

586 Antoine Claudet, "Sur un nouveau procédé pour donner une égale netteté à tous les plans d'un corps solide représenté dans une épreuve photographique," *Bulletin de la société française de photographie* 12 (September 1866): 225-231; *The British Journal of Photography* (August 31, 1866).

Claudet's new focusing apparatus and theories continued to spark responses and critique from across the photographic field.<sup>587</sup>

The pages of these journals printed voices coming from all directions, geographically and professionally, on a range of aspects of photography. Indeed, the format of the photographic journal answered Claudet's request for a forum for discussion, in which proposals could be contested and argued, and checked against the experiments of others. Claudet's articles were part of a process of conversation and debate amongst other practitioners, a version of practicing and developing the medium through writing about it.

### ***Correspondence***

In addition to publishing journal articles, Claudet was, like the majority of the Victorian bourgeois class, an avid letter writer. We have already looked at one 1847 letter to David Hastings, a writer for the *Morning Herald* (London, 1786-1869). This letter is part of a group of sixteen, all written by Claudet in English during a span of ten years, from 1844 to 1854. They are currently in the collection of the Research Institute at the Getty Center, Los Angeles. All are in Claudet's small precise hand on blue stationery and as a group they provide a very helpful glimpse into how Claudet sought to gain

---

587 The French society did not appear to have the same response as that in England. They simply announced it. In the translated report published in the *Bulletin*, the editorial secretary announced the "very lively debate" initiated in England, on the subject of the priority of the discovery made by Claudet." Apparently J. B. Reade had presented a similar apparatus to the Photographic Society in 1865. Claudet also mentioned this debate in a letter to Talbot. See Claudet to Talbot, January 9, 1867, in *Talbot Correspondence*, Doc No. 9176. "Depuis l'association Britannique à Nottingham je me suis trouvé entraîné dans une vive polemique au sujet de mon idée d'égaliser la definition des divers plans d'une figure en faisant mouvoir le foyer pendant l'exposition." [Since the British Association at Nottingham I have found myself in a lively controversy on the subject of my idea to equalize the definition of the different planes of a figure by moving the lens during exposure.]

recognition for his work. An early correspondence, sent from 18 King William Street in December of 1844, accompanied an “optical apparatus” that Claudet had ordered from Paris and had sent to Hastings as a gift.<sup>588</sup> Another letter asked if Hastings could inquire as to the status of an invitation the photographer had sent to the *Harold's* editor to view his “specimens” and also to ask about putting in a “short notice” for his studio.<sup>589</sup> In another, he enclosed an account of a paper given in early 1847 and admitted that he has “put aside all kinds of modesty and you will see that I speak of myself in no disparaging terms.”<sup>590</sup> It appears that Hastings was also a friendly acquaintance of Claudet's, as a few of the letters invited the reviewer to social gatherings at the Frenchman's home.<sup>591</sup> This makes evident Claudet's generous and convivial character as well as his ambition. It also provides a useful record of his photographic activities during this period. In 1847, Claudet alerted Hastings to the portrait that he had just made of Michael Faraday and to his intention of publishing a “Gallery of portraits of eminent men.”<sup>592</sup> He asked the writer to put an announcement in the paper. Apparently his request worked, as in March he

---

588 Claudet to Hastings, December 19, 1844. *Antoine Claudet Letters to D. Hastings*. The apparatus appears to be opera glasses, as Claudet mentions that “although your articles upon theatrical subjects cannot be criticized . . . [the device] might bring nearer the objects you want to scrutinize . . .” The date and address is also proof that Claudet had moved his studio entrance, from the Adelaide Gallery to 18 King William Street, by this time.

589 Claudet to Hastings, n.d., likely 1844-1845.

590 Claudet to Hastings, February 2, 1847.

591 Claudet to Hastings, January 20, 1848. “We shall keep our pâté until Sunday and hope that you will find no bad excuse for that day. You must come.”

592 Claudet to Hastings, February 21, 1847. The letter included a notice that Claudet wanted to show Hastings a portrait taken of “Professor Grove” and that he had recently made a portrait of the Marquis of Northampton which he hoped to publish. “It will soon be proved that photography is the best means of securing good likenesses. There is much prejudice against the new art, good sense and reason must triumph at last.” An April 3 note mentioned again the portrait of the Marquis as well as a daguerreotype portrait of Lord Brougham and that Claudet intended “to have the first lithographs in a short time.” He asked the reviewer to “put in a word of these two portraits in the Morning Herald.”

wrote to thank Hastings for the “splendid notice you have given to Professor Faraday’s portrait.”<sup>593</sup>

One letter reveals that Claudet occasionally acted as a London contact and correspondent for his fellow Frenchmen as he would also do for Talbot.<sup>594</sup> A later letter written in 1854 from 107 Regent Street informed Hastings that he had had the honor of being asked to visit Queen Victoria at Buckingham Palace and, that morning, had made some portraits “for the Stereograph.” “I have succeeded to take some good portraits of her.”<sup>595</sup> He then wrote that there was also the intention to take group portraits of the princes and princesses and that he had “left [his] apparatus at the Palace waiting for the day which will suit h. M. [her Majesty].” He asked for Hastings’s help in providing publicity for this event.<sup>596</sup>

Another frequent figure with whom Claudet corresponded was Talbot.<sup>597</sup> Crucially for this study, during the span of their correspondence from 1841 to 1866, Claudet wrote to Talbot in both French and English. Almost all of the letters that the French photographer sent to his English colleague and temporary business partner in negotiating the calotype venture between 1842 and 1846 were written in French. Perhaps

---

593 Claudet to Hastings, February 21, 1847.

594 August 19, 1848. “The enclosed is a political letter from a Frenchman who has lived many years in England and who is now in Paris fulfilling an office in one of the Ministries. He is a very clever and shrewd man as you will judge by his way of writing and his letter might be interesting to a respectable newspaper.” Apparently Hastings asked about this possibility but it was denied by the editor, according to a letter from Claudet dated August 26<sup>th</sup>. A later letter dated June 9, 1849, called Hastings, jokingly, a “Socialist or something as bad, otherwise you would not abandon your friends.” He invited the writer to his house one evening when “Madam Bontemps,” (most likely the wife of George Bontemps of Choisy-le-Roi) who “sings exceedingly well” would be providing some music. Bontemps had moved to London during the 1848 revolution.

595 Claudet to Hastings, April 6, 1854.

596 Claudet to Hastings, April 6, 1854.

597 As previously mentioned, their first correspondence was in regards to the Electrotpe process which Claudet was experimenting with and sending samples to Talbot. Claudet to Talbot January 4 and 5, 1842, in *Talbot Correspondence*, Doc. Nos. 4414 and 4415.

this was a way for Claudet to distinguish himself from his rivals, Richard Beard and Henry Collen, who had also attempted to make an arrangement with Talbot for use of the calotype process. Writing in French was also a sign of class and education and was a way for the two to align themselves with each other. Claudet also defended Talbot's priority for the invention of photography over France as he "obtained results and showed them to his friends" in 1834.<sup>598</sup> Claudet wrote to Talbot frequently from Paris and was often Talbot's go-between with Lerebours, Gaudin, and other photographers there. At the end of one letter from France, Claudet reminded Talbot of his services. "If I can be at all useful to you during my stay in Paris, I will consider it a pleasure to receive your commissions."<sup>599</sup> Claudet served as intermediary for French colleagues who wanted to contact the English inventor. At the end of 1860, he forwarded a letter from Ernest Lacan to Talbot that asked for permission to use the English inventor's name on the masthead of his new publication, *Monde Photographique*, an international journal to which Claudet would also contribute. Claudet wrote to Talbot of his friend, "I know Mr. Lacan

---

598 "Mr. le president donne lecture d'une lettre de M. Claudet, Français, établi à Londres; voici le passage le plus important de cette lettre: "Vous me permettrez de revenir sur le sujet de la denomination de photographie qu'on adopte, à tort, je crois, en France pour le procédé sur papier inventé par M. Talbot. Dans votre dernier numéro il se trouve un article par M. Le Gray [refers to "De l'état actuel de la photographie," *La Lumière* 1 no. 8 (March 30, 1851): 30-31] dans lequel l'auteur dit: 'Stimulé par les decouvertes de Niépce et de Daguerre, Talbot, en Angleterre, se livra aux premieres applications de cet art, et mérita la reconnaissance universelle par la publication de son procédé, qu'il désigna sous le nom de talbotype.' Cette phrase, toute bienveillante qu'il est, renferme une erreur. M. Talbot publie son procédé à la Société royale de Londres quelque temps avec avant l'époque à laquelle Daguerre annonça sa découverte en France, et dès l'année 1834, il avait obtenue des résultats et les avait montrés à des amis. On peut donc dire avec justice que les deux découvertes, bien différentes l'une de l'autre, ont été conçues en meme temps. Ni l'inventeur français ni l'inventeur anglais ne peuvent être accuses de plagiat, ni meme d'avoir suggère l'un à l'autre la moindre idée." [. . . M. Talbot presented his process to the Royal Society in London some time before Daguerre announced his discovery in France, and since 1834 he had obtained results and had shown them to friends. We could therefore say with justice that the two discoveries, very different from each other, were conceived at the same time. Neither the French inventor nor the English inventor could be accused of plagiarism, or even to have suggested any idea to each other.]

599 Claudet to Talbot, November 19, 1842, in *Correspondence*, Doc. No. 4649. "Si je puis vous être bon à quelque chose pendant mon sejour à Paris je me ferai un vrai plaisir de recevoir vos commissions." [If I can be of any help to you with anything during my stay in Paris I will be very pleased to receive your commissions.]

particularly well. He is commendable in every respect . . . I will be very happy if you would care to reply to Mr. Lacan's letter and give him permission to rely on the patronage which he asks you."<sup>600</sup>

Correspondence, debate, acknowledgement of his own achievements and those of his fellow photographers, and further understanding of the medium in which he was working: these are all things that Claudet accomplished by writing about photography. I have presented a small selection of his papers and correspondence, yet it is enough to gather a sense of the diverse figures in the photographic communities on both sides of the channel with whom Claudet was involved.

### ***History and Practice***

The first histories of photography were attached to practical manuals. Someone interested in learning the daguerreotype process first encountered a brief chronological and technical account of the various discoveries—optical and chemical—leading up to and subsequent to the invention of photography. The reader then proceeded to an instructional section on how the photographic process—daguerreotype, calotype, and later, collodion—worked. Therefore, in the manual the practical knowledge and use of the medium in the present was linked to a chain of technological discoveries in the past.<sup>601</sup>

---

600 Claudet to Talbot, December 31, 1860. Claudet also consulted Talbot on his photographic engraving processes: "I have examined your specimens of engraving with greatest interest. It is promising . . ." Claudet to Talbot, January 10, 1861. And later he wrote to Talbot in response to seeing his album of photoglyphic engravings that he had sent to him. Claudet to Talbot November 1, 1864, in *Talbot Correspondence*, Doc. No. 8891.

601 Anne McCauley, *Industrial Madness, Commercial Photography in Paris 1848-1871* (New Haven: Yale University Press, 1994), 16-17.

The structure of a photography manual followed that of instructional manuals in other fields, both artistic (such as eighteenth and early nineteenth-century texts on miniature painting) and scientific. The report presented by Humphrey Davy and Thomas Wedgwood to the Royal Society in 1802 followed the form of the papers with which that scientific body was accustomed, with an explanation of the experiments accompanied by a summary of the results.<sup>602</sup> The first widely published pamphlet on photography, and therefore the first widely published history of photography, was Daguerre's *Historique et description des procédés du daguerréotype et du diorama*, 1839.<sup>603</sup> The text began with a "Communication" by Arago that had been presented at the July 3, 1839 meeting of the Académie des sciences. These twenty-one pages include a general announcement to the assembly requesting that its members evaluate the invention and recognize its potential as a national, scientific, archaeological, and fine art invention. Then followed a history of the new medium up to that point, beginning with Giambattista della Porta's (c. 1535-1615) description of the camera obscura followed by seventeenth and eighteenth-century chemical experiments, to Wedgwood's and Davy's report, to the partnership of Niépce and Daguerre.<sup>604</sup> In many respects, this short history was not very different from the beginnings of histories of photography in texts today. Daguerre's "practical" description of the daguerreotype process included diagrams of the various types of apparatus required and how to use them.<sup>605</sup> An 1839 London review of the pamphlet attests to its popularity.

"This little treatise will, of course, be eagerly sought and read by every admirer of 'The

---

602 Thomas Wedgwood and Humphrey Davy, "Account of the Art of Photogenic Drawing," read before the Royal Society, *Transactions* 37 (January 31, 1839): 196-208.

603 J. L. M. Daguerre, *Historique et description des procédés du daguerréotype et du diorama*, par Daguerre (Paris: Alphonse Giroux et Cie, Éditeurs, 1839).

604 Chapter Eight of the Seventeenth book of *Natural Magick*, 1584. London: Printed for Thomas Young, and Samuel Speed, 1658.

605 Daguerre, *Historique et description*, 55-72.

New Art.' Published, as it wisely is, at a very moderate price . . . containing a full and remarkably explicit account (illustrated by plates representing the necessary apparatus) of the details of M. Daguerre's process."<sup>606</sup>

Talbot's "On the Art of Photogenic Drawing," written in a hurry in January of 1839, gave its own journalistic account of how the inventor formed the idea for photogenic drawing. The more substantial photo-historical text authored by Talbot after he had discovered the calotype process, was *The Pencil of Nature*, the first part of which was published in 1844. The text opened with a short description of what photography was: a "mere action of light upon sensitive paper." A "Brief Historical Sketch of the Invention of the Art" was included, which gave a "brief account of the circumstances which preceded and led to the discovery of it." Here the historical account was the Englishman's personal story, "disrupted" by the January 1839 announcement in Paris. Talbot acknowledged Wedgwood and Davy's contributions as a precursor to his work. However the history given was brief. The emphasis was on a survey of the ways in which the process could be applied. The book comprised photographic plates that "differ in all respects, and as widely as possible, in their origin, from plates of the ordinary kind."<sup>607</sup> Talbot's book, "published in the country where it was first discovered," asserted England's priority over his paper photography invention. By this time the paper process was beginning to become popular in France too.

---

606 "Fine Arts. New Publications. *History and Practice of Photogenic Drawing, on the True Principles of the Daguerreotype; With the Method of Dioramic Painting*, translated from the original by J. S. Memes, LL.D., Hon. Member of the Royal Scottish Academy of Fine Arts, &c. London, 1839. Smith, Elder, and Co.; Edinburgh, Adam Black and Co.," *Literary Gazette and Journal of the Belles Lettres* no. 1183 (September 1839): 605.

607 William Henry Fox Talbot, *The Pencil of Nature* (London: Longman, Brown, Green, & Longmans, 1844).

Daguerre's "manual" and Talbot's volumes were distinct from each other beyond their technological and geographical differences. Whereas Daguerre's *Manual* was meant for commercial profit, to be sold and used by amateurs both professional and private, Talbot's *Pencil* aimed for circulation strictly within his own class of scientific, artistic, and literary figures.<sup>608</sup> Daguerre's pamphlet established the genre of practical photographic manuals, more affordable for the general practitioner and for a range of classes of commercial photographers, including Claudet. Daguerre's pamphlet found followers in England in the 1840s and was much translated and imitated. British photographer Joseph Ellis's 1847 "Photography, a Popular Treatise," described a similar chronology—della Porta, Wedgwood and Davy, Niépce and Daguerre, and Talbot, and (most likely because it was a British publication) included Herschel as well.<sup>609</sup> Henry H. Snelling's *The History and Practice of the Art of Photography*, first published in the United States, opened with "A Brief History of the Art," which in this text began around 1800. After a focus on "Light" and Robert Hunt's "Treatise," the rest of Snelling's book was divided by process.<sup>610</sup> Turning towards his compatriots, Snelling added Samuel Morse (1791-1872), John William Draper (born in England, 1811-1882) and Alexander Wolcott as pioneering figures.

---

608 The book could be seen as a precursor to high-quality publications on photography, leading up to Alfred Stieglitz's *Camera Work* at the turn of the century.

609 Joseph Ellis, *Photography: A Popular Treatise, Designed to Convey Correct Information Concerning The Discoveries Of Niepce, Daguerre, Talbot, and Others, and as Preliminary to Acquiring a Practical Acquaintance with the Art* (Brighton, Robert Flothorp, 1847).

610 Henry H. Snelling, *The History and Practice of the Art of Photography* (Hastings-on-Hudson, N.Y.: Morgan & Morgan, Inc., Publishers, 1849). Chapter titles include: "Light," "Hunt's Treatise," "Hints and Suggestions," "The Daguerreotype Apparatus," and "The Daguerreotype Process." The remaining chapters have to do with etching daguerreotypes, the calotype, the "positive calotype," the "cyanotype and chrysotype" (among other "types") and "colouring daguerreotypes." An addition at the end of Snelling's book is devoted to Claudet's "Photographometer," which at the time (published in *The Art-Journal*, March 1849) was, as Snelling writes on page 135, "a recent improvement in Photographic Manipulation."

As has been mentioned, Robert Hunt wrote treatises on the medium beginning in 1841, and these were published in multiple editions in the 1850s. His *Manual of Photography* (1853), for example, included a scientific history of photography, divided chronologically and technologically, from a “[h]istory of Discoveries in Photography” and “Early Researches on the Chemical Action of Solar Rays” to “[h]eliography, the Process of Mr. Niepce,” Talbot’s photogenic drawing and calotype, “Daguerreotype – the Discovery of M. Daguerre,” and John Herschel’s processes including the cyanotype and crysotype.”<sup>611</sup> Both Ellis and Hunt credited Claudet for his assistance with their publications. The preface to Hunt’s *Manual of Photography* stated: “To Mr. Claudet and Mr. Horne, in particular, I am indebted for many novel and most useful details in the practice of the Daguerreotype and the Collodion processes.”<sup>612</sup> Such an acknowledgement elucidates Claudet’s position as connected to a network of individuals from different fields that photography variously intersects with.

Although not a practical manual or treatise on photography, David Brewster’s 1862 paper “Photography” also communicated a version of photography’s history. Brewster noted that, although in its practical sense photography had made rapid strides, “the theory of its processes lingers behind, and researches extensive and profound are still required to raise it to the dignity of a branch of physical science.”<sup>613</sup> Part of raising the medium to the “dignity” of other sciences was to discern what was the “truest” form of photography. For Brewster, it was Talbot’s process. “From the history which we have now given, in this and in a previous article, of photography, and its processes and applications, the reader

---

611 Robert Hunt, *Manual of Photography*, 4th ed. (London: J. J. Griffin, 1854).

612 Hunt, *Manual*, viii.

613 David Brewster, “Photography,” *Photographic Journal* 15 (September 1862): 124-8.

cannot fail to see that, notwithstanding the beauty of the Daguerreotype, the *Talbotype*, or photography on paper, or its equivalents, is the true type of the photogenic art.” He acknowledged, however, that, though Talbot was “the inventor of the Talbotype,” “true” photography was the result of a history, a series of figures and experiments, mostly British, concluding with his friend and colleague Claudet. “As James Watt was not the sole inventor of the steam-engine, nor Newton the sole discoverer of the laws of the planetary system, so Mr. Talbot does not claim to be the sole inventor of photography as an art or a science. Wedgwood and Davy were humble pioneers in guiding the pencil of the sun, and Niépce and Archer have added to its power; and if we may name any other individual in England as the great inventor of photogenic instruments and processes, we are sure that every photographer in the empire will not grudge this tribute of praise to Mr. Claudet, who has so long occupied the highest place in the profession.”<sup>614</sup>

An English photographer wrote about the early history of photography from a slightly longer vantage point. John Werge’s *Photography, Its Origin, Progress, and Practice* began with an account of the “remarkable, interesting, and romantic” history of photography.<sup>615</sup> After a few short anecdotal accounts, such as that about Wedgwood and Davy “striving to make the sun depict Nature,” Daguerre, in “a dingy room in Paris . . . a little, fat, scrubby-looking Frenchman . . . labouring incessantly,” and J. B. Reade, who he claimed had accidentally made the first developed paper photograph, Werge left his

---

614 Brewster, “Photography,” (1862): 128. “A jury of his country indeed . . . have decided that he is the inventor of the Talbotype; and we trust the day is not distant when the nation shall not grudge some honourable recognition of labours which have given professional bread to thousands—an elegant pursuit to hundreds of amateurs, male and female—domestic gratification to the occupants of the cottage and the palace—new powers of observation and research to the philosopher—and ever-flowing fountains of knowledge to every class of society but the blind.”

615 John Werge, *Photography, Its Origin, Progress, and Practice* (London: Simpkin, Marshall & Co., 1880).

“the romantic history of photography,” and turned to what was by this time the more traditional narrative of how photography came about. The author concluded his “rapid *resumé*” with the *carte-de-visite* before continuing on to detailed descriptions of photographic processes. In Werge’s *The Evolution of Photography*, written a decade later, he presented a quite different kind of photographic history.<sup>616</sup> Although it began with a chronological summary, in the second chapter, the photographer began to tell his story as a first-person narrative. He was fifteen when photography was announced, and his story recounted his growing up within the world of photography, his photographic career in England, his journey to the United States and, most importantly, his meetings with various photographic figures, including Claudet. He called the elder French-born photographer “a copious contributor to its proceedings, as well as to photographic literature,” and remarked on Claudet’s tone with his “*confrères*,” as “always courteous.” He was “the best specimen of a Frenchman I had ever met. Towards his clients he was firm, respectful, and sometimes generous.”<sup>617</sup> Claudet clearly held the respect of this English author (who had previously described Daguerre unfavorably), and it is likely that others in the British photography community felt similarly.<sup>618</sup> The esteem that he had cultivated over his years in London, combined with his acumen as a businessman and a professional photographer, gave Claudet a unique presence in the photographic realm. He

---

616 John Werge, *The Evolution of Photography, with a Chronological Record of Discoveries, Inventions, etc., Contributions to Photographic Literature, and Personal Reminiscences Extending Over Forty Years* (London: Piper & Carter and John Werge, 1890).

617 Werge, *The Evolution of Photography*, 86.

618 Werge, *The Evolution of Photography*, 86-87. He tells a favorable story about Claudet. At one point a client returned a portrait of their child that they did not approve of and Claudet took the picture back and returned the money. Later the family requested the portrait, but Claudet refused. “Proceedings were taken to compel him to surrender it, which he defended. In stating the case, the counsel remarked that the child was dead. Mr. Claudet immediately stopped the counsel and the case exclaiming ‘Ah! They did not tell me that before. Now, I make the parents a present of the portrait.’”

was never considered British (Werge refers to him as a Frenchman), yet he was a Frenchman of a “higher order,” perhaps, than others in the mind of his contemporaries, which may explain why Claudet was able to circulate within such a diverse network of people.

***“Un beau livre écrit sur la pierre”***

Claudet’s fourth and final studio, opened in June of 1851, was a photographic manual of sorts. Named the “Temple to Photography” and occupying the lower floors of 107 Regent Street, the studio served as both a history lesson and as an arena for the practice of photography in its multiple forms [Figure 5:4].<sup>619</sup> As one writer in *The Athenaeum* described it, the spacious “temple” was designed in “Renaissance Style” by Charles Barry, the architect for the new Houses of Parliament.

The ground floor contained showrooms and store-rooms, the first floor darkrooms and offices, the second floor waiting-rooms, artists’ rooms, and the studio. The waiting-rooms were decorated by a French artist, Hervieu with paintings illustrating the history of photography. Here the visitor learnt that photography is the outcome of the labours of philosophers all through the ages . . .<sup>620</sup>

---

619 An advertisement in *The Times* gives an indication of the layout. “Mr. Claudet has transferred his daguerreotype portrait establishment to spacious and convenient premises, 107, Regent-street (Quadrant, near Vigo-street). The specimen room is on the ground floor, and portraits are taken in a large, improved, and well ventilated crystal building on the first floor.” *The Times*, June 25, 1851: 9. The 1850 Census states that Claudet resided at 20 Park Terrace, was age 53, with his wife Julia, 48, and her mother Ann Bourdelaine, age 80. The residence also included his daughter Maria (Mary), age 26, Frederick, age 25, and Frank (Francis), age 14, and his servant Harriet Collet, age 24.

620 “He engaged Sir Charles Barry, architect of the Houses of Parliament, to reconstruct the existing building in Renaissance style.” The artist was Auguste Hervieu (1819-1858). See *The Athenaeum* (August 30, 1856): 139-154.

A wood engraving of Charles Barry after a daguerreotype by Claudet was published in *The Illustrated London News* in the month of the opening of Parliament in the New Houses of Parliament [Figure 5:5].<sup>621</sup>

Another author, writing for *La Lumière* in 1854, noted the sensation of being surrounded by a kind of visual history of photography. “The idea is to represent the diverse phases through which science had to pass in order to arrive at the magnificent results obtained by photography, and thus recall the origin of this art and the respect to which it has a right.”<sup>622</sup> According to this writer, the main gallery was oblong and lit from above by glass skylights made of octagonal-shaped glass.<sup>623</sup> Ernest Lacan, editor of *La Lumière*, who visited 107 Regent Street in June of 1855, also commented that light came through the skylight above and was controlled by an elaborate system of screens attached to cords that could redirect the light according to the needs of the moment. Claudet’s camera was covered with a small “square tent” in order to keep light away from the sensitized plate and the viewing glass. It also kept the photographer hidden from the sitter who might otherwise be distracted by his movements in the process of taking the picture.<sup>624</sup> F.-A. de la Rivière’s article on his visit in 1851 also included a description of

---

<sup>621</sup> Below this figure is an engraving of “Dr. Lyon Playfair’s Lecture,” on “Glass,” at the Museum of Practical Geology; see *The Illustrated London News* 20, no. 546 (February 21, 1852): 161-162.

<sup>622</sup> “Galerie photographique de M. Claudet,” *La Lumière* 4, no. 29 (July 22, 1854): 114-115. “L’idée, c’est de représenter les phases diverses par lesquelles a dû passer la science avant d’arriver aux magnifiques résultats obtenus par la photographie, et ainsi de rappeler la haute origine de cet art et le respect auquel il a droit.”

<sup>623</sup> Ernest Lacan, “La photographie en Angleterre,” *La Lumière* 5, no. 25 (June 23, 1855): 97-8. “La galerie de M. Claudet est un carré long; elle est éclairée par un très-joli vitrage à compartiments octogones, formant le plafond.”

<sup>624</sup> Lacan, “La photographie en Angleterre,” (1855): 98. “La lumière vient d’en haut; au moyen d’écrous, que des cordons font mouvoir, il dirige à volonté les rayons lumineux, son châssis vitré étant cintré et recevant ainsi également la lumière de tous côtés. De plus, son appareil est disposé sous une espèce de tente carrée, mobile, qui n’a qu’une ouverture peu considérable du côté du modèle; de telle sorte que la chambre noire est complètement à l’abri des rayons extérieurs qui, en pénétrant dans l’appareil, produisent souvent

Claudet's camera, particularly the use of a prism in front of the lens to invert the image onto the daguerreotype plate during exposure.<sup>625</sup> After visiting Claudet's Regent Street studio in 1853, the author Charles Dickens remarked on Claudet's use of a prism in one issue of his weekly journal *Household Words*.<sup>626</sup>

The walls of the reception area and the stairway to the second level (where the photographs were taken) were lined with painted portraits of well known scientific and artistic figures in the history of photography. As if to represent the bilingual proprietor of the studio, the ordering of the wall paintings combined British and French artists and scientists. Correspondence with Talbot provides more information regarding the arrangement of these portraits. A letter, in French from November 1853, dates these paintings to this time, somewhat later than the opening of the studio in 1851. "I have a project to cover the walls of the reception room of my establishment with paintings representing the allegorical history of photography. Above will be garnished with a border containing medallions for portraits of the inventors of photography and the principle scholars who contributed to its perfection. Yours and that of Daguerre will have the place of the center and all the others will follow to the right and left."<sup>627</sup> Apparently

---

un voile sur les épreuves; en outre, la personne qui pose n'est pas distraite par les mouvements de l'opérateur."

<sup>625</sup> See F.-A. de la Rivière, "Héliographie sur plaques métalliques," (1851): 114.

<sup>626</sup> Charles Dickens, "Photography," *Household Words* 7 (1853): 59. "The first reflection is made, therefore, by turning the side of the camera to the sitter and causing his image to fall upon one face of a large prism placed before the glasses otherwise in use: an image is then deflected into the camera, which falls in the required manner on the plate."

<sup>627</sup> Claudet to Talbot, November 12, 1853, in *Talbot Correspondence*, Doc. No. 6866. "J'ai le projet de couvrir les murs de la salle de reception de mon établissement de peintures représentant l'histoire allégorique de la Photographie. Le haut sera garni d'une bordure contenant plusieurs médaillons destinés à recevoir les portraits des inventeurs de la photographie & des principaux savants qui ont contribué à ses perfectionnements. Le vôtre & celui de Daguerre auront la place du centre & tous les autres suivront à droite & à gauche." He asks for the favor of taking or receiving from Talbot a photographic portrait of the inventor and asks if Talbot still has saved the image he had taken (in ca. 1843-5). "Je crois me rappeler

the medallion portraits were profiles, as Claudet asked Talbot if he could visit his studio again for a new portrait, “in the position that suits the medallion, that is to say a profile.”<sup>628</sup>

Thus while waiting for their own portraits to be taken, clients were informed about the important figures in photography’s history. On the wall facing the entrance to the waiting room the client first encountered a portrait of della Porta, followed by portraits of Daguerre, Talbot, and Charles Wheatstone. On the right wall were portraits of Herschel, Isaac Newton, and Brewster. On the left wall were portraits of Fizeau, Arago and Niépce de Saint-Victor. When the client turned around and looked above the entrance, he or she encountered portraits of Davy, Leonardo de Vinci, Niépce, and Wedgwood.<sup>629</sup> An upper frieze was interspersed with decorative arabesques and painted medallions containing portraits of other significant intellectuals and artists who contributed to photography and stereoscopy.<sup>630</sup> The main wall included an arcade of four arches, and each panel beyond them contained allegorical murals depicting the arts of

---

avoir eu l’honneur de faire votre Daguerreotype & si vous avez conservé cette épreuve qui était bien imparfaite, peut-être qu’elle suffirait à l’artiste.”

628 Claudet to Talbot, November 12, 1853. “[D]ans la position qui convient au médaillon, c’est-à-dire un profil.” It is also apparent that André-Adolphe-Eugène Disderi (1819-1889) in Paris later contacted Talbot for a similar purpose. See Disderi to Talbot, January 20, 1860, Doc. No. 8028: “Je viens sous les auspices de Monsieur Claudet solliciter de vous un service. Je suis sur le point d’ouvrir de nouveaux salons . . . L’une des decorations principales sont les Portraits des Illustres inventeurs du daguerreotype et de la photographie. Votre portrait seul me manqué . . . je vous serais doublement obligé de me donner le Profil et vu du coté droit, car c’est pour faire un médaillon.” [I write under the direction of Monsieur Claudet to ask a favor from you. I am at the point of opening new rooms . . . The main decorations are portraits of the illustrious inventors of the daguerreotype and photography. Your portrait is the only one missing . . . I would be very obliged if you give me a profile view of the right side for a medallion.]

629 “Galerie photographique,” (1854): 114. “Sur le côté du salon faisant face à l’entrée, le premier portrait de la friese est celui de *Porta*, qui, en 1590, inventa la chambre obscure; puis viennent ceux de *Daguerre*, de *Talbot*, et de *Wheatstone*; à droite, *Herschel*, *Newton*, *Brewster*; au-dessus de l’entrée, *Davy*, *Léonard de Vinci*, *Niépce et Wedgwood*; la frise de gauche présente les portraits de *Fizeau*, d’*Arago* et de *Niépce de Saint-Victor*.”

630 “Galerie photographique,” (1854): 114. “La frise supérieure se compose d’arabesques et de médaillons contenant les portraits des savants et des artistes auxquels la photographie et la stéréoscopie doivent leur naissance ou leur perfection actuelle.”

statuary, painting, the invention of photography, the application of photographic portraiture through the camera, and the application of stereoscopy to photography. Additionally, four medallions represented the four great “centers of civilization”—Athens, Rome, Paris, and London.<sup>631</sup> In the same vein as Claudet’s adoption of the architectural allusion to an ancient temple, here Paris and London, two centers of major industry and empire, as well as Claudet’s two homes, are compared to the empires of Athens and Rome. Meanwhile, Claudet consciously made a correspondence between France and England through the positioning of two large historical paintings. The right wall was devoted to the moment of announcement in France, including a painting of Louis-Philippe voting into law the pension for Daguerre and Niépce, and the wall opposite was dedicated to the moment of photography’s announcement in England, including a painting of the river Thames and Somerset House, the headquarters of the Royal Institution where Talbot’s photogenic drawings were first presented on January 25, 1839.<sup>632</sup>

These elaborate commentaries on the history of photography gave equal presence to France and England, both as geographical locations, in the large narrative panels, as well as in the portraits of individual figures. The ways in which these figures were grouped on each wall was less chronological than by contribution. The “inventors,”

---

631 “Galerie photographique,” (1854): 114. “Cinq panneaux, compris entre les quatre arcades qui divisent le mur principal, représentent la statuaire, la peinture, l’invention de la photographie, l’application de la photographie aux portraits au moyen de la chambre obscure, et l’application du stéréoscope à la photographie. Dans les médaillons intermédiaires sont symbolisés les quatre grands centres de la civilisation: Athènes, Rome, Paris et Londres.”

632 “Galerie photographique,” (1854): 114. “Le mur de droite est consacré à la France; celui de gauche, à l’Angleterre. Le premier représente la Chambre des députés, qui, sous le règne de Louis-Philippe, dont le portrait se trouve un peu plus bas, vota la loi accordant une pension à Daguerre et à Niépce, en récompense de leur admirable découverte. Le second offre une vue de la Tamise et de Somerset House, siège de la Société royale, à laquelle Talbot communiqua d’abord son invention de la photographie sur papier.”

Daguerre and Talbot, are placed between two other “inventors,” one of the camera obscura (della Porta), and one of the stereoscope (Wheatstone). They were also placed so as to be the “first” figures that the visitor encountered. The two opposing walls comprises one of Frenchmen (on the “left” wall) who had something to do with the medium’s development—Arago, Fizeau, and Niépce de Saint Victor (1805-1870)—and one of Englishmen (the “right” wall)—Newton, Herschel and Brewster. Another example of the juxtaposition of photography in England with that of France could be found nearby, in a space the writer called Claudet’s “salon,” which could be referencing the office or “private rooms” situated behind the reception area. In there were displayed two more painted portraits of Talbot and Daguerre, the “two inventors, English and French, who in the same year, in 1839, discovered the secret of the photographic process, one on paper, one on a plate of silver.”<sup>633</sup> A final note by the author mentions that on the wall next to the stairs were paintings symbolizing photography “on paper, on glass, and on metal,” referencing the three basic materials of image support and the three main photographic processes used up to that point.<sup>634</sup> Actual photographic specimens were displayed throughout, most likely to offer a glimpse of the variety of types of daguerreotypes, including stereo-daguerreotypes, that clients could choose from.<sup>635</sup>

This did not come without cost. As recorded in the *Photographic News* shortly after the disastrous fire that destroyed the “Temple to Photography,” the paintings by Hervieu alone had cost over four hundred pounds. The decorative elements of the

---

633 “Galerie photographique,” (1854): 114-115. “Ainsi, dans le salon de M. Claudet, sont mis en présence les deux inventeurs français et anglais, qui, dans la meme année, en 1839, on trouvé le secret du procédé photographique, l’un sur papier, l’autre sur la plaque d’argent.”

634 “Galerie photographique,” (1854): 115. “Enfin, du côté de l’escalier, trois gracieuses compositions symbolisent las photographie sur papier, sur verre, et sur metal.”

635 “Galerie photographique,” (1854): 115. “Dans ce même salon, dont les murs sont désormais sacrés, grace à ces bijoux artistiques, M. Claudet expose de charmantes épreuves photographiques.”

interior, wall paper, furniture and draperies, had cost over three hundred pounds. The “table stereo stands,” carved by Harry Rogers and through which clients could view several stereographic daguerreotypes in a row, had cost two hundred and fifty pounds each.<sup>636</sup> All of this is aside from the costs of salaries for staff, plates, chemicals, apparatus and equipment for the studio.

On another wall in Claudet’s office one found a wall paying homage to British industry and to Claudet’s adopted country. The wall contained a painting of the Great Exhibition of 1851 (during which the Regent street studio had opened) and portraits of Queen Victoria and Prince Albert, the exhibition’s (and photography’s) royal patrons.<sup>637</sup> Although Claudet made sure to honor the country in which he had established himself as a photographer, his studio also made prevalent homage to French art. The *Lumière* visitor in 1854 wrote with a note of pride on the fact that the murals throughout the studio owed their perfection to a French artist.<sup>638</sup> As a result of having one’s daguerreotype portrait made at Claudet’s establishment, the client left 107 Regent Street not only with an image of themselves but also, according to the editor of *La Lumière*, under the “influence” of the idea that photography was “a true art” that required its own particular “special

---

636 *Photographic News* (January 31, 1868): 51-2. “The paintings in the panels, of allegorical and emblematical subjects in keeping with the place, designed and painted under Mr. Claudet’s instructions, by a clever French artist, cost upwards of four hundred pounds, and the decorative fittings of the place nearly three hundred more. These are now simply blackened and blistered canvas and ashes. A couple of magnificent table stereo stands, magnificently cared by Harry Rogers, which cost two hundred and fifty pounds apiece, are now simply a few pieces of charred wood.”

637 “Galerie photographique,” (1854): 114. “Le même côté droit contient, en outre, un panneau rappelant l’Exposition universelle de Londres qui fut l’occasion du premier concours entre les photographes. Au-dessous, en voit un portrait du prince Albert faisant pendant à celui de la reine d’Angleterre.”

638 “Galerie photographique,” (1854): 115. “Nous ne saurions dire avec quelle délicatesse dans le dessin, quelle richesse dans le coloris et quelle suavité dans l’expression, sont traités ces divers sujets dont nous venons de faire une sèche analyse. Toutes ces peintures murales, les plus remarquables, peut-être, ce celles exécutées en Angleterre par des artistes modernes, sont dues au pinceau de M. Hervieu.”

aptitude” and set of skills, something that Claudet both advocated and embodied as a photographer from the beginning of his career.<sup>639</sup>

Lacan, in 1855, also commented on the studio’s “Frenchness” and wrote that Claudet’s visitors were greeted with a courtesy “all French.”<sup>640</sup> The French editor described Claudet’s studio as a “pantheon of photography.” In fact it was arranged as such, a temple that honored all of the gods of photography while also honoring the medium itself. In alluding to ancient, monumental architecture, Claudet’s naming of his establishment as a “temple,” in this case to the gods of photography, implied a lasting historical lineage and countered the recently constructed marvel of industrial modernity, the Crystal Palace.<sup>641</sup>

Lacan also described the studio as “a beautiful book written in stone.”<sup>642</sup> As a “book,” Claudet’s Temple told a particular version of the history of photography. What is notable about the history of photography that Claudet created and with which he surrounded his clients and his own staff is that it was not chronological. Rather, scientists and mathematicians who preceded photography by hundreds of years were mixed with more recent inventors and improvers of the medium. Physical and chemical

639 And similar to the advice he gave to Sutton in 1841 (see Ch. 2). “Galerie Photographique de M. Claudet,” p. 115. “En partant du salon de M. Claudet, on reste sous l’in---ce de cette idée: que la photographie est un art veritable, exigeant une vocation et une aptitude spéciales, et que M. Claudet test de tous ceux qui l’ont exercé, le plus digne et le plus émérité.”

640 Lacan, “La photographie en Angleterre,” (1855): 97-8. “Nous engageons vivement les artistes et les amateurs qui iront à Londres à visiter aussi la terrasse de M. Claudet, qui leur en fera les honneurs avec une courtoisie toute française.”

641 Paradoxically, Claudet was also one of the Palace’s major contributors, as in his glass business he had been tied to the company that produced the glass for its construction. “Subscription to put up a Monument to the Inventors of Heliography Niépce and Daguerre,” *La Lumière* 1, no. 27 (August 10, 1851): 105. Claudet is one of the Subscribers, along with C. Chevalier, Fizeau, and Blanquart-Evrard.

642 Lacan, “La Photographie en Angleterre,” (1855): 97. “C’est un veritable Panthéon de la photographie; c’est aussi un beau livre écrit sur la pierre: l’histoire de cette grande découverte, qui a déjà produit tant de merveilles et qui en produira bien d’autres encore. Pas un nom, pas un fait n’a été oublié, excepté le nom de M. Claudet et les perfectionnements qu’il a réalisés.”

developments in photography, for which there were no specific dates, were included among depictions of historical events. French painting was mixed with British photography.

In the process of working in this studio, with one version of the story of photography surrounding him, Claudet was writing a history of photography even while practicing it. The “beautiful book,” like his writings, and like the medium itself, was not a singular entity and was never stationary. It was a commercial studio but also a scientific laboratory, an exhibition space as well as a history lesson. It was a space where photography was tested, sold, and honored, and a space where the medium intersected with a dialogue that was constantly changing.

## Conclusion

“What a curious fact it is that the Daguerreotype has almost wholly disappeared. I believe it lingers only in the Studio of Mr. Claudet.”<sup>643</sup> So said David Brewster in a letter to Talbot at the end of 1861. British photographer John Werge also noted in his 1890 *Evolution of Photography* that for daguerreotypes, Claudet was “one of the last to relinquish its practice in London.”<sup>644</sup> Indeed Claudet practiced the daguerreotype process long past the other photographic studios on Regent Street, after the vast majority of the commercial photographs being produced were cartes-de-visite and stereocards, made with collodion on glass plate negatives and albumen paper. Perhaps this was out of allegiance to his native country. However I note this not in order to position Claudet as exceptional, as the last survivor of a species in the process of becoming extinct, but rather to point out that photography was not an orderly succession of processes, one ending neatly at the time of the other’s discovery and prominence.

As I have stated in the Introduction and have argued in the preceding chapters of this dissertation, a figure like Claudet confounds any traditional, diachronic history of photography. He contributed to photography’s development in two countries historically and photographically opposed, one the originator of the direct positive on metal, the other of the paper negative. He practiced both processes. Claudet helped to establish

---

<sup>643</sup> Brewster letter to Talbot, December 23, 1861, in *Talbot Correspondence*, Doc. No. 8488.

<sup>644</sup> John Werge, *The Evolution of Photography, with a Chronological Record of Discoveries, Inventions, etc., Contributions to Photographic Literature, and Personal Reminiscences Extending Over Forty Years* (London: Piper & Carter and John Werge, 1890), 86.

photography as a commercial business in London while he also spoke on complex aspects of the medium among eminent scientific figures. He made daguerreotype portraits of depth and seemingly effortless beauty while calculating mathematically the correct distance of camera to subject and constructing instruments to control and measure this process. Although but one figure, he worked in multiple realms of photography. As the author of his memoir wrote: “whilst his hands are busily engaged in producing admirable specimens of art, his head is occupied with abstruse questions as to the properties of the agents employed, the chemical constituents of light, and the theory of optics.”<sup>645</sup> The history of art, in the canonical sense of a succession of significant artistic achievements and stylistic tenants founded on their opposition to what came before, can be used, and has been used, as a model for the history of photography. However, the multi-faceted Claudet, and indeed the fluid medium that he practiced, does not fit easily into that kind of art history of photography. Consequently, as this project has aimed to reveal, a great deal of its history has been left latent.

As a medium, photography is not exclusively a fine art. It is comprised of values different from those that make up art history (originality, authorship, and the unique work of art; i.e. the qualities of a canonical painter) and it even contradicts them. As a result, photography complicates the chronological narrative adopted by traditional monographic studies of an artist. If photography is the subject in such a format, it is most often not all there. Claudet is a relatively unknown figure because he does not represent one particular photographic style or photographer’s role and so his career allows for the possibility of writing a fluid account that more accurately elucidates how photography was developed

---

<sup>645</sup> A. Claudet, *F.R.S. A Memoir* (London: Basil, Mantagu, Pickering, 1868), 9.

in its early years. A figure like Claudet is as multi-faceted as the medium of photography itself. Just as the medium necessitated constant testing and reinventing in order to discover its possibilities, Claudet as subject is particularly suited to testing out new possibilities for the monographic study. In the same way that the uncertainty, fluidity, and unpredictability of the process of photography's early development required a dynamic dialogue among its practitioners, the medium also requires an historical account that is in similarly dynamic dialogue with its subject.

This dissertation has aimed to account for Claudet's importance as a connective figure. Through a close study of the career of this French-born photographer, I have proposed a lateral kind of history. In order to better understand photography's history, to see more of it, the traditional history of photography has to be replaced with one that acknowledges connectivity. By considering a photographer like Claudet and his photographic career as a dialogue with individuals within the commercial, the scientific, and the artistic realms of mid nineteenth-century Britain, I have considered the ways in which both photographer and the medium intersected with an expanded network of cultural forces. I have aimed to make evident that the ways in which this particular figure and the medium interconnected with these forces is complex and constantly changing, much as it is in the present moment. Indeed Claudet's role in this network was as a "medium," making him vital to any substantial understanding of photography's first decades.

I have proposed to re-tell the early decades of photography's history through the specificities of Claudet's practice. In these five chapters, Claudet's practice has been stitched into a range of contemporary discourses. As we have seen in Chapter One,

Claudet was an integral figure in photography's (via the daguerreotype's) commercialization in Britain, which enables a broader dialogue between photography and capitalism. In Chapter Two and Three, I was concerned with how photography served a scientific interest in perfecting and extending the image itself at the same time as photography served pure science. Claudet's photographs, instruments, and papers were crucial to understanding some of the ways that photography was in dialogue with science in the mid nineteenth-century. Chapter Four examined photography's relationship to fine art and particularly the photographer's complex self-labeling as "artist" and his labeling of the medium as "art." I argued that when Claudet described himself as a "Photographic Artist" and petitioned photography's status as a fine art, he did so with the specificities of photography in mind, comparable to, yet in its principles different from, other arts. Finally, in Chapter Five, I placed Claudet's writing on photography next to and in dialogue with the writings of other photographic practitioners and enthusiasts, practical and historical, in order to explore the writing about photography as another, and indeed integral, practice within its history.

In conclusion, writing Claudet's career as a series of dialogues has made it possible to re-picture photography's development as a process of successes and failures, knowns and unknowns, that produced a range of cross-disciplinary conversations. If we consider these dialogues as latent images of photographic history, this approach has aimed to expose and allow them to "develop out." My study of this one photographer has enabled a more complex understanding of the medium while also producing a new form of monograph. The end result is an alternative way of writing photography's early history. As consequence, much like Claudet's stereographic daguerreotypes brought forward

more of the photographic image (they were, he said, “the complement of photography”) a study of Claudet brings out a sharper, more complete history of photography.<sup>646</sup>

---

<sup>646</sup> *A. Claudet, F. R. S. A Memoir* (London: Basil, Mantagu, Pickering, 1868). “His enthusiasm was indeed as warm for the stereoscope as it had been earlier for photography itself. It was, he said, the complement of photography.”

## Appendix A: Antoine Claudet in Public Collections

*\*Note: This is not a comprehensive list. This list provides information on the significant works by Antoine Claudet currently held in public collections as well as provenance where known*

### National Media Museum, Bradford, UK

#### *Daguerreotypes*

Claudet, *Seated Young Man with jacket and cane*, c.1847-51  
1/4 plate daguerreotype  
DC/35

Claudet, *The Famous Chess Players*, c. 1845  
1/4 plate daguerreotype  
1913-201

Claudet, *Portrait of a young woman*, c. 1841-7  
1/6 plate daguerreotype  
1965-424

#### ***Wooden box containing stereo-daguerreotypes of Claudet's family***

Provenance: Christie's South Kensington Sale, June 28, 1984, Lot 14:

Claudet, *Antoine Claudet with Henry and Francis Claudet and Photographometer*, after 1851  
stereo-daguerreotype  
1984-1642

Claudet, *Portrait of Seated Man*, after 1851  
stereo-daguerreotype  
1984-1643

Claudet, *Portrait of Mdme. Claudet and Mdme. Bourdelaine with dog*, after 1851  
stereo-daguerreotype  
1984-1644

Claudet, *Portrait of Mdme Bourdelaine*, after 1851  
stereo-daguerreotype  
1984-1645

Claudet, *Portrait of a Seated Woman*, after 1851  
stereo-daguerreotype

NOI - 1

Claudet, *Portrait of a Seated Man*, after 1851  
stereo-daguerreotype  
NOI – 2

Claudet  
*Portrait of a Seated Man*, after 1851  
stereo-daguerreotype  
NOI – 3

Claudet  
*Portrait of a Seated Young Boy*, after 1851  
stereo-daguerreotype  
NOI – 4

Claudet, *Portrait of a Seated Man*, after 1851  
stereo-daguerreotype  
NOI – 5

Claudet, *Portrait of a Seated Woman*, after 1851  
stereo-daguerreotype  
NOI – 6

Claudet, *Claudet's Patent Stereo Viewer with a Stereo Daguerreotype of a Young Man*,  
after 1851  
stereo-daguerreotype  
NOI – 7

Claudet  
*Row of Statues*, c. 1851  
stereo-daguerreotype  
NOI – 8

Claudet  
*Portrait of Seated Woman in Yellow Dress*, after 1851  
stereo-daguerreotype

Claudet  
*Portrait of Seated Man*, after 1851  
stereo-daguerreotype  
1951-323

Claudet  
*Family Group*, after 1851  
stereo-daguerreotype

1951-322

Claudet

*Portrait of Marion Bunn (wife of Elijah Murphy, "surgeon of the viceroy's bodyguard")*,

after 1851

stereo-daguerreotype

1919-301

Claudet

*Portrait of Young Boy in Soldier Uniform*

after 1851

stereo-daguerreotype

Claudet, *Portrait of a Young Girl*, after 1851

stereo-daguerreotype

1936-144

Claudet, *Portrait of a Family Group (Mother and Four Children)*, after 1851

stereo-daguerreotype

1951-323

***Paper Prints and Negatives***

Claudet studio, *Chess Players*, c. 1843-6

salt print

1937-0372/1

Claudet, *Woman Holding a Book*, c. 1843-6

salt print

1937-0372/2

Claudet, *Man Holding Picture*, c. 1843-6

salt print

1937-0372/6

Claudet, *Woman Seated, Reading*, c. 1843-6

two salt prints

1937 - 0372/7

Claudet, *Woman Holding Book*, c. 1843-6

salt print

1937-2466

Claudet, *Chess Players (Claudet on Right)*, c. 1843-6

twenty salt prints

1937-2526

Claudet, *Chess Players (Claudet on Left)*, c. 1843-6  
eleven salt prints  
1937-2527

Claudet, *Portrait of a Woman, Seated*, c. 1843-6  
salt print  
1937-3517

Claudet, *Woman Seated in Formal Portrait*, c. 1843-6  
salt print  
1937-3519

Claudet, *Woman with Arms Folded*, c. 1843-6  
salt print  
1937-3553

Claudet, *Portrait of Woman in a Bonnet*, c. 1843-6  
calotype negative  
1937-3594

Claudet, *Woman Seated, Knitting*, c. 1843-6  
calotype negative  
1937-3595

Claudet, *Woman and Child (Charlotte T\_?)*, c. 1843-6  
calotype negative  
1937-3643

Claudet, *Man with Book, Draped Curtain*, c. 1843-6  
salt Print  
1937-3714

Claudet, *George Pritchard in COUNSUL'S Uniform*, c. 1843-6  
calotype negative  
1937-3767

Claudet, *Man with Spectacles Reading a Book on a Table, Checkered Pants*, c. 1843-6  
calotype negative  
1937-3775

Claudet, *Views of Focimeter and Measure*  
albumen print  
1937-3796

Claudet, *Self-portrait, Seated*, c. 1843-6

salt print  
1937-3830

Claudet, *Man in Turban*, c. 1843-6  
calotype negative  
1937-3871

Claudet, *Claudet and Two Men Playing Cards, Pouring Wine*, c. 1843-6  
calotype negative  
1937-4309

Claudet studio, *Claudet and Two Men Playing Chess, (Claudet in the Middle Pouring Wine)*, c. 1843-6  
calotype negative  
1937-4410

Claudet, *Seated Man Reading Book Next to Statue*, c. 1843-6  
salt print  
1937-4387

Claudet, *Seated Man Looking at Daguerreotype*, c. 1843-6  
salt print  
1937-4389

Claudet, *Seated Man with Elbow on Table*, c. 1843-6  
salt print  
1937-4421

Claudet, *Seated Man Reading Book*, c. 1843-6  
calotype negative

Claudet, *Woman Standing in Dark Dress, Forest Backdrop with Drape*, c. 1859-67  
albumen carte-de-visite

Claudet, *Woman in Veil Seated on Chaise*, c. 1859-67  
albumen carte-de-visite

Claudet, *Man Standing with Soldier's Cap and Jacket*, c. 1859-67  
albumen carte-de-visite

Henri Claudet, *Mdme Claudet*, c. 1859-67  
albumen carte-de-visite

***Ricketts Collection***

Claudet, *Young Man*, after 1851

1/9 plate daguerreotype  
A.9

Claudet, *Madame Richomme*, c.1847  
daguerreotype  
A.10

Claudet, *Portrait of Boy*, after 1851  
daguerreotype  
A.11

Claudet, *Woman in Bonnet*, c. 1841-44  
daguerreotype  
A.12

Claudet, *Young Woman*, after 1851  
1/6 plate daguerreotype  
A.13

Claudet, *Man in Embroidered Waistcoat*, c. 1841-1844  
1/6 plate daguerreotype  
A.14

Claudet, *Man Looking to His Right*  
1/6 plate daguerreotype  
A.15

Claudet, *Man with Hand in Coat*, after 1851  
1/6 plate daguerreotype  
A.16

Claudet, *Woman in Chair* (“*Ratcliff family, related to Mr. Do \_\_\_ in the Thurston Case*”),  
after 1851  
stereo-daguerreotype  
A.99

Claudet, *Portrait of Children*, after 1851  
stereo-daguerreotype  
A.100

Claudet, *Mr. Ratcliffe*, after 1851  
two stereo-daguerreotypes  
A.101

Claudet, *Portrait of a Woman with Two Children*, 1855  
stereo-daguerreotype

A.102

***Royal Photographic Society Collection***

Claudet, *William Henry Fox Talbot*, c. 1844  
1/6 plate daguerreotype

Lerebours, *Campo Vacino à Rome (Claudet & Houghton labels on verso)*, c. 1840  
whole-plate daguerreotype  
Cat. 143 (RPS 42)

H. L. Pattinson, *Niagara*, c. 1843  
whole-plate daguerreotype  
Provenance: presented to the RPS by Mr. Swan, 1901

Claudet, *Portrait of Boy*, c. 1855  
stereo-daguerreotype

Claudet, *Portrait of Elderly Man*, c. 1841-4  
1/6 plate daguerreotype  
Cat. no. 2 (RPS 120)

Claudet, *George Houghton*, c. 1841-4  
1/6 plate daguerreotype  
Cat. no. 39 (RPS 110)

Claudet, *George Houghton*, c. 1841-4  
1/6 plate daguerreotype  
Cat. no. 40 (old RPS no. 111)

Claudet, *George Houghton*, c. 1841-7  
1/6 plate daguerreotype  
Cat. no. 42

Claudet, *Portrait of Houghton and Two Young Daughters*, c. 1841-4  
daguerreotype  
Cat. no. 43 (RPS 113)

Claudet, *Portrait of John Flicht (Houghton Family)*, c. 1846-51  
1/6 plate daguerreotype  
Cat. no. 44 (RPS 54)

Claudet, *William Henry Fox Talbot*, c. 1841-4  
1/6 plate daguerreotype  
Cat. no. 50

Claudet, *Michael Faraday*, c. 1848  
 ¼ plate daguerreotype  
 Cat. no. 72

Claudet, *Grandmother Houghton*, c. 1841-4  
 ¼ plate daguerreotype  
 Cat. no. 98 (RPS 109)

Claudet, *Lady of Houghton Family*, c. 1841-4  
 1/6 plate daguerreotype  
 Cat. no. 99 (RPS 114)

Attr. Claudet, *Young Girl (possibly Houghton family)*, c. 1840s  
 Cat. no. 100

Claudet, *Portrait of Young Lady (possibly Houghton family)*, c. 1841-44  
 1/6 plate daguerreotype  
 Cat. no. 104 (RPS 12)

Claudet, *Young Man (Pair)*, after 1851  
 1/6 plate daguerreotypes  
 Nos. 151 and 152

Claudet, *Man with Whiskers*, after 1851  
 stereo-daguerreotype  
 Cat. No. 159

### **National Portrait Gallery, London**

Claudet, *Sir Charles Wheatstone and his family*, c. 1851-1852  
 stereo-daguerreotype  
 NPG P154

Provenance:

Governing Body of Kings College collection, London, c. 1980

Exhibited:

NPG recent acquisition exhibition, 1982

NPG exhibition "Camera Portraits, Photographs from the NPG 1839-1989," 1989-1990

NGA, Washington, 1990-1991

Claudet, *Michael Faraday; William Thomas Brande*, c. 1846  
 daguerreotype  
 NPG P740

Claudet, *Charles Babbage*, c.1847-51

daguerreotype  
P28

Claudet, *Elizabeth Laura Caroline Stourton (née Throckmorton)*, 1860s  
albumen carte-de-visite  
NPG Ax46389

Claudet, *Duleep Singh, Maharaja of the Punjab*, 1860s  
albumen carte-de-visite  
NPG x1506

Claudet, *Maharanee Duleep Singh*, 1860s  
albumen carte-de-visite  
NPG x1507

Claudet, *Catherine Elizabeth (Neville), Viscountess Stopford*, 1860s  
albumen carte-de-visite  
NPG x1486

Claudet, *William Hepworth Dixon (1821-1879), historian and traveller with his son William*  
albumen carte-de-visite  
Ax16254

Claudet  
*Anthony Trollope (1815-1882)*  
albumen carte-de-visite  
38658

### **Engravings**

Bosley after Claudet, *François Pierre Guillaume Guizot*, 1852  
engraving  
box 763/1

Henry Ryall after daguerreotype by Claudet, *Arthur Wellesley, 1st Duke of Wellington*  
Published May 1, 1845 by J. Watson  
D20213

H.T. Ryall after daguerreotype by Claudet, *Arthur Wellesley, 1st Duke of Wellington (1769-1852)*  
engraving  
37729

H.T. Ryall after daguerreotype by Claudet, *Arthur Wellesley, 1st Duke of Wellington*, n.d.  
engraving

38056

C. Dyer after daguerreotype by Claudet, *The Duke of Wellington*, n.d.  
hand-colored engraving  
37745

J.B. Hunt after Claudet, *Caroline Chisholm (née Jones)*, published 1853  
engraving  
D2049

Attr. Count d'Orsay, *Arthur Wellesley, 1st Duke of Wellington*  
watercolor from daguerreotype by Claudet  
Published in Arthur Christopher Benson (1862-1925), ed. *The Letters of Queen Victoria:  
A Selection from Her Majesty's Correspondence between the Years 1837 and 1861* vol. 2,  
p. 3  
NPG box 516/10

Unknown, *David Livingstone (1813-1873)*, Dec 27, 1856  
wood cut after daguerreotype by Claudet  
D6854, NPG Archive Engravings Collection

### **Victoria & Albert Museum, London**

Antoine Claudet, *Andrew Pritchard*, July 18, 1843  
1/9th plate daguerreotype  
PH.57-1939

Claudet, *Portrait of Mrs. Andrew Pritchard*, September 23, 1847  
daguerreotype  
1422-1939

Claudet (attr.), *Interior, Woman standing at fireplace*  
stereo-daguerreotype  
E.1199-1992

Claudet, *Portrait of a young woman*, 1850s  
stereo-daguerreotype  
PH.32-1972

Claudet, *Portrait of the Duke of Wellington*, mid 1840s  
albumen carte-de-visite  
3554-1940

Claudet, *Portrait of elderly woman (presumably the wife of Louis-Philippe)*, n.d.

albumen carte-de-visite

Claudet, *Portrait of Paul DuChailu*, n.d.  
albumen carte-de-visite

Claudet, *Professor James*, n.d.  
albumen carte-de-visite

### **British Library, Photographs Collection**

Claudet, *William Henry Fox Talbot*, c. 1841-47  
1/6 plate daguerreotype

Claudet, *William Henry Fox Talbot*, c. 1841-47  
1/6 plate daguerreotype

Claudet, *Four daguerreotype portraits of Talbot's children*, c. 1840s  
1/6 plate daguerreotypes

Claudet, *Nicolaas Henneman*, 1840s  
1/6 plate daguerreotype

Claudet, *Mother of Sargent Nicholson*, after 1851  
stereo-daguerreotype

Claudet, *Chess Players*, 1840s  
¼ plate daguerreotype

### **Royal Collection, Windsor**

Claudet, *Queen Victoria; Pss. Mary, Dss. Of Gloucester; Prince of Wales and Pss. Alice, Gloucester House*, June 1856  
1/9 plate daguerreotype  
RCIN 2932493

Claudet, *Portrait of unknown man*, after 1851  
stereo-daguerreotype  
RCIN 2932502

Claudet, *Michael Faraday*, after 1851  
albumen carte-de-visite  
RCIN 2911246

***Album, "Photographic Portraits," Volume 1/59 1853-1857***

Claudet, *Duc D'Aumale*, 1856  
hand-painted salt print  
RCIN 2906617 [#97]

Claudet, *The Prince of Condé - Oldest son of the Duc d'Aumale*, 1856  
hand-painted salt print  
RCIN 2906618 [#98]

Claudet, *François, Prince de Joinville*, 1856  
hand-painted salt print  
RCIN 2906619 [#99]

Claudet, *Princess Françoise d'Orleans, daughter of the Prince of Joinville*, 1856  
hand-painted salt print  
RCIN 2906620 [#100]

Claudet, *Pierre, Duc de Penthièvre, son of the Prince of Joinville*, 1856  
hand-painted salt print  
RCIN 2906621 [#101]

Claudet, *François, Duc de Guise, aged 3 years, 2nd son of the Duc d'Aumale*, February 1857  
hand-painted salt print  
RCIN 2906632 [#112]

***Blue Velvet Album of Hand-Coloured Photographs, 1848-1863:***

Claudet, *Prince of Wales and Princess Alice*, July 1856  
hand-colored print  
RCIN 2914271

Claudet, *Duke of Wellington*  
albumen print of engraving after Claudet daguerreotype  
RCIN 2912009

***T.K.S. Album [monogram with fish and motto "Avisé la fin" on front cover]:***

Claudet, *Maharajah Duleep Singh*, c. mid 1860s  
hand-tinted albumen carte-de-visite  
page 9

**National Museums of Scotland, Edinburgh**

Claudet, *David Brewster and Young Boy*, after 1851  
1/4 plate daguerreotype  
T.1950.18

***Bernard Howarth-Loomes Collection***

Claudet, *Seated Young Woman with a Lace Shawl*, c. 1847-1851  
daguerreotype

Claudet, *Seated Young Man*  
1/9 plate daguerreotype

Claudet, *Seated Woman*, after 1851  
1/6 plate daguerreotype

Claudet, *Soldier*, after 1851  
1/6 plate daguerreotype

Claudet, *T. E. Whitby ("Hal's Grandfather")*, after 1851  
1/6 plate daguerreotype

Claudet, *Young Man in Profile*, after 1851  
1/6 plate daguerreotype

Claudet, *Young Woman with Bonnet and Shawl*, c. 1841-44  
1/6 plate daguerreotype

Claudet, *Young Woman with Bonnet and Shawl*, c. 1841-4  
1/6 plate daguerreotype

Claudet, *Woman in Blue Dress (Miss Hargreaves)*, after 1851

Claudet, *Family Group (Lord Audley and Mary & Emily Touchet)*, after 1851

**National Portrait Gallery, Edinburgh**

Claudet, *Young Man Standing*  
daguerreotype  
R.7

Claudet, *Portrait of a Woman*, 1844-1851  
1/9th plate daguerreotype

R.40

***Edinburgh Photographic Society Collection***

Claudet, *Mr. Huistler Lowe, Bath (1792-1875)*, 1847-1851  
1/6th plate daguerreotype

**University of Oxford Museum of the History of Science**

Claudet, *Portrait of Michael Faraday*, 1840s  
1/4 plate daguerreotype

Claudet, *Young Girl Looking into Mirror*, after 1851  
stereo-daguerreotype

Claudet, *Instruments*, after 1851  
stereo-daguerreotype

**Robinson Library, Newcastle University, Newcastle, UK**

N.-M.-P. Lerebours, *Port Ripetta à Rome (Claudet & Houghton label affixed to verso)*, c. 1840  
whole-plate daguerreotype

N.-M.-P. Lerebours, *Saint Pierre et Chateau St. Ange (Claudet & Houghton label affixed to verso)*, c. 1840  
whole-plate daguerreotype

**University of St. Andrews, University Library, St Andrews, UK**

Claudet, *Young Man and Woman Seated at Table with Decanter*, after 1851  
stereo-daguerreotype

Claudet, *A Young Scientist*, after 1851  
stereo-daguerreotype

Claudet, *Four children*, after 1851  
stereo-daguerreotype

Claudet, *Group of Four Men at a Table (Forbes seated at left)*, after 1851  
stereo-daguerreotype

**Wilson Center for Photography, London**

Claudet, *Portrait of a Pacific Islander*, c. 1845

1/9 plate daguerreotype

Exhibited: "*First Seen: Portraits of the World's Peoples 1840-1880*," 2004  
00-6710

Claudet, *Portrait of a Woman*, c. 1845

daguerreotype

00-6711

Claudet, *Portrait of a Girl and Boy*, c. 1851

Stereo-daguerreotype

84-1188

Claudet, *Mrs. Ferguson, Glasgow*, 1865

albumen carte-de-visite

Claudet, *Lieutenant Sharp*, 1860s

albumen carte-de-visite

**Société Française de Photographie, Paris**

Claudet, *Jury of the 1862 Exhibition*, 1862

albumen photograph

Claudet, *Self-Portrait*, c. 1860s

albumen carte-de-visite

Claudet, *Self-Portrait, cropped at shoulders*, c. 1860s

albumen carte-de-visite

Claudet, *Self-Portrait taken with Topaz Lens*, November 1867

albumen carte-de-visite

Claudet, *Self-Portrait taken with Crystal Lens*, November 1867

albumen carte-de-visite

Claudet, *Focimeter taken with Topaz Lens*, November 1867

albumen carte-de-visite

Claudet, *Focimeter taken with ordinary lens*, November 1867

albumen carte-de-visite

Claudet, *La mesure de la lumière par le photographometer pendant l'éclipse* [The measure of light by the photographometer during the eclipse], March 15, 1858

two daguerreotypes

Provenance: given by Claudet to the Société in 1858

### **The George Eastman House, Rochester, New York**

Claudet, *Reproduction of Sculpture at Great Exhibition 1851 (Female Nude Removing Thorn From Foot)*, c. 1855

stereo-daguerreotype

70:0017:0001

Provenance: Gift of Eastman Kodak Company: ex-collection Gabriel Cromer

Claudet, *Portrait of a man*, c. 1855

stereo-daguerreotype

70:0017:0002

Provenance: Gift of Eastman Kodak Company: ex-collection Gabriel Cromer

Claudet, *Portrait of a woman*, c. 1850

stereo-daguerreotype with applied color

70:0017:0003

Claudet, *Stuffed Bird from Great Exhibition 1851*, 1851

stereo-daguerreotype

70:0017:0004

Provenance: Gift of Eastman Kodak Company: ex-collection Gabriel Cromer

Claudet, *Architectural view - St. Andrews*, c. 1840s

calotype negative

83:2130:0001

Provenance: Gift of H. H. Claudet

Claudet, *Street scene - St. Andrews (Street lined with trees)*, c. 1840s

calotype negative

83:2130:0002

Provenance: Gift of H. H. Claudet

Claudet, *Portrait of a Man Holding a Top Hat*, c. 1855

stereo-daguerreotype

76:0168:0107

Provenance: Gift of Eastman Kodak Company: ex-collection Gabriel Cromer

Claudet, *Portrait of a girl*, c. 1855

stereo-daguerreotype

76:0168:0109

Claudet, *Self-portrait with Wife and Daughter Mary*, c. 1855

stereo-daguerreotype

76:0168:0111

Provenance: Gift of Mrs. Norman Gilchrist

Claudet, *Portrait of Emma Frederica Spencer, Wife of Charles Vere Spencer*

April 28, 1857

stereo-daguerreotype

76:0168:0112

Provenance: Gift of Mrs. Alden Scott Boyer

Claudet, *Portrait of Claudet Family (Four Women and One Man, possibly Francis George Claudet)*, c. 1855

stereo-daguerreotype

76:0168:0113

Provenance: Gift of Mrs. Norman Gilchrist

Claudet, *Portrait of Mary Claudet (Antoine's daughter)*, c. 1855

stereo-daguerreotype

76:0168:0114

Provenance: Gift of Mrs. Norman Gilchrist

Claudet, *Portrait of A Girl With A Flower Basket*, c. 1855

stereo-daguerreotype

76:0168:0116

Provenance: Gift of Eastman Kodak Company: ex-collection Gabriel Cromer

Claudet, *Francis George Claudet as a Model*, c. 1855

stereo-daguerreotype

76:0168:0117

Provenance: Gift of Mrs. Norman Gilchrist

Claudet, *Portrait of Two Girls at a Piano*, c. 1855

stereo-daguerreotype

76:0168:0171

Provenance: Gift of Mrs. Norman Gilchrist

Claudet, *Portrait of a Woman and Girl*, c. 1854

stereo-daguerreotype

78:1629:0007

Provenance: Gift of Eastman Kodak Collection: ex-collection Gabriel Cromer

Claudet, *Portrait of Mildred Elizabeth Gray, Mother of Emma Frederica Spencer*

July 27, 1857

stereo-daguerreotype

78:1629:0008

Provenance: Gift of Eastman Kodak Company: ex-collection Gabriel Cromer

Claudet, *Portrait of Mary Claudet and Antoine Claudet's Mother*, c. 1850

stereo-daguerreotype

78:1629:0012

Provenance: Gift of Mrs. Norman Gilchrist

Claudet, *Portrait of a Woman*, c. 1850

stereo-daguerreotype

81:1899:0001

Claudet, *The Chess Players*, c. 1843

salted paper print

81:2847:0007

Provenance: Gift of Miss M. T. Talbot

Claudet, *Madame Antoine Claudet*, c. 1860

albumen carte-de-visite

83:2129:0003

Provenance: Gift of H. H. Claudet

### **The Grolier Club, New York**

Six stereo-daguerreotypes in the "Sir Thomas Phillipps Collection"

### **The Harry Ransom Center, University of Texas, Austin**

Claudet, *The Geography Lesson*, 1851

stereo-daguerreotype

964:0865:0001

Claudet, *Empty Interior of the Great Exhibition*, 1851

stereo-daguerreotype

964:0865:0002

Claudet, *Crystal Palace 1851 Exhibition, Transept Looking North*, 1851  
 stereo-daguerreotype  
 964:0865:0003

Claudet, *Arrangement of Stuffed Birds at the Great Exhibition*, 1851  
 stereo-daguerreotype  
 964:0865:0004

Claudet, *A Victorian Bust in Greek Style*, 1851  
 stereo-daguerreotype  
 964:0865:0005

Attr. Claudet, *Great Exhibition 1851, Venus at the Bath*, 1851  
 stereo-daguerreotype  
 964:0865:0008

Claudet, *Diamond Ring presented to Claudet by Czar Nicholas*, c. 1851  
 stereo-daguerreotype  
 964:0865:0009

Claudet, *Interior of Great Exhibition*, 1851  
 stereo-daguerreotype  
 964:0865:00015

Claudet, *John A. Court Gray, Father of Emma Frederic Spencer*, Sept. 16, 1857  
 stereo-daguerreotype  
 964:0865:00010

Claudet, *Rev. Charles Vere Spencer*, Jul 15, 1856  
 stereo-daguerreotype  
 964:0865:00011

Claudet, *Bishop Spencer of Jamaica and daughter, Mrs. Harvey*, after 1851  
 folding pocket stereoscope  
 964:0865:00012

Claudet, *Mrs. Glanville & Harriet Spencer, Her Daughter and [Sister?] of Charles Vere Spencer, Rector of Wheatfield*, June 1, 1857  
 stereo-daguerreotype  
 964:0865:00013

Claudet, *An Elaborately Decorated Room*, c. 1855  
 stereo-daguerreotype  
 964:0865:00014

Claudet, *Portrait of a Seated Lady*, August 1858

albumen print hand-painted by E.T. Parris  
964:0753:0001

Claudet, *Portrait of a Gentleman*, c. 1845-6  
hand-tinted salt print

Claudet, *General Holmes*, c. 1860  
albumen carte-de-visite  
964:0074:0089

Claudet, *The Maharanee, Wife of Dhuleep Singh*, c. 1865  
albumen carte-de-visite  
964:0515:0190

Claudet, *Self-portrait*, c. 1860  
albumen carte-de-visite  
964:0074:0246

Claudet, *Portrait of a British Gentleman*, c. 1843  
1/6 plate daguerreotype  
964:0020:0017

Claudet, *Portrait of British Gentleman in Naval Uniform*, 1859  
¼ plate daguerreotype  
964:0020:0019

Claudet, *Portrait of a British Woman*, c. 1845  
1/6 plate daguerreotype  
964:0865:0020

Sir William Crookes, *Claudet's Focimeter*  
waxed paper negative

Unknown, *Claudet Portrait of Duke of Wellington*  
bromide print

### ***Instruments***

*Revolving stereoscope (holds about eighty slides)*, Claudet patent March 8, 1855  
18 3/4 in. x 11 in. x 10 1/2 in.  
GE-21  
Exhibited: Paris Universal Exhibition, 1855

*Claudet's Lenticular Stereoscope*, Claudet patent March 8, 1855  
GE-16

**The J. Paul Getty Museum, Los Angeles**

Claudet, *Self-portrait with His Son Francis*, 1853  
stereo-daguerreotype  
84.XT.266.10

Claudet, *Arthur Wellesley, 1st Duke of Wellington (1769-1852)*  
1/9<sup>th</sup> plate daguerreotype of engraving after daguerreotype portrait  
Provenance:  
Sotheby's, 1984  
E. J. Denney, purchased 1940 from the collection of General Vershoyle Cambell, a  
descendant of the 1st Duchess of Wellington's Sister (named Mrs. Hamilton)  
85.XT.449

Claudet, *Portrait of a Young Man Holding a Book*, c. 1847  
1/9 plate daguerreotype  
84.XT.266.4

Claudet, *Still Life with Guitar, Fabrics, Umbrella, Statuary, and Small Stuffed Dog*, 1852  
– 1858  
stereo-daguerreotype  
84.XT.266.8

Claudet, *Portrait of a Young Girl*, 1848 - 1851  
1/4 plate daguerreotype  
84.XT.270.2

Claudet, *Portrait of a Middle-Aged Man Posed With Seltzer Dispenser*, c. 1848  
1/4 plate daguerreotype  
84.XT.404.3

Claudet, *Portrait of a Woman*, 1851  
1/6<sup>th</sup> plate daguerreotype  
[Secondary inscription on slip of paper placed in case in blue ink: "L'inventeur Anglais  
Mayo - / Exposition De Londres 1851 / Voir Médaille Et Diplome. / Daguerreotype De  
Claudet"  
84.XT.404.4

Claudet, *Portrait of a Well-To-Do, Well-Dressed Woman*, 1852-1860  
stereo-daguerreotype  
84.XT.833.4

Claudet, *Portrait of an Elderly Couple*, 1852-1860  
stereo-daguerreotype  
84.XT.833.5

Claudet, *Portrait of a Young Woman*, 1852-1858  
 stereo-daguerreotype  
 84.XT.833.6

Claudet, *Portrait of a Couple*, c. 1855  
 stereo-daguerreotype  
 84.XT.833.7

Claudet, *Portrait of a Young Man with Muttonchop Whiskers*, c. 1842  
 1/6th plate daguerreotype  
 84.XT.833.13

Claudet, *Portrait of a Girl In Blue Dress*, c. 1854  
 1/6<sup>th</sup> plate daguerreotype  
 84.XT.833.17

Claudet, *Portrait of a Woman*, 1852 - 1858  
 stereo-daguerreotype  
 84.XT.833.23

*Claudet's Stereoscope*, patent March 1853  
 84.XU.911

Claudet, *Mother Posed with Her Young Son and Daughter*, c. 1855  
 stereo-daguerreotype  
 84.XT.924.1

Claudet, *Portrait of a Middle-Aged Woman*, c. 1855  
 stereo-daguerreotype  
 84.XT.924.2

Claudet, *Portrait of Selena Frewen*, c. 1855  
 stereo-daguerreotype  
 84.XT.924.3

Claudet, *Portrait of a Young Girl*, c. 1855  
 stereo-daguerreotype  
 84.XT.924.4

Claudet, *Portrait of a Middle-Aged Woman*, c. 1855  
 stereo-daguerreotype  
 84.XT.924.5

Claudet, *Profile of a Woman*, c. 1844-51  
 1/6th plate daguerreotype  
 84.XT.1566.7

Claudet, *Boy with Parrot*, c. 1856  
 stereo-daguerreotype  
 84.XT.1566.11

Claudet, *Group Portrait of an Unidentified Family*, c. 1845  
 1/4<sup>th</sup> plate daguerreotype  
 85.XT.144.1

Claudet, *Portrait of Mrs. Charlotte Ellen Chester and Her Son Frank Charles Chester*,  
 1857  
 stereo-daguerreotype  
 85.XT.144.2

Claudet, *Portrait of Mrs. Charlotte Chester Woodroffe*, 1855  
 stereo-daguerreotype  
 85.XT.144.3

Claudet, *Fancy, a Dog*, c. 1850  
 stereo-daguerreotype  
 85.XT.144.4

Claudet, *Full-Bearded Man, Standing*, c. 1865  
 albumen carte-de-visite  
 84.XD.1426.84

Claudet, *Man with Moustache, Holding a Top Hat, Standing*, c. 1865  
 albumen carte-de-visite  
 84.XD.1426.85

Claudet, *Unidentified Man with Long Muttonchops, Standing*, 1860s  
 albumen carte-de-visite  
 84.XD.1426.142

### ***Albums***

*Cartes-De-Visite Album of Napoleon III and Family Plus Distinguished Artists, Actors, Actresses, Politicians, Etc.*, 1860 – 1870  
 84.XD.378

*Cartes-De-Visite Album of Noted British, French, Russian, Etc. Personalities of The Mid-19th Century*, c. 1862-1875  
 84.XD.697.15

*Boswell Family Album: Mostly Cartes-De-Visite Portraits, 1850s - 1860s*  
 84.XO.825.11

## Appendix B: Chronology, The First Ten Years of the Daguerreotype in England

- 1797**      **August 12**      Antoine Claudet born at Chateau-de-Rosay in Lyon
- 1818**      Claudet enters the office of his uncle, the banker Vital Roux
- 1821**      **August 30**      Marries Julie Bourdelaine
- 1822**      Claudet's first son John born (dies in March 1838)
- 1824**      **June 3**      Claudet's daughter Anne Mary born
- 1825**      Vital Roux places Claudet at the glassworks of Choisy-le-Roi as director in conjunction with George Bontemps, a well-known glass manufacturer, at M. Ponce Grimblot's glass works outside of Paris
- 1826**      **March 22**      Claudet's son Justus Frederick born
- [By 1829] Claudet moves to London to introduce the productions of Choisy-le-Roi and set up a company to import their products
- 1829**      Claudet's son Henri born (d. 1880)
- 1830**      **June 26**      *The Times*: 1: "A PARISIAN LADY, many years accustomed to tuition, wishes to obtain a SITUATION as RESIDENT GOVERNESS. She speaks her own language with elegance and accuracy, and would likewise instruct her pupils in Italian and the rudiments of Spanish and music, Address, post paid, to B.J., at Mr. Claudet's, 89, High Holborn."
- 1832**      **June 4**      The Royal Adelaide Gallery opens
- Claudet invents a machine for cutting cylindrical glass
- c. 1834**      George Houghton becomes a partner in the glass importing company, and the two open the firm of Claudet & Houghton at 89 High Holborn, London; wholesale and retail outlet selling "glass shades, painted, stained, embossed and engraved glass, together with crown and plate sheet glass."
- 1837**      Claudet's son Francis born (d. 1906)
- 1838**      Chance Bros. of Birmingham takes out an English patent for the French optical glass that Bontemps had perfected in 1828

**February 28** *The Times*: “STRONG GLASS, for conservatories, manufactories, and first-rate buildings—CLAUDET and HOUGHTON, 89, High Holborn, beg to call the attention of noblemen, gentlemen, builders, and the public requiring glass for the above or any other purposes, to their SHEET GLASS, quite a new manufacture in this country, the price of which is very little higher than crown glass, although having more than double its strength, and which will consequently very much more effectually resist hail, strong winds, and other causes of breakage.”

**March 6** Claudet’s son John dies, *The Times*, March 8, 1838: 7

Royal Polytechnic Institution established at 309 Regent Street, London

**August 6** *The Times*, 8: “Claudet and Houghton ads – Glass Shades and Strong Window Glass” ads, same as August 17; and “COALS.—Beard and Co.’s trade”

**August 17** *The Times* 1: 1: “GLASS SHADES, for the Preservation of Clocks, artificial flowers, busts, alabaster ornaments, birds, minerals, surgical models, chymical preparations, &c. The manufacture of glass shades having lately been introduced into this country, they may now be obtained of all dimensions, either round, oval, or square, at very moderate prices, at Claudet and Houghton’s glass shade warehouse, 89, High Holborn. N.B. Sent, safely packed, to all parts of the country.”

(Below):

“STRONG WINDOW GLASS for Conservatories, Manufactories, and first-rate Buildings.—Crown and Sheet Window Glass Warehouse, 89, High Holborn.—CLAUDET and HOUGHTON beg to call the attention of noblemen, gentlemen, builders, and the public requiring glass for the above or any other purposes, to their SHEET GLASS, quite a new manufacture in this country, the price of which is very little higher than crown glass, although having more than double its strength, and which will consequently very much more effectually resist hail, strong winds, and other causes of breakage. Crown window glass of the most approved manufacture. Fluted glass, which serves as a blind, although it admits more light than any other sort of glass, suited for offices, skylights, interior and passage doors, &c. Painted glass, white opaque ornamented glass, ruby and every other coloured glass, for windows of churches, dwelling-houses, &c.

**1839** **January 7** Arago discloses the Daguerreotype process to the Académie des sciences, Paris

**January 12** H. Gaucheraud, “Fine Arts. The Daguerotype [*sic*]” from the *Gazette de France*, Jan. 6, 1839, reprinted in *The Literary Gazette*

(January 12, 1839)

**January 19** Report of Arago's announcement

**March** "Sun-paintings," *The Art-Union* (March 1839): 24

**March 21** *The Times*: "FRENCH GLASS SHADES"

**April 22** *The Times*: "PAINTED GLASS for WINDOWS.—Every description of PAINTED and ORNAMENTED GLASS for WINDOWS, from the simplest to the most elegant in design, executed the best style, and at moderate prices, by CLAUDET and HOUGHTON, 89, High Holborn, London. Ruby and other coloured glass equal all respects to the ancient."

Below:

"FRENCH GLASS SHADES, for the preservation of clocks, artificial flowers, busts, alabaster ornaments, birds, minerals, surgical models, &c. The above articles, both useful and ornamental, being now manufactured in this country, by which the importation from the continent at a great expense is superseded, may be obtained (either round, oval, or square) at very moderate prices, from CLAUDET and HOUGHTON, glass shade warehouse, 89, High Holborn London. Lamp shades of every description."

**June** Opening of Diorama in Regents Park announced in *The Art-Union*,

94

**June 22** Daguerre assigns a monopoly of the manufacture and sale of his apparatus in France and elsewhere, with the exception of England, to Alphonse Giroux et Compagnie

**July 4** *The Times*: "French Glass Shades.—Reduction of Prices at CLAUDET and HOUGHTON'S wholesale and retail warehouses, 89, High Holborn

Below:

"STRONG WINDOW GLASS for Conservatories, first-rate Buildings, &c. at CLAUDET and HOUGHTON'S wholesale and retail warehouse, 89, High Holborn.

**July 15** [about] "French intermediary" on behalf of Daguerre and Niépce instructed patent agent, Miles Berry, of firm Newton & Berry, 66 Chancery Lane, London to apply for British Royal Letters Patent [British Patent No. 8194 (August 14, 1839)]

**July 25** *The Times*: "PAINTED GLASS for WINDOWS.—Every description of PAINTED and ORNAMENTAL GLASS for Windows . . ." CLAUDET and HOUGHTON

**July** “New discovery in art” *The Art-Union*, 106 “This is an invention of a lithographer, but the remark is made, “Of the wonder-working Daguerreotype, which was to send a host of engravers to parish workhouses, we have of late heard nothing; and we fancy, for all that was said, they may not be justified in meeting starvation half-way.”

**August 14** Miles Berry British Royal Letters Patent. No. 8194, “A New or Improved Method of Obtaining the Spontaneous Reproductions of all the Images Received in the Focus of the Camera Obscura,” sealed. Makes Berry the sole patentee of the daguerreotype for “England, Wales, and the Town of Berwick-upon-Tweed, as well as Her Majesty’s Colonies and Plantations abroad.” Enrolled February 14, 1839.

**August 19** details of daguerreotype process made public at joint meeting of Académie des sciences and the Académie des beaux arts

**August 20** A. Donné, “Académie des sciences. Séance du 19 aout. Exposition du daguerrotype [*sic*],” *Journal des débats politique et littéraires* (20 August 1839).

**August 24** “The Daguerreotype” *Chambers Edinburgh Journal* 8, 243, 327

**September 13** Daguerreotype process first demonstrated in London by Monsieur de St. Croix, arrived from Paris, at No. 7 Piccadilly, opposite the southern “crescent” of Regent Street; produces a daguerreotype of house, pathway and sky; the image was compared to a mezzotint [*The Times*, September 14, 1839: 4], twenty minute exposure.

**September** “The Secret of Mr. Daguerre,” *The Art-Union*, 132, 139, 143: “Daguerre Manual in the Press, and will be published in a few days, price three shillings. Daguerre’s process of Daguerreotype; or, Philographic Drawing. The only work written by M. Daguerre himself. With six plates, representing the entire process, for which a pension of 10,000 francs a year has just been settled by the French Government upon M. Daguerre. Persons wishing to secure early copies are recommended to give their orders immediately. London: W. Strange, Paternoster row; and orders received by all booksellers.”

**October** “Paris. The Daguerreotype,” *The Art-Union*, 155

**September/October** Miles Berry announces that “any person or persons who may make, use, exercise or vend this invention either in public or private, for his or her benefit or advantage, will be guilty of an infringement upon this patented right, and legal proceedings will

immediately be taken against any persons so acting.”

Berry enters into special licensing arrangements with the Directors of the Royal Polytechnic Institution and their chemist John Thomas Cooper junior was authorized to deliver lectures on the daguerreotype at the Royal Polytechnic Institute.

Beard takes out a patent for color printing on fabric

**November 2** “The Daguerreotype”: “In England a French artist of the name of Ste. Croix is at present exhibiting the wonders of the daguerreotype. A London paper [*The Times*] remarked of this exhibition that there was a soft tint of blue in the sky, the writer of the article believes this to be a visual deception arising out of the admirable minuteness of the shading.”

**1839/40**

**Autumn** On the advice of Lerebours, Claudet travels to Paris to learn the daguerreotype process from Daguerre; Claims to buy license to use the process from Daguerre; During initial visit to Paris, Claudet buys as many daguerreotypes as possible. Back in London, Claudet sends specimens to Royal Society soiree

Claudet continues to import daguerreotype pictures from Lerebours, sells them through Claudet & Houghton

**1840**

*Le Daguerreotype considéré sous un point de vue artistique, mécanique et pittoresque par un amateur* (Hubert), Paris, 1840

**February 3** William S. Johnson (father of John Johnson) sailed for London, reached England by the close of the month, “and immediately thereafter had an interview with Richard Beard, Esq., and with whom an agreement was entered into for the patenting of the mirror camera (the invention of Wolcott) in England.” [“Chapter in the Early History of Photography,” 1868]

Richard Beard, owner of the London coal retailing company, meets with William S. Johnson, father of John Johnson, partner of Alexander Simon Wolcott, New York. They meet through the patent agent William Carpmael. William Johnson had come to London to find an English buyer for his son’s Wolcott camera, which used a concave mirror to reflect the image on to the plate, shortening exposure time and avoiding lateral reversal. Beard paid £200 and expenses for one-half of the American invention; the remaining half, with all profits, he purchased for £7,000 at twelve months from the issuing of the American patent in London

The issue of this patent was opposed by Miles Berry; the opposition to the

issuing of the patent for the mirror was withdrawn on Beard and Johnson agreeing to pay Daguerre [Berry] “£150 per annum for the right to employ and use all pertaining to the Daguerrean art, chemically, patented by Daguerre.”

Beard hires John Frederick Goddard, science lecturer, to supervise experiments in shortening exposure time at the Medical Hall near Furnivals Inn, Holborn where Goddard was supervising numerous experiments; Goddard finds that the addition of bromine to iodine solution shortens exposure

**February 14** Berry’s Patent 8194 enrolled, “Obtaining Daguerreotype Portraits”

**March 3** *The Times*: “THE DAGUERREOTYPE; or, Nature Delineated by Herself. This extraordinary discovery, for the use of which the French Government have paid the inventors so largely, is a mode or process by which all images produced by the camera obscura are retained and fixed in a few minutes upon surfaces of silver. This is effected by the action of light only, and must at all times be a correct and perfect representation of nature. It is like the reflection of an Image seen in a mirror, and there retained by some magic power. The sole right of making, using, exercising, or vending this important discovery in England being secured by Her Majesty’s royal letters patent, granted to Mr. Miles Berry, of the Patent-office, Chancery-lane, Messrs. Claudet and Houghton, 89, High Holborn, beg leave to announce that having obtained a license from the patentee, they have on hand a collection of splendid specimens of this wonderful discovery, representing the most interesting monuments, ancient and modern, of Paris, Rome, and other cities, also panoramic views of these towns, landscapes, portraits taken from nature, &c. Details, imperceptible to the eye, can be discovered on these plates with a magnifying glass as we see distant objects by the help of a telescope; in fact, these images being delineated by nature herself are as perfect as all her works. Injunctions will be taken against any person possessing apparatuses, making use of them, or selling proofs without licence or the authority of the patentee. Direction—Claudet and Houghton, 89, High Holborn.”

**March 25** Document stating Claudet granted license by Berry “to use a limited portion of the apparatus in consideration of the sum of 200 pounds.”

**March 25** *The Times*: “THE DAGUERREOTYPE.—Under a license from the Patentee—CLAUDET and HOUGHTON beg to announce that

they have on hand for SALE a collection of beautiful SPECIMENS produced by the DAGUERREOTYPE, and particularly views taken in Paris and Rome, landscapes, portraits, &c.”

**March 30** Berry writes to Board of Treasury on behalf of Daguerre to inquire if the queen’s Government would be interested in purchasing the rights of the daguerreotype “for the purpose of throwing it open in England for the benefit of the public and preventing this important discovery being fettered or limited by individual interest or exertion.” Proposal declined.

Richard Beard (reportedly) buys the patent from Berry and offers Claudet 200 pounds for his license

**April 10** *The Times*: ““THE DAGUERREOTYPE, or Nature Delineated by Herself.—Her Majesty and Prince Albert having been graciously pleased to purchase some specimens produced by the DAGUERREOTYPE, and to express their highest admiration of this wonderful discovery . . . Direction, Claudet and Houghton, 89, High Holborn.”

**April 11** *The Athenaeum*, no. 650: 294: “The selfish policy of M. Daguerre appears to have all but put a stop to the practical application and improvement of his interesting discovery, by limiting its use to the wealthy. This is the more to be regretted, as we every day see specimens more and more perfect. Messrs. Claudet & Houghton have lately received a selection, from Paris, quite unequalled, and well worth a visit; some of the specimens so perfect, that the water reflects the buildings; in others, inscriptions are legible through a magnifying glass, which cannot be read on the building itself with the naked eye.”

**April 18** Claudet Houghton Ad in *The Athenaeum*, p. 60: “The Daguerreotype: or Nature delineated by herself,” and ad in *The Art-Union*, April 1840

**May 8** A.S. Wolcott, “Method of Taking Likenesses by Means of a Concave Reflector and Plates so Prepared as that Luminous or Other Rays will Act Thereon,” patented, United States Patent Office

**June 6** *The Times*: “POLYTECHNIC INSTITUTION.—CONTINENTAL DAGUERREOTYPES of the first class, in 100 beautiful views taken in Greece, Italy, and France recently introduced into this country by Messrs Claudet and Houghton, (licensees and patentees) for the exhibition and sale of which a separate room has been exclusively appropriated

**June 13** Beard files patent No. 8546, "Improvements in Apparatus for Taking or Obtaining Likenesses and Representations of Nature and of Drawings and other Objects"; for bromine addition to iodine [Goddard experiment], the Wolcott camera, and innovation of preparing plates by pressing them face to face between rollers; extends patent rights to Scotland; Patent 8546 includes description of Concave reflector to reflect light onto sitter so they are not in direct light, as well as glazing of roof with blue glass

**July 30** *The Times*: "THE DAGUERREOTYPE, or mode of fixing, by a self-acting process, the transient images shown in the camera obscura. This wonderful invention is protected in this country by letters patent, and particularly honoured by Her Majesty's patronage. A large collection of SPECIMENS obtained by the Daguerreotype is exhibited for SALE by Messrs. CLAUDET and HOUGHTON, 89 High Holborn."

**September** John William Draper, "On the process of Daguerreotype, and its application to taking portraits from the life," *The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science* 17 (September 1840)

**1841**

1841 Census states that Claudet, aged 43, resides in New St. Milton Gravesend, profession listed as "Merchant"; Wife Julia, aged 35, daughter Mary age 15, and son Frank aged 4.

**January** *The Art-Union: 2*: "Just Published. THE DAGUERREOTYPE APPLIED TO ENGRAVING. A collection composed of the finest views obtained by the Daguerreotype, of the most remarkable monuments and places of the world, beautifully engraved by the best artists in Paris. The work will consist of twelve numbers, each containing four views, accompanied with text in French. In the first numbers are the following interesting subjects:---The Collosseum and the Piazza del Popolo, at Rome; The Cities of Jerusalem and St. Jean D'Acree; he Arsenal of Venice; the Column of July in Paris; the Ducal Piazza at Florence, &c., &c. The 4<sup>th</sup> number will contain the Column of Pompeii in Egypt, the Cascade of Tivoli, a View of London, with St. Paul's and the River, and the City of Beyrout. Price, per number, 10s. 6d, and 14 s. on large paper. To be had of Messrs. Claudet and Houghton, 89, High Holborn."

**February 1** *The Art-Union: 39*: "DAGUERRIAN EXCURSIONS, or a Collection of views obtained by the Daguerreotype, of remarkable Monuments and Places, beautifully engraved. The work will consist of Twelve Numbers, each containing Four Views, accompanied with text in French. Price 10s. 6d. each number. The sixth number now published. Sold by Claudet and Houghton, at their warehouses for French glass

shade, sheet, crown, and painted window glass, 89 High-Holborn.”

**February 8** Talbot files patent for Talbotype/calotype, No. 8842

**February 19** Daguerre letter to Robert Hunt, “Sir, I have received your very amiable letter & I wish I could give you an answer more suitable to your wishes & to my desire of being either agreeable or useful to you. But though the principle of my new discovery is certain, I am determined not to publish it before I have succeeded in making the execution of it as easy to every body as it is to myself.”

**March 20** *The Literary Gazette and Journal of the Belles Lettres* no. 1261 (1841): “Photographic Portraits. / We have just returned from witnessing the experiment of portrait-taking by Mr. Wolcott’s patent reflecting apparatus at the Polytechnic Institution”

**March 20** *The Spectator* (March 20, 1841): 283, “The visitor is introduced into an apartment lighted from above, and having a flat roof of blue glass, which subdues the glare of the sun’s rays without materiality diminishing their luminous intensity”

**March 23** Beard opens first photographic portrait studio in British Isles in attic floor of the Royal Polytechnic Institution, 309 Regent Street, London with assistance of John Johnson, had arrived from America some months earlier

**March 24** “The Photographic or Daguerreotype Miniatures,” *The Times*: “The apartment (sic) appropriated for the magical process - for so it may be termed - is . . . on the highest story (sic) of the institution”

**March 26** Goddard lecture at the Royal Institution, *The Polytechnic Journal* 4, nos. 1-6: 248

**April** Talbot writes to Walter Calverley Trevelyan: “I think the best camera is Daguerre’s construction if you like to import one from Paris you can commission Ross, optician Regent Street London to get a good one. He got some for me. Sir D. Brewster spoke to me in very high terms of the lenses made by an optician in Edinburgh no doubt it was Davidson.”

**April 3** *The Literary Gazette and Journal of the Belles Lettres* no. 1263 (April 3, 1841) “Royal Institution. Friday, 26<sup>th</sup> March—Mr. Goddard, ‘On the Application of the Daguerreotype to the taking Likenesses from the Life.’”

**April 13** *The Times*: “BY ROYAL LETTERS PATENT.---The Daguerreotype, 89, High Holborn.—CLAUDET and HOUGHTON beg to

announce to the amateurs of this wonderful discovery, that they are now enabled to SUPPLY all persons wishing to use the invention for amusement or experiment with complete apparatus, prepared plates, &c., at a very moderate price.”

**May** Claudet making first successful daguerreotype portraits; begins experimenting with accelerating the exposure time discovers that fuming silver plate with chlorine and iodine reduces exposure time to seconds; first to publish discovery

**June 7** Claudet submits his method of acceleration to the Académie des sciences

**June 18** Claudet’s Patent, No. 9193, “Certain Improvements in the Process or Means of and Apparatus for Obtaining Images or Representations of Nature or Art,” enrolled

**By third week of June** Claudet opens first studio on roof of Royal Adelaide Gallery in the Gallery of Practical Science, Adelaide Street, West Strand

**June 23** Beard agreement with Miles Berry

Beard applies for court injunction to keep Claudet from continuing business; argues that Berry had given him the whole patent, including Claudet’s part; Berry offers Claudet 200 pounds to take back license, Claudet refuses

**July 1** *The Art-Union*: 113: “UNDER Her MAJESTY’S ROYAL LETTERS PATENT.—DAGUERREOTYPE PORTRAITS are taken daily at the GALLERY of PRACTICAL SCIENCE, Adelaide-street, West Strand, by the improved process of Mr. A. Claudet, which required but a few seconds to obtain a perfect likeness. By this process also pictures forming groups of three to six persons can be taken either engaged at tea, cards, chess, or in conversation, forming whole length family portraits of friends, arranged in any manner”

**July 15** Court proceedings, decision made in favor of Beard

**July 16** *The Times*: 7, “BEARD v. CLAUDET”

**July 17** *Literary Gazette and Journal of the Belles Lettres* no. 1278: 463: “The method in practice at the Adelaide Gallery for taking pictures by the Daguerre process differs somewhat from that which we have before described as employed at the Polytechnic Institution.”

**July 22** Claudet makes successful appeal before the Court of Chancery against the decision [Beard tried repeated appeals but eventually gave up]

Photographic studios (after negotiations with Beard) opened in Bristol, Liverpool, Nottingham, and Brighton. Manchester studio under Beard's direct control and others operative in 1841 in Dublin and Edinburgh

**August 5** Beard Ad in *The Times*

**August** Henry Collen, noted miniature painter, operating first professional calotypist studio at 29 Somerset Street, Portman Square, London, modest business between August 1841 and June 1842

**August** "Mr. Talbot on recent Improvements in Photography," *Philosophical Magazine and Journal of Science* 19, no. 22: 166-167

**August 1** *The Art-Union*: 139 "PHOTOGRAPHIC PORTRAITS.—Beard v. Claudet.—"

**August 17** W. R. Grove, Esq., "On a Voltaic Process for Etching Daguerreotype Plates," read before the London Electrical Society

**Thomas Wharton's** miniature picture frame back design, [*back embossed with Royal Coat of Arms and 'T. Wharton No. 791 25 August 1841'*] registered as "miniature picture frame back" at the office of the Registrar of Designs, under protection of Designs Copyright Act, 1839, used by Beard on backs of early portraits in pressed gilt frames

**September 1** *The Art-Union*: 145 "Under Her Majesty's Royal Letters Patent. Daguerreotype.—Royal Adelaide Gallery, Lowther Arcade, West Strand.—Mr. Claudet is now taking PORTRAITS and GROUPS of Figures at this Institution, upon a greatly improved plan. In addition to which, by a new application, Mr. Claudet is enabled, without any additional charge, to fix the Portraits, and render them so durable they will not fade or turn black. The state of the weather offers no impediment to the process, and parties are not expected to take their Portraits unless perfectly satisfied with the likeness. A performance on the new musical instrument the Terpodion; Microscope, Pyreidotrope, Steam Gun, Electric Eel, &c.—Admission, 1s. Children half-price.—Open daily from half-past ten till six o'clock."

*The Art-Union*: 156, "FRANCE.—Paris.—'Photography.' *New Advance in Discovery by M. Daguerre; Instantaneous Formation of Images*"

**September** *Art Union*: 158 "Etching by Electricity.—Among the papers

read on the 17<sup>th</sup> ult. At the meeting of the London Electrical Society, was one ‘On a Voltaic process for etching Daguerreotype plates,’ by Mr. W. B. Grove, M.A., F.R.S.”

(below):

“Beard v. Claudet.—The injunction granted in this case, as reported last month, has been dissolved. Ulterior proceedings are, we believe, pending between the parties.”

**September 4** Claudet in *The Athenaeum* “From the daguerreotype likeness, number of Electrotpe portraits can be produced as beautiful as the original”

**September 10** Beard’s patent, No. 9292 “Colouring Daguerreotype Pictures,” enrolled September 10, 1842

**November** *Derniers perfectionnements apportés au daguerréotype* (Gaudin and N.P. Lerebours)

**December 18** Claudet, “Certain improvements in the process or means of an apparatus for obtaining images or representations of nature or art,” enrolled in the Petty Bag Office June 18, 1842

**December 25** *The Literary Gazette and Journal of the Belles Lettres* No. 1301: 836, “Daguerréotype and Electrotpe. / We have received a letter from M. Claudet, commenting on our remarks (*Lit. Gazette*, No. 1295) on these interesting processes”

**December 1841** Talbot writes that good camera obscuras like the ones Daguerre had constructed can be found at “Lerebours, the Opticians,” Paris

Arago mentions Claudet: “M. Claudet, qui a trouvé le moyen de réduire à quelques secondes la durée d’exposition dans la chambre obscure” [*Oeuvres complètes de François Arago* 4: 516] – referring to Claudet’s method of accelerating the production of the daguerreotype image by the use of bromide and chloride of iodine, making exposure 100 times more rapid

Lerebours, having inherited his father’s optician business in 1840, forms a partnership with Marc-Antoine Gaudin, selling the Gaudin-type daguerreotype camera. The camera contains a variable aperture in the form of a moveable disc attached to the front of the camera over the lens, a mechanism which anticipated Waterhouse stops by some years; also offered lessons in photography, published several treatises on the subject, and commissioned various artists to undertake the *Excursions daguerriennes*

*Nouvelles instructions sur l'usage due Daguerreotype* by Charles Chevalier, 1841

*Description de nouveaux daguerreotypes perfectionnés et portraitifs, avec l'instruction de M. Daguerre, annotée* by Buron, 1841

**1842**

**March 28** Beard opens his London studio at 34 Parliament Street, Westminster

**April 1** *The Art-Union* 4 (April 1, 1842): 84: "Daguerreotype Portraits"

**April 25** Beard opens his second London studio at 85 King William Street

Beard Patent No. 9292 for hand-coloring plates "giving the warmth and truth of a miniature painting," *Bath and Cheltenham Gazette* (April 5, 1842): 4

**June** "To Antoine Jean François Claudet, of High Holborn, in the county of Middlesex, glass merchant, for certain improvements in the process or means of an apparatus for obtaining images or representations of nature or art" enrolled in the Petty Bag office

**June 25** "Scientific Adjudication, Court of Queen's Bench, Before Lord Chief Justice Denman, June 25, 1842. *Berry v. Claudet*. / This was an action brought by Mr. Beard, proprietor of the Daguerreotype patent, in the name of Berry, (the original patentee, from whom the patent right had been purchased,) against Mr. Claudet, to compel him to give up a license he had obtained to use this invention."

**July** Queen Dowager visits Claudet's studio

**July 1** *The Art-Union*: 149; "ROYAL POLYTECHNIC INSTITUTION.—The NEW ROOMS, which extend to Cavendish-square, are now OPEN, and the Bude light most successfully introduced. During the Midsummer Holidays the Morning and Evening Public Lectures of Dr. Ryan, Professor Bachhoffner, and the other Lecturers, will be particularly adapted for the Youthful Visitors, and the means will be used by which amusement and instruction can be conveyed in all the useful branches of practical science . . ."

**August** Claudet writing from Adelaide Gallery informed Talbot that he had received the camera obscura (Gaudin's model) that Talbot had asked him to order from Mr. Lerebours for him

**August 1** *The Art-Union*: 186 “M. Claudet, at the Adelaide Gallery, has lately made some full-length portraits of much beauty. Instead of employing a qualified light his sitters are generally placed in the open air and even in the sun”

**Sept./Oct.** *The Art-Union*: 219, “Royal Polytechnic Institution, . . . dissolving Views . . . Among the varied Lectures in Practical Science, the Calotype Process of Mr. Fox Talbot is given at Two o’clock daily, in which pictures are spontaneously developed before the visitors . . .”

*The Civil Engineering and Architect’s Journal* 5 (October 1842): 358: Description of Claudet’s patent “Improvements in Dauguerreotype [*sic*]”

**October 8** “Uses of the Daguerreotype,” *Chambers Edinburgh Journal* no. 558: 304

*George Cruikshanks Omnibus* ed. by Laman Blanchard. Tilt & Bogue, Fleet Street. 1842, 29 “Photographic Phenomena, or the New School of Portrait Painting”

## 1843

**January** Publication in *The Edinburgh Review* includes a summary history of photography up to that point

**January 7** “Daguerréotypes,” *The Athenaeum* no. 793 (Jan. 7, 1843) “A patent has been granted to Mr. Beard for improvements in the means of taking likenesses. It consists in *colouring* the pictures, and the process is thus described in the *Mechanics’ Magazine*.”

**March 18** Patent sealed, Alexander Simon Wolcott, London, and John Johnson (states of Manchester and “machinist, for improvements in photography), “Improvements in Photography”

**April 1** “Our Weekly Gossip,” *The Athenaeum* no. 805 (April 1, 1843): 313. “We mentioned last week, from the German papers, a report that Prof. Böttiger had discovered a mode of daguerreotyping in colours. How this may be we know not: but certainly our own clever and enterprising artist, Mr. Beard, has discovered a mode of colouring daguerreotypes, which has a very pleasing effect. Two whole-lengths, one of a Highlander and the other of a lady in rich old-fashioned costume, struck us as admirable, and, for clearness and natural effect, hitherto unequalled.”

**June 1** *The Art-Union* 5 (June 1, 1843): 150: “Photographic Portraits.—We have had an opportunity of inspecting the latest improvements in photographic portraiture at Mr. Beard’s establishment, at

the Polytechnic Institution.”

**June 3** Front page advertisement in *The Athenaeum*, no. 814: “Claudet’s Daguerreotype Portraits taken daily at the Royal Adelaide Gallery . . . Price of a single Portrait, 1 Guinea, upon plates 3 1/4 by 2 3/4 inches; and 5 guineas upon plates 8 1/2 by 6 1/2 inches; intermediate sizes in proportion. Colouring from 5s. to 10s.”

**June 25** “Beard v. Claudet,” *Newton’s London Journal* 21: 57; “Court of Queen’s Bench. Before Lord Chief Justice Denman. June 25th, 1842 ”Berry v. Claudet”

**July 1** front page ad, with shortened version of text of above, added sentence at end: “Duplicates at half price, and inferior Portraits produced by the old process exchanged without any charge.”

**August 19** *The Athenaeum*, no. 825 (August 19, 1843): “Sales by Auction. Philosophical Apparatus, Objects of Natural History, &c. Messrs. J. C. & Stevens will sell by Auction, at their Great Room, 38, King-street, Covent-garden, on Thursday, 24<sup>th</sup> of August, at 12 o’clock. A Daguerreotype Apparatus, by Lerebour of Paris, Electrical Machines, Air Pump, Solar Microscope, and other Philosophical and Chemical Apparatus, Portable Vapour Bath, Mahogany and other Cabinets, Elegant Dinner and Dessert Services of Worcester and Old Derby China . . .”

**September 16** Herschel, “On a Remarkable Photographic Process, by Which Dormant Pictures are Produced, Capable of Development by the Breath or by Keeping in a Moist Atmosphere.” “—If nitrate of silver, specific gravity 1.200, be added to ferro-tartaric acid, specific gravity 1.023, . . . [self development] . . .” *The Athenaeum* no. 829: 847

**September 30** *The Athenaeum*, no. 831, p. 874. “A Treatise on Photography”

**October 21** Lerebours, “A Treatise on Photography,” *The Athenaeum* no. 834 (October 21, 1843): 941, trans. J. Egerton, Longman and Co.

Antoine Claudet, “The Progress and Present State of the Daguerreotype Art,” Reprinted in *Transactions of the Society of Arts* 55 (1843-1844), 89-110

**1844**

**April 22** *Comptes Rendus*, no. 17: “M. Daguerre – Letter to Mr. Arago, “On a New Mode of Preparing the Plates Destined to Receive Photographic Images”

**July 6** *The Athenaeum* no. 871: “Claudet’s Daguerreotype Portraits, Royal Adelaide Gallery, Lowther Arcade, Strand”

**October** Beard announces decision to grant licenses to a limited number of individuals to practice as professional photographers in 20 mile radius of London; offers award for proof of infringement of the monopoly

**December** Beard’s first appointed London licensee, James Bright, opens studio at 183 Strand

M.-A. Gaudin, *Traité Pratique de Photographie*, 1844

1845

**January 22** Paper read by Claudet to the Society of Arts (Announced in Feb. 1 *The Athenaeum*, No. 901, 124) “On the Progress of Photography”

**April 22** *Comptes Rendues*, no. 17, April 22, 1844, “On a New Mode of Preparing the Plates Destined to Receive Photographic Images by Mr. Daguerre”

**April** *Pictorial Times*, woodcut of daguerreotype portrait by Claudet of group of Ojibbeway Indians, in London

**May 24** Announcement in *The Athenaeum*: 518: “A considerable improvement has been made in the arrangement of the instrument used for taking portraits from the life, by Mr. Claudet, of the Adelaide Gallery. Much of the unnatural character found in Photographic portraits, arising from the distortion by spherical aberration, has been removed, and thus a more agreeable picture insured. We have seen some specimens produced by M. Claudet, which were of great delicacy and strictly true to nature. Portraits thus obtained by the agency of light are afterwards painted by the artist. The finish of these pictures is very great; and without losing any of the fidelity of the originals, they have the charm of beautiful artistic productions. In the hands of Mr. Claudet, the process for engraving Daguerreotype plates, published some time since by M. Fizeau, appears likely to become practically useful . . . “

**June 2** Beard v. Egerton

**June 3** “Vice Chancellor’s Courts, Monday June 2.” *The Times* re: Beard v. Egerton

**June 16** *The Times*, “Daguerreotype,” “Beard v. Egerton”

**June 15** *The Athenaeum*, no. 868: “Claudet’s Talbotype (or Calotype) Portraits, Adelaide Gallery.”

1846

**January 1** *The Art-Union* 8 (January 1846) “Photographic Miniatures.—Some months since we took occasion favourably to notice the vast improvements which Mr. Claudet and his coadjutor, M. Mansion, had made in their method of taking portraits by the Daguerreotype”

**January 28** Paper read at the Society of Arts, “On some Principles and Practical Facts in the Art of Photography.”

**February 1** *The Art-Union Advertiser* 8, p. xxi: “New Style of Miniature Painting. M. Mansion, of the Daguerreotype Establishment, Adelaide Gallery”

**April 11** *The Athenaeum* no. 963: 361: “Photographic Portraits. MR. CLAUDET begs, at the beginning of the favourable season, to invite the public to inspect his immense collection of DAGUERREOTYPE and TALBOTYPE PORTRAITS, in which are illustrated some highly important improvements; one of these (which has always been considered a great desideratum with regard to the correctness of the likeness) consists in representing the FACE NON-INVERTED, but with the natural position of the right and left sides; another improvement is, that the effect of the picture is particularly increased with respect to the relief and depth given to different parts”

**May 9** *The Athenaeum* no. 967, 465: “Beard’s Coloured Photographic Portraits” over “Claudet’s Daguerreotype Portraits, Royal Adelaide Gallery” ads

(below):

Claudet advertises previous clients: “H.M. King Louis Phillipe, H.M. the Queen Dowager, their Graces the Duke of Wellington, the Duke and Duchess of Northumberland, the Duke of Richmond, and a great many other persons of distinction, both English and foreign”

**May 28** *The Times*: “Court of Common Pleas. May 27th. Beard v. Egerton and Others”

**June 6** *The Athenaeum* no. 971: 569. “Copies of Daguerreotypes, of an enlarged or diminished size, from the Plate on which any Portrait or other image has been taken are furnished by a new patent apparatus, in use at Mr. Beard’s Establishments”

(below):

“Claudet’s Coloured and Non-Inverted Daguerreotype Portraits”

**July 1** *The Art-Union* 8: 216; under “Topics of the Month” and “Daguerreotype Portraits”

**July 4** *The Athenaeum* no. 975: 673 “Mr. Beard’s Photographic

Portrait Establishments are at 85, King William-street, City, 34, Parliament-street, Westminster, and the Royal Polytechnic Institution, Regent-street; specimens of recent colouring improvements; licenses can be applied for at 85 King William street”

**July 25** *The Athenaeum* no. 978: 745 “Claudet’s Daguerriotype Portraits”; ‘Mr. Claudet operates himself, and never allows an inferior portrait to leave his establishment. open from 9 o’clock, (18, King William-street, near the Adelaide Gallery)”

**August 8** *The Spectator* 19, no. 945 (August 8, 1846): 763-4; “Fine Arts. Photographic Miniatures” comparing Beard and Claudet

**September 1** *The Art-Union Advertiser* 8, no. 99: cvii: advertisements for Claudet’s studio on King William Street

**October 3** *The Athenaeum, Journal of English and Foreign Literature, Science, and the Fine Arts* no. 988: 1009 “The Wellington Statue, Claudet’s Daguerriotypes . . . Mr. Claudet having been employed to execute a series of Daguerriotypes of this great national work, the studio of Mr. Wyatt”

**1847**

**February** Sir David Brewster, “On the Optical Phaenomena, Nature, and Locality of *Musicae volitantes*; with Observations on the structure of the Vitreous Humour, and on the Vision of Objects placed within the Eye.” *Transactions of the Royal Society of Edinburgh* 15: 377

**February 17** Claudet reads “Progress of Photography” to the Royal Society of Arts (published in *RSA Transactions* 56, 1846-8): “The Photographic Art has not yet been ten years in existence, and already it is practised in all the Countries of the Globe . . .”

**February 23** Joseph Ellis, “Photography, a Popular Treatise, Designed to Convey Correct Information Concerning the Discoveries of Niépce, Daguerre, Talbot, and others, and as Preliminary to Acquiring a Practical Acquaintance with the Art; by an amateur,” read before the Literary & Scientific Institution of Brighton 23rd February 1847

**February 2** [Extracts from the Minutes of the Society of Arts] “Mr. Kilburn on Photography”

**March 1** Account in *Art-Union Monthly Journal* 9: 109-110; “Photography – On the evening of the 17<sup>th</sup> of last month, a paper by M. Claudet was read in the Great Room of the Society of Arts, in the Adelphi, descriptive of the progress hitherto, and the present state, of photography”

**April** for Claudet's establishment at the Colosseum, *Athenaeum*, with Kilburn advertisements printed below

**June** "Professor Highschool, of Philadelphia" advertisements in *The Athenaeum*

**July 2** *London Journal of Arts and Science* 31, 1847: 64, Beard v. Egerton

**July 3** "Court of Common Pleas, Guildhall." Beard v. Egerton, *The Times*

**July 24** *The Athenaeum* July 24, 1847: Mr. Mansion – "15 colours used by him for portraits, landscapes, etc. may be had ready for use"

**August** *The Athenaeum* no. 1032: 825: Henneman advertisement for Talbotypes at 122 Regent Street

**October 24** Claudet presents a communication to the Académie des sciences, a similar paper sent on the 10th of June to the Royal Society, "On Different Properties of Solar Radiation acting on Silver Plates coated with Iodine, or its compounds with Bromine or Chlorine"

**1848**

**March** "Photographic Phaenomena Referring to the Various Actions of the Red and Yellow Rays on Daguerreotype Plates When they have been Affected by Daylight." *Philosophical Magazine and Journal of Science* 32, no. 214 (March 1848): 199-201. Addressed as a letter, "Gentlemen, Having made on the 24th of October 1847, a communication to the Académie des Sciences of Paris similar to that I sent on the 10th of June to the Royal Society, On different Properties of Solar Radiation acting on Silver Plates coated with Iodine, or its compounds with Bromine or Chlorine, a discussion ensued, in which Messrs. Ed. Becquerel and Gaudin (see *Comptes Rensus*, October 31 and November 2) controverted the accuracy of some part of my experiments . . ."

**November** "Description of the Photographometer an instrument for measuring the intensity of the Chemical Action of the Rays of Light on all the Photographic preparations, and for comparing with each other the sensitiveness of these different preparations. Invented by A. Claudet, London September 1848," *The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science* 33, no. 223: 329-335

**1849**

**January 31** "The Photographometer of Mr A Claudet read by Mr Hunt" (from Extracts From the Minutes of the Society of Arts)

**February** *The Athenaeum* no. 113: 185: "Professor Faraday's

Portrait—“ by Claudet advertised, exhibited at the last soirée of the Royal Institution

Claudet paper to Society of Arts; *The Art-Journal*: 358 “Researches on the Theorie”

**March** “The Photographometer,” *The Art-Journal*: 96

**May 1** *The Art-Journal* 11 “Portrait of Faraday.--Mr. Claudet has just issued a portrait of the able experimental philosopher Dr. Faraday”

**June 25** “Beard v. Egerton,” *London Journal of Arts and Science* 34: 438

**September 14** “Researches on the Theory of the principal Phaenomena of Photography in the Daguerreotype Process” read before the British Association at Birmingham

**October 8** Beard files for Bankruptcy; it is granted on June 5th, 1850

**November** Claudet, “Researches on the Theory of the principal Phaenomena of Photography in the Daguerreotype Process,” published in *Philosophical Magazine and Journal of Science*

## Bibliography

### Archival Sources

Arago, François-Jean-Dominique. *Oeuvres complètes de François Arago*. Vol. 4. Paris: Gide et J. Baudry, 1858.

Arnoux, J.-J. "Exposition Universelle." *La Lumière* 1 no. 21 (June 29, 1851): 82.

"Arts and Sciences: Photography." *Literary Gazette, and Journal of the Belles Lettres* 1537 (1846): 601.

Babbage, Charles. "Observations on the Analogy which Subsists Between the Calculus of Functions and Other Branches of Analysis." *Philosophical Transactions of the Royal Society of London* 107 (1817): 197-216.

———. *Reflections on the Decline of Science in England and on Some of its Causes*. London: B. Fellowes and J. Booth, 1830.

*Baptisms Solemnized in the Parish of St. Andrew, Holborn, London, and in the County of Middlesex, in the Year 1829*. London: T. Lodder, Holborn, 1830.

*Baptisms Solemnized in the Parish of St. Andrew, Holborn, London, and in the County of Middlesex, in the Year 1831*. London: T. Lodder, Holborn, 1832.

Baudelaire, Charles. "Salon of 1859." *Révue française* (June 10–July 20, 1859).

Beard, Richard. 1842. Colouring Daguerreotype Pictures. British Patent 9292, September 10, 1842.

———. 1840. Improvements in Apparatus for Taking or Obtaining Likenesses and Representations of Nature and of Drawings and other Objects. British Patent 8546, June 13, 1840.

———. 1839. Printing Calicoes and Other Fabrics. Patent 8109, June 17, 1839.

*Beard v. Claudet, Affidavits*, July 1841. London: National Archives, C31/618-part.

*Beard v. Claudet, Chancery Proceedings*. July 1841. London: National Archives, C13/435/B19.

"Beard v. Claudet." *The Times*, July 16, 1841: 7.

- Beau, Adolphe. "Photography as a Fine Art." *The Photographic Journal* no. 112 (August 15, 1861): 255.
- Belloc, Auguste. "The Future of Photography." *Photographic News* (September 17, 1858): 13-14.
- . *Photographie rationnelle, traité complet théorique et pratique, applications diverse*. Paris: Leiber, 1862.
- Berry, Miles. 1839. Obtaining Daguerreotype Portraits, A New or Improved Method of Obtaining the Spontaneous Reproductions of all the Images Received in the Focus of the Camera Obscura. British Patent 8194, 1839.
- Brewster, David. "Description of Several New and Simple Stereoscopes." *Transactions of the Royal Scottish Society of Arts* 3 (1849): 247-264.
- . "On the Distinctness of Vision Produced in Certain Cases by the Use of the Polarizing Apparatus in Microscopes." *Philosophical Magazine and Journal of Science* 32, no. 214 (March 1848).
- . "On the Optical Phaenomena, Nature, and Locality of Muscae Volitantes; With Observations on the Structure of the Vitreous Humour, and on the Vision of Objects Placed Within the Eye." *Philosophical Magazine and Journal of Science* 32, no. 212 (January 1848): viiii.
- . "On the Optics of Photography, but Particularly on the Character of the Images Formed Upon Opaque and Transparent Surfaces." *Photographic Journal* (November 21, 1857): 83-6.
- . "Photography." *The Encyclopaedia Britannica, or Dictionary of Arts, Sciences and General Literature* 17 (1859): 544-555.
- . "Photography." *Photographic Journal* 15 (September 1862): 124-8.
- . *The Stereoscope: Its History, Theory, and Construction, with its Application to the Fine and Useful Arts and to Education*. London: John Murray, 1856.
- Broughton, Lord Henry, trans. A. Claudet. *Discours de Lord Broughton sur se droit de visite*. Paris: au Comptor des imprimeurs-reunis, 1843.
- "Catalogue of an Assemblage of Photographic Apparatus, Including the Stock of an Eminent Photographer Lately Deceased." London: Puttick and Simpson, 1869.
- Census 1841, New St. Milton, Gravesend, Kent; Public Record Office, Reference HO 107/460/7.

Chance, James Frederick. *A History of Chance Brothers & Co.* London: Spottiswoode, Ballantyne & Co. Ltd., 1919.

Chance, Robert Lucas. 1838. British Patent 7596, March 19, 1838.

“A Chapter in the Early History of Photography.” *The Photographic News* 12 (August 21, 1868): 404-5.

“Claudet and Adelaide Gallery.” *The Art-Union* (July 1, 1841): 113.

Claudet, Antoine. *Antoine Claudet Letters to D. Hastings 1844-1854.* The Getty Research Institute, Los Angeles, CA.

———. 1841. Certain Improvements in the Process or Means of an Apparatus for Obtaining Images or Representations of Nature or Art. British Patent 9193, June 18, 1841.

———. “Considérations sur le stéréoscope.” *La Lumière* (January 26, 1856): 30-31, 34-35.

———. “Correspondance.” *La Lumière* (March 9, 1851).

———. “Correspondence: Photography and the Phenakistiscope,” *The Photographic Journal* 12, no. 282 (September 29, 1865): 504-505.

———. “Description of the Dynactinometer, an Instrument for Measuring the Intensity of the Photogenic Rays and Comparing the Power of Object-Glasses; with Observations on the Difference Between the Visual and Photogenic Foci, and Their Constant Variation.” *Philosophical Magazine and Journal of Science* 1, no. 5 (May 1851): 478-491.

———. “Description of the Dynactinometer. An Instrument for Measuring the Intensity of the Photogenic Rays and Comparing the Power of Object Glasses, Etc.” *Photographic Art Journal* 2, no. 2 (1851): 81-89.

———. “Description of the Photographometer, An Instrument for Measuring the Intensity of the Chemical Action of the Rays of Light on All the Photographic preparations, and for comparing with each other the sensitiveness of these different preparations. Invented by A. Claudet, London September 1848.” *The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science* 33, no. 223 (November 1848): 329-335.

———. “Enlargement of Photographs;” “Rule for Finding at Once Both the Distances of Negative and Sensitive Surface for Any Degree of Enlargement, and Vice Versa.” *The Photographic Journal* no. 122 (June 16, 1862): 62-68.

- . “Focus Equalizer.” *The British Journal of Photography*. August 31, 1866.
- . “Du foyer chimique et du foyer apparent dans les objectifs.” *La Lumière* 1, no. 18 (June 8, 1851): 71-2.
- . “Le foyer chimique et du foyer apparent dans les objectifs.” *La Lumière* 1, no. 15 (May 18, 1851): 59.
- . 1853. Improvements in Stereoscopes. British Patent 711, March 23, 1853.
- . “Influence de la polarisation sur la variation des foyers.” *La Lumière* 1, no. 22 (July 6, 1851): 87-8.
- . “Is Photography a Fine Art? À Monsieur Silvy.” *The British Journal of Photography* (November 1, 1861).
- . “The Monostereoscope,” 2, no. 14 (July 15, 1858): 179.
- . “A New Fact Relating to Binocular Vision.” *Proceedings of the Royal Society of London* 15 (1866-1867): 424-429.
- . “The New Picture Galleries.” *The British Journal of Photography* (May 1, 1862): 168.
- . “Notice sur le stéréoscope.” *Bulletin de la Société Française de Photographie* 5 (April, 1859): 97-104.
- . “Nouvelles recherches sur la difference entre les foyers visuels et photogeniques. Description du dynactonometre, du focimetre, etc.” Deuxieme Memoire, Read August 7, 1850, at the British Association in Edinburgh. Paris: Lerebours et Secretan, 1851.
- . “On the Best Mode of Focusing the Photographic Apparatus.” *Journal of the Society of Arts* 1 (1852-3): 234-235.
- . “On the Classification of the International Exhibition of 1862 As Regards Photography,” *The Photographic Journal* (August 15, 1861): 241-244.
- . “On Different Properties of Solar Radiations,” *Photographic Art Journal* 1, no. 4 (1851): 246-51.
- . “On the Dynactinometer.” *Daguerreian Journal* 1, no. 3 (Dec. 2, 1850): 76.
- . “On the Introduction of Mercurial Vapour into the Camera, in Daguerreotypy.” *The Journal of the Photographic Society* no. 10 (October 21, 1853): 117-120.

- . “On the Means of Increasing the Angle of Binocular Instruments in Order to Obtain a Stereoscopic Effect in Proportion to Their Magnifying Power.” *Society of Arts*, 1852.
- . “On the Means of Increasing the Angle of Binocular Instruments in Order to Obtain a Stereoscopic Effect in Proportion to Their Magnifying Power.” *British Journal of Photography* no. 122 (July 16, 1860): 207-9; *Proceedings of the British Association* (1860): 261-262; *The Athenaeum* (July 1860).
- . “On Moving Photographic Images.” *Photographic Journal* (September 15, 1860): 144.
- . “On Moving Photographic Figures, Illustrating Some Phenomena of Vision Connected with the Combination of the Stereoscope and the Phenakistoscope by Means of Photography.” *Philosophical Magazine and Journal of Science* 30, no. 203 (1865): 271-6.
- . “On the Moving Photographic Figures, Illustrating Some Phenomena of Vision Connected with the Combination of the Stereoscope and the Phenakistoscope by Means of Photography.” *The Photographic Journal* (September 15, 1865): 143-145.
- . “The Optics of Photography.” *Art Journal* (October 1866): 321.
- . “Optics of Photography. On a New Process for Equalizing the Definition of All The Planes of a Solid Figure Represented in a Photographic Picture.” *Philosophical Magazine and Journal of Science* 32, no. 215 (1866): 212-20.
- . “Optics of Photography.--On a Self-Acting Focus-Equalizer, or the Means of Producing the Differential Movement of the Two Lenses of a Photographic Optical Combination. Which is Capable, During the Exposure, of Bringing Consecutively all the Planes of a Solid Figure into Focus, Without Altering the Size of the Various Images Superposed.” *Proceedings of the Royal Society of London* 15 (1866-67): 455-459.
- . “On the Phenomenon of Relief of the Image Formed on the Ground Glass of the Camera Obscura.” *Proceedings of the Royal Society of London* 8 (1856-1857): 569-572.
- . “On the Phenomenon of Relief of the Image Formed on the Ground Glass of the Camera Obscura.” *Philosophical Magazine and Journal of Science* 15, no. 101 (1858): 397-400.
- . “Photographic Coloration.” *The Athenaeum* no. 1018 (1847): 472.
- . “Photographic Experiments.” *The Athenaeum* no. 1023 (1847): 602.

- . “Photographic Phaenomena Referring to the Various Actions of the Red and Yellow Rays on Daguerreotype Plates When They Have Been Affected by Daylight.” *Philosophical Magazine and Journal of Science* 32, no. 214 (March 1848): 199-201.
- . “Photography as Fine Art, À Monsieur Silvy.” *The Photographic Journal* (October 15, 1861): 280-282.
- . “On Photography in Its Relation to the Fine Arts.” *British Journal of Photography* 7, no. 118 (May 15, 1860): 146-147.
- . “Photography in Its Relation to the Fine Arts.” *The Photographic Journal* (June 15, 1860): 250-67.
- . “Photo-Sculpture.” *The British Journal of Photography* 11 (September 23, 1864): 366.
- . 1864. Photo-sculpture. British Patent 3107, December 14, 1864.
- . “Physiology of Binocular Vision, Stereoscopic and Pseudoscopic Illusions.” *The Art-Journal* (February 1867): 49-51, (March 1867): 73-5.
- . “On the Principles of the Solar Camera.” *Photographic News* 4, no. 96 (July 6, 1860): 110-111.
- . 1843. Printing from Daguerreotype Plates. British Patent 9957, May 21, 1843.
- . “The Progress and Present State of the Daguerreotype Art.” *Transactions of the Society of Arts, Manufactures, and Commerce* 55 (1843/1844): 89-110.
- . “On the Progress of Photography.” *The Athenaeum* no. 901 (February 1, 1845): 124.
- . “Progress of Photography.” *Art-Union Monthly Journal* 9 (March 1847): 110.
- . “Progress of Photography.” *Royal Society of Arts Transactions* 56 (1846-8).
- . *Recherches sur la théorie des principaux phénomènes de photographie*. Paris: G. Baillière, 1850.
- . “Researches on the Theory of the Principal Phenomena of Photography in the Daguerreotype Process.” *Art Journal* (1849): 358-60.

- . “Researches on the Theory of the Principal Phaenomena of Photography in the Daguerreotype Process.” *Philosophical Magazine and Journal of Science* 35, no. 237 (November 1849): 374-385.
- . “Researches on the Theory of the Principal Phenomena of Photography in the Daguerreotype Process.” *Photographic Art Journal* 2, no. 1 (1851): 37-50.
- . “Solar Radiation. On Different Properties of Solar Radiation.” *Daguerreian Journal* 1, no. 6 (1851): 161-68.
- . “On Some Phenomena Produced by the Refractive Power of the Eye.” *Philosophical Magazine and Journal of Science* 26, no. 175 (October 1863): 324-326.
- . “On Some Principles and Practical Facts in the Art of Photography.” Read to the Society of Arts on January 28, 1846 and announced in *The Athenaeum* no. 954 (February 7, 1846): 152.
- . “Le stereomonoscope, nouvel instrument dont le principe est fonde sur la decouverte de la propriété ingerente au verre depoli de presenter en relief l’image de la chambre obscure (sujet d’un memoire communique le 15 mars 1858 a la societe royale de londres).” Paris: Impr. de Bonaventure et Ducessois, 1858.
- . “The Stereomonoscope,” 2, no. 9 (May 1, 1858): 114-115.
- . “The Stereomonoscope.” *Photographic News* 1, no. 1-3 (September 10-September 24, 1858): 3-4, 14-15, 26-27.
- . “On the Stereomonoscope, a New Instrument by which an Apparently Single Picture Produces the Stereoscopic Illusion.” *Journal of the Photographic Society* (November 22, 1858): 78-79.
- . “On the Stereomonoscope, a New Instrument by which an *Apparently* Single Picture Produces the Stereoscopic Illusion.” *The Philosophical Magazine and Journal of Science* 16, no. 109 (December 1858): 462-3.
- . “The Stereoscope.” *The Photographic News* 11, no. 40 (June 10, 1859).
- . “The Stereoscope and its Photographic Applications,” *Journal of the Society of Arts* 1 (January 21, 1853): 97-100.
- . *Du steréoscope et de ses applications à la photographie par A. Claudet; Derniers perfectionnements apportés au daguerreotype par F. Colas* (Paris: Lerebours & Secretan, 1853).

- . “On Stereoscopic Phenakistoscropy.” *The Photographic Journal* no. 163 (November 16, 1865): 189-190.
- . “Sur les dangers resultant de l’emploi de mercure” and “Du foyer chimique et du foyer apparent dans les objectifs.” *La Lumière* 1, no. 15 (May 18, 1851): 59.
- . “Sur un nouveau procédé pour donner une egale netteté a tous les plans d’un corps solide représenté dans une épreuve photographique.” *Bulletin de la Société Française de Photographie* 12 (September 1866): 225-231.
- . “To the Editor of the Photographic Journal. Château de La Roche, near Amboise. December 8, 1857.” *Journal of the Photographic Society* (December 21, 1857): 124-126.
- . “On the Variation of the Foci of Lenses.” *British Journal of Photography* no. 2 (January 15, 1858): 24-5.
- . “On Various Phenomena of Refraction Through Semi-lenses or Prisms, Producing Anomalies in the Illusion of Stereoscopic Images.” *Proceedings of the Royal Society of London* 8 (1856-1857): 104-110.
- . “On Various Phaenomena of Refraction Through Semi-Lenses or Prisms, Producing Anomalies in the Illusion of Stereoscopic Images.” *Philosophical Magazine and Journal of Science* 13, no. 83 (1857): 71-75.
- Claudet, Francis. *Gold, Its Properties, Modes of Extraction, Value, &c.* (New Westminster: Printed at the Office of the *Mainland Guardian*, 1871)
- . *The Handbook of British Columbia, an Emigrant’s Guide to the Gold Fields; With Map and Two Illustrations*, from Photographs by M. Claudet. (London: W. Oliver, 1862).
- “M. Claudet’s Daguerreotype Portraits.” *The Athenaeum* no. 975 (1846): 689.
- “Mr. Claudet on the Stereoscopic Angle.” *Photographic News* 4, no. 97 (July 13, 1860): 125.
- “Claudet’s Portrait of the Duke of Wellington.” *The English Gentleman*, no. 5 (1845): 76.
- “Mr. Claudet’s Stereoscopic Daguerreotype Portraits.” *The Times*, Feb. 13, 1852.
- “Colosseum Print. This Picture of the Metropolis of the British Empire is Presented to the Subscribers of the Illustrated London News by the Proprietors.” *Supplement to the Illustrated London News* (January 7, 1843): 545. London: W. Little, 1843.

Crawford, W. H. Stanley. "On the Daguerreotype." *Journal of the Photographic Society* 12 (December 21, 1853): 167-168.

"Crayon Daguerreotypes." *The Practical Mechanics Journal* (February 1853): 45.

Daguerre, L.-J.-M. *Historique et description des procédés du daguerréotype et du diorama, par Daguerre*. Paris: Alphonse Giroux et Cie., 1839.

"The Daguerreotype." *Chambers Edinburgh Journal* 8 (August 24, 1839): 243, 327.

"Daguerréotype and Electrotype." *The Literary Gazette, and Journal of the Belles Lettres* no. 1301 (December 25, 1841): 838.

"Daguerreotype Portraits." *The Art-Union* 4 (April 1, 1842): 84.

"Daguerréotype Studies, Messrs. Kilburn and Highschool." *The Athenaeum* no. 1016 (April 17, 1847): 416-417.

Davy, Humphry. "An Account of a Method of Copying Paintings upon Glass, and of Making Profiles, by the Agency of Light upon Nitrate of Silver. Invented by T. Wedgwood, Esq." *Journal of the Royal Institution*, 1802.

———. *Consolations in Travel: or, The last days of a philosopher*. London: J. Murray, 1830.

Day, Charles William. *Art of Miniature Painting, Comprising Instructions Necessary for the Acquirement of that Art*. 3<sup>rd</sup> ed. London: Winsor & Newton, 1853.

De la Rivière, F.-A. "Héliographie sur plaques métalliques: une visite à M. Claudet." *La Lumière* 1, no. 29 (August 24, 1851): 113-114.

Della Porta, Giambattista. "Of Strange Glasses," vol. 17 of *Natural Magick*, 1584. London: Printed for Thomas Young, and Samuel Speed, 1658.

"Description." *Photographic Art Journal* 2, no. 2 (August 1851): 81-89.

Donné, A. "Académie des sciences. Séance du 19 aout. Exposition du daguerrotype [sic]." *Journal des débats politique et littéraires* (August 20, 1839).

Draper, John William. "On the Process of Daguerreotype, and its Application to Taking Portraits from the Life." *The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science* 17 (September 1840).

"Dynactinomètre de M. Claudet." *La Lumière* 1, no. 7 (March 23, 1851): 26.

"The Earl of Rosse's Soirée." *The Times*, May 24, 1852: 5.

Maria Edgeworth to Fanny Wilson, May 23, 1841. Housed in the Special Collections of the Bodleian Library, Oxford University, as part of "Papers of Maria Edgeworth (1768-1849) and the Edgeworth Family."

"Editor's Table: Photosculpture." *Philadelphia Photographer* (August 1864): 127.

Ellis, Joseph. "Photography, a Popular Treatise, Designed to Convey Correct Information Concerning the Discoveries of Niepce, Daguerre, Talbot, and Others, and as Preliminary to Acquiring a Practical Acquaintance with the Art." (Brighton: Robert Flothorp, 1847).

———. "Progress of Photography." Lecture to the Literary and Scientific Institution of Brighton (November 13, 1855).

"Engraving of Exhibition Opening, Society of Arts." *Illustrated London News* (December 1852).

"Enlarged Photograph by Woodward Solar Camera." *Illustrated London News* (August 27, 1859).

*Excursions daguerriennes, vues et monuments les plus remarquables du globe*. Paris: Rittner et Goupil, 1841-2.

*Exhibition of the Works of Industry of All Nations Reports by the Jurors on The Subjects in the Thirty Classes into which the Exhibition was Divided*. London: William Clowes & Sons, Stamford Street and Charing Cross, 1852.

Faraday, Michael. "Experimental Researches in Electricity." *Philosophical Transactions of the Royal Society* (January 1, 1832), 125-162.

———. "On the Manufacture of Glass for Optical Purposes." *Philosophical Transactions of the Royal Society of London* 120 (1830): 1-57.

"Fine Art Gossip." *The Athenaeum* no. 917 (1845): 518.

"Fine Arts, 'Etching Daguerreotype Plates by a Voltaic Process.'" *Literary Gazette and Journal of the Belles Lettres* 1283 (August 1841): 548-9.

"Fine Arts. New Publications. *History and Practice of Photogenic Drawing, on the true Principles of the Daguerreotype; with the Method of Dioramic Painting*. translated from the original by J. S. Memes, LL.D., Hon. Member of the Royal Scottish Academy of Fine Arts, &c. London, 1839. Smith, Elder, and Co.; Edinburgh, Adam Black and Co." *Literary Gazette and Journal of the Belles Lettres* 1183 (September 1839): 605.

- “Fine Arts—Photogenic Drawing.” *The Literary Gazette and Journal of the Belles Lettres* no. 1157 (March, 1839): 187.
- “Fine Arts: Talbotypes.” *Literary Gazette and Journal of the Belles Lettres* no. 1477 (May 10, 1845): 300.
- “Galerie photographique de M. Claudet.” *La Lumière* 4, no. 29 (July 22, 1854): 114-115.
- Gaudin, M.-A. “Résumé général du daguerreotype: de la chambre obscure, des objectifs, de la mise au point, et du temps de l’exposition.” *La Lumière* 2, no. 19 (May 1, 1852): 74.
- Grove, W. R. “Etching Daguerreotype Plates by a Voltaic Process,” *The Literary Gazette and Journal of the Belles Lettres* (August 1841): 548-549.
- . “On a Voltaic Process for Etching Daguerreotype Plates.” (1841).
- Harrison, Henry. *Instructions for the Mixture of Water-colours: Adapted to the Various Styles of Miniature Painting: and Also to Landscape, Flower, and Fruit Painting*. London: Souter and Law, 1843.
- Herschel, John. “Treatise on Sound.” *Encyclopaedia Metropolitana or Universal Dictionary of Knowledge* 4: 747-824.
- Hilliard, Nicholas. *A Treatise Concerning the Arte of Limning*. 1589-99. Ashington: Mid Northumberland Arts Group in association with Carcanet New Press, 1981 and 1992.
- Hunt, Robert. *Hunt’s Handbook to the Official Catalogues*. London: Spicer Brothers and W. Clowes & Sons, 1851.
- . *Manual of Photography*. 4<sup>th</sup> ed. London: J. J. Griffin, 1854.
- . “The Photographometer of Mr. A. Claudet.” *Extracts from the Minutes of the Society of Arts* (January 31, 1849).
- . *A Popular Treatise on the Art of Photography: Including Daguerreotype and All the New Methods of Producing Pictures by the Chemical Agency of Light*. Glasgow: R. Griffin, 1841.
- . *Researches on Light: An Examination of All the Phenomena Connected with the Chemical and Molecular Changes Produced by the Influence of the Solar Rays, Embracing All the Known Photographic Processes and New Discoveries in the Art*. London: Printed for Longman, Brown, Green, and Longmans, 1844.
- The Illustrated Exhibitor, a Tribute to the World’s Industrial Jubilee, Comprising*

*Sketches, by Pen and Pencil of the Principal Objects in the Great Exhibition of the Works of Industry of All Nations 1851.* London: John Cassell, 1851.

*The Illustrated London News* 20, no. 542 (January 24, 1852): 77-78.

“Introductory Address.” *The Journal of the Photographic Society* no. 1 (March 3, 1853): 1.

Jerdan, William. *National Portrait Gallery of Illustrious and Eminent Persons of the Nineteenth Century.* London: Fisher, Son & Jackson, 1830.

Johnson & Wolcott. 1843. *Photography and its Application to the Arts.* British Patent 9672, March 18, 1843.

Kilburn, W. E. “Extracts from Minutes of the Society of Arts.” *Journal of the Society of Arts* (February 24, 1847).

“Mr. Kilburn on Photography.” *Extracts from the Minutes of the Society of Arts* (February 2, 1847).

Lacan, Ernest. “Exposition photographique.” *La Revue Photographique* 8 (1863): 144.

———. *Esquisses photographiques* (Paris: Grassart, 1856).

———. “La Photographie en Angleterre.” *La Lumière* 5, no. 25 (June 23, 1855): 97-8.

Lacroix, S.-F. *An Elementary Treatise on the Differential and Integral Calculus.* Cambridge and London: Deighton and Sons, Law & Whittaker, 1816.

“The Late M. Claudet.” *The British Journal of Photography* (1868): 2-3.

“Lecture by Mr. J.F. Goddard at the Royal Institution, ‘On the Application of the Daguerreotype to the Taking of Likenesses from the Life.’” *The Polytechnic Journal* 4, nos. 1-6 (March 26, 1841): 248.

Le Gray. “De l’état actuel de la photographie.” *La Lumière* 1 no. 8 (March 30, 1851): 30-31.

Lerebours, Noël-Marie-Paymal. *Traité de photographie: derniers perfectionnements apportés au daguerreotype.* Paris: Lerebours, 1843.

“Letter.” *Literary Gazette* no. 1301 (December 25, 1841): 838.

*Magazine of Popular Science & Journal of Useful Inventions* 1 (1836).

- Mansion, L. *Letters Upon the Art of Miniature Painting*. London: R. Ackermann, Paris: L. Janet, 1822.
- Marriages solemnized in the Parish of Islington in the County of Middlesex in the Year 1821* No. 188, London, 1822.
- “Memoir of Lord George Bentinck.” *The Illustrated London News* 13, no. 337 (1848): 200-201.
- “Memoranda: New Mode of Preparation of Daguerreotype Plates.” *Magazine of Science and School of Arts* 3, no. 121 (July 24, 1841).
- “New Exhibition at the Adelaide Gallery.” *The Art-Union* (August 1842): 186.
- Norgate, Edward. *Miniatura: or The Art of Limning*. [ca. 1600]. London: Oxford University Press, 1919.
- Official Descriptive and Illustrated Catalogue*. London: Spicer Brothers, Wholesale Stationers; W. Clowes and Sons, 1851.
- “On a Portable Dark Tent.” *The Journal of the Photographic Society* no. 10 (October 21, 1853): 119.
- Parsey, Arthur. *The Art of Miniature Painting on Ivory*. London: Longman, Rees, Orme, Brown, and Green, 1831.
- Payne, John. *The Art of Painting in Miniature, on Ivory: In the Manner at Present Practised by the Most Eminent Artists in that Profession*. London: Robert Laurie and James Whittle, 1812.
- “Perspective in the Stereoscope.—Claudet’s Views of the Exhibition, and Statuette Portrait Groups.” *The Philosophical Magazine* (August 1841): 77.
- “Photographic Portraits.” *The Literary Gazette and Journal of the Belles Lettres* no. 1261 (March 20, 1841).
- “Photographic Portraits: Beard v. Claudet.” *The Art-Union* no. 31 (August 1, 1841): 139.
- “Photographic Society of Scotland.” *British Journal of Photography* 8, no. 140 (April 15, 1861): 150.
- “The Photographometer.” *The Art-Journal* (March 1, 1849): 96.
- “Photography and the Commissioners for the Exhibition of 1862.” *London Review*, May 25, 1861, reprinted in *The Photographic Journal* no. 110 (June 15, 1861): 205.

- “Photography and the Microscope.” *Photographic News* 1, no. 1 (September 10, 1858): 2.
- “Photo-Sculpture.” *The Art-Journal* (May 1864): 141.
- Playfair, Dr. Lyon. “Letter to the Secretary of the Photographic Society.” *The Photographic Journal* no. 110 (June 15, 1861): 197.
- Pollock, Frederick. “Letter to F. R. Sandford, secretary, Her Majesty’s Commissioners.” *The Photographic Journal* (June 15, 1861): 196.
- “Procès-verbal de la séance du 26 Décembre, 1862.” *Bulletin de la Société Française de Photographie* 8 (December 1862): 313-314.
- “Professor Faraday’s Portrait.” *The Athenaeum* no. 113 (February 24, 1849): 185.
- “Report on the 17th Meeting of the British Association for the Advancement of Science.” *The Athenaeum* no. 1027 (1847): 713.
- Reports by the Juries on the Subjects in the Thirty Classes into Which the Exhibition was Divided.* London: Spicer Brothers; W. Clowes and Sons, 1851.
- Robison, Sir John. “Part III. Perfection of the Art, as stated in ‘Notes on Daguerre’s Photograph.’” *The American Journal of Science and Arts* 37, no. 1 (July 1839): 183-5.
- “Royal Institution. Friday, 26<sup>th</sup> March—Mr. Goddard, “On the Application of the Daguerreotype to Taking Likenesses from the Life.” *The Literary Gazette and Journal of the Belles Lettres* no. 1263 (April 3, 1841).
- “Royal Polytechnic.” *The Art-Union* (August 1842): 186.
- The School of Miniature, Erected for the Instruction of the Ignorant, the Improvement of Proficients, and the General Information of Such as are Pleased With Pictures in Small . . .* London: 1733.
- “Scientific and Literary: Society of Arts Dec. 13.” *The Athenaeum* no. 843 (1843): 1139.
- “Scientific and Literary: Society of Arts Jan. 22.” *The Athenaeum* no. 901 (1845): 124.
- “Scientific Discoveries.” *The Salem Gazette* 65, no. 35 (May 1, 1846): 1.
- “The Secret of Mr. Daguerre.” *The Art-Union* (September 1839): 132, 139.
- “Serious Fire at Mr. Claudet’s Studio in Regent Street,” *The Photographic News* 11

(January 31, 1868): 51-2.

Silvy, Camille. "Letter to the Editor of the Photographic Journal," *The Photographic Journal* no. 111 (July 15, 1861): 226.

———. "À Monsieur Claudet." *The Photographic Journal* (September 10, 1861): 267-271.

Smith, Albert. "Sketches of London Life and Character." (1849) In *A Dictionary of Victorian London*, by Lee Jackson. London; New York, NY: Anthem Press, 2006.

Snelling, Henry H. *The History and Practice of the Art of Photography*. Hastings-on-Hudson, N.Y.: Morgan & Morgan, Inc., Publishers, 1849.

"Société Héliographique." *La Lumière* 1 no. 11 (March 23, 1851): 42.

"Society of Arts." *The Athenaeum* no. 1009 (February 17, 1847): 236.

"Society of Arts." *The Athenaeum* no. 1176 (May 1850): 507.

"Society of Arts." *Literary Gazette and Journal of the Belles Lettres* no. 1673 (February 1849): 97.

"The Solicitor-General.—Sir Fitzroy Kelly.—From a Daguerreotype by Kilburn." and "The Attorney General.—Sir Frederick Thesiger.—From a Daguerreotype by Claudet." *The Illustrated London News* 20, no. 550 (March 20, 1852): 225.

*The Spectator* (March 20, 1841): 283.

"The Stereoscope." *The Athenaeum* no. 1260 (December 20, 1851): 1350.

"Stereoscope." *The Critic* 21, no. 528 (August 1860): 208.

"Stereoscopic Daguerreotype Portraits." *The Athenaeum* no. 1852 (January 3, 1852): 2.

"Stereoscopic Daguerreotype Portraits'; New address 107 Regent Street, Quadrant, near Vigo street." *The Athenaeum* no. 1852 (January 3, 1852), 2.

"Stereoscopic Daguerreotypes." *The Illustrated London News* 20, no. 552 (April 3, 1852): 277

"Stereoscopic Magazine." *The Literature Gazette and Journal of Science and Art* no. 2153 (April 24, 1858): 408.

"Stereoscopometer / Manifold Binocular Camera." *Humphrey's Journal* 4, no. 13 (Oct. 15, 1852): 204.

*Street's Indian and Colonial Mercantile Directory for 1870*. London: G. Street, 1870.

“Subscription to Put Up a Monument to the Inventors of Heliography Niépce and Daguerre.” *La Lumière* 1, no. 27 (August 10, 1851): 105.

“Sun-paintings.” *The Art-Union* (March 1839): 24.

Sutton, Thomas. “Reminiscences of an Old Photographer.” *The British Journal of Photography* (August 30, 1867): 413.

Talbot, William Henry Fox. *Some Account of The Art of Photogenic Drawing* before the Royal Society on January 31, 1839

———. *The Pencil of Nature*. London: Longman, Brown, Green, & Longmans, 1844.

Timbs, John. *The Year-Book of Facts in Science and Art*. London: s. n., 1849.

“Topics of the Month: Daguerreotype Portraits.” *The Art-Union* (1846): 216.

“Topics of the Month: Photographic Miniatures.” *The Art-Union* 1 (January 1846): 19-20.

“Topics of the Month: Photography.” *The Art-Union* (1846): 91.

“Topics of the Month: Photography.” *The Art-Union* (1847): 109-110.

Towler, John. *The Silver Sunbeam: A Practical and Theoretical Text-Book on Sun Drawing and Photographic Printing*. New York: J.H. Ladd, 1864.

Wedgwood, Thomas and Humphrey Davy. “Account of the Art of Photogenic Drawing.” *Transactions* 37 (Jan. 31, 1839): 196-208.

Werge, John. *Photography, Its Origin, Progress, and Practice*. London: Simpkin, Marshall & Co., 1880.

———. *The Evolution of Photography, with a Chronological Record of Discoveries, Inventions, Etc., Contributions to Photographic Literature, and Personal Reminiscences Extending Over Forty Years*. London: Piper & Carter and John Werge, 1890.

Wheatstone, Charles. “Contributions to the Physiology of Vision. Part the First. On Some Remarkable and Hitherto Unobserved, Phenomena of Binocular Vision.” *Philosophical Transactions of the Royal Society* 128 (June 1838): 371-94.

———. “On Some Remarkable, and Hitherto Unobserved, Phenomena of Binocular

Vision." *Philosophical Transactions of the Royal Society of London* 142 (1852): 8.

Wynter, A. "Cartes de Visite." *Once a Week* (January 25, 1862): 137.

## Secondary Literature

A. Claudet, *F. R. S. A Memoir*. London: Basil, Mantagu, Pickering, 1868.

Adamson, Keith P. "Early British Patents in Photography." *History of Photography* 15, no. 4 (Winter 1991): 313-323.

Altick, Richard D. *The Shows of London*. Cambridge, MA and London: Belknap/Harvard, 1978.

Arnold, H. J. P. *William Henry Fox Talbot: Pioneer of Photography and Man of Science*. London: Hutchinson Benham, Ltd., 1977.

Bajac, Quentin and Dominique de Font-Réaulx. *Le daguerréotype français: Un objet photographique*. Paris: Réunion des musées nationaux, 2003.

Batchen, Geoffrey. *Burning with Desire: The Conception of Photography*. Cambridge, MA: MIT Press, 1997.

———. "Dreams of Ordinary Life: Cartes-de-visite and the Bourgeois Imagination." In *Photography: Theoretical Snapshots*, in Lond, J.J., Andrea Noble and Edward Welch, eds. London: Routledge, 2009: 80-97.

———. *Each Wild Idea: Writing, Photography, History*. Cambridge, MA: MIT Press, 2001.

———. "Light and Dark: Photography and Art History." *Art Bulletin* 86, no. 4 (December 2004): 764-76.

Bott, Rita Ellen. "Charles R. Meade and His Daguerre Pictures." *History of Photography* 8, no. 1 (1984): 33-40.

Buerger, Janet E. *French Daguerreotypes*. Chicago: University of Chicago Press, 1989.

*Chefs-d'oeuvre des grands ébénistes 1760-1850 de G. Jacob à Giroux*. Paris: Musée des Arts Décoratifs, 1951.

Christie's, "Succession de Feus Monseigneur le Comte de Paris et Madame la Comtesse de Paris," Sale no. 5547, Lot 228." (October 14, 2008).

- Claudet, Laura. "Claudet, Antoine Francois Jean (1797-1867)." in John Hannavy, ed., *Encyclopedia of Nineteenth-Century Photography* (London: Routledge, 2008): 302-304.
- Coke, Joan. "Antoine François Jean Claudet: Artist, Photographer, and Scientist." Master's thesis, University of New Mexico, 1985.
- Coombs, Katherine. *The Portrait Miniature in England*. London: V&A Publications, 1998.
- Darrah, William C. *The World of Stereographs*. Gettysburg, PA: William C. Darrah, 1977.
- Dimond, Francis and Roger Taylor. *Crown & Camera: the Royal Family and Photography 1842-1910*. New York: Viking, 1987.
- Eder, Josef Maria. *History of Photography*. New York: Columbia University Press, 1945. First published as *Geschichte der photographie und der photomechanischen Verfahren in Osterreich*. Vienna: L. Weiss, 1898.
- Edwards, Steve. *The Making of English Photography: Allegories*. University Park, PA: The Pennsylvania State University Press, 2006.
- . "Photography, Allegory, and Labor." *Art Journal* 55, no. 2 (Summer 1996): 38-44.
- Fisher, Robert B. "The Beard Photographic Franchise in England: An Overview." *The Daguerreian Annual* (1992): 73-95.
- Flukinger, Roy. "Beard and Claudet: A Further Inquiry." In *The Daguerreotype: A Sesquicentennial Celebration*. In Wood, John, ed. *The Daguerreotype*. Iowa City: University of Iowa Press; London: Duckworth, 1989.
- . *The Formative Decades: Photography in Great Britain, 1839-1920*. Austin: University of Texas Press, 1985.
- Foskett, Daphne. *British Portrait Miniatures: A History*. London: The Hamlyn Publishing Group, Ltd., 1963.
- Foster, J.J. *Miniature Painters British and Foreign: With Some Account of those who Practiced in America in the Eighteenth Century*. London: Dickinsons; New York: E. Dutton, 1903.
- Frecker, Paul. "Camille Silvy and the English Press." *History of Photography* 33, no. 4 (November 2009): 324-345.

- Gall, Jean-Luc. "Photo/sculpture." *Études photographiques* 3 (Novembre 1997): <http://www.etudesphotographiques.revues.org/index95.html> (accessed March 12, 2010).
- Gee, Brian. "The Spectacle of Science and Engineering in the Metropolis Part I: E.M. Clarke and the Early West End Exhibitions." *Bulletin of the Scientific Instrument Society* no. 58 (1998): 11-18.
- . "The Spectacle of Science and Engineering in the Metropolis Part II: E.M. Clarke and the Royal Panopticon of Science and Art." *Bulletin of the Scientific Instrument Society* no. 59 (1998): 6-13.
- Gernsheim, Helmut and Allison. *The History of Photography from the Earliest Use of the Camera Obscura in the Eleventh Century up to 1914*. 1st ed. London: Oxford University Press, 1955. Reprint, New York: McGraw Hill, 1969.
- . *L. J. M. Daguerre: The History of the Diorama and the Daguerreotype*. 2<sup>nd</sup> ed. New York: Dover Publications, 1968.
- . *The Origins of Photography*. New York: Thames and Hudson, 1982.
- Gill, Arthur T. "Antoine François Jean Claudet." *The Photographic Journal*, no. 107 (December 1967): 405-9.
- . "Call Back Yesterday." *The Photographic Journal* 114, no. 1 and no. 3 (1974): 36-37, 129-30.
- . "Early Stereoscopes." *The Photographic Journal* 109, no. 10 (October 1969): 546-59; 109, no. 11 (November 1969): 606-14 and no. 12 (December 1969): 641-651.
- . "The First Movie?" *The Photographic Journal* 109, no. 1 (1969): 26-29.
- . "Portraits of Fox Talbot." *The Photographic Journal* 115, no. 7 (1975): 303-05.
- . "Wolcott's Camera in England and the Bromine-Iodine Process." *History of Photography* 1, no. 3 (July, 1977): 215-218.
- Green-Lewis, Jennifer. *Framing the Victorians: Photography and the Culture of Realism*. Ithaca: Cornell University Press, 1996.
- Hannavy, John. *Case Histories: The Packaging and Presentation of the Photographic Portrait in Victorian Britain 1840-1875*. Woodbridge, Suffolk; Easthampton, MA: Antique Collectors' Club, 2005.

- . ed. *Encyclopedia of Nineteenth-Century Photography*. London: Routledge, 2008.
- Harlow, Neal. "Introduction to 'Gold': Francis Claudet." Vancouver B.C.: British Columbia Library Quarterly, 1960.
- Haworth-Booth, Mark. *Camille Silvy: Photographer of Modern Life* (Los Angeles: J. Paul Getty Museum, 2010).
- . *Camille Silvy: River scene, France*. Malibu: J. Paul Getty Museum, 1992.
- . *Golden Age of British Photography 1839-1900: Photographs from the Victoria and Albert Museum, London*. Millerton, NY: Aperture, 1984.
- Heathcote, Bernard V. and Pauline F. *A Faithful Likeness: The First Photographic Portrait Studios in the British Isles 1841-1855*. Nottingham, 2002.
- . "Richard Beard: An Ingenious and Enterprising Patentee." *History of Photography* 3, no. 4 (October 1979): 313-28.
- Heyert, Elizabeth. *The Glasshouse Years: Victorian Portrait Photography, 1839-1870*. Montclair, N.J.: Allanheld & Schram; London: G. Prior, 1979.
- Howe, Kathleen. *First Seen: Portraits of the World's Peoples 1840-1880*. Santa Barbara Museum of Art, 2004.
- Johnson, William S. *Nineteenth-Century Photography: An Annotated Bibliography*. Boston: G.K. Hall, 1990.
- Jones, John. *Wonders of the Stereoscope*. New York: Knopf, distributed by Random House, 1976.
- Kamlish, Marian. "Claudet, Fenton and the Photographic Society." *History of Photography* 26, no. (2002): 296-306.
- . "A Response to Roger Taylor." *The History of Photography* 27 (Winter 2003): 389-90.
- Keller, Corey, ed. *Brought to Light: Photography and the Invisible 1840-1900*. San Francisco: San Francisco Museum of Modern Art, in association with Yale University Press, 2008. Published in conjunction with the exhibition "Brought to Light: Photography and the Invisible 1840-1900" shown at San Francisco Museum of Modern Art and the Albertina, Vienna.
- Kingslake, Rudolf. *History of the Photographic Lens*. Boston: Academic Press 1989.

- Kraus, Jr., Hans. *Sun Pictures. Catalogue Three. The Harold White Collection of Works by William Henry Fox Talbot*. New York: Hans P. Kraus, Jr., 1987.
- . *Sun Pictures. Catalogue Four*. New York: Hans P. Kraus, Jr., 1987.
- Linkman, Audrey. *The Victorians Photographic Portraits*. London and New York: Tauris Parke, 1993.
- Lloyd, Valerie. *Photography: The First Eighty Years*. London: P. & D. Colnaghi, 1976.
- Lowrey, Bates and Isabel. *The Silver Canvas: Masterpieces from the J. Paul Getty Museum*. Los Angeles: The J. Paul Getty Museum, 1998.
- Mann, Charles. "Photo-Meubles." *History of Photography* 4, no. 2 (1980): 95-6.
- Marien, Mary Warner. *Photography: A Cultural History* (London: Laurence King, 2002).
- Mattison, David. *The Claudets of British Columbia*. Victoria, B.C.: British Columbia Archives and Records Service, 1990.
- . "The Claudets of British Columbia: Melting, Assaying and Photographing All Day." *History of Photography* 14, no. 2 (April-June 1990): 135-153.
- McCauley, Anne. *Industrial Madness: Commercial Photography in Paris 1848-1871*. New Haven: Yale University Press, 1994.
- . *Likenesses: Portrait Photography in Europe, 1850-1870*. Albuquerque: University of New Mexico Art Museum.
- . "'Merely Mechanical': On The Origins Of Photographic Copyright in France and Great Britain." *Art History* 31 no. 1 (February 2008): 57-78.
- Monteiro, Stephen. "Veiling the Mechanical Eye: Antoine Claudet and the Spectacle of Photography in Victorian London." *Interdisciplinary Studies in the Long Nineteenth Century* 7 (2008), <http://www.19.bbk.ac.uk> (accessed January 20, 2010).
- Morrison-Low, A. D. "Instrument Making and Early Photography." *The PhotoHistorian* no. 149 (January 2007): 29-37.
- Morrison-Low, A. D. and J. R. R. Christie. *'Martyr of Science': Sir David Brewster 1781-1868*. Edinburgh: The Royal Scottish Museum, 1984.
- Musée des arts décoratifs. *Chefs-d'oeuvre des grands ébénistes 1790-1850 de G. Jacob à Giroux*. Paris: Le Musée, 1951.

- Newhall, Beaumont. *The Daguerreotype in America*. New York: Dover Publications, 1976.
- . *The History of Photography*. New York: The Museum of Modern Art, 1982.
- . *Photography, A Short Critical History*. New York: Museum of Modern Art, 1938.
- . "Photosculpture." *Image 7*, no. 5 (May 1958): 100-105.
- Nickel, Douglas. *Francis Frith in Egypt and Palestine, A Victorian Photographer Abroad*. Princeton and Oxford: Princeton University Press, 2004.
- . "History of Photography: The State of Research." *The Art Bulletin* 83, no. 3 (September 2001): 548-558.
- Paris et le daguerréotype*. Paris: Paris-Musées, 1989. Published in conjunction with the exhibition shown at the Musée Carnavalet, Paris.
- Pellerin, Denis. *Photographie stéréoscopique sous le second empire*. Paris: Bibliothèque Nationale de France, 1995.
- Pilbeam, Pamela. *Madame Tussaud and the History of Waxworks*. London; New York: Hambledon and London, 2003.
- Potonniée, Georges. *Histoire de la découverte de la photograph*. Paris: Publications photographiques, P. Montel, 1925.
- Pritchard, Michael. *A Directory of London Photographers, 1841-1908*. Bushey: ALLM, 1986.
- . "The Rise of British Photographic Manufacturing 1839-c.1862: Sources and Trends." *Technology and Art: The Birth and Early Years of Photography: The Proceedings of the Royal Photographic Society Historical Group Conference. September 1-3, 1989*. Bath: RPS Historical Group, 1990.
- Reynaud, Françoise, ed. *Paris in 3D: from stereoscopy to virtual reality, 1850-2000*. London: Booth-Clibborn Editions; Paris: Paris-Musées, 2000.
- Reynolds, Graham. *British Portrait Miniatures*. Cambridge: Cambridge University Press, 1998.
- . *English Portrait Miniatures*. Cambridge: Cambridge University Press, 1988.

- Richards, Thomas. *The Commodity Culture of Victorian England: Advertising and Spectacle, 1851-1914*. Stanford, California, Stanford University Press, 1990.
- Richter, Stefan. *The Art of the Daguerreotype*. London: Viking, 1989.
- Roberts, Lissa, Simon Schaffer and Peter Dear, eds. *The Mindful Hand: Inquiry and Invention from the Late Renaissance to Early Industrialization*. Amsterdam: Koninklijke Nederlandse Akademie van Wetenschappen; Bristol: University Presses Marketing, distributor, 2007.
- Roberts, Pam. *Photohistorica: Landmarks in Photography Rare Images from the Collection of the Royal Photographic Society*. New York: Artisan, 2000.
- Ryan, James. "Images and Impressions: Printing, Reproduction and Photography." in John M. Mackenzie ed. *The Victorian Vision: Inventing New Britain*. London: V&A, 2001. 215-222.
- Sandford, F.R. "Letter to Frederick Pollock, Council of the Photographic Society." *The Photographic Journal* no. 110 (June 15, 1861): 196.
- Schaaf, Larry. *Out of the Shadows: Herschel, Talbot, & the Invention of Photography*. New Haven & London: Yale University Press, 1992.
- . *The Photographic Art of William Henry Fox Talbot*. Princeton and Oxford: Princeton University Press, 2000.
- Schwartz, Joan. "The Geography Lesson: Photographs and the Construction of Imaginative Geographies." *Journal of Historical Geography* 22, no. 1 (1996): 16-45.
- Schwarz, Heinrich. *David Octavius Hill—Der Meister der Photographie*. Leipzig: Insel, 1931.
- Seiberling, Grace. *Amateurs, Photography and the Mid-Victorian Imagination*. Chicago: University of Chicago Press, 1986.
- Sevey, Linda Vance. "The Question of Style in Daguerreotype and Calotype Portraits by Antoine Claudet." Master's thesis, Rochester Institute of Technology, 1977.
- Simcock, Tony. *Photography 150: Images from the First Generation*. Oxford: Museum of the History of Science, 1989.
- Sobieszek, Robert A. "Sculpture as the Sum of Its Profiles: François Willème and Photosculpture in France, 1859-1868." *The Art Bulletin* 62, no. 4 (December 1980): 617-30.

- Sobieszek, Robert A. and Peter C. Bunnell, eds. *The Daguerreotype Process Three Treatises, 1840-1849*. New York: Arno Press, 1973.
- Sorel, Philippe. "Photosculpture: the fortunes of a sculptural process based on photography," in François Reynaud ed. *Paris in 3D*. Paris: Paris Musées and Booth-Clibborn Editions, 2000: 80-89.
- Sparling, Tobin Andrews. *The Great Exhibition: A Question of Taste*. New Haven: Yale Center for British Art, 1982.
- Stark, Amy E. "Lowell Augustus Reeve (1874-1865): Publisher and Patron of the Stereograph." *History of Photography* 5 (1981): 11.
- Stephen, Ann. *On Looking at Looking: The Art and Politics of Ian Burn*. Melbourne: The Miegunyah Press, 2006.
- Tallis, John. *John Tallis's London Street Views, 1838-1840*. London: London Topographical Society, 2002.
- Taylor, Roger. "Claudet, Fenton and the Photographic Society: A Response." *History of Photography* 27 (2003): 386-88.
- . *Impressed by Light: British Photographs from Paper Negatives, 1840-1860*. New Haven: Yale University Press, 2007.
- . *Photographs exhibited in Britain 1839-1865: A Compendium of Photographers and their Work*. Ottawa: National Gallery of Canada: Musée des beaux-arts du Canada, 2002.
- Thomas, Ann. *Beauty of Another Order: Photography in Science*. New Haven: Yale University Press in association with the National Gallery of Canada, Ottawa, 1997. Published in conjunction with the exhibition "Photography in Science: Beauty of Another Order" shown at the National Gallery of Canada, Ottawa.
- Thomas, David Bowen. *The First Negatives: An Account of the Discovery and Early Use of the Negative-Positive Photographic Process*. London: H.M. Stationery Office, 1964.
- Tucker, Jennifer. *Nature Exposed: Photography as Eyewitness in Victorian Science*. Baltimore: Johns Hopkins University Press, 2005.
- Weaver, Mike. *British Photography in the Nineteenth Century: The Fine Art Tradition*. Cambridge; New York: Cambridge University Press, 1989.
- Wing, Paul. *Stereoscopes: The First One Hundred Years*. Nashua, N.H.: Transition Publishing, 1996.

- Wood, R. Derek. "Brewster's and Claudet's Topaz Camera Lens, 1867," *Microscopy* 31, no. 5 (February 1969): 121-122.
- . "Daguerreotype Case Backs: Wharton's Design of 1841," *History of Photography* 4, no. 3 (July 1980): 251-252.
- . "The Daguerreotype in England; Some Primary Material Relating to Beard's Lawsuits." *History of Photography* 3, no. 4 (1979): 305-9.
- . "The Daguerreotype Patent, the British Government, and The Royal Society," *History of Photography* 4, no. 1 (January 1980): 53-59.
- . "Daguerreotype Shopping in London in February 1845," *The British Journal of Photography* 126, no. 6224 (November 9, 1979): 1094-5.
- . "The Diorama in Great Britain in the 1820s," *History of Photography* 17, no. 3 (Autumn 1993): 284-295.
- . "Ste Croix in London," *History of Photography* 17, no. 1 (Spring 1993): 101-7.
- . "Victorian Photographers," *The Photographic Journal* 109 (July 1969): 412, 536.

## Websites

*The Correspondence of William Henry Fox Talbot*

<http://foxtalbot.dmu.ac.uk/letters/letters.html> (accessed May 3, 2010)

*Histoire de la Photographie Ancienne*

<http://www.marillier.nom.fr> (accessed May 3, 2010)

*The London Stereoscopic Society Website*

<http://www.londonstereo.com> (accessed April 19, 2010)

*Midley Essays on the History of Early Photography*

<http://www.midley.co.uk> (accessed May 3, 2010)

Newcastle University Library Daguerreotypes

<http://www.ncl.ac.uk/library/specialcollections/collections/daguerreotypes> (accessed April 14, 2010)

*Photographic Exhibitions in Britain, 1839-1865,*

<http://www.peib.dmu.ac.uk> (accessed April 23, 2010)